



# Open Source Used In AppDynamics\_OTIS\_Pipeline 23.8.0

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  - 1.319.1 Available under license
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- 1.401 json-utils 2.19.14**
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- 1.403 protocol-core 2.19.14**
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- 1.404 annotations 2.19.14**
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### **1.551 kotlin-scripting-compiler-embeddable 1.7.20**

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### **1.552 third-party-jackson-dataformat-cbor 2.20.8**

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### **1.553 third-party-jackson-core 2.20.8**

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### **1.554 golang 1.19.9**

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### **1.555 x-crypto v0.12.0**

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### **1.556 k8s-io-apimachinery 0.0.0-20191123233150-4c4803ed55e3**

1.556.1 Available under license

### **1.557 github.com/eko/gocache/v2 2.2.0**

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### **1.558 eko-gocache 2.2.0**

1.558.1 Available under license

### **1.559 golang-genproto 0.0.0-202111221231510-d629cc9a93d5**

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### **1.560 kubernetes-apimachinery 0.0.0-20191123233150-4c4803ed55e3**

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### **1.561 reporter (devel)**

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- 1.562 google-golang-org-genproto 0.0.0-20211221231510-d629cc9a93d5**
- 1.562.1 Available under license
- 1.563 opentelemetry-proto 0.17.1**
- 1.563.1 Available under license
- 1.564 json-cpp 1.7.4**
- 1.564.1 Available under license
- 1.565 libzip tags/rel-1-2-0**
- 1.565.1 Available under license
- 1.566 libcap 1:2.66-4**
- 1.566.1 Available under license
- 1.567 perl-base 5.32.1-4+deb11u2**
- 1.567.1 Available under license
- 1.568 login 4.8.1-1**
- 1.568.1 Available under license
- 1.569 libpam-modules-bin 1.4.0-9+deb11u1**
- 1.569.1 Available under license
- 1.570 sysvinit-utils 2.96-7+deb11u1**
- 1.570.1 Available under license
- 1.571 gcc-10-base 10.2.1-6**
- 1.571.1 Available under license
- 1.572 libnettle8 3.7.3-1**
- 1.572.1 Available under license
- 1.573 libgcc-s1 10.2.1-6**
- 1.573.1 Available under license
- 1.574 libcom-err 1.46.2-2**
- 1.574.1 Available under license
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- 1.575.1 Available under license
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Pentium Pro 200mhz

FreeBSD 2.1.5

gcc 2.7.2.2

SSLey 0.7.0 30-Jan-1997

built on Tue Apr 22 12:14:36 EST 1997

options:bn(64,32) md2(int) rc4(idx,int) des(ptr,risc 1,16,long) idea(int) blowfish(ptr2)

C flags:gcc -DTERMIOS -D\_ANSI\_SOURCE -fomit-frame-pointer -O3 -m486 -Wall

The 'numbers' are in 1000s of bytes per second processed.

| type          | 8 bytes   | 64 bytes  | 256 bytes | 1024 bytes | 8192 bytes |
|---------------|-----------|-----------|-----------|------------|------------|
| md2           | 130.99k   | 367.68k   | 499.09k   | 547.04k    | 566.50k    |
| md5           | 1924.98k  | 8293.50k  | 13464.41k | 16010.39k  | 16820.68k  |
| sha           | 1250.75k  | 5330.43k  | 8636.88k  | 10227.36k  | 10779.14k  |
| sha1          | 1071.55k  | 4572.50k  | 7459.98k  | 8791.96k   | 9341.61k   |
| rc4           | 10724.22k | 14546.25k | 15240.18k | 15259.50k  | 15265.63k  |
| des cbc       | 3309.11k  | 3883.01k  | 3968.25k  | 3971.86k   | 3979.14k   |
| des ede3      | 1442.98k  | 1548.33k  | 1562.48k  | 1562.00k   | 1563.33k   |
| idea cbc      | 2195.69k  | 2506.39k  | 2529.59k  | 2545.66k   | 2546.54k   |
| rc2 cbc       | 806.00k   | 833.52k   | 837.58k   | 838.52k    | 836.69k    |
| blowfish cbc  | 4687.34k  | 5949.97k  | 6182.43k  | 6248.11k   | 6226.09k   |
| rsa 512 bits  | 0.010s    |           |           |            |            |
| rsa 1024 bits | 0.045s    |           |           |            |            |
| rsa 2048 bits | 0.260s    |           |           |            |            |
| rsa 4096 bits | 1.690s    |           |           |            |            |

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Motorolla 68020 20mhz, NetBSD

SSLey 0.9.0t 29-May-1998

built on Fri Jun 5 12:42:23 EST 1998

options:bn(64,32) md2(char) rc4(idx,int) des(idx,cisc,16,long) idea(int) blowfish(idx)

C flags:gcc -DTERMIOS -O3 -fomit-frame-pointer -Wall -DB\_ENDIAN

The 'numbers' are in 1000s of bytes per second processed.

| type          | 8 bytes | 64 bytes | 256 bytes | 1024 bytes | 8192 bytes |
|---------------|---------|----------|-----------|------------|------------|
| md2           | 2176.00 | 5994.67  | 8079.73   | 8845.18    | 9077.01    |
| mdc2          | 5730.67 | 6122.67  | 6167.66   | 6176.51    | 6174.87    |
| md5           | 29.10k  | 127.31k  | 209.66k   | 250.50k    | 263.99k    |
| hmac(md5)     | 12.33k  | 73.02k   | 160.17k   | 228.04k    | 261.15k    |
| sha1          | 11.27k  | 49.37k   | 84.31k    | 102.40k    | 109.23k    |
| rmd160        | 11.69k  | 48.62k   | 78.76k    | 93.15k     | 98.41k     |
| rc4           | 117.96k | 148.94k  | 152.57k   | 153.09k    | 152.92k    |
| des cbc       | 27.13k  | 30.06k   | 30.38k    | 30.38k     |            |
|               | 30.53k  |          |           |            |            |
| des ede3      | 10.51k  | 10.94k   | 11.01k    | 11.01k     | 11.01k     |
| idea cbc      | 26.74k  | 29.23k   | 29.45k    | 29.60k     | 29.74k     |
| rc2 cbc       | 34.27k  | 39.39k   | 40.03k    | 40.07k     | 40.16k     |
| rc5-32/12 cbc | 64.31k  | 83.18k   | 85.70k    | 86.70k     | 87.09k     |

|               |          |          |        |          |        |
|---------------|----------|----------|--------|----------|--------|
| blowfish cbc  | 48.86k   | 59.18k   | 60.07k | 60.42k   | 60.78k |
| cast cbc      | 42.67k   | 50.01k   | 50.86k | 51.20k   | 51.37k |
|               | sign     | verify   | sign/s | verify/s |        |
| rsa 512 bits  | 0.7738s  | 0.0774s  | 1.3    | 12.9     |        |
| rsa 1024 bits | 4.3967s  | 0.2615s  | 0.2    | 3.8      |        |
| rsa 2048 bits | 29.5200s | 0.9664s  | 0.0    | 1.0      |        |
|               | sign     | verify   | sign/s | verify/s |        |
| dsa 512 bits  | 0.7862s  | 0.9709s  | 1.3    | 1.0      |        |
| dsa 1024 bits | 2.5375s  | 3.1625s  | 0.4    | 0.3      |        |
| dsa 2048 bits | 9.2150s  | 11.8200s | 0.1    | 0.1      |        |

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<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE article PUBLIC "-//Boost//DTD BoostBook XML V1.0//EN"
"http://www.boost.org/tools/boostbook/dtd/boostbook.dtd">
<article id="copyright_test" last-revision="DEBUG MODE Date: 2000/12/20 12:00:00 $"
xmlns:xi="http://www.w3.org/2001/XInclude">
<title>Copyright Test</title>
<articleinfo>
<copyright>
<year>1963</year> <year>1964</year> <year>1965</year> <holder>Jane Doe</holder>
</copyright>
<copyright>
<year>2018</year> <holder>Joe Blow, John Coe</holder>
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<year>1977</year> <year>1985</year> <holder>Someone else</holder>
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This is an attempt to acknowledge early contributions to the garbage collector. Later contributions should instead be mentioned in README.changes.

## HISTORY -

Early versions of this collector were developed as a part of research projects supported in part by the National Science Foundation and the Defense Advance Research Projects Agency.

The garbage collector originated as part of the run-time system for the Russell programming language implementation. The first version of the garbage collector was written primarily by Al Demers. It was then refined and mostly rewritten, primarily by Hans-J. Boehm, at Cornell U., the University of Washington, Rice University (where it was first used for C and assembly code), Xerox PARC, SGI, and HP Labs. However, significant contributions have also been made by many others.

Some other contributors:

More recent contributors are mentioned in the modification history in README.changes. My apologies for any omissions.

The SPARC specific code was originally contributed by Mark Weiser.

The Encore Multimax modifications were supplied by Kevin Kenny (kenny@m.cs.uiuc.edu). The adaptation to the IBM PC/RT is largely due to Vernon Lee, on machines made available to Rice by IBM.

Much of the HP specific code and a number of good suggestions for improving the generic code are due to Walter Underwood.

Robert Brazile (brazile@diamond.bbn.com) originally supplied the ULTRIX code. Al Dosser (dosser@src.dec.com) and Regis Cridlig (Regis.Cridlig@cl.cam.ac.uk) subsequently provided updates and information on variation between ULTRIX systems. Parag Patel (parag@netcom.com) supplied the A/UX code.

Jesper Peterson(jep@mtiame.mtia.oz.au), Michel Schinz, and Martin Tauchmann (martintauchmann@bigfoot.com) supplied the Amiga port.

Thomas Funke (thf@zelator.in-berlin.de(?)) and

Brian D.Carlstrom (bdc@clark.lcs.mit.edu) supplied the NeXT ports.

Douglas Steel (doug@wg.icl.co.uk) provided ICL DRS6000 code.

Bill Janssen (janssen@parc.xerox.com) supplied

the SunOS dynamic loader

specific code. Manuel Serrano (serrano@cornas.inria.fr) supplied linux and

Sony News specific code. Al Dosser provided Alpha/OSF/1 code. He and

Dave Detlefs(detlefs@src.dec.com) also provided several generic bug fixes.

Alistair G. Crooks(agg@uts.amdahl.com) supplied the NetBSD and 386BSD ports.

Jeffrey Hsu (hsu@soda.berkeley.edu) provided the FreeBSD port.

Brent Benson (brent@jade.ssd.csd.harris.com) ported the collector to

a Motorola 88K processor running CX/UX (Harris NightHawk).

Ari Huttunen (Ari.Huttunen@hut.fi) generalized the OS/2 port to

nonIBM development environments (a nontrivial task).

Patrick Beard (beard@cs.ucdavis.edu) provided the initial MacOS port.

David Chase, then at Olivetti Research, suggested several improvements.  
Scott Schwartz (schwartz@groucho.cse.psu.edu) supplied some of the code to save and print call stacks for leak detection on a SPARC.  
Jesse Hull and John Ellis supplied the C++ interface code.  
Zhong Shao performed much of the experimentation that led to the current typed allocation facility. (His dynamic type inference code hasn't made it into the released version of the collector, yet.)

## 1.5 annotations 13.0

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jar/org/intellij/lang/annotations/Identifier.java
* /opt/cola/permits/173667507_1695324641.7896898/0/annotations-13-0-sources-
jar/org/intellij/lang/annotations/Pattern.java
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jar/org/jetbrains/annotations/Nullable.java  
\* /opt/cola/permits/173667507\_1695324641.7896898/0/annotations-13-0-sources-  
jar/org/jetbrains/annotations/NonNls.java  
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/opt/cola/permits/173667507\_1695324641.7896898/0/annotations-13-0-sources-  
jar/org/jetbrains/annotations/PropertyKey.java

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jar/org/intellij/lang/annotations/JdkConstants.java  
* /opt/cola/permits/173667507_1695324641.7896898/0/annotations-13-0-sources-  
jar/org/jetbrains/annotations/NotNull.java  
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## 1.6 kryo-parent 4.0.2

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- \* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/ByteBufferInputStream.java
- \* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/factories/SerializerFactory.java
- \* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/BlowfishSerializer.java
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- \* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/factories/PseudoSerializerFactory.java
- \* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/AsmCachedFieldFactory.java
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/UnsafeMemoryOutput.java  
\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/UnsafeCachedFieldFactory.java  
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/FastOutput.java  
\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/pool/KryoPool.java  
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/KryoObjectInput.java  
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/util/MapReferenceResolver.java  
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/FastInput.java  
\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/KryoSerializable.java

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jar/com/esotericsoftware/kryo/serializers/FieldSerializerAnnotationsUtil.java
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jar/com/esotericsoftware/kryo/DefaultSerializer.java
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jar/com/esotericsoftware/kryo/io/UnsafeMemoryInput.java
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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/opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/util/ObjectMap.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/ClassResolver.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/io/KryoObjectOutput.java
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jar/com/esotericsoftware/kryo/serializers/MapSerializer.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/util/IdentityObjectIntMap.java
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/serializers/FieldSerializerUnsafeUtilImpl.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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/opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
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* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/serializers/CollectionSerializer.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/serializers/FieldSerializerGenericsUtil.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/Serializer.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/serializers/AsmCacheFields.java
* /opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/io/ByteBufferOutputStream.java
*
/opt/cola/permits/184959208_1695340629.1678586/0/kryo-shaded-4-0-2-sources-
jar/com/esotericsoftware/kryo/util/DefaultClassResolver.java
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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/TimeSerializers.java

\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/FieldSerializerConfig.java

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/\*\* A few utility methods for using @link{sun.misc.Unsafe}, mostly for private use.

\*

\* Use of Unsafe on Android is forbidden, as Android provides only a very limited functionality for this class compared to the JDK

\* version.

\*

\* @author Roman Levenstein <romixlev@gmail.com> \*/

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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/serializers/GenericsResolver.java

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\* /opt/cola/permits/184959208\_1695340629.1678586/0/kryo-shaded-4-0-2-sources-jar/com/esotericsoftware/kryo/io/Util.java

## 1.9 listenablefuture 9999.0-empty-to-avoid-conflict-with-guava



# 1.10 boost 1.67.0

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# 1.11 failureaccess 1.0.1

# 1.12 j2objc-annotations 1.3

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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From strings/apr\_fnmatch.c, include/apr\_fnmatch.h, misc/unix/getopt.c, file\_io/unix/mktemp.c, strings/apr\_strings.c:

```
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From network\_io/unix/inet\_ntop.c, network\_io/unix/inet\_pton.c:

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From dso/aix/dso.c:

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From strings/apr\_strnatcmp.c,

include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.

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From

strings/apr\_snprintf.c:

\*

\* cvt - IEEE floating point formatting routines.

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Since Nov 27 1996, it was maintained by Guy Maor <[maor@debian.org](mailto:maor@debian.org)>. He  
rewrote most of it.

Since May 20 2000, it is maintained by Roland Bauerschmidt  
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not-a-legal-formal-parameter-tuple.scala:2: error: not a legal formal parameter.

Note: Tuples cannot be directly deconstructed in method or function parameters.

Either create a single parameter accepting the Tuple2,

or consider a pattern matching anonymous function: `{ case (a, b) => ... }`

```
val x: ((Int, Int) => Int) = (((a, b)) => a)
```

^

not-a-legal-formal-parameter-tuple.scala:3: error: not a legal formal parameter.

Note: Tuples cannot be directly deconstructed in method or function parameters.

Either create a single parameter accepting the Tuple2,

or consider a pattern matching anonymous function: `{ case (param1, param2) => ... }`

```
val y: ((Int, Int, Int) => Int) = (((a, !)) => a)
```

^

not-a-legal-formal-parameter-tuple.scala:4: error: not a legal formal parameter.

Note: Tuples cannot be directly deconstructed in method or function parameters.

Either create a single parameter accepting the

Tuple3,

or consider a pattern matching anonymous function: `{ case (param1, ..., param3) => ... }`

```
val z: ((Int, Int, Int) => Int) = (((a, NotAPatternVariableName, c)) => a)
```

^

three errors found

```
{% if site.thisScalaVersion != site.latestScalaVersion %}
```

```
<div class="version-notice">This is the specification of a previous version of Scala. See the <a href="{ site.baseurl }"/>{ site.latestScalaVersion }"/>Scala { site.latestScalaVersion } spec</a>.</div>
```

```
{% endif %}
```

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and can

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To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) 19yy <name of author>
```

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```
Gnomovision version 69, Copyright (C) 19yy name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands ``show w'` and ``show c'` should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than ``show w'` and ``show c'`; they could even be mouse-clicks or menu items--whatever suits your program.

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```
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`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

# 1.29 shadow 4.8.1-1

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Written by: Philip Hazel  
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## 1.32 libgpg-error 1.38-2

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## 1.34 error\_prone\_annotations 2.4.0

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Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/DoNotCall.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/CheckReturnValue.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/concurrent/GuardedBy.java  
\*  
/opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/OverridingMethodsMustInvokeSuper.java

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\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/FormatString.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/FormatMethod.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/CompatibleWith.java  
\*  
/opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-jar/com/google/errorprone/annotations/DoNotMock.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-

jar/com/google/errorprone/annotations/RestrictedApi.java  
\* /opt/ws\_local/PERMITS\_SQL/1076606128\_1596591714.12/0/error-prone-annotations-2-4-0-sources-  
jar/com/google/errorprone/annotations/MustBeClosed.java  
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```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-  
jar/com/google/errorprone/annotations/concurrent/LockMethod.java  
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-  
jar/com/google/errorprone/annotations/concurrent/UnlockMethod.java  
*  
/opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-  
jar/com/google/errorprone/annotations/NoAllocation.java  
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```

```
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*/
```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/IncompatibleModifiers.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/ForOverride.java
*
/opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/Immutable.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/SuppressPackageLocation.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/CompileTimeConstant.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/Var.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/CanIgnoreReturnValue.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/RequiredModifiers.java
* /opt/ws_local/PERMITS_SQL/1076606128_1596591714.12/0/error-prone-annotations-2-4-0-sources-
jar/com/google/errorprone/annotations/concurrent/LazyInit.java
```

## 1.35 snake-yaml 1.27

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## 1.36 d3-time-format 2.3.0

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## 1.37 jctools-core 3.1.0

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```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>
```

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  <artifactId>jctools-core</artifactId>
  <groupId>org.jctools</groupId>
  <version>3.1.0</version>
  <name>Java Concurrency Tools Core Library</name>
  <description>Java Concurrency Tools Core Library</description>
  <packaging>bundle</packaging>
```

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  <dependencies>
    <dependency>
      <groupId>org.hamcrest</groupId>
      <artifactId>hamcrest-all</artifactId>
      <version>${hamcrest.version}</version>
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```
  <dependency>
```

```

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<version>${junit.version}</version>
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<dependency>
  <groupId>com.google.guava</groupId>
  <artifactId>guava-testlib</artifactId>
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</dependency>
</dependencies>
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    <plugin>
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      <configuration>
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        </includes>
      </configuration>
    </plugin>
    <plugin>
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      <artifactId>maven-bundle-plugin</artifactId>
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      <configuration>
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        </instructions>
      </configuration>
    </plugin>
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          <phase>verify</phase>
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          </goals>
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  </plugins>
</build>

```

```

    </executions>
  </plugin>
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<artifactId>maven-javadoc-plugin</artifactId>
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  <additionalOptions>
    <additionalOption>-Xdoclint:none</additionalOption>
  </additionalOptions>
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</configuration>
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    </goals>
  </execution>
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</plugin>
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</build>

<distributionManagement>
  <repository>
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    <name>jctools-jctools</name>
    <url>https://api.bintray.com/maven/jctools/jctools/jctools-core/;publish=1</url>
  </repository>
</distributionManagement>

<url>https://github.com/JCTools</url>
<inceptionYear>2013</inceptionYear>

<licenses>
  <license>
    <name>Apache
License, Version 2.0</name>
    <url>http://www.apache.org/licenses/LICENSE-2.0.txt</url>
    <distribution>repo</distribution>
  </license>
</licenses>

<scm>
  <url>https://github.com/JCTools/JCTools</url>
  <connection>scm:git:https://github.com/JCTools/JCTools</connection>
  <tag>HEAD</tag>

```

```
</scm>

<developers>
  <developer>
    <url>https://github.com/nitsanw</url>
  </developer>
  <developer>
    <url>https://github.com/mjpt777</url>
  </developer>
  <developer>
    <url>https://github.com/RichardWarburton</url>
  </developer>
  <developer>
    <url>https://github.com/kay</url>
  </developer>
  <developer>
    <url>https://github.com/franz1981</url>
  </developer>
</developers>

<prerequisites>
  <maven>3.5.0</maven>
</prerequisites>

<properties>
  <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  <java.version>1.6</java.version>
  <java.test.version>1.8</java.test.version>

  <maven.compiler.source>${java.version}</maven.compiler.source>
  <maven.compiler.target>${java.version}</maven.compiler.target>
  <maven.compiler.testSource>${java.test.version}</maven.compiler.testSource>
  <maven.compiler.testTarget>${java.test.version}</maven.compiler.testTarget>

  <hamcrest.version>1.3</hamcrest.version>
  <junit.version>4.12</junit.version>
  <guava-testlib.version>21.0</guava-testlib.version>
</properties>
</project>
```

Found

in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/META-INF/maven/org.jctools/jctools-core/pom.xml

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- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/spec/Ordering.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/SpSCUnboundedAtomicArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/SpMCAtomicArrayQueue.java
- \*
- /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/MessagePassingQueueUtil.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/MpMCAtomicArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/util/UnsafeJvmInfo.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/LinkedListAtomicNode.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/SpSCLinkedList.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/MpSCUnboundedXaddArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/spec/Preference.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/MpSCAtomicArrayQueue.java
- \*
- /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/MessagePassingQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/SupportsIterator.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/MpMCUnboundedXaddArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/MpSCGrowArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-jar/org/jctools/queues/atomic/BaseSpSCLinkedListAtomicArrayQueue.java
- \* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-

jar/org/jctools/queues/atomic/AtomicQueueFactory.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/MpmcArrayQueue.java  
\*  
/opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/atomic/SpSCAtomicArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/atomic/SpSCLinkedAtomicQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/SpMCArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/maps/AbstractEntry.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/MpmcUnboundedXaddChunk.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/MpscChunkedArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/maps/NonBlockingHashMapLong.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/atomic/MpscChunkedAtomicArrayQueue.java  
\*  
/opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
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\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/util/UnsafeLongArrayAccess.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/MpscBlockingConsumerArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/queues/atomic/BaseMpscLinkedAtomicArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
jar/org/jctools/maps/NonBlockingHashMap.java  
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\* /opt/ws\_local/PERMITS\_SQL/1093815924\_1601014602.33/0/jctools-core-3-1-0-sources-  
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```

* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/SpSCChunkedAtomicArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
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*
/opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/MpscUnboundedXaddChunk.java
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jar/org/jctools/queues/LinkedQueueNode.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/SpSCUnboundedArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/util/PortableJvmInfo.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/ConcurrentCircularArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/maps/NonBlockingSetInt.java
*
/opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/BaseLinkedAtomicQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/SequencedAtomicReferenceArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/MpscLinkedQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/util/UnsafeRefArrayAccess.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/MpscCompoundQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/SpSCChunkedArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/SpSCArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/AtomicReferenceArrayQueue.java
*
/opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/QueueFactory.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/MpscArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/util/UnsafeAccess.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/MpscUnboundedArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/SpSCGrowableAtomicArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-

```

```
jar/org/jctools/queues/IndexedQueueSizeUtil.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/atomic/MpscLinkedAtomicQueue.java
*
/opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/SpSCGrowArrayQueue.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/util/RangeUtil.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/package-info.java
* /opt/ws_local/PERMITS_SQL/1093815924_1601014602.33/0/jctools-core-3-1-0-sources-
jar/org/jctools/queues/BaseSpSCLinkedArrayQueue.java
```

## 1.38 okio 2.8.0

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```
* /opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/ByteString.kt
* /opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/-Utf8.kt
* /opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/-Util.kt
* /opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/-Platform.kt
*
/opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/-Platform.kt
* /opt/cola/permits/1096821398_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/ByteString.kt
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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/RealBufferedSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/SegmentedByteString.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/RealBufferedSource.kt  
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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/RealBufferedSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Okio.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/RealBufferedSource.kt  
\*  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Source.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/BufferedSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Sink.kt

\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Buffer.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/internal/Buffer.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Timeout.kt  
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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/-DeprecatedOkio.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/-DeprecatedUpgrade.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Throttler.kt  
\*

/opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/-DeprecatedUtf8.kt

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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/AsyncTimeout.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/ForwardingSink.kt  
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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Source.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/SegmentPool.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/SegmentPool.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/BufferedSource.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Segment.kt  
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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Sink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/JvmOkio.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Buffer.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Timeout.kt  
\*  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/ForwardingSource.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/RealBufferedSource.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/DeflaterSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/GzipSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/BufferedSink.kt

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\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/commonMain/okio/Options.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/HashingSink.kt  
\* /opt/cola/permits/1096821398\_1601900245.47/0/okio-2-8-0-sources-jar/jvmMain/okio/Pipe.kt

## 1.39 kryo 5.0.0-RC1

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- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/Kryo.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/io/ByteBufferOutputStream.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/MapSerializer.java
- \*
- /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/TimeSerializers.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/Registration.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/util/Generics.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/util/Util.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/VersionFieldSerializer.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/unsafe/UnsafeByteBufferOutput.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/BlowfishSerializer.java
- \*
- /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/io/ByteBufferInputStream.java
- \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-

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jar/com/esotericsoftware/kryo/serializers/EnumNameSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/util/MapReferenceResolver.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/DeflateSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/KryoException.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/util/IntMap.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/util/HashMapReferenceResolver.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/ExternalizableSerializer.java
*
/opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/io/ByteBufferOutput.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/CompatibleFieldSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/DefaultSerializers.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/ReferenceResolver.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/ImmutableSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/CollectionSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/io/Output.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/util/DefaultInstantiatorStrategy.java
*
/opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/CachedFields.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/unsafe/UnsafeInput.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/TaggedFieldSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/ClosureSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/DefaultSerializer.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/io/ByteBufferInput.java
* /opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/util/GenericsUtil.java
*
/opt/cola/permits/1097492970_1602080077.51/0/kryo-5-0-0-rc1-sources-
jar/com/esotericsoftware/kryo/serializers/BeanSerializer.java

```

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/KryoObjectOutput.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/KryoSerializable.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/serializers/FieldSerializer.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/KryoDataOutput.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/DefaultClassResolver.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/serializers/UnsafeField.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/Input.java  
 \*  
 /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/ObjectMap.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/KryoDataInput.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/IdentityMap.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/KryoCopyable.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/IdentityObjectIntMap.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/OutputChunked.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/ListReferenceResolver.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/unsafe/UnsafeOutput.java  
 \*  
 /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/serializers/EnumMapSerializer.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/InputChunked.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/serializers/DefaultArraySerializers.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/Serializer.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/unsafe/UnsafeUtil.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/SerializerFactory.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/util/Pool.java  
 \* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-  
 jar/com/esotericsoftware/kryo/io/KryoObjectInput.java

\*

/opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/JavaSerializer.java

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/ReflectField.java

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/unsafe/UnsafeByteBufferInput.java

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/serializers/OptionalSerializers.java

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/ClassResolver.java

\* /opt/cola/permits/1097492970\_1602080077.51/0/kryo-5-0-0-rc1-sources-jar/com/esotericsoftware/kryo/util/IntArray.java

## 1.40 libsepol 3.1-1

### 1.40.1 Available under license :

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Version 2.1, February 1999

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## 1.41 protobuf 3.11.4

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This file contains a list of people who have made large contributions to the public version of Protocol Buffers.

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- \* Optimize Java serialization of strings so that UTF-8 encoding happens only once per string per serialization call.
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- \* Added atomicops for Solaris

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- \* Fixed minor IBM xLC compiler build issues
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## 1.42 coreutils 8.32-4+b1

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Copyright (C) <year> <name of author>
```

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```
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```

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## 1.43 httpcomponents-client 4.5.13

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e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

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```

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## 1.52 iconv 2.31

### 1.52.1 Available under license :

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<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

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Version 3, 29 June 2007

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The

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## 1.55 diffutils 3.7-5

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```
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```

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## 1.56 audit 3.0-2

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\* /opt/cola/permits/1135840457\_1613613080.13/0/commons-logging-1-1-sources-9-jar/org/apache/commons/logging/impl/LogFactoryImpl.java

```
*
/opt/cola/permits/1135840457_1613613080.13/0/commons-logging-1-1-sources-9-
jar/org/apache/commons/logging/impl/Jdk13LumberjackLogger.java
* /opt/cola/permits/1135840457_1613613080.13/0/commons-logging-1-1-sources-9-
jar/org/apache/commons/logging/impl/SimpleLog.java
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jar/org/apache/commons/logging/impl/Jdk14Logger.java
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jar/org/apache/commons/logging/LogSource.java
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jar/org/apache/commons/logging/impl/ServletContextCleaner.java
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## 1.60 asm 5.0.4

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\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/package.html

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\*

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jar/org/objectweb/asm/xml/SAXClassAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-  
jar/org/objectweb/asm/xml/SAXAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-  
jar/org/objectweb/asm/xml/SAXAnnotationAdapter.java  
\*  
/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/xml/Processor.java  
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jar/org/objectweb/asm/xml/SAXFieldAdapter.java  
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jar/org/objectweb/asm/xml/ASMContentHandler.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-  
jar/org/objectweb/asm/xml/SAXCodeAdapter.java  
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/\*\*

\* Creates a new {[@link GeneratorAdapter](#)}. *Subclasses must not use this  
 \* constructor*. Instead, they must use the

\* {[@link #GeneratorAdapter\(int, MethodVisitor, int, String, String\)](#)}

\* version.

\*

\* [@param mv](#)  
 \* the

method visitor to which this adapter delegates calls.

\* [@param access](#)  
 \* the method's access flags (see {[@link Opcodes](#)}).

\* [@param name](#)  
 \* the method's name.

\* [@param desc](#)  
 \* the method's descriptor (see {[@link Type Type](#)}).

\* [@throws IllegalStateException](#)  
 \* If a subclass calls this constructor.

\*/

Found in path(s):

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/GeneratorAdapter.java

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\* Creates a new JSRInliner. *<i>*Subclasses must not use this

\* constructor*</i>*. Instead, they must use the

\* { @link #JSRInlinerAdapter(int, MethodVisitor, int, String, String, String, String[])}  
\* version.

\*

\* @param mv

\*

the `MethodVisitor` to send the resulting inlined

\* method code to (use `null` for none).

\* @param access

\* the method's access flags (see { @link Opcodes}). This

\* parameter also indicates if the method is synthetic and/or

- \* deprecated.
- \* @param name
- \* the method's name.
- \* @param desc
- \* the method's descriptor (see { @link Type}).
- \* @param signature
- \* the method's signature. May be <tt>null</tt>.
- \* @param exceptions
- \* the internal names of the method's exception classes (see
- \* { @link Type#getInternalName() getInternalName}). May be
- \* <tt>null</tt>.
- \* @throws IllegalStateException
- \* If a subclass calls this constructor.
- \*/

Found in path(s):

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/JSRInlinerAdapter.java

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/\*\*

\* Constructs a new { @link ClassNode }. <i>Subclasses must not use this

\* constructor</i>. Instead, they must use the { @link #ClassNode(int)}

\* version.

\*

\* @throws IllegalStateException

\* If a subclass calls this constructor.

\*/

Found in path(s):

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/ClassNode.java

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\*/

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\* Constructs a new { @link Textifier }. <i>Subclasses must not use this

\* constructor</i>. Instead, they must use the { @link #Textifier(int)}

```
* version.  
*  
* @throws IllegalStateException  
*     If a subclass calls this constructor.  
*/
```

Found in path(s):

```
* /opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/Textifier.java  
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```

```
/**
```

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```

```
*
```

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```

```
*/
```

```
/**
```

```
* Constructs a new {@link LocalVariableAnnotationNode}. <i>Subclasses must  
* not use this constructor</i>. Instead, they must use the  
* {@link #LocalVariableAnnotationNode(int, TypePath, LabelNode[], LabelNode[], int[], String)}  
* version.
```

```
*
```

```
* @param typeRef
```

- \* a reference to the annotated type. See { @link TypeReference }.
- \* @param typePath
- \* the path to the annotated type argument, wildcard bound, array
- \* element type, or static inner type within 'typeRef'. May be
- \* <tt>null</tt> if the annotation targets 'typeRef' as a whole.
- \* @param start
- \* the first instructions corresponding to the continuous ranges
- \* that make the scope of this local variable (inclusive).
- \* @param end
- \* the last instructions corresponding to the continuous ranges
- \* that make the scope of this local variable (exclusive). This
- \* array must have the same size as the 'start' array.
- \* @param index
- \* the local variable's index in each range. This array must have
- \* the same size as the 'start' array.
- \* @param desc
- \* the class descriptor of

the annotation class.

\*/

Found in path(s):

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LocalVariableAnnotationNode.java

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\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/AnnotationWriter.java  
\*  
/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/SimpleVerifier.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/NameMapping.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/Printer.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/Shrinker.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/Method.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/CheckAnnotationAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/RemappingSignatureAdapter.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/ClassWriter.java  
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\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/MethodVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/TraceFieldVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/SourceValue.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/AdviceAdapter.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LabelNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/ClassConstantsCollector.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/CheckSignatureAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/BasicVerifier.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/CodeSizeEvaluator.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/InstructionAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/IntInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/RemappingClassAdapter.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/MultiANewArrayInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/ClassReader.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/VarInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/RemappingMethodAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/Value.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/StaticInitMerger.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/AnnotationConstantsCollector.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/AnnotationVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/InsnNode.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/signature/SignatureReader.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LdcInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LookupSwitchInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LineNumberNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/JarOptimizer.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/LocalVariablesSorter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/TraceAnnotationVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/Constant.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/TypeAnnotationNode.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Handle.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/TryCatchBlockNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/ClassOptimizer.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/ASMifier.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/TraceClassVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/TableSwitchInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/Frame.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/InvokeDynamicInsnNode.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/AnalyzerException.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/Subroutine.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/SerialVersionUIDAdder.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/InnerClassNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/ParameterNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/LocalVariableNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/Analyzer.java

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/SmallSet.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/RemappingAnnotationAdapter.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/TypeInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/TraceSignatureVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/IncInsnNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/MethodOptimizer.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/CheckFieldAdapter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Frame.java  
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\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/SimpleRemapper.java  
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/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/AnnotationNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/FieldVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Context.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/util/TraceMethodVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/MethodConstantsCollector.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Handler.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/MethodNode.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/InsnList.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/FieldConstantsCollector.java  
\*  
/opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/MethodWriter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/analysis/BasicInterpreter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/signature/SignatureWriter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/commons/TryCatchBlockSorter.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Item.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Edge.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/ClassVisitor.java  
\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/tree/FrameNode.java

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* /opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-
jar/org/objectweb/asm/optimizer/ConstantPool.java
*
/opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/Opcodes.java
* /opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-
jar/org/objectweb/asm/util/CheckClassAdapter.java
* /opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-
jar/org/objectweb/asm/signature/SignatureVisitor.java
```

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```

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```
*/
```

```
/**
```

```
* Creates a new {@link AnalyzerAdapter}. Subclasses must not use this
```

```
* constructor. Instead, they must use the
```

```
* {@link #AnalyzerAdapter(int, String, int, String, String, MethodVisitor)}
```

```
* version.
```

```
*
```

```
* @param owner
```

```
*
```

```

    the owner's class name.
* @param access
*     the method's access flags (see { @link Opcodes }).
* @param name
*     the method's name.
* @param desc
*     the method's descriptor (see { @link Type Type }).
* @param mv
*     the method visitor to which this adapter delegates calls. May
*     be <tt>null</tt>.
* @throws IllegalStateException
*     If a subclass calls this constructor.
*/

```

Found in path(s):

```

* /opt/cola/permits/1135863767_1613617914.89/0/asm-5-0-4-sources-6-
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annotations.properties

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frames.properties

\* /opt/cola/permits/1135863767\_1613617914.89/0/asm-5-0-4-sources-6-jar/org/objectweb/asm/optimizer/shrink-  
resize.properties

\*

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signatures.properties

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jar/org/objectweb/asm/optimizer/shrink.properties

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writer.properties

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## 1.65 findutils 4.8.0-1

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## 1.68 libidn 2.3.0-5

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man/sha1.3

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include/bsd/err.h  
include/bsd/stdlib.h  
include/bsd/sys/param.h  
include/bsd/unistd.h  
src/bsd\_getopt.c  
src/err.c  
src/fgetln.c  
src/progname.c

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include/bsd/sys/bitstring.h  
include/bsd/sys/queue.h  
include/bsd/sys/time.h  
include/bsd/timeconv.h  
include/bsd/vis.h  
man/bitstring.3bsd  
man/errc.3bsd  
man/explicit\_bzero.3bsd  
man/fgetln.3bsd  
man/fgetwln.3bsd  
man/fpurge.3bsd  
man/funopen.3bsd  
man/getbsize.3bsd  
man/heapsort.3bsd  
man/nlist.3bsd  
man/pwcache.3bsd  
man/queue.3bsd

man/radixsort.3bsd  
man/reallocarray.3bsd  
man/reallocf.3bsd  
man/setmode.3bsd  
man/strmode.3bsd  
man/strnstr.3bsd  
man/strtoi.3bsd  
man/strtou.3bsd  
man/unvis.3bsd  
man/vis.3bsd  
man/wcsncpy.3bsd  
src/getbsize.c  
src/heapsort.c  
src/merge.c  
src/nlist.c  
src/pwcache.c  
src/radixsort.c  
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man/fmtcheck.3bsd

man/humanize\_number.3bsd

man/stringlist.3bsd

man/timeval.3bsd

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man/flopen.3bsd

man/getpeereid.3bsd

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man/readpassphrase.3bsd

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src/arc4random.c

src/arc4random\_linux.h

src/arc4random\_openbsd.h

src/arc4random\_uniform.c

src/arc4random\_unix.h

src/arc4random\_win.h

src/closefrom.c

src/freezero.c

src/getentropy\_aix.c

src/getentropy\_bsd.c

src/getentropy\_hpux.c

src/getentropy\_hurd.c

src/getentropy\_linux.c

src/getentropy\_osx.c

src/getentropy\_solaris.c

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src/readpassphrase.c

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```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/NullsLastOrdering.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/Sets.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/ForwardingMap.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/ForwardingObject.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/AbstractMultiset.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/TreeMultiset.java
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jar/com/google/common/collect/ExplicitOrdering.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/ForwardingSet.java
```

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/EnumHashMap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingSortedSet.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Maps.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ReverseNaturalOrdering.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/HashMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ConcurrentHashMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ReverseOrdering.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractSetMultimap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SortedSetMultimap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ClassToInstanceMap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RegularImmutableSet.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Multimaps.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/BiMap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/LinkedHashMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Synchronized.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/package-info.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ArrayListMultimap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingConcurrentMap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Multisets.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/NullsFirstOrdering.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingListIterator.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Iterables.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-

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jar/com/google/common/collect/ForwardingMapEntry.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/TreeMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/AbstractIterator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/AbstractSortedSetMultimap.java  
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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ForwardingIterator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/MapDifference.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/Lists.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/LinkedListMultimap.java  
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jar/com/google/common/collect/AbstractMapBasedMultiset.java  
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jar/com/google/common/collect/CompoundOrdering.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Multimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/MutableClassToInstanceMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Iterators.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractListMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableSet.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/UsingToStringOrdering.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ComparatorOrdering.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ListMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ByFunctionOrdering.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingQueue.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/LinkedHashMultimap.java  
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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Interner.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingSortedMap.java

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\* This following method is a modified version of one found in

\* <http://gee.cs.oswego.edu/cgi-bin/viewcvs.cgi/jsr166/src/test/tck/AbstractExecutorServiceTest.java?revision=1.30>

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/FakeTimeLimiter.java  
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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/Futures.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/PatternFilenameFilter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/FuturesGetChecked.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/GwtFluentFutureCatchingSpecialization.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/FluentFuture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/UncheckedTimeoutException.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/annotations/VisibleForTesting.java  
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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/TypeToken.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/TimeLimiter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/GwtFuturesCatchingSpecialization.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AbstractTransformFuture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/SimpleTimeLimiter.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/CollectionFuture.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/AppendableWriter.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/AbstractUndirectedNetworkConnections.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RangeGwtSerializationDependencies.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/DirectedMultiNetworkConnections.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/ValueGraphBuilder.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/NetworkBuilder.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/AbstractNetwork.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/ValueGraph.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/MapIteratorCache.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/UndirectedGraphConnections.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/StandardMutableGraph.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/AbstractGraphBuilder.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Comparators.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/EndpointPairIterator.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/HashMultimapGwtSerializationDependencies.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/GraphConstants.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/LinkedHashMultimapGwtSerializationDependencies.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/StandardValueGraph.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/DirectedNetworkConnections.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/GraphBuilder.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/graph/MultiEdgesConnecting.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-

jar/com/google/common/graph/MapRetrievalCache.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/AbstractDirectedNetworkConnections.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/StandardNetwork.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMultisetGwtSerializationDependencies.java  
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jar/com/google/common/graph/EdgesConnecting.java  
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jar/com/google/common/graph/ImmutableValueGraph.java  
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jar/com/google/common/graph/EndpointPair.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/StandardMutableNetwork.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/StandardMutableValueGraph.java  
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jar/com/google/common/graph/ForwardingValueGraph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/AbstractGraph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/MutableValueGraph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/DirectedGraphConnections.java  
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jar/com/google/common/graph/UndirectedMultiNetworkConnections.java  
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jar/com/google/common/graph/ElementOrder.java  
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\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/FinalizableSoftReference.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/eventbus/DeadEvent.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/Flushables.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/Files.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/LineReader.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/eventbus/AllowConcurrentEvents.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/FinalizableReferenceQueue.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Throwables.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Suppliers.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Predicates.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Charsets.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/CharStreams.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/FinalizableReference.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/eventbus/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/AbstractIterator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-

jar/com/google/common/base/Predicate.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/primitives/Primitives.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/EnumMultiset.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/AbstractFuture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Function.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/DirectExecutor.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/ByteStreams.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/CountingOutputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/ExecutionList.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Preconditions.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/package-info.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/ListenableFuture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/LittleEndianDataInputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/MultiInputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/Interners.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/CountingInputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/Closeables.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/eventbus/EventBus.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/eventbus/Subscribe.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/FinalizablePhantomReference.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/eventbus/AsyncEventBus.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Functions.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Defaults.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/LittleEndianDataOutputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Objects.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/FinalizableWeakReference.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/LineBuffer.java

\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Supplier.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/HashBiMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/Resources.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Platform.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Range.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/UnmodifiableIterator.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/thirdparty/publicsuffix/PublicSuffixPatterns.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/EmptyImmutableListMultimap.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableMapEntrySet.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-

jar/com/google/common/collect/Tables.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/StandardTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/Serialization.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMapValues.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableBiMap.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/StandardRowSortedTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableCollection.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMultiset.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableSortedSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/RegularImmutableMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/RegularImmutableBiMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableListMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/PeekingIterator.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/Table.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableEntry.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/Collections2.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/TreeBasedTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/HashBasedTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableMapKeySet.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/CollectPreconditions.java  
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```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/primitives/Platform.java
```

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 */
```

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```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/Queues.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/LongMath.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/ForwardingListeningExecutorService.java
*
 /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/RemovalListener.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/AbstractScheduledService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
```



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jar/com/google/common/util/concurrent/AtomicLongMap.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/Funnels.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Ticker.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/RegularImmutableMultiset.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/Hasher.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/MessageDigestHashFunction.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/AbstractSortedMultiset.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/BigIntegerMath.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/HashCode.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Enums.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/WrappingExecutorService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/package-info.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/IntMath.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Optional.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/DoubleUtils.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/primitives/ParseRequest.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/BloomFilterStrategies.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/AbstractListeningExecutorService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/reflect/TypeParameter.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/BoundType.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/Weigher.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/CacheBuilderSpec.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/RegularContiguousSet.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/Murmur3\_32HashFunction.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/CycleDetectingLockFactory.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/RemovalNotification.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/HostAndPort.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/HashFunction.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/AbstractNonStreamingHashFunction.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/AbstractCache.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/UnsignedInts.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/Uninterruptibles.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingExecutorService.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/UnsignedLong.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/RemovalCause.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Present.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/Crc32cHashFunction.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/Cache.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/PrimitiveSink.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/MathPreconditions.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/AbstractStreamingHasher.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ListeningScheduledExecutorService.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/UncheckedExecutionException.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/UnsignedInteger.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/Funnel.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/CacheStats.java

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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/RemovalListeners.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/MediaType.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/AbstractLoadingCache.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/CacheLoader.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/PairwiseEquivalence.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/Murmur3\_128HashFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ExecutionError.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/HashingOutputStream.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/AbstractHasher.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/LoadingCache.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/BloomFilter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/UnsignedLongs.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/Types.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AsyncFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/FunctionalEquivalence.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/package-info.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/HttpHeaders.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/Hashing.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/EmptyContiguousSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/DoubleMath.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/DescendingImmutableSortedMultiset.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/FutureCallback.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-

jar/com/google/common/collect/TreeRangeSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/cache/ForwardingLoadingCache.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/cache/ForwardingCache.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/hash/AbstractCompositeHashFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Absent.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/GwtTransient.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/ImmutableLongArray.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/AbstractHashFunction.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingCondition.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/ImmutableIntArray.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/ImmutableDoubleArray.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingLock.java

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  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RowSortedTable.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/UnmodifiableListIterator.java
  - \*
  - /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/MinMaxPriorityQueue.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractSequentialIterator.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingSetMultimap.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingImmutableCollection.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SortedMapDifference.java
  - \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingSortedSetMultimap.java
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- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/IndexedImmutableSet.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/BaseImmutableMultimap.java

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jar/com/google/common/escape/Escapers.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/RegularImmutableTable.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/MapMakerInternalMap.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/annotations/GwtCompatible.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/net/HostSpecifier.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/LocalCache.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/AbstractService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/primitives/SignedBytes.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/DenseImmutableTable.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/ForwardingFluentFuture.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/CacheBuilder.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/net/UrlEscapers.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/primitives/UnsignedBytes.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Platform.java
```

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingListenableFuture.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/SettableFuture.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/LineProcessor.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/InternetDomainName.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/ArrayBasedEscaperMap.java  
 \*  
 /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Cut.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/ArrayBasedUnicodeEscaper.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/ReferenceEntry.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/Callables.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AbstractIdleService.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SparseImmutableTable.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AbstractExecutionThreadService.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/JdkFutureAdapters.java  
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 /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/ByteProcessor.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/ByteArrayDataOutput.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/Platform.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/TypeResolver.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingFuture.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/html/HtmlEscapers.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/ArrayBasedCharEscaper.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/MapMaker.java  
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 /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/Service.java  
 \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-



jar/com/google/common/xml/XmlEscapers.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/Splitter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/io/ByteArrayDataInput.java  
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jar/com/google/common/base/PatternCompiler.java  
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jar/com/google/common/base/JdkPattern.java  
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/CommonMatcher.java  
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 *  
 * As of 2010/06/11, this method is identical to the (package private) hash method in OpenJDK 7's  
 * java.util.HashMap  
class.  
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\*/  
/\*\*  
\* Holder for web specializations of methods of { @code Floats }. Intended to be empty for regular  
\* version.  
\*/

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jar/com/google/common/primitives/FloatsMethodsForWeb.java  
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/\*\*

\* Returns an array containing all of the elements in the specified collection. This method  
\* returns the elements in the order they are returned by the collection's iterator. The returned  
\* array is "safe" in that no references to it are maintained by the collection. The caller is  
\* thus free to modify the returned

array.

\*

\* <p>This method assumes that the collection size doesn't change while the method is running.

\*

\* <p>TODO(kevinb): support concurrently modified collections?

\*

\* @param c the collection for which to return an array of elements

\*/

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jar/com/google/common/util/concurrent/ClosingFuture.java
 * /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/graph/AbstractBaseGraph.java
 * /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/ObjectCountHashMap.java
 *
 /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/graph/BaseGraph.java
 * /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/ObjectCountLinkedHashMap.java
 * /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/graph/Traverser.java
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 */
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/BigDecimalMath.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/Java8Compatibility.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/OverflowAvoidingLockSupport.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/ToDoubleRounder.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/io/Java8Compatibility.java
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```

```
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*/
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/TrustedListenableFutureTask.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/eventbus/Subscriber.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/math/Quantiles.java
*
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/MoreObjects.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/ListenerCallQueue.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/eventbus/Dispatcher.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/eventbus/SubscriberRegistry.java
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```

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*/
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/graph/package-info.java
```

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```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/IgnoreJRERequirement.java
```

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\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/xml/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/AbstractByteHasher.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/package-info.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/SmoothRateLimiter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/CartesianList.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/LongAddable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/TypeToInstanceMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/TypeCapture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/LinearTransformation.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/StatsAccumulator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableRangeMap.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredKeyMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/CharSource.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/html/package-info.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/RateLimiter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/LongAddables.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/Stats.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/ByteSink.java  
\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/Closer.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/CharSink.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/ClassPath.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/ImmutableTypeToInstanceMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/Element.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableRangeSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/LongAddable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/AbstractInvocationHandler.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/Invokable.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/SipHashFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/Parameter.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/FileWriteMode.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/PairedStatsAccumulator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/ByteSource.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/reflect/MutableTypeToInstanceMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ListenableScheduledFuture.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/BaseEncoding.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/ChecksumHashFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ServiceManager.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/StandardSystemProperty.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/math/PairedStats.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/cache/LongAddables.java  
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 */
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/VerifyException.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Verify.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/FilteredMultimapValues.java
*
 /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/io/CharSequenceReader.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/reflect/TypeVisitor.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/AbstractTable.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/eventbus/SubscriberExceptionHandler.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/WrappingScheduledExecutorService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/eventbus/SubscriberExceptionContext.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/thirdparty/publicsuffix/PublicSuffixType.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Utf8.java
*
 /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/HashingInputStream.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/Runnables.java
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*/
/*
* This method was rewritten in Java from an intermediate step of the Murmur hash function in
* http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the
* following header:
*
* MurmurHash3 was written by Austin Appleby, and is placed in the public domain. The author
* hereby
disclaims copyright to this source code.
*/
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/collect/Hashing.java
```

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```
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* Written by Doug Lea with assistance from members of JCP JSR-166
* Expert Group and released to the public domain, as explained at
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*/
```

Found in path(s):

```
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/Striped64.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/cache/LongAdder.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/AtomicDoubleArray.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/Striped64.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/hash/LongAdder.java
```

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```
/*
```

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\*/

/\*\*

\* Holder for web specializations of methods of { @code Ints }. Intended to be empty for regular

\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/primitives/IntsMethodsForWeb.java

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Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableEnumSet.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ArrayTable.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableClassToInstanceMap.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ComparisonChain.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableSortedSetFauxverideShim.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableSortedMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/DiscreteDomain.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableAsList.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SingletonImmutableTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/EmptyImmutableSetMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractIndexedListIterator.java  
\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RegularImmutableSortedSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RegularImmutableList.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingTable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ComputationException.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableSetMultimap.java  
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/\*\*

\* Outer class that exists solely to let us write { @code Partially.GwtIncompatible } instead of plain  
\* { @code GwtIncompatible }. This is more accurate for { @link Futures#catching }, which is available

\* under GWT but with a slightly different signature.  
\*  
\* <p>We can't use { @code PartiallyGwtIncompatible } because then the GWT compiler  
wouldn't recognize  
\* it as a { @code GwtIncompatible } annotation. And for { @code Futures.catching }, we need the GWT  
\* compiler to autostrip the normal server method in order to expose the special, inherited GWT  
\* version.  
\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/Partially.java

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\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/hash/ImmutableSupplier.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/util/concurrent/ExecutionSequencer.java

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\*/

/\*\*

\* Holder for extra methods of {@code Objects} only in web. Intended to be empty for regular  
\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/base/ExtraObjectsMethodsForWeb.java

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\*/

/\*

\* This method was rewritten in Java from an intermediate step of the Murmur hash function in  
\* <http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp>, which contained the  
\* following header:

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jar/com/google/common/base/SmallCharMatcher.java

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- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/TransformedIterator.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingNavigableSet.java
- \*
- /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/CompactHashSet.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/CompactLinkedHashMap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingDeque.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/EvictingQueue.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredMultimap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredKeyListMultimap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingBlockingDeque.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/TreeRangeMap.java
- \*
- /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableEnumMap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredSetMultimap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/TreeTraverser.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingImmutableMap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/DescendingImmutableSortedSet.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RangeMap.java
- \* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/UnmodifiableSortedMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredEntryMultimap.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/TransformedListIterator.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SortedMultisetBridge.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredEntrySetMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractNavigableMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FilteredKeySetMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/DescendingMultiset.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingBlockingDeque.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractSortedKeySortedSetMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AllEqualOrdering.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RegularImmutableAsList.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingNavigableMap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingImmutableSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractMultimap.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/CompactLinkedHashSet.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingImmutableList.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/GeneralRange.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/Count.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RangeSet.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ForwardingSortedMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SortedIterables.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/AbstractRangeSet.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ImmutableSortedMultisetFauxverideShim.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/RegularImmutableSortedMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/SortedIterable.java

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\* Holder for web specializations of methods of { @code Shorts}. Intended to be empty for regular

\* version.

\*/

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 */
/**
 * Not supported. <b>You are attempting to create a map that may contain a non-{@code Comparable}
 * key.</b> Proper calls will resolve to the version in {@code ImmutableSortedMap}, not this dummy
 * version.
 *
 * @throws UnsupportedOperationException always
 * @deprecated <b>Pass a key of type {@code Comparable}
 * to use {@link
 * ImmutableSortedMap#of(Comparable, Object)}.</b>
 */
```

Found in path(s):

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/ImmutableSortedMapFauxverideShim.java  
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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/LittleEndianByteArray.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AsyncCallable.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/hash/FarmHashFingerprint64.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/ReaderInputStream.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/AggregateFutureState.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/CombinedFuture.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/InterruptibleTask.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/ConsumingQueueIterator.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/Platform.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Shorts.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Stopwatch.java

\*

/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Floats.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/thirdparty/publicsuffix/TrieParser.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ListenableFutureTask.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/Joiner.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Doubles.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Chars.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/FileBackedOutputStream.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Bytes.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/SequentialExecutor.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Longs.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/CharMatcher.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/base/internal/Finalizer.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Booleans.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/Ints.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/UnicodeEscaper.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/io/MultiReader.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/InetAddresses.java  
\*  
/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/escape/Escaper.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/collect/FluentIterable.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/PercentEscaper.java  
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jar/com/google/common/collect/SortedMultiset.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/SortedMultisets.java

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jar/com/google/common/reflect/Reflection.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/ImmutableGraph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/SuccessorsFunction.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/PredecessorsFunction.java  
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/opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/Graphs.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/Graph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/MutableGraph.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/collect/TopKSelector.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/MutableNetwork.java  
\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-  
jar/com/google/common/graph/ImmutableNetwork.java  
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\* Holder for web specializations of methods of { @code Doubles}. Intended to be empty for regular  
\* version.

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/primitives/package-info.java

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\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/net/package-info.java

\* /opt/cola/permits/1136647774\_1613845914.79/0/guava-30-0-android-sources-jar/com/google/common/util/concurrent/ForwardingBlockingQueue.java

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\*

```
/opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/Atomics.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/base/Ascii.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/ListeningExecutorService.java
* /opt/cola/permits/1136647774_1613845914.79/0/guava-30-0-android-sources-
jar/com/google/common/util/concurrent/Monitor.java
```

## 1.76 commons-lang3 3.3.2

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 */
/**
 * A registry for service provider objects.
 * <p/>
 * Service providers are looked up from the classpath, under the path
 * {@code META-INF/services/}<full-class-name>.
```



```

* <p/>
* For example:<br/>
* { @code META-INF/services/com.company.package.spi.MyService }.
* <p/>
* The file should contain a list of fully-qualified concrete
class names,
* one per line.
* <p/>
* The <em>full-class-name</em> represents an interface or (typically) an
* abstract class, and is the same class used as the category for this registry.
* Note that only one instance of a concrete subclass may be registered with a
* specific category at a time.
* <p/>
* <small>Implementation detail: This class is a clean room implementation of
* a service registry and does not use the proprietary { @code sun.misc.Service }
* class that is referred to in the <em>JAR File specification</em>.
* This class should work on any Java platform.
* </small>
*
* @author <a href="mailto:harald.kuhr@gmail.com">Harald Kuhr</a>
* @version $Id: com/twelvemonkeys/util/service/ServiceRegistry.java#2 $
* @see RegisterableService
* @see <a href="http://java.sun.com/j2se/1.3/docs/guide/jar/jar.html#Service%20Provider">JAR File
Specification</a>
*/

```

Found in path(s):

```

* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/service/ServiceRegistry.java

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\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/lang/ReflectUtil.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/DuplicateHandler.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/TokenIterator.java

\*

/opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/Time.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/regex/RegexTokenIterator.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/WeakWeakMap.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/regex/WildcardStringParser.java

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\*

/opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/LinkedSet.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/convert/PropertyConverter.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/convert/DefaultConverter.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/FilterIterator.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/ExpiringMap.java

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-

```

jar/com/twelvemonkeys/lang/BeanUtil.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/NoAvailableConverterException.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/lang/SystemUtil.java
*
/opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/LinkedMap.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/StringTokenIterator.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/TimeFormat.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/lang/Platform.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/AbstractTokenIterator.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/MissingTypeException.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/service/ServiceConfigurationError.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/lang/StringUtil.java
*
/opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/Converter.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/TimeoutMap.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/ConverterImpl.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/BeanMap.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/AbstractDecoratedMap.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/service/RegisterableService.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/LRUMap.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/LRUHashMap.java
*
/opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/ConversionException.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/CollectionUtil.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/TypeMismatchException.java
* /opt/cola/permits/1136869015_1613965041.22/0/common-lang-3-3-2-sources-2-
jar/com/twelvemonkeys/util/convert/DateConverter.java

```

\* /opt/cola/permits/1136869015\_1613965041.22/0/common-lang-3-3-2-sources-2-jar/com/twelvemonkeys/util/IgnoreCaseMap.java

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The End

# 1.81 tar 1.34+dfsg-1

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set xrange [0:]

set terminal pngcairo font 'Sans, 8' lw 1 size 1400,1024

set xtics rotate by -45

set style histogram errorbars gap 2 lw 1

set style fill solid border -1

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Upstream-Name: liblz4

Upstream-Contact: Yann Collet <Cyan4973@github.com>

Source: <https://github.com/lz4/lz4>

Files: \*

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## 1.86 python 3.9.2

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All

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| Release        | Derived from | Year      | Owner      | GPL-compatible? (1) |
|----------------|--------------|-----------|------------|---------------------|
| 0.9.0 thru 1.2 |              | 1991-1995 | CWI        | yes                 |
| 1.3 thru 1.5.2 | 1.2          | 1995-1999 | CNRI       | yes                 |
| 1.6            | 1.5.2        | 2000      | CNRI       | no                  |
| 2.0            | 1.6          | 2000      | BeOpen.com | no                  |
| 1.6.1          | 1.6          | 2001      | CNRI       | yes (2)             |
| 2.1            | 2.0+1.6.1    | 2001      | PSF        | no                  |
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| 2.1.1          | 2.1+2.0.1    | 2001      | PSF        | yes                 |
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# 1.87 asm 9.1

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* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-  
jar/org/objectweb/asm/signature/SignatureWriter.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/TypePath.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-  
jar/org/objectweb/asm/RecordComponentVisitor.java  
*  
/opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-  
jar/org/objectweb/asm/signature/SignatureReader.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Context.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/TypeReference.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/FieldVisitor.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-  
jar/org/objectweb/asm/MethodTooLargeException.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ModuleVisitor.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-  
jar/org/objectweb/asm/ClassTooLargeException.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ClassWriter.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Attribute.java  
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/opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ClassVisitor.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Handler.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/FieldWriter.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Type.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/AnnotationWriter.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Edge.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/MethodWriter.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ByteVector.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Constants.java  
* /opt/cola/permits/1146079232_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ConstantDynamic.java
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/opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Label.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Handle.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Opcodes.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ClassReader.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/AnnotationVisitor.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/signature/SignatureVisitor.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Frame.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/SymbolTable.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/ModuleWriter.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/MethodVisitor.java  
\*  
/opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/RecordComponentWriter.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/Symbol.java  
\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/CurrentFrame.java  
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\* /opt/cola/permits/1146079232\_1616457494.45/0/asm-9-1-sources-jar/org/objectweb/asm/package.html

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```
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/config/TraceParams.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/export/SpanData.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/tags/Tagger.java
*
/opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/SpanBuilder.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/stats/Aggregation.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
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* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/CurrentSpanUtils.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/Sampler.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/tags/propagation/TagPropagationComponent.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/common/Clock.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/internal/package-info.java
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\*  
/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/propagation/TagContextSerializationException.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/export/RunningSpanStore.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/InternalUtils.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/samplers/Samplers.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/Measure.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/TraceOptions.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/propagation/TextFormat.java  
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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/StatsRecorder.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/EndSpanOptions.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/unsafe/ContextUtils.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/StatsCollectionState.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/TimeUtils.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/TagContextBuilder.java  
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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/NoopStats.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/internal/ZeroTimeClock.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/samplers/AlwaysSampleSampler.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/propagation/TagContextBinarySerializer.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/Tags.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/Tag.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-

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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-  
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info.java  
\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/Link.java  
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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-  
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jar/io/opencensus/trace/SpanId.java
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jar/io/opencensus/common/ExperimentalApi.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/samplers/ProbabilitySampler.java
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*/
/**
* API for resource information population.
*
* <p>The resource library primarily defines a type "Resource" that captures information about the
* entity for which stats or traces are recorded. For example, metrics exposed by a Kubernetes
* container can be linked to a resource that specifies the cluster, namespace, pod,
* and container
* name.
*
* <p>Two environment variables are used to populate resource information:
*
* <ul>
* <li>OC_RESOURCE_TYPE: A string that describes the type of the resource prefixed by a domain
* namespace. Leading and trailing whitespaces are trimmed. e.g. "kubernetes.io/container".
* <li>OC_RESOURCE_LABELS: A comma-separated list of labels describing the source in more detail,
* e.g. "key1=val1,key2=val2". The allowed character set is appropriately constrained.
* </ul>
*
* <p>Type, label keys, and label values MUST contain only printable ASCII (codes between 32 and
* 126, inclusive) and less than 256 characters. Type and label keys MUST have a length greater than
* zero. They SHOULD start with a domain name and separate hierarchies with / characters, e.g.
* k8s.io/namespace/name.
*
* <p>WARNING: Currently all the public classes under this package are marked as {@link
* io.opencensus.common.ExperimentalApi}. DO NOT USE except for experimental
```



purposes.

\*

\* <p>Please see

\* <https://github.com/census-instrumentation/opencensus-specs/blob/master/resource/Resource.md> for

\* more details.

\*/

Found in path(s):

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/resource/package-info.java

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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/TagMetadata.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/data/Exemplar.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/LongCumulative.java

\*

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/data/package-info.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/DoubleCumulative.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/DerivedLongCumulative.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/tags/propagation/TagContextTextFormat.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/data/AttachmentValue.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/MetricOptions.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/DerivedDoubleCumulative.java

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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/DerivedDoubleGauge.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/MessageEvent.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/ServerStats.java

\*

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/export/MetricProducer.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/BigendianEncoding.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/ToDoubleFunction.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/Tracestate.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/LabelValue.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/export/Value.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/DoubleGauge.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/ServerStatsFieldEnums.java

\*

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/internal/Utils.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-

```

jar/io/opencensus/common/ServerStatsEncoding.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/common/package-info.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/ExportComponent.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/BaseMessageEvent.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/resource/Resource.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/Point.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/MetricProducerManager.java
*
/opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/common/ToLongFunction.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/internal/DefaultVisibilityForTesting.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/internal/BaseMessageEventUtils.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/Metrics.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/LongGauge.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/LabelKey.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/MetricsComponent.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/Summary.java
*
/opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/package-
info.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/MetricRegistry.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/DerivedLongGauge.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/MetricDescriptor.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/TimeSeries.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/metrics/export/Distribution.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/package-
info.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/common/ServerStatsDeserializationException.java
*

```

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/export/Metric.java

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\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/Measurement.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/Stats.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/TraceId.java

\*

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/Status.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/Duration.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/AttributeValue.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/internal/Provider.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/Function.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/NetworkEvent.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/TraceComponent.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/trace/Tracing.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/stats/ViewData.java

\*

/opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/common/Timestamp.java

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-

```
jar/io/opencensus/trace/Span.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/Tracer.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/stats/View.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/SpanContext.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/trace/BlankSpan.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/common/OpenCensusLibraryInformation.java
* /opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/stats/ViewManager.java
*
/opt/cola/permits/1148044123_1635875831.74/0/opencensus-api-0-28-0-sources-
jar/io/opencensus/internal/StringUtils.java
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*/
/**
* This package describes the Metrics data model. Metrics are a data model for what stats exporters
* take as input. This data model may eventually become the wire format for metrics.
*
* <p>WARNING: Currently all the public classes under this package are marked as { @link
* io.opencensus.common.ExperimentalApi}. The classes
* and APIs under { @link io.opencensus.metrics }
* are likely to get backwards-incompatible updates in the future. DO NOT USE except for
* experimental purposes.
*
* <p>Please see
* https://github.com/census-instrumentation/opencensus-specs/blob/master/stats/Metrics.md and
* https://github.com/census-instrumentation/opencensus-
proto/blob/master/opencensus/proto/stats/metrics/metrics.proto
* for more details.
```

\*/

Found in path(s):

\* /opt/cola/permits/1148044123\_1635875831.74/0/opencensus-api-0-28-0-sources-jar/io/opencensus/metrics/package-info.java

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

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| Release        | Derived from | Year      | Owner      | GPL-compatible? (1) |
|----------------|--------------|-----------|------------|---------------------|
| 0.9.0 thru 1.2 | 1.2          | 1991-1995 | CWI        | yes                 |
| 1.3 thru 1.5.2 | 1.2          | 1995-1999 | CNRI       | yes                 |
| 1.6            | 1.5.2        | 2000      | CNRI       | no                  |
| 2.0            | 1.6          | 2000      | BeOpen.com | no                  |
| 1.6.1          | 1.6          | 2001      | CNRI       | yes (2)             |
| 2.1            | 2.0+1.6.1    | 2001      | PSF        | no                  |
| 2.0.1          | 2.0+1.6.1    | 2001      | PSF        | yes                 |
| 2.1.1          | 2.1+2.0.1    | 2001      | PSF        | yes                 |
| 2.1.2          | 2.1.1        | 2002      | PSF        | yes                 |
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| 1.6            | 1.5.2        | 2000      | CNRI       | no                  |
| 2.0            | 1.6          | 2000      | BeOpen.com | no                  |
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# 1.103 gdbm 1.19-2

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```
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under certain conditions; type `show c' for details.
```

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## 1.104 e2fsprogs 1.46.2-2

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```
#  
# This is a Makefile stub which handles the creation of BSD shared  
# libraries.  
#  
# In order to use this stub, the following makefile variables must be defined.  
#  
# BSDLIB_VERSION = 1.0  
# BSDLIB_IMAGE = libce  
# BSDLIB_MYDIR = et  
# BSDLIB_INSTALL_DIR = $(SHLIBDIR)  
#
```

```
all:: image
```

```
real-subdirs:: Makefile
```

```
@echo " MKDIR pic"
```

```
@mkdir -p pic
```

```
BSD_LIB = $(BSDLIB_IMAGE).so.$(BSDLIB_VERSION)
```

```
BSDLIB_PIC_FLAG = -fpic
```

```
image: $(BSD_LIB)
```

```
$(BSD_LIB): $(OBJS)
```

```
(cd pic; ld -Bshareable -o $(BSD_LIB) $(LD_FLAGS_SHLIB) $(OBJS))
```

```
$(MV) pic/$(BSD_LIB) .
```

```
$(RM) -f ../$(BSD_LIB)
```

```
(cd ..; $(LN) $(LINK_BUILD_FLAGS) \
```

```
`echo $(my_dir) | sed -e 's;lib/;;' /$(BSD_LIB) $(BSD_LIB))
```

```
install-shlibs install:: $(BSD_LIB)
```

```
@echo " INSTALL_PROGRAM $(BSDLIB_INSTALL_DIR)/$(BSD_LIB)"
```

```
@$(INSTALL_PROGRAM) $(BSD_LIB) \
```

```
$(DESTDIR)$ (BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
@-$(LD_CONFIG)
```

```
install-strip: install
```

```
install-shlibs-strip:: install-shlibs
```

```
uninstall-shlibs uninstall::
```

```
$(RM) -f $(DESTDIR)$ (BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
clean::
```

```
$(RM)
```

```
-rf pic
```

```
$(RM) -f $(BSD_LIB)
```

```
$(RM) -f ../$(BSD_LIB)
```

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Index: tdbsa/tdb.c

=====

--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/

/\*

- Unix SMB/CIFS implementation.
- + trivial database library - standalone version
  
- trivial database library - private includes
- 
- Copyright (C) Andrew Tridgell           2005
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Gadi Oxman, August 1995

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```

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```
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```

```
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```

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```
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```

```
<signature of Ty Coon>, 1 April 1989
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before you ship. The release schedules for this package are flexible, if you give me enough lead time.

Theodore Ts'o  
23-June-2007

---

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This is the Debian GNU/Linux prepackaged version of the EXT2 file system utilities (e2fsck, mke2fs, etc.). The EXT2 utilities were written by Theodore Ts'o <tytso@mit.edu> and Remy Card <card@masi.ibp.fr>.

Sources were obtained from <http://sourceforge.net/projects/e2fsprogs>

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This package was added to the e2fsprogs debian source package by Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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## 1.105 lombok-utils 1.18.12

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```
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Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
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it
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```

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```
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```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
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Version 3, 29 June 2007

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## 1.113 base-passwd 3.5.51

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## 1.114 libxcrypt 4.4.18-5

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# 1.118 libxxhash0 0.8.0-2

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-----  
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## 1.119 logsave 1.46.2-2

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```
#
# This is a Makefile stub which handles the creation of BSD shared
# libraries.
#
# In order to use this stub, the following makefile variables must be defined.
#
# BSDLIB_VERSION = 1.0
# BSDLIB_IMAGE = libce
# BSDLIB_MYDIR = et
# BSDLIB_INSTALL_DIR = $(SHLIBDIR)
#
```

```
all:: image
```

```
real-subdirs:: Makefile
@echo " MKDIR pic"
@mkdir -p pic
```

```
BSD_LIB = $(BSDLIB_IMAGE).so.$(BSDLIB_VERSION)
BSDLIB_PIC_FLAG = -fpic
```

image: \$(BSD\_LIB)

\$(BSD\_LIB): \$(OBS)

(cd pic; ld -Bshareable -o \$(BSD\_LIB) \$(LD\_FLAGS\_SHLIB) \$(OBS))

\$(MV) pic/\$(BSD\_LIB) .

\$(RM) -f ../\$(BSD\_LIB)

(cd ..; \$(LN) \$(LINK\_BUILD\_FLAGS) \

`echo \$(my\_dir) | sed -e 's/lib/;"/\$(BSD\_LIB) \$(BSD\_LIB))

install-shlibs install:: \$(BSD\_LIB)

@echo " INSTALL\_PROGRAM \$(BSDLIB\_INSTALL\_DIR)/\$(BSD\_LIB)"

@\$(INSTALL\_PROGRAM) \$(BSD\_LIB) \

\$(DESTDIR)\$BSDLIB\_INSTALL\_DIR/\$(BSD\_LIB)

@\$(LDCONFIG)

install-strip: install

install-shlibs-strip:: install-shlibs

uninstall-shlibs uninstall::

\$(RM) -f \$(DESTDIR)\$BSDLIB\_INSTALL\_DIR/\$(BSD\_LIB)

clean::

\$(RM)

-rf pic

\$(RM) -f \$(BSD\_LIB)

\$(RM) -f ../\$(BSD\_LIB)

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Index: tdbsa/tdb.c

-----  
--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/

/\*

- Unix SMB/CIFS implementation.
- + trivial database library - standalone version

- trivial database library - private includes

-

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Theodore Ts'o  
23-June-2007

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This package was added to the e2fsprogs debian source package by  
Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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## 1.122 libbrotli1 1.0.9-2+b2

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## 1.123 libpsl5 0.21.0-1.2

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psl-make-dafsa and lookup\_string\_in\_fixed\_set.c.

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## 1.124 libnghttp2-14 1.43.0-1

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set yrange [0:]

set terminal pngcairo font 'Sans, 8' lw 1 size 1400,1024

set xtics rotate by -45

set style histogram errorbars gap 2 lw 1

set style fill solid border -1

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# 1.125 librtmp 2.4+20151223.gitfa8646d.1-2+b2

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Version 2.1, February 1999

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```
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```

```
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## 1.128 libgdbm6 1.19-2

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# 1.130 libnpt0 1.6-3

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That's all there is to it!

## 1.131 libfido2 1.6.0-2

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# 1.133 make 4.3-4.1

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## 1.136 binutils 2.35.2-2

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## 1.138 pkg-config 0.29.2-1

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# 1.139 mpplib 1.2.0-1

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```
#
# These procedures come from the source code of GFun.
#
getname:=proc(yofz::function(name), y, z)
y:=op(0,yofz);
if type(y,'procedure') then error `not an unassigned name`,y fi;
z:=op(yofz)
end proc:
```

```
#
# returns the smallest i such that u(n+i) appears in a recurrence
#
minindex := proc(rec,u,n)
min(op(map(op,indets(rec,'specfunc'('linear'(n),u)))))-n
end proc:
```

```
#
# returns the largest i such that u(n+i) appears in a recurrence
```

```

#
maxindex := proc(rec,u,n)
  max(op(map(op,indets(rec,'specfunc'('linear'(n),u)))))-n
end proc:

#
# A recurrence of the form  $a(n+d) = p(n)/q(n) a(n)$  is represented through a record:
# OneTermRecurrence : record(order, numerator, denominator)
#
`type/OneTermRecurrence` := 'record(order, numerator, denominator)':

#
#checkOneTermRecurrence
# Input: a recurrence rec (either with or without initial conditions).
#   If it has initial conditions, they are ignored.
#   a(n): the name of the sequence and the name of the variable.
#
# Output:
#
# This procedure checks that rec is a recurrence of the form  $a(n+d) = p(n)/q(n) a(n)$ 
# If the check succeeds, it returns the corresponding record. If it fails, an error is
# returned.
#
checkOneTermRecurrence := proc(rec, aofn)::OneTermRecurrence;
local r, d, a, n, term1, term2, res;

getname(aofn, a, n):
if type(rec, 'set') then
  r:=select(has, rec, n);
  if nops(r)>1
    then error `invalid recurrence`, rec
  fi:
  if nops(r)=0
    then error "%1 does not appear in the recurrence", n
  fi:
  r := op(r):
else r:=rec:
fi:
if type(r,`=')
  then r:=op(1,r)-op(2,r)
fi:
if indets(r,'specfunc'('anything',a)) <> indets(r,'specfunc'('linear'(n),a))
  then error "the recurrence contains elements that are not linear in %1", n
fi:
if nops(r) <> 2
  then error "the recurrence contains %1 terms (expected 2)", nops(r)

```

```

fi:
r := subs(n=n-minindex(r, a, n), r):
d := maxindex(r, a, n):

term1 := select(has, r, a(n)):
term2 := select(has, r, a(n+d)):

res := factor( -(term1/a(n)) / (term2/a(n+d)) ):

Record( 'order'=d, 'numerator' = numer(res), 'denominator' = denom(res) )
end proc:

#
# my_factors factorizes p the same way as factors(p) would do except that the constant part is computed
# differently. We assume here that p has integer coefficients, and we want to factorize it over polynomials
# with integer coefficients. my_factors ensures that the factors have integer coefficients.
#
my_factors := proc(p)
local L, c, fact, i, my_c, my_fact, q:
L := factors(p):
c := L[1]: fact := L[2]:
my_c := c: my_fact := []:
for i from 1 to nops(fact) do
q := denom(fact[i][1]):
my_fact := [ op(my_fact), [ fact[i][1]*q, fact[i][2] ] ]:
my_c := my_c / (q^fact[i][2]):
od:
[ my_c, my_fact]:
end proc:

#
# This procedure decomposes a one-term recurrence with the following form:
#  $a(n+d) = c * s1(n)/s1(n+d) * s2(n+d)/s2(n) * p(n)/q(n) * a(n)$ 
#
# Known issue: this procedure assumes that the only variables involved are
# n and x with their usual meaning.
#
decomposeOneTermRecurrence := proc(formalRec::OneTermRecurrence, res_cste, res_s1, res_s2, res_p, res_q)
local p, q, cste, s1, s2, d, L, i, tmp, exponent, r, polyring;
p := formalRec:-numerator:
q := formalRec:-denominator:
d := formalRec:-order:
s1 := 1:
L := op(2, my_factors(p)): # L contains the non trivial factors of p
for i from 1 to nops(L) do
tmp := L[i][1]: exponent := L[i][2]:

```

```

r := gcd(tmp^exponent, subs(n=n-d, q)):
p := quo(p,r,n): q := quo(q, subs(n=n+d, r),n): s1 := s1 * r:
od:

s2 := 1:
L := op(2,my_factors(p)): # L contains the *remaining* non trivial factors of p
for i from 1 to nops(L) do
  tmp := L[i][1]: exponent := L[i][2]:
  r := gcd(tmp^exponent, subs(n=n+d, q)):
  p := quo(p, r, n): q := quo(q, subs(n=n-d, r), n): s2 := s2 * r:
od:

# Finally we look for the constant part (with respect to n) of p/q
cste := op(1, my_factors(p))/op(1, my_factors(q)):
p := p/op(1, my_factors(p)): q :=
q/op(1, my_factors(q)):
polyring := RegularChains[PolynomialRing]([n,x]):
L := op(2, my_factors(p)):
for i from 1 to nops(L) do
  if RegularChains[MainVariable](L[i][1], polyring) = x
  then cste := cste * L[i][1]^L[i][2]: p := quo(p,L[i][1]^L[i][2],x):
  fi:
od:
L := op(2, my_factors(q)):
for i from 1 to nops(L) do
  if RegularChains[MainVariable](L[i][1], polyring) = x
  then cste := cste / L[i][1]^L[i][2]: q := quo(q,L[i][1]^L[i][2],x):
  fi:
od:

res_cste := cste;
res_s1 := s1;
res_s2 := s2;
res_p := simplify(p);
res_q := simplify(q);
end proc:

#
#coeffrecToTermsrec
# Input: a linear recurrence rec (either with or without initial conditions).
#       a(n): the name of the sequence and the name of the variable.
#       x: a value or symbolic name
#
# Output:
# The recurrence satisfied by a(n)*x^n. Note that this recurrence is also denoted by a(n).
# If initial conditions were provided, corresponding initial conditions are computed.
#

```

```

coeffrecToTermsrec
:= proc(rec, aofn, x)
local a,n,L,r,cond,d,i,tmp,c,res;
getname(aofn, a, n):
if type(rec, 'set') then
L := selectremove(has, rec, n):
r := L[1]:
if nops(r)>1
then error `invalid recurrence`, rec
fi:
if nops(r)=0
then error "%1 does not appear in the recurrence", n
fi:
r := op(r):
cond := L[2]:
else r := rec:
fi:
d := maxindex(r, a, n):
L := indets(r,'specfunc'('linear'(n),a)):
if indets(r,'specfunc'('anything',a)) <> L
then error "the recurrence contains elements that are not linear in %1", n
fi:
L := map(op, L):
for i from 1 to nops(L) do
r := subs(a(op(i,L))=a(op(i,L))*x^(d-op(i,L)+n), r):
od:
if cond<>'cond' then
c := {}:
for i from 1 to nops(cond) do
tmp := op(i, cond): # tmp should have the form 'a(k) = cste'
if not type(tmp, "=") then error "Invalid initial condition: %1", tmp: fi:
L := selectremove(has, {op(tmp)}, a):
if (nops(L[1]) <> 1) or (nops(L[2])<>1)
then error "Invalid initial condition: %1", tmp:
fi:
tmp := op(1, L[1]): # tmp has the form 'a(k)'
c := {op(c), tmp = op(1, L[2])*x^op(tmp)}:
od:
res := {r, op(c)}:
else res := r:
fi:
res:
end proc:

```

#

# This procedure removes the conditions of the form  $a(k)=0$  from the initial conditions of rec

# It returns a list  $L = [L1, L2, \dots]$  where  $Li = [k, \text{expr}]$  representing the condition  $a(k)=\text{expr}$ .



```

# Moreover, it asserts that the Li are ordered by increasing k.
#
removeTrivialConditions := proc(rec, aofn)
local a,n,i,L,tmp,c,cond,k:
getname(aofn, a, n):
if not type(rec, 'set') then
error "%1 is not a recurrence with initial conditions", rec
else
L := selectremove(has, rec, n):
cond := L[2]:
if nops(cond)=0
then error "%1 does not contain initial conditions", rec
fi:
fi:
c := []:
for i from 1 to nops(cond) do
tmp := op(i, cond): # tmp should have the form 'a(k) = cste'
if not type(tmp, '=' ) then error
"Invalid initial condition: %1", tmp: fi:
L := selectremove(has, {op(tmp)}, a):
if (nops(L[1]) <> 1) or (nops(L[2])<>1)
then error "Invalid initial condition: %1", tmp:
fi:
if op(1, L[2])<>0 then c := [op(c), [op(op(1, L[1])), op(1, L[2])]]: fi:
od:
# We check that the conditions are ordered by increasing k.
if (nops(c)=0) then return c: fi:
k := c[1][1]:
for i from 2 to nops(c) do
if (c[i][1]<=k)
then error "Unexpected error in removeTrivialConditions: the conditions are not correctly ordered (%1)\n", c
else k := c[i][1]
fi:
od:
c:
end proc:

```

```

#
# findFixpointOfDifferences: takes a set L of integer and returns the smallest set S
# containing L and such that for each i, S[i]-S[i-1] \in S
findFixpointOfDifferences := proc(L)
local res, i:
res := L:
for i from 2 to nops(L) do
res := { op(res), L[i]-L[i-1] }:
od:
if (res=L) then return res else return findFixpointOfDifferences(res) fi:

```

end proc:

```
#
# error_counter functions
# allows one to follow the accumulation of errors in each variable.
# an error_counter is a list of the form [[var1, c1], [var2, c2], ... ]
# where the vari are variable names and the ci indicate how many approximation errors
# are accumulated in vari.
#
#
# This procedure initializes the counter associated with variable var to 1 (and creates it if needed.)
# It returns an up-to-date error_counter.
init_error_counter := proc (var, error_counter)
  local i, res:
  res := error_counter:
  for i from 1 to nops(res) do
    if (res[i][1]=var)
    then res[i][2] := 1:
      return res:
    fi
  od:
  res := [op(res), [var, 1]]:
end:
```

```
#
# This procedure adds a given number to the counter associated with variable var.
# It returns an up-to-date error_counter.
add_to_error_counter := proc (var, n, error_counter)
  local i, res:
  res := error_counter:
  for i from 1 to nops(res) do
    if (res[i][1]=var)
    then res[i][2] := res[i][2]+n:
      return res:
    fi
  od:
  res := [op(res), [var, n]]:
end proc:
```

```
#
# This procedure sets the value of the counter associated with variable var.
# It returns an up-to-date error_counter.
set_error_counter := proc(var, n, error_counter)
  local i,err:
```

```

err := error_counter:
for i from 1 to nops(err) do
  if (err[i][1]=var)
  then err[i][2] := n:
    return err:
  fi
od:
err := [op(err), [var, n]]:
end proc:

#
# This procedure initializes the counter associated to the multiplication of var2 and var3,
# putting the result in variable var1.
# It returns an up-to-date error_counter.
error_counter_of_a_multiplication := proc (var1, var2, var3, error_counter)
local i, res, c2, c3:
c2 := 0: c3 := 0:
for i from 1 to nops(error_counter) do
  if (error_counter[i][1]=var2) then c2 := error_counter[i][2] fi:
  if (error_counter[i][1]=var3) then c3 := error_counter[i][2] fi:
  if (error_counter[i][1]=var1)
  then
    res := [ op(error_counter[1..i-1]), op(error_counter[i+1..nops(error_counter))]]
  ]
  fi:
od:
if (res = 'res') then res := error_counter fi:
res := [op(res), [var1, c2+c3+1]]:
end:

#
# Copies the error counter of var2 into var1
error_counter_on_copy := proc(var1, var2, error_counter)
local i, err, c2:
c2 := 0:
for i from 1 to nops(error_counter) do
  if (error_counter[i][1] = var2) then c2 := error_counter[i][2] fi:
  if (error_counter[i][1] = var1)
  then
    err := [ op(error_counter[1..i-1]), op(error_counter[i+1..nops(error_counter))]]
  ]
  fi:
od:
if (err = 'err') then err := error_counter fi:
if (c2 <> 0) then err := [op(res), [var1, c2]] fi:
end proc:

#

```

```

# Returns the value of the error counter associated to a variable
find_in_error_counter := proc(var, error_counter)
local i:
for i from 1 to nops(error_counter) do
  if (error_counter[i][1] = var) then return error_counter[i][2] fi:
od:
return 0:
end proc:

#
# generate_multiply_rational(fd, var1, var2, r, error_counter, indent) generates code for performing
#
var1 = var2*r in MPFR
# fd is the file descriptor in which the code shall be produced.
# var1 and var2 are strings representing variable names. r is a Maple rational number.
# error_counter is an error_counter (as described above).
# indent is an optional argument. It is a string used to correctly indent the code. It is prefixed to any
# generated line. Hence, if indent=" ", the generated code will be indented by 2 spaces.
# An up-to-date error_counter is returned.
generate_multiply_rational := proc(fd, var1, var2, r, error_counter, indent:= "")
local p,q,err:
err := error_counter:
if (whattype(r)<>'fraction') and (whattype(r)<>'integer')
then error "generate_multiply_rational used with non rational number %1", r: fi:
if (abs(r)=1)
then
  if (var1=var2)
  then
    if (r<>1) then fprintf(fd, "%sMPFR_CHANGE_SIGN (%s);\n", indent, var1) fi:
    return err:
  else
    if (r=1)
    then fprintf(fd, "%smpfr_set (%s, %s, MPFR_RNDN);\n", indent, var1,
var2):
    else fprintf(fd, "%smpfr_neg (%s, %s, MPFR_RNDN);\n", indent, var1, var2):
    fi:
    return error_counter_on_copy(var1, var2, err):
  fi:
fi:
# Now, r is a rational number different from 1.
p := numer(r): q := denom(r):
if (abs(p)<>1)
then
  fprintf(fd, "%smpfr_mul_si (%s, %s, %d, MPFR_RNDN);\n", indent, var1, var2, p):
  err := error_counter_of_a_multiplication(var1, var2, "", err):
  if (q<>1)
  then
    fprintf(fd, "%smpfr_div_si (%s, %s, %d, MPFR_RNDN);\n", indent, var1, var1, q):

```

```

err := error_counter_of_a_multiplication(var1, var1, "", err):
fi:
else
  fprintf(fd, "%smpfr_div_si (%s, %s, %d, MPFR_RNDN);\n", indent, var1, var2, p*q):
  err := error_counter_of_a_multiplication(var1, var2, "", err):
fi:
return err:
end proc:

#
# generate_multiply_poly is the same as generate_multiply_rational but when r is a rational fraction.
# The fraction r must have the form p/q where p and q are polynomials with integer coefficients.
#
# Moreover, the gcd of the coefficients of p must be 1. Idem for q.
# The procedure returned a list [m, d, err] where m is the set of indices k such that
# a mpfr_mul_sik function is needed and idem for d with mpfr_div_sik.
# err is an up-to-date error counter.
generate_multiply_poly := proc(fd, var1, var2, r, error_counter, indent:= "")
local p,q,Lp,Lq,n,i,j,var,required_mulsi,required_divsi, err:
err := error_counter:
required_mulsi := {}:
required_divsi := {}:
p := numer(r): q := denom(r):
Lp := my_factors(p): Lq := my_factors(q):
if (Lp[1] <> 1)
  then error "generate_multiply_poly: an integer can be factored out of %1", p:
fi:
if (Lq[1] <> 1)
  then error "generate_multiply_poly: an integer can be factored out of %1", q:
fi:
Lp := Lp[2]: Lq := Lq[2]:
var := var2:
if (nops(Lp) <> 0)
then
  n := 0:
  for i from 1 to nops(Lp) do n := n + Lp[i][2] od:
  if (n=1)
  then
    fprintf(fd, "%smpfr_mul_si (%s, %s", indent, var1, var):
  else

    required_mulsi := { op(required_mulsi), n }:
    fprintf(fd, "%smpfr_mul_si%d (%s, %s", indent, n, var1, var):
  fi:
  for i from 1 to nops(Lp) do
    for j from 1 to Lp[i][2] do
      fprintf(fd, ", %a", Lp[i][1]):

```

```

    od:
od:
fprintf(fd, ", MPFR_RNDN);\n"):
err := set_error_counter(var1, n+find_in_error_counter(var, err) , err):
var := var1:
fi:
if (nops(Lq) <> 0)
then
n := 0:
for i from 1 to nops(Lq) do n := n + Lq[i][2] od:
if (n=1)
then
fprintf(fd, "%smpfr_div_si (%s, %s", indent, var1, var):
else
required_divsi := { op(required_divsi), n }:
fprintf(fd, "%smpfr_div_si%d (%s, %s", indent, n, var1, var)
fi:
for i from 1 to nops(Lq) do
for j from 1 to Lq[i][2] do
fprintf(fd, ", %a", Lq[i][1])
od:
od:
fprintf(fd, ", MPFR_RNDN);\n"):
err := set_error_counter(var1, n+find_in_error_counter(var, err) , err):
var := var1:
fi:
if (var1 <> var) then
fprintf(fd, "%smpfr_set
(%s, %s, MPFR_RNDN);\n", indent, var1, var):
err := set_error_counter(var1, find_in_error_counter(var, err) , err):
fi:
return [required_mulsi, required_divsi, err]:
end proc:

#
# This function generates the code of a procedure mpfr_mul_uin or mpfr_div_uin
#
generate_muldivsin := proc(op, n)
local i, var:
if ((op <> "mul") and (op <> "div"))
then error "Invalid argument to generate_muldivuin (%1). Must be 'mul' or 'div'", op
fi:
if (whattype(n) <> 'integer')
then error "Invalid argument to generate_muldivuin (%1). Must be an integer.", n
fi:

if (op="mul") then var := "MUL" else var := "DIV" fi:

```

```

printf("__MPFR_DECLSPEC void mpfr_div_si%d _MPFR_PROTO((mpfr_ptr, mpfr_srcptr,\n", n):
for i from n to 2 by -2 do
  printf("                long int, long int,\n"):
od:
if (i=1)
then
  printf("                long int, mpfr_rnd_t);\n"):
else
  printf("
                mpfr_rnd_t);\n")
fi:

printf("\n\n\n"):
printf("void\n"):
printf("mpfr_%s_si%d (mpfr_ptr y, mpfr_srcptr x,\n", op, n):
for i from n to 2 by -2 do
  printf("        long int v%d, long int v%d,\n", n-i+1, n-i+2):
od:
if (i=1)
then
  printf("        long int v%d, mpfr_rnd_t mode)\n", n):
else
  printf("        mpfr_rnd_t mode)\n")
fi:
printf("{\n"):
printf("  long int acc = v1;\n"):
printf("  mpfr_set (y, x, mode);\n"):
  for i from 2 to n do
    printf("  MPFR_ACC_OR_%s (v%d);\n", var, i):
  od:
printf("  mpfr_%s_si (y, y, acc, mode);\n", op):
printf("}\n"):
return:
end proc:
# convert from Gonnet's FPAccuracy data sets to mpfr format
# http://www.inf.ethz.ch/personal/gonnet/FPAccuracy/all.tar.Z

# 1 - cut the lines from (say) C/acos.c, remove the 3rd (eps) field,
#   replace the commata ',' by spaces, and remove the final ';'.
#   (hint: cut -d" " -f1,2,4,5 /tmp/acos.c > /tmp/acos2.c)
# 2 - edit the infile and outfile lines below, and run
#   maple -q < gonnet.mpl

infile := "/tmp/acos2.c":
outfile := "acos":

##### don't edit below this line #####

```

```

foo := proc(arg_m, val_m, arg_e, val_e, fp)
  fprintf (fp, "53 53 n ", 53);
  to_hex(arg_m, arg_e, fp);
  fprintf (fp, " ");
  # warning: Gonnet stores -val_e
  to_hex(val_m, -val_e, fp);
  fprintf (fp, "\n");
end:

```

```

to_hex := proc(m, e, fp)
  if m<0 then fprintf (fp, "-") fi;
  fprintf (fp, "0x%sp%d", convert(abs(m),hex), e);
end:

```

```

copyright := proc(fp)
  fprintf (fp, "# This file was generated from the FPAccuracy package\n#
http://www.inf.ethz.ch/personal/gonnet/FPAccuracy/all.tar.Z:\n#
Copyright (C) Gaston H. Gonnet\n# This program is free software; you can redistribute it and/or\n# modify it under
the terms of the GNU General Public License\n# as published by the Free Software Foundation; either version 2\n#
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FITNESS FOR A PARTICULAR PURPOSE. See the\n# GNU General Public License for more details.\n# You
should have received a copy of the GNU General Public License\n# along with this program; if not, write to the Free
Software\n# Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.\n")
end:

```

```

fp := fopen (outfile, WRITE):

```

```

l := readdata(infile, integer, 4):
copyright(fp):
for e in l do foo(op(e), fp) od:

```

```

fclose (fp);

```

```

quit;

```

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The

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```
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read("metaMPFR\_common.mpl"):

```
FUNCTION_SERIES := 0:
FUNCTION_SERIES_RATIONAL := %+1:
CONSTANT_SERIES := %+1:
```

```
#####
##### We can now generate the code #####
#####
# This procedure generate code for a straightforward evaluation of the series
# corresponding to a recurrence.
# rec is a recurrence with initial conditions
# type can take three values, depending on which series should be evaluated:
# FUNCTION_SERIES -> produces code for evaluating sum( a(i)*x^i )
# FUNCTION_SERIES_RATIONAL -> produces code for evaluating sum( a(i)*(p/q)^i )
# CONSTANT_SERIES -> produces code for evaluating sum( a(i) )
# name is the name the should be given to the produced procedure.
# fofx is an optional parameter. It is the function being implemented.
# -> if provided, this argument will be used to (heuristically)
find the limits
# of the function at +/-oo and find its asymptotical behavior.
# *IMPORTANT NOTE*: it must be a function of the variable 'x'.
# Moreover, neither _f nor x shall be assigned at the time of
# calling the function
#
```

```

generateStraightforwardAlgo := proc(rec, aofn, type, name, filename, fofx := _f(x))
local a, b, n, fd, init_cond, nc, d, exponents, formalRec, c, s1, s2, p, q, hardconstant, f0, i0, ri0, i, j, var, var1, var2,
var3, guard_bits, required_mulsi, required_divsi, temp, error_counter, error_in_loop, maxofti, additional_error:

getname(aofn, a, n):

required_mulsi := {}:
required_divsi := {}:
fd := fopen(filename, WRITE):

# We check that we have a recurrence of the form  $a(n+d)=r(n)*a(n)$ 
# and we extract its canonical form:
#  $a(n+d) = c * s1(n)/s1(n+d) * s2(n+d)/s2(n) * p(n)/q(n) * a(n)$ 
#
formalRec := checkOneTermRecurrence(rec, a(n)):
decomposeOneTermRecurrence(formalRec, c,
s1, s2, p, q):
d := formalRec:-order:

# We keep only non-trivial initial conditions
init_cond := removeTrivialConditions(rec, a(n));
nc := nops(init_cond):
exponents := {1, d}:
for i from 1 to nc do
  exponents := {op(exponents), init_cond[i][1]}
od:
exponents := findFixpointOfDifferences(exponents):
exponents := exponents minus {0}:

error_counter := []:

fprintf(fd, "/* Evaluation by a straightforward algorithm */\n"):
fprintf(fd, "/* Code automatically generated by metaMPFR. */\n"):

fprintf(fd, "static int\n"):
if (type=FUNCTION_SERIES)
  then fprintf(fd, "mpfr_%a (mpfr_ptr res, mpfr_srcptr x, mpfr_rnd_t rnd)\n", name):
elif (type=FUNCTION_SERIES_RATIONAL)
  then fprintf(fd, "mpfr_%a (mpfr_ptr res, int u, int v, mpfr_rnd_t rnd)\n", name):
elif (type=CONSTANT_SERIES)
  then fprintf(fd, "mpfr_%a (mpfr_ptr res, mpfr_rnd_t rnd)\n", name):
fi:
fprintf(fd, "{\n"):

#####
#####

```



```

Declarations #####
#####

fprintf(fd, " MPFR_ZIV_DECL (loop);\n");
fprintf(fd, " MPFR_SAVE_EXPO_DECL (expo);\n");
fprintf(fd, " mpfr_prec_t wprec;          /* working precision */\n");
fprintf(fd, " mpfr_prec_t prec;            /* target precision */\n");
fprintf(fd, " mpfr_prec_t err;           /* used to estimate the evaluation error */\n");
fprintf(fd, " mpfr_prec_t correctBits;      /* estimates the number of correct bits */\n");
fprintf(fd, " unsigned long int k;\n");
fprintf(fd, " unsigned long int conditionNumber; /* condition number of the series */\n");
fprintf(fd, " unsigned assumed_exponent; /* used as a lowerbound of -EXP(f(x)) */\n");
fprintf(fd, " int r;                          /* returned ternary value */\n");
fprintf(fd, " mpfr_t s;                        /* used to store the partial sum */\n");

if (whattype(c) = 'fraction') or (whattype(c) = 'integer')
  then hardconstant := 0
  else hardconstant := 1
fi:
if (type=FUNCTION_SERIES) then hardconstant := 1 fi:

if (hardconstant=1)
then
  if (type=CONSTANT_SERIES)
    then fprintf(fd, " mpfr_t x%d;          /* used to store %a */\n", d, c):
  elif (type=FUNCTION_SERIES_RATIONAL)
    then fprintf(fd, " mpfr_t x%d;          /* used to store %a */\n", d, c*(u/v)^d):
  elif (type=FUNCTION_SERIES)
    then fprintf(fd, " mpfr_t x%d;          /* used to store %a */\n", d, c*x^d):
  fi:
fi:

if (type=FUNCTION_SERIES)
then
  fprintf(fd, " mpfr_t tmp;\n");
  if (nops(exponents)-1 >= 1) then fprintf(fd, " mpfr_t ") fi:
  for i from 1 to nops(exponents)-1 do
    fprintf(fd, "x%d", exponents[i]):
    if (i<nops(exponents)-1) then fprintf(fd, ", ") else fprintf(fd, ";          /* used to store x^i */\n") fi
  od:
fi:

fprintf(fd, " mpfr_t ");
for i from 1 to nc do
  fprintf(fd, "tip%d", init_cond[i][1]):
  if (i<nc) then fprintf(fd, ", ") else fprintf(fd, "; /* used to store successive values of t_i */\n") fi:
od:
fprintf(fd, " int ");

```

```

for i from 1 to nc do
  fprintf(fd, "test%d", init_cond[i][1]):
  if (i<nc) then fprintf(fd, ", ") else fprintf(fd, ";\n") fi:
od:
fprintf(fd, " int global_test;          /* used to test when the sum can be stopped */):

fprintf(fd, "\n"):
fprintf(fd, " /* Logging */\n"):
if (type=FUNCTION_SERIES)
  then fprintf(fd, " MPFR_LOG_FUNC ( (\\"x[%%#R]=%%R rnd=%%d\", x, x, rnd), (\\"res[%%#R]=%%R\", res,
res) );\n\n")
elif (type=FUNCTION_SERIES_RATIONAL)
  then fprintf(fd, " MPFR_LOG_FUNC ( (\\"x=u/v with u=%%d and v=%%d, rnd=%%d\", u, v, rnd),
(\\"res[%%#R]=%%R\", res, res) );\n\n")
else fprintf(fd, " MPFR_LOG_FUNC ( (\\"rnd=%%d\", rnd), (\\"res[%%#R]=%%R\", res, res) );\n\n")
fi:

#####
##### Special cases #####
#####

if ( (type=FUNCTION_SERIES) or (type=FUNCTION_SERIES_RATIONAL) )
then
  fprintf(fd, " /* Special cases */\n"):

if (type=FUNCTION_SERIES)
  then fprintf(fd, " if (MPFR_UNLIKELY (MPFR_IS_NAN (x)))\n")
  else fprintf(fd, " if (MPFR_UNLIKELY (v==0))\n")
fi:
fprintf(fd, "  {\n"):
fprintf(fd, "    MPFR_SET_NAN (res);\n"):
fprintf(fd, "    MPFR_RET_NAN;\n"):
fprintf(fd, "  }\n"):

if (init_cond[1][1] > 0) then f0 := 0 else f0 := init_cond[1][2] fi:
if (type=FUNCTION_SERIES)
  then fprintf(fd, " if (MPFR_UNLIKELY (MPFR_IS_ZERO (x)))\n")
  else fprintf(fd, " if (MPFR_UNLIKELY (u==0))\n")
fi:
if (whattype(f0) = 'integer')
then
  fprintf(fd, "  {\n"):
  fprintf(fd, "    return mpfr_set_si (res, %a, rnd);\n", f0):
  fprintf(fd, "  }\n")
else
  printf("You need to provide a function mpfr_%%a0(mpfr_t, mpfr_rnd_t) that evaluates %%a with correct
rounding\n",

```

```

name, f0):
  fprintf(fd, "  {\n"):
  fprintf(fd, "    return mpfr_%a0 (res, rnd);\n", name):
  fprintf(fd, "  }\n")
fi:

if (type=FUNCTION_SERIES)
then
  fprintf(fd, " if (MPFR_UNLIKELY (MPFR_IS_INF (x)))\n"):
  fprintf(fd, "  {\n"):
  for i from -1 to 1 by 2 do # Trick to handle both -oo and +oo
    if (i<0)
      then fprintf(fd, "    if (MPFR_IS_NEG (x))\n"):
      else fprintf(fd, "    else\n")
    fi:
    fprintf(fd, "      {\n"):
    if (i<0) then f0 := "m" else f0 := "p" fi:
    if (fofx <> _f(x))
    then
      f0 := limit(fofx, x=i*infinity):
      if (whattype(f0)='integer')
      then fprintf(fd, "        return mpfr_set_si (res, %a, rnd);\n", f0):
      elif (f0 = infinity) or (f0 = -infinity)
      then
        fprintf(fd, "          MPFR_SET_INF(res);\n"):
        if (f0>0)
        then fprintf(fd, "            MPFR_SET_POS(res);\n")
        else fprintf(fd,
"          MPFR_SET_NEG(res);\n")
        fi:
        fprintf(fd, "          MPFR_RET(0);\n"):
      else
        if (i<0) then f0 := "m" else f0 := "p" fi:
        fi:
        fi:
        if ((f0 = "p") or (f0 = "m"))
        then
          printf("You need to provide a function mpfr_%a%sinf(mpfr_t, mpfr_rnd_t) that evaluates lim(f(x), x=", name,
f0):
          if (f0 = "m") then printf("-") fi:
          printf("inf) with correct rounding.\n"):
          fprintf(fd, "            return mpfr_%a%sinf (res, rnd);\n", name, f0)
          fi:
          fprintf(fd, "          }\n")
        od:
        fprintf(fd, "        }\n")
      fi:
    fi:

```

```

#####
##### Precomputations #####
#####

fprintf(fd, "\n"):
fprintf(fd, " /* Save current exponents range *\n"):
fprintf(fd, " MPFR_SAVE_EXPO_MARK (expo);\n\n"):

if ( (type=FUNCTION_SERIES) or (type=FUNCTION_SERIES_RATIONAL)
)
then fprintf(fd, " /* FIXME: special case for large values of |x| ? *\n\n")
fi:

# Note : prec is the value such that we will try to compute an approximation
# with relative error smaller than 2^(1-prec).
# Several things may happen:
# 1) We do not achieve the intended error: this is because we badly estimated the exponent of the result
# 2) We achieve the error, but it is not sufficient to decide correct rounding (Ziv's bad case)
# Against 1), we can try to make our estimate of the exponent better with any heuristic.
# Against 2), we can consider more guard bits. 11 guard bits seem a good value for the beginning
# (statistically, we expect to fail in less than 0.1 % of the cases)
# wprec is the precision used during the computation, in order to ensure the final relative error 2^(1-prec)
#
fprintf(fd, " /* We begin with 11 guard bits *\n"):
fprintf(fd, " prec = MPFR_PREC (res) + 11;\n"):
fprintf(fd, " MPFR_ZIV_INIT
(loop, prec);\n"):

# TODO: the value here can be chosen completely heuristically. We could do something much better
# when fofx is known by using asympt(fofx, x, 1). A clean implementation appears to be complex though.
# We must catch errors if the development does not exist (e.g. AiryAi(-x));
# We must find a separation after which the asymptotic behavior is valid (e.g. x>1)
printf("The code contains a variable assumed_exponent arbitrarily set to 10. You can put any value heuristically
chosen. The closer it is to -log_2(|f(x)|), the better it is.\n"):
fprintf(fd, " assumed_exponent = 10; /* TIP: You can put any value heuristically chosen. The closer it is to -
log_2(|f(x)|), the better it is *\n"):

# TODO: find a way of putting a rigorous value here.
# This value *must* be rigorous: the safety of the implementation relies on it.
# Precisely, we need to have sum(|a(i)*x^i|) <= 2^conditionNumber
fprintf(fd, " conditionNumber = xxx; /* FIXME: set a value such that
sum(|a(i)*x^i|) <= 2^conditionNumber *\n"):
printf("The code contains a variable conditionNumber that you must manually set to a suitable value, in order to
ensure that sum_{i=0}^{infinity} |a(i)*x^i| <= 2^conditionNumber\n"):
fprintf(fd, " wprec = prec + ERRORANALYSISPREC + conditionNumber + assumed_exponent;\n"):

```

```

#####
##### Initialisations #####
#####

if (hardconstant=1)
then
  fprintf(fd, " mpfr_init (x%d);\n", d):
fi:
if (type = FUNCTION_SERIES)
then
  fprintf(fd, " mpfr_init (tmp);\n"):
  for i from 1 to nops(exponents)-1 do
    fprintf(fd, " mpfr_init (x%d);\n", exponents[i])
  od:
fi:

for i from 1 to nc do
  fprintf(fd, " mpfr_init (tip%d);\n", init_cond[i][1])
od:
fprintf(fd, " mpfr_init (s);\n\n"):

#####
##### Ziv' loop: setting the precision
#####
#####

fprintf(fd, " /* ZIV' loop *\n"):
fprintf(fd, " for (;\n"):
fprintf(fd, " {\n"):

fprintf(fd, " MPFR_LOG_MSG ((\"Working precision: %%d\n\", wprec, 0));\n\n"):
if (hardconstant=1)
then
  fprintf(fd, " mpfr_set_prec (x%d, wprec);\n", d):
fi:
if (type = FUNCTION_SERIES)
then
  fprintf(fd, " mpfr_set_prec (tmp, wprec);\n"):
  fprintf(fd, " if(mpfr_get_prec (x) > wprec)\n"):
  fprintf(fd, " mpfr_set_prec (x1, wprec);\n"):
  fprintf(fd, " else\n"):
  fprintf(fd, " mpfr_set_prec (x1, mpfr_get_prec (x));\n"):
  for i from 2 to nops(exponents)-1 do
    fprintf(fd, " mpfr_set_prec (x%d, wprec);\n", exponents[i])
  od:
fi:

```

```

for i from 1 to nc do
  fprintf(fd, "  mpfr_set_prec (tip%d, wprec);\n", init_cond[i][1])
od:
fprintf(fd, "  mpfr_set_prec (s, wprec);\n\n"):

#####
##### Ziv' loop: initial conditions #####
#####

fprintf(fd, "  mpfr_set_ui (s, 0, MPFR_RNDN);\n"):

if (type = FUNCTION_SERIES)
then
  fprintf(fd, "  mpfr_set (x1, x, MPFR_RNDN);\n"):
  error_counter := init_error_counter("x1", error_counter):
  for i from 2 to nops(exponents) do
    fprintf(fd, "  mpfr_mul (x%d, x%d, x%d, MPFR_RNDN);\n", exponents[i], exponents[i-1], exponents[i]-
exponents[i-1]):
    var1 := sprintf("x%d", exponents[i]):
    var2 := sprintf("x%d", exponents[i-1]):
    var3 := sprintf("x%d", exponents[i]-exponents[i-1]):
    error_counter := error_counter_of_a_multiplication(var1, var2, var3, error_counter):
  od:
fi:

for i from 1 to nc do
  i0 := init_cond[i][1]:
  ri0 := init_cond[i][2]: # We implement t_{i0} <- ri0
  if (whattype(ri0)='integer') or (whattype(ri0)='fraction')
  then
    if (type = FUNCTION_SERIES) and (i0 <> 0)
    then
      var
:= sprintf("  mpfr_mul_si (tip%d, x%d, ", i0, i0):
      var1 := sprintf("tip%d", i0):
      var2 := sprintf("x%d", i0):
      error_counter := error_counter_of_a_multiplication(var1, var2, "", error_counter):
    else
      var := sprintf("  mpfr_set_si (tip%d, ", i0):
      var1 := sprintf("tip%d", i0):
      error_counter := init_error_counter(var1, error_counter):
    fi:
    fprintf(fd, "%s%d, MPFR_RNDN);\n", var, numer(ri0)):
    if (whattype(ri0)='fraction')
    then
      fprintf(fd, "  mpfr_div_si (tip%d, tip%d, %d, MPFR_RNDN);\n", i0, i0, denom(ri0)):

```

```

    var1 := sprintf("tip%d", i0):
    error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
fi:
else
    printf("You need to provide a function mpfr_%a%d (mpfr_t, mpfr_rnd_t) that evaluates %a with faithful
rounding.\n", name, i0, ri0):
    fprintf(fd, "    mpfr_%a%d (tip%d, MPFR_RNDN);\n", name, i0, i0):
    var1 := sprintf("tip%d",
i0):
    error_counter := init_error_counter(var1, error_counter):
    if (type = FUNCTION_SERIES) and (i0 <> 0)
    then
        fprintf(fd, "    mpfr_mul (tip%d, tip%d, x%d, MPFR_RNDN);\n", i0, i0, i0):
        var1 := sprintf("tip%d", i0):
        var2 := sprintf("x%d", i0):
        error_counter := error_counter_of_a_multiplication(var1, var1, var2, error_counter):
    fi:
fi:

if (type = FUNCTION_SERIES_RATIONAL) and (i0 <> 0)
then
    var1 := sprintf("tip%d", i0):
    if (i0 = 1)
    then fprintf(fd, "    mpfr_mul_si (tip%d, tip%d, ", i0, i0):
    else
        required_mulsi := { op(required_mulsi), i0 }:
        fprintf(fd, "    mpfr_mul_si%d (tip%d, tip%d, ", i0, i0, i0):
    fi:
    for j from 1 to i0 do
        fprintf(fd, "u, "):
        error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
    od:
    fprintf(fd, "MPFR_RNDN);\n"):
    if (i0 = 1)
    then fprintf(fd, "    mpfr_div_si (tip%d,
tip%d, ", i0, i0):
    else
        required_divsi := { op(required_divsi), i0 }:
        fprintf(fd, "    mpfr_div_si%d (tip%d, tip%d, ", i0, i0, i0):
    fi:
    for j from 1 to i0 do
        fprintf(fd, "v, "):
        error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
    od:
    fprintf(fd, "MPFR_RNDN);\n"):
fi:

fprintf(fd, "    mpfr_add (s, s, tip%d, MPFR_RNDN);\n\n", i0):

```

```

od:

if (whattype(c) = 'integer') or (whattype(c) = 'fraction')
then
  if (type = FUNCTION_SERIES) and (c = -1)
  then
    fprintf(fd, "    MPFR_CHANGE_SIGN (x%d);\n", d):
  elif (type = FUNCTION_SERIES) and (c <> 1)
  then
    fprintf(fd, "    mpfr_mul_si (x%d, x%d, %d, MPFR_RNDN);\n", d, d, numer(c)):
    var1 := sprintf("x%d", d):
    error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
    if (whattype(c) = 'fraction')
    then
      fprintf(fd, "    mpfr_div_si (x%d, x%d, %d, MPFR_RNDN);\n",
d, d, denom(c)):
      error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
    fi:
  fi:
else
  printf("You need to provide a function mpfr_%a_cste (mpfr_t, mpfr_rnd_t) that evaluates %a with faithful
rounding.\n", name, c):
  if (type = CONSTANT_SERIES)
  then
    fprintf(fd, "    mpfr_%a_cste (x%d, MPFR_RNDN);\n", name, d):
    var1 := sprintf("x%d", d):
    error_counter := init_error_counter(var1, error_counter):
  elif (type = FUNCTION_SERIES) then
    fprintf(fd, "    mpfr_%a_cste (tmp, MPFR_RNDN);\n", name):
    error_counter := init_error_counter("tmp", error_counter):
    fprintf(fd, "    mpfr_mul (x%d, tmp, x%d, MPFR_RNDN);\n", d, d):
    var1 := sprintf("x%d", d):
    error_counter := error_counter_of_a_multiplication(var1, "tmp", var1, error_counter):
  elif (type = FUNCTION_SERIES_RATIONAL) then
    fprintf(fd, "    mpfr_%a_cste (x%d, MPFR_RNDN);\n", name, d):
    var1 := sprintf("x%d",
d):
    error_counter := init_error_counter(var1, error_counter):
    if (d = 1)
    then fprintf(fd, "    mpfr_mul_si (x%d, x%d, ", d, d):
    else
      required_mulsi := { op(required_mulsi), d }:
      fprintf(fd, "    mpfr_mul_si%d (x%d, x%d, ", d, d, d):
    fi:
    for j from 1 to d do
      fprintf(fd, "u, "):
      error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
    od:

```



```

fprintf(fd, "MPFR_RNDN);\n"):
var1 := sprintf("x%d", d):
if (d = 1)
then fprintf(fd, "    mpfr_div_si (x%d, x%d, ", d, d):
else
    required_divsi := { op(required_divsi), d }:
    fprintf(fd, "    mpfr_div_si%d (x%d, x%d, ", d, d, d):
fi:
for j from 1 to d do
    fprintf(fd, "v, "):
    error_counter := error_counter_of_a_multiplication(var1, var1, "", error_counter):
od:
fprintf(fd, "MPFR_RNDN);\n"):
fi:
fi:

#####
#####
Ziv' loop: evaluation of the series #####
#####

fprintf(fd, "\n"):
fprintf(fd, "    /* Evaluation of the series *^\n"):
fprintf(fd, "    k = %d;\n", d):
fprintf(fd, "    for (;;)\n"):
fprintf(fd, "    {\n"):
if (init_cond[1][1] <> 0) then fprintf(fd, "        k += %d;\n", init_cond[1][1]) fi:

for i from 1 to nc do
    error_in_loop := 0:
    i0 := init_cond[i][1]:
    if (hardconstant = 1)
    then
        fprintf(fd, "        mpfr_mul (tip%d, tip%d, x%d, MPFR_RNDN);\n", i0, i0, d):
        var1 := sprintf("x%d", d):
        error_in_loop := error_in_loop + 1 + find_in_error_counter(var1, error_counter):
    else
        var := sprintf("tip%d", i0):
        temp := generate_multiply_rational(fd, var, var, c, [[var, error_in_loop]], "        "):
        error_in_loop := find_in_error_counter(var, temp):
        if (type = FUNCTION_SERIES_RATIONAL)
        then
            if (d=1)
            then
                fprintf(fd,
"        mpfr_mul_si (tip%d, tip%d, u, MPFR_RNDN);\n", i0, i0):
                fprintf(fd, "        mpfr_div_si (tip%d, tip%d, v, MPFR_RNDN);\n", i0, i0):
                error_in_loop := error_in_loop + 2:

```

```

else
  required_mulsi := { op(required_mulsi), d };
  fprintf(fd, "      mpfr_mul_si%d (tip%d, tip%d", d, i0, i0):
  for j from 1 to d do fprintf(fd, ", u") od:
  fprintf(fd, ", MPFR_RNDN);\n"):
error_in_loop := error_in_loop + d:

  required_divsi := { op(required_divsi), d };
  fprintf(fd, "      mpfr_div_si%d (tip%d, tip%d", d, i0, i0):
  for j from 1 to d do fprintf(fd, ", v") od:
  fprintf(fd, ", MPFR_RNDN);\n" ):
error_in_loop := error_in_loop + d:
  fi
fi
fi:
var := sprintf("tip%d", i0):

temp := generate_multiply_poly(fd, var, var, subs(n=k-d, p/q), [[var, error_in_loop]], "      "):
required_mulsi := { op(required_mulsi), op(temp[1]) };
required_divsi := { op(required_divsi),
op(temp[2]) };
error_in_loop := find_in_error_counter(var, temp[3]):
temp := generate_multiply_poly(fd, "tmp", var, subs(n=k, s2/s1), [[var, error_in_loop]], "      "):
required_mulsi := { op(required_mulsi), op(temp[1]) };
required_divsi := { op(required_divsi), op(temp[2]) };

fprintf(fd, "      mpfr_add (s, s, tmp, MPFR_RNDN);\n"):

if (i<nc) then fprintf(fd, "\n      k += %d;\n", init_cond[i+1][1]-i0)
else fprintf(fd, "\n      k += %d;\n", d-i0)
fi:
od:

#####
##### Error analysis #####
#####

maxofti := 0: # store the maximum of the error counters of the initial conditions
for i from 1 to nc do
  var := sprintf("tip%d", init_cond[i][1]):
  if find_in_error_counter(var, error_counter) > maxofti
  then maxofti := find_in_error_counter(var, error_counter):
  fi:
od:
additional_error
:= find_in_error_counter("tmp", temp[3]) - error_in_loop:

```

```

#####
#### Ziv' loop: stopping criterion for the series ####
#####

# The first neglected term is tk, so the remainder is made by
# tk + t(k+d) + t(k+2d)... and the corresponding series
# beginning with t(k+1), t(k+2), etc. up to t(k+d-1).
#
# We have  $t(k_0+d) = c * s_1(k_0)/s_1(k_0+d) * s_2(k_0+d)/s_2(k_0) * p(k_0)/q(k_0) * x^d t(k_0)$ 
# (where  $x=u/v$  or  $x=1$  in cases of rational series or constant series)
# So it suffices that:
# forall  $k_0 \geq k-d$ ,  $|c * s_1(k_0)/s_1(k_0+d) * s_2(k_0+d)/s_2(k_0) * p(k_0)/q(k_0) * x^d| \leq 1/2$  (1)
#
# If this is true,  $|t_k| = |c * s_1(k-d)/s_1(k) * s_2(k)/s_2(k-d) * p(k-d)/q(k-d) * x^d t(k-d)| \leq t(k-d)/2$ 
# This is also true for larger values of k, so we can bound  $|t_k + t(k+d) + t(k+2d) + \dots|$  by  $|t(k-d)|$ .
# And the same holds for  $|t(k+1) + \dots|$ ,  $|t(k+2) + \dots|$ , etc. up to  $|t(k+d-1) + \dots|$ .
#
# global_test depends on k and we must satisfy:
# "if (global_test) then (1) holds".
#
# the total remainder is bounded by  $2 * nc * tk$ .

fprintf(fd, "      global_test = xxx; /* FIXME: set the value in order to ensure that, whenever global_test is true,
we have: forall  $k' \geq k$ ,  $|r(k') * x^d| \leq 1/2$ , where r is the fraction such that  $a(n) = r(n) a(n-d) * \wedge^n$ ):
printf("The code contains a variable global_test that you must manually set to a suitable value, in order to ensure
that when global_test is true, the following holds:\n"):
printf("      forall  $k' \geq k$ ,  $|r(k') * x^d| \leq 1/2$ , where r is the fraction such that  $a(n) = r(n) a(n-d) \wedge^n$ ):
guard_bits := 1+1+ceil(log[2](nc)):
for i from 1 to nc do
  i0 := init_cond[i][1]:
  fprintf(fd, "      test%d = ( (!MPFR_IS_ZERO(s))\n", i0):
  fprintf(fd, "      && ( MPFR_IS_ZERO(tip%d)\n", i0):
  fprintf(fd, "      || (MPFR_EXP(tip%d) + (mp_exp_t)prec + %d <= MPFR_EXP(s))\n", i0, guard_bits):
  fprintf(fd, "      )\n"):
  fprintf(fd, "      );\n"):
od:
fprintf(fd, "      if (");
for i from 1 to nc do
  fprintf(fd, "test%d && ", init_cond[i][1]):
od:
fprintf(fd, "global_test)\n"):
fprintf(fd, "      break;\n"):
fprintf(fd, "      }\n\n"):

#####
##### Ziv' loop: testing final #####

```

```
#####
```

```
fprintf(fd, "    MPFR_LOG_MSG ((\"Truncation rank: %%lu\\n\", k));\\n\\n");
fprintf(fd, "    err = ERRORANALYSISK + conditionNumber - MPFR_GET_EXP (s);\\n\\n");
fprintf(fd, "    /* err is the number of bits lost due to the evaluation error */\\n");
fprintf(fd, "    /* wprec-(prec+1): number of bits lost due to the approximation error */\\n");
fprintf(fd, "    MPFR_LOG_MSG ((\"Roundoff error: %%Pu\\n\", err));\\n");
fprintf(fd, "    MPFR_LOG_MSG ((\"Approxim error: %%Pu\\n\", wprec-prec-1));\\n\\n");
    fprintf(fd, "    if (wprec < err+1)\\n");
fprintf(fd, "        correct_bits=0;\\n");
fprintf(fd, "    else\\n");
fprintf(fd, "        {\\n");
fprintf(fd, "            if (wprec < err+prec+1)\\n");
fprintf(fd, "                correct_bits = wprec - err - 1;\\n");
fprintf(fd, "            else\\n");
fprintf(fd, "                correct_bits = prec;\\n");
        }\\n\\n");
fprintf(fd, "    if (MPFR_LIKELY (MPFR_CAN_ROUND (s, correct_bits, MPFR_PREC (y), rnd)))\\n");
fprintf(fd, "        break;\\n\\n");

fprintf(fd, "    if (correct_bits == 0)\\n");
fprintf(fd, "        {\\n");
fprintf(fd, "            assumed_exponent *= 2;\\n");
fprintf(fd, "            MPFR_LOG_MSG ((\"Not a single bit correct (assumed_exponent=%%lu)\\n\",\\n");
fprintf(fd, "                assumed_exponent));\\n");
fprintf(fd, "            wprec = prec + ERRORANALYSISK + conditionNumber + assumed_exponent;\\n");
fprintf(fd, "        }\\n");
fprintf(fd, "    else\\n");
fprintf(fd, "        {\\n");
fprintf(fd, "            if (correct_bits < prec)\\n");
fprintf(fd, "                { /* The precision was badly chosen */\\n");
fprintf(fd, "                    MPFR_LOG_MSG ((\"Bad assumption on the exponent of %s(x)\", 0));\\n", name);
fprintf(fd, "                    MPFR_LOG_MSG ((\"(E=%%ld)\\n\", (long) MPFR_GET_EXP (s));\\n");
fprintf(fd, "                    wprec = prec + err + 1;\\n");
fprintf(fd, "                }\\n");
            else\\n");
fprintf(fd, "                { /* We are really in a bad case of the TMD */\\n");
fprintf(fd, "                    MPFR_ZIV_NEXT (loop, prec);\\n\\n");

fprintf(fd, "                /* We update wprec */\\n");
fprintf(fd, "                /* We assume that K will not be multiplied by more than 4 */\\n");
fprintf(fd, "                wprec = prec + ERRORANALYSIS4K + conditionNumber\\n");
fprintf(fd, "                    - MPFR_GET_EXP (s);\\n");
                }\\n");
            }\\n\\n");

fprintf(fd, "    } /* End
```

```

of ZIV loop *\n\n"):
fprintf(fd, " MPFR_ZIV_FREE (loop);\n\n"):
fprintf(fd, " r = mpfr_set (res, s, rnd);\n\n"):

#####
##### Clearing everything #####
#####

fprintf(fd, " mpfr_clear (s);\n"):
if (hardconstant=1)
then
  fprintf(fd, " mpfr_clear (x%d);\n", d):
fi:
if (type = FUNCTION_SERIES)
then
  fprintf(fd, " mpfr_clear (tmp);\n"):
  for i from 1 to nops(exponents)-1 do
    fprintf(fd, " mpfr_clear (x%d);\n", exponents[i]):
  od:
fi:

for i from 1 to nc do
  fprintf(fd, " mpfr_clear (tip%d);\n", init_cond[i][1]):
od:

fprintf(fd, "\n"):
fprintf(fd, " MPFR_SAVE_EXPO_FREE (expo);\n"):
fprintf(fd, " return mpfr_check_range (res, r, rnd);\n"):
fprintf(fd, " }\n"):

fclose(fd):

for i from 1 to nops(required_mulsi) do
  printf("You need to provide a mpfr_mul_si%d function.\n", required_mulsi[i]):
  printf("
-> This can be achieved by a call to generate_muldivsin(\"mul\", %d):\n", required_mulsi[i]):
od:
for i from 1 to nops(required_divsi) do
  printf("You need to provide a mpfr_div_si%d function.\n", required_divsi[i]):
  printf(" -> This can be achieved by a call to generate_muldivsin(\"div\", %d):\n", required_divsi[i]):
od:

#####
##### Error analysis #####
#####

```

```

printf("\n\n"):
printf("Before the loop, we have "):
for i from 1 to nc do
  var := sprintf("tip%d", init_cond[i][1]):
  printf("%s %d)", var, find_in_error_counter(var, error_counter)):
  if (i <> nc) then printf(", ") else printf("\n") fi:
od:
printf("Each step of the loop adds another %d\n", error_in_loop):
if (additional_error <> 0)
then printf("Moreover, the multiplication by %a adds another %d to each term before it is summed.\n", subs(n=k,
s2/s1), additional_error)
fi:
printf("Finally, we have  $s = \sum_{i=0}^{k-1} (t_i \{d + dk\})$ \n", maxofti + additional_error + 1 - error_in_loop,
error_in_loop):
printf("We bound it by  $\{(k+d)*2^{(d)}\}$ \n", ceil( (maxofti + additional_error + 1 - error_in_loop)/error_in_loop),
ceil(log[2](error_in_loop))):

a := ceil( (maxofti + additional_error + 1 - error_in_loop)/error_in_loop):
b := ceil(log[2](error_in_loop)):

if (a > 0)
then var := sprintf("MPFR_INT_CEIL_LOG2 (prec + %d)", a)
elif (a=0) then var := sprintf("MPFR_INT_CEIL_LOG2 (prec)")
else sprintf("MPFR_INT_CEIL_LOG2 (prec - %d)", -a)
fi:
if (b > 0) then var := sprintf("%s + %d", var, b+2) fi:
var := sprintf("sed -n -i 's/ERRORANALYSISPREC/%s/g;p' %s", var, filename):
system(var):

if (a > 0)
then var := sprintf("MPFR_INT_CEIL_LOG2 (k + %d)", a)
elif (a=0) then var := sprintf("MPFR_INT_CEIL_LOG2 (k)")
else sprintf("MPFR_INT_CEIL_LOG2 (k - %d)", -a)
fi:
if (b > 0) then var := sprintf("%s
+ %d", var, b+2) fi:
var := sprintf("sed -n -i 's/ERRORANALYSISK/%s/g;p' %s", var, filename):
system(var):

if (a > 0)
then var := sprintf("MPFR_INT_CEIL_LOG2 (k + %d)", a)
elif (a=0) then var := sprintf("MPFR_INT_CEIL_LOG2 (k)")
else sprintf("MPFR_INT_CEIL_LOG2 (k - %d)", -a)
fi:
var := sprintf("%s + %d", var, b+4):
var := sprintf("sed -n -i 's/ERRORANALYSIS4K/%s/g;p' %s", var, filename):
system(var):

```

```

end proc:
read ("metaMPFR_straightforwardAlgo.mpl"):

f := AiryAi(x):
deq := holexprtodiffeq(f, y(x)):
rec := diffeqtorec(deq, y(x), a(n)):
name_of_function := op(0,f):
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

f := erf(x):
deq := holexprtodiffeq(f, y(x)):
rec := diffeqtorec(deq, y(x), a(n)):
name_of_function := op(0,f):
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = -(6*n+1)*(6*n+2)*(6*n+3)*(6*n+4)*(6*n+5)*(6*n+6)*a(n)/
(n+1)^3*(3*n+1)*(3*n+2)*(3*n+3)*12288000 }, a(0)=1 }:
name_of_function := alpha:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n*****
Implementation de %s *****\n", name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1 }:
name_of_function := test0a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=Pi }:
name_of_function := test1a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=1 }:
name_of_function := test2a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n*****

```

```

Implmentation de %s *****\n", name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=Pi }:
name_of_function := test3a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1, a(1)=2 }:
name_of_function := test4a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=Pi, a(1)=0 }:
name_of_function := test5a:
name_of_file
:= sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=1, a(1)=Pi }:
name_of_function := test6a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=Pi, a(1)=0 }:
name_of_function := test7a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+3) = -(6*n+1)*a(n)/(
(n+1)^3 ), a(0)=1, a(1)=0, a(2)=0 }:
name_of_function := test8a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implmentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

rec := { a(n+3) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=0, a(1)=Pi, a(2)=2 }:

```



```

name_of_function := test9a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

```

```

rec := { a(n+3) = (1/Pi)*(3*n+1)*a(n)/(n+2), a(0)=0, a(1)=0, a(2)=1 }:
name_of_function := test10a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES,
name_of_function, name_of_file, f):

```

```

rec := { a(n+7) = (1/Pi)*(3*n+1)*a(n)/(n+2), a(0)=Pi, a(4)=1, a(6)=2 }:
name_of_function := test11a:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), CONSTANT_SERIES, name_of_function, name_of_file, f):

```

```

rec := { a(n+1) = -(6*n+1)*a(n)/(n+1)^3, a(0)=1 }:
name_of_function := test0b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

```

```

rec := { a(n+1) = -(6*n+1)*a(n)/(n+1)^3, a(0)=Pi }:
name_of_function := test1b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec,
a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

```

```

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/(n+2), a(0)=1 }:
name_of_function := test2b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

```

```

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/(n+2), a(0)=Pi }:
name_of_function := test3b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n/***** Implementation de %s *****/\n",

```

```

name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1, a(1)=2 }:
name_of_function := test4b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=Pi, a(1)=0}:
name_of_function := test5b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=1, a(1)=Pi }:
name_of_function := test6b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+2) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=Pi, a(1)=0}:
name_of_function := test7b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n*****
Implementation de %s *****\n", name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+3) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1, a(1)=0, a(2)=0 }:
name_of_function := test8b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+3) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=0, a(1)=Pi, a(2)=2 }:
name_of_function := test9b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implementation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+3) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=0, a(1)=0, a(2)=1 }:
name_of_function := test10b:
name_of_file

```

```

:= sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+7) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=Pi, a(4)=1, a(6)=2 }:
name_of_function := test11b:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES, name_of_function, name_of_file, f):

rec := { a(n+1) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1 }:
name_of_function := test0c:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES_RATIONAL, name_of_function, name_of_file, f):

rec := { a(n+1) = -(6*n+1)*a(n)/( (n+1)^3
), a(0)=Pi }:
name_of_function := test1c:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES_RATIONAL, name_of_function, name_of_file, f):

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=1 }:
name_of_function := test2c:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES_RATIONAL, name_of_function, name_of_file, f):

rec := { a(n+1) = (1/Pi)*(3*n+1)*a(n)/( (n+2) ), a(0)=Pi }:
name_of_function := test3c:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES_RATIONAL, name_of_function,
name_of_file, f):

rec := { a(n+2) = -(6*n+1)*a(n)/( (n+1)^3 ), a(0)=1, a(1)=2 }:
name_of_function := test4c:
name_of_file := sprintf("%a.c", name_of_function):
printf("\n\n\n***** Implimentation de %s *****\n",
name_of_file):

```

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+2) = -(6\*n+1)\*a(n)/( (n+1)^3 ), a(0)=Pi, a(1)=0 }:

name\_of\_function := test5c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\* Implementation de %s \*\*\*\*\*\n",

name\_of\_file):

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+2) = (1/Pi)\*(3\*n+1)\*a(n)/( (n+2) ), a(0)=1, a(1)=Pi }:

name\_of\_function := test6c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\* Implementation de %s \*\*\*\*\*\n",

name\_of\_file):

generateStraightforwardAlgo(rec,

a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+2) = (1/Pi)\*(3\*n+1)\*a(n)/( (n+2) ), a(0)=Pi, a(1)=0 }:

name\_of\_function := test7c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\* Implementation de %s \*\*\*\*\*\n",

name\_of\_file):

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+3) = -(6\*n+1)\*a(n)/( (n+1)^3 ), a(0)=1, a(1)=0, a(2)=0 }:

name\_of\_function := test8c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\* Implementation de %s \*\*\*\*\*\n",

name\_of\_file):

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+3) = -(6\*n+1)\*a(n)/( (n+1)^3 ), a(0)=0, a(1)=Pi, a(2)=2 }:

name\_of\_function := test9c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\*

Implementation de %s \*\*\*\*\*\n", name\_of\_file):

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+3) = (1/Pi)\*(3\*n+1)\*a(n)/( (n+2) ), a(0)=0, a(1)=0, a(2)=1 }:

name\_of\_function := test10c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

printf("\n\n\n\*\*\*\*\* Implementation de %s \*\*\*\*\*\n",

name\_of\_file):

generateStraightforwardAlgo(rec, a(n), FUNCTION\_SERIES\_RATIONAL, name\_of\_function, name\_of\_file, f):

rec := { a(n+7) = (1/Pi)\*(3\*n+1)\*a(n)/( (n+2) ), a(0)=Pi, a(4)=1, a(6)=2 }:

name\_of\_function := test11c:

name\_of\_file := sprintf("%a.c", name\_of\_function):

```
printf("\n\n/***** Implementation de %s *****/\n",
name_of_file):
generateStraightforwardAlgo(rec, a(n), FUNCTION_SERIES_RATIONAL, name_of_function, name_of_file, f):
```

# 1.141 mercurial 5.6.1-4

## 1.141.1 Available under license :

```
#require unix-permissions no-root
```

```
$ hg init a
$ cd a
$ echo foo > b
$ hg add b
$ hg ci -m "b"
```

```
$ chmod -w .hg/store
```

```
$ cd ..
```

```
$ hg clone a b
requesting all changes
adding changesets
adding manifests
adding file changes
added 1 changesets with 1 changes to 1 files
new changesets 97310831fa1a
updating to branch default
1 files updated, 0 files merged, 0 files removed, 0 files unresolved
```

```
$ chmod +w a/.hg/store # let test clean up
```

```
$ cd b
$ hg verify
checking changesets
checking manifests
crosschecking files in changesets and manifests
checking files
checked 1 changesets with 1 changes to 1 files
```

```
$ cd ..
```

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# 1.143 mercurial 5.6.1

## 1.143.1 Available under license :

```
#require unix-permissions no-root
```

```
$ hg init a
```

```
$ cd a
```

```
$ echo foo > b
```

```
$ hg add b
```

```
$ hg ci -m "b"
```

```
$ chmod -w .hg/store
```

```
$ cd ..
```

```
$ hg clone a b
```

```
requesting all changes
```

```
adding changesets
```

```
adding manifests
```

```
adding file changes
```

```
added 1 changesets with 1 changes to 1 files
```

```
new changesets 97310831fa1a
```

```
updating to branch default
```

```
1 files updated, 0 files merged, 0 files removed, 0 files unresolved
```

```
$ chmod +w a/.hg/store # let test clean up
```

```
$ cd b
```

```
$ hg verify
```

```
checking changesets
```

```
checking manifests
```

```
crosschecking files in changesets and manifests
```

```
checking files
```

```
checked 1 changesets with 1 changes to 1 files
```

```
$ cd ..
```

```
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```

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## 1.147 libstdc++-10-dev 10.2.1-6

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ftp://gcc.gnu.org/pub/gcc/releases/ (for full releases)  
svn://gcc.gnu.org/svn/gcc/ (for prereleases)  
ftp://sourceware.org/pub/newlib/ (for newlib)  
git://git.savannah.gnu.org/gm2.git (for Modula-2)

The current gcc-10 source package is taken from the SVN gcc-10-branch.

Changes: See [changelog.Debian.gz](http://changelog.Debian.gz)

Debian splits the GNU Compiler Collection into packages for each language, library, and documentation as follows:

| Language | Compiler package | Library package | Documentation |
|----------|------------------|-----------------|---------------|
|----------|------------------|-----------------|---------------|

```

-----
Ada
    gnat-10      libgnat-10      gnat-10-doc
BRIG    gccbrig-10   libhsail-rt0
C       gcc-10           gcc-10-doc
C++    g++-10      libstdc++6      libstdc++6-10-doc
D       gdc-10
Fortran 95  gfortran-10  libgfortran5    gfortran-10-doc
Go      gccgo-10   libgo0
Objective C  gobjc-10   libobjc4
Objective C++ gobjc++-10
Modula-2  gm2-10      libgm2

```

For some language run-time libraries, Debian provides source files, development files, debugging symbols and libraries containing position-independent code in separate packages:

| Language | Sources | Development | Debugging | Position-Independent |
|----------|---------|-------------|-----------|----------------------|
|----------|---------|-------------|-----------|----------------------|

```

-----
C++          libstdc++6-10-dbg libstdc++6-10-pic
D    libphobos-10-dev

```

Additional packages include:

All languages:

```

libgcc1,
libgcc2, libgcc4  GCC intrinsics (platform-dependent)
gcc-10-base      Base files common to all compilers
gcc-10-soft-float Software floating point (ARM only)
gcc-10-source    The sources with patches

```

Ada:

```

libgnat-util10-dev, libgnat-util10  GNAT version library

```

C:

```

cpp-10, cpp-10-doc      GNU C Preprocessor
libssp0-dev, libssp0    GCC stack smashing protection library
libquadmath0           Math routines for the __float128 type
fixincludes             Fix non-ANSI header files

```

C, C++ and Fortran 95:

```

libgomp1-dev, libgomp1  GCC OpenMP (GOMP) support library
libitm1-dev, libitm1   GNU Transactional Memory Library

```

Biarch support: On some 64-bit platforms which can also run 32-bit code, Debian provides additional packages containing 32-bit versions of some libraries. These packages have names beginning with 'lib32' instead of

'lib', for example lib32stdc++6. Similarly, on some 32-bit platforms which can also run 64-bit code, Debian provides additional packages with names beginning with 'lib64' instead of 'lib'. These packages contain 64-bit versions of the libraries. (At this time, not all platforms and not all libraries support biarch.) The license terms for these lib32 or lib64 packages are identical to the ones for the lib packages.

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- libatomic
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- libitm

- libssp
- libstdc++-v3
- libobjc
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- \* Cygnus Support, drepper@cygnus.com.

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Cephes Math Library Release 2.2: January, 1991

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Adapted for glibc November, 2001

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D:

gdc-10                    GNU D Compiler  
libphobos-10-dev        D standard runtime library

The D source package is made up of the following components.

The D front-end for GCC:

- d/\*

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The DMD Compiler implementation of the D programming language:  
- d/dmd/\*

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DRuntime: Runtime Library for the D Programming Language

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Version 2, June 1991

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If distribution of object code is made by offering access to copy

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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- b. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

- c. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
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This is the Debian GNU/Linux prepackaged version of the GNU compiler

collection, containing Ada, C, C++, D, Fortran 95, Go, Objective-C,

Objective-C++, and Modula-2 compilers, documentation, and support

libraries. In addition, Debian provides the gm2 compiler, either in

the same source package, or built from a separate same source package.

Packaging is done by the Debian GCC Maintainers

<debian-gcc@lists.debian.org>, with sources obtained from:

ftp://gcc.gnu.org/pub/gcc/releases/ (for full releases)

svn://gcc.gnu.org/svn/gcc/ (for prereleases)

ftp://sourceware.org/pub/newlib/ (for newlib)

git://git.savannah.gnu.org/gm2.git (for Modula-2)

The current gcc-10 source package is taken from the SVN gcc-10-branch.

Changes: See changelog.Debian.gz

Debian splits the GNU Compiler Collection into packages for each language, library, and documentation as follows:

| Language      | Compiler package | Library package | Documentation     |
|---------------|------------------|-----------------|-------------------|
| Ada           | gnat-10          | libgnat-10      | gnat-10-doc       |
| BRIG          | gccbrig-10       | libhsail-rt0    |                   |
| C             | gcc-10           |                 | gcc-10-doc        |
| C++           | g++-10           | libstdc++6      | libstdc++6-10-doc |
| D             | gdc-10           |                 |                   |
| Fortran 95    | gfortran-10      | libgfortran5    | gfortran-10-doc   |
| Go            | gccgo-10         | libgo0          |                   |
| Objective C   | gobjc-10         | libobjc4        |                   |
| Objective C++ | gobjc++-10       |                 |                   |
| Modula-2      | gm2-10           | libgm2          |                   |

For some language run-time libraries, Debian provides source files, development files, debugging symbols and libraries containing position-independent code in separate packages:

| Language | Sources          | Development       | Debugging         | Position-Independent |
|----------|------------------|-------------------|-------------------|----------------------|
| C++      |                  | libstdc++6-10-dbg | libstdc++6-10-pic |                      |
| D        | libphobos-10-dev |                   |                   |                      |

Additional packages include:

All languages:

|                   |                                     |
|-------------------|-------------------------------------|
| libgcc1,          |                                     |
| libgcc2, libgcc4  | GCC intrinsics (platform-dependent) |
| gcc-10-base       | Base files common to all compilers  |
| gcc-10-soft-float | Software floating point (ARM only)  |
| gcc-10-source     | The sources with patches            |

Ada:

libgnat-util10-dev, libgnat-util10 GNAT version library

C:

|                      |                                       |
|----------------------|---------------------------------------|
| cpp-10, cpp-10-doc   | GNU C Preprocessor                    |
| libssp0-dev, libssp0 | GCC stack smashing protection library |
| libquadmath0         | Math routines for the __float128 type |
| fixincludes          | Fix non-ANSI header files             |

C, C++ and Fortran 95:

libgomp1-dev, libgomp1 GCC OpenMP (GOMP) support library

libitm1-dev, libitm1 GNU Transactional Memory Library

Biarch support: On some 64-bit platforms which can also run 32-bit code, Debian provides additional packages containing 32-bit versions of some libraries. These packages have names beginning with 'lib32' instead of 'lib', for example lib32stdc++6. Similarly, on some 32-bit platforms which can

also run 64-bit code, Debian provides additional packages with names beginning with 'lib64' instead of 'lib'. These packages contain 64-bit versions of the libraries. (At this time, not all platforms and not all libraries support biarch.) The license terms for these lib32 or lib64 packages are identical to the ones for the lib packages.

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- libatomic
- libdecnumber
- libgomp
- libitm
- libssp
- libstdc++-v3
- libobjc
- libgfortran
- The libgnat-10 Ada support library and libgnat-util10 library.
- Various config files in gcc/config/ used in runtime libraries.
- libvtv

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Developed by:

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libquadmath/math:

atanq.c, expm1q.c, j0q.c, j1q.c, log1pq.c, logq.c:

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cosqh.c, erfq.c, jnq.c, lgammaq.c, powq.c, roundq.c:

Changes for 128-bit \_\_float128 are

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ldexpq.c:

- \* Conversion to long double by Ulrich Drepper,
- \* Cygnus Support, drepper@cygnus.com.

cosq\_kernel.c, expq.c, sincos\_table.c, sincosq.c, sincosq\_kernel.c, sinq\_kernel.c, truncq.c:

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llroundq.c, lroundq.c, tgammaq.c:

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Cephes Math Library Release 2.2: January, 1991  
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gcc/go/gofrontend, libgo:

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D:  
gdc-10                    GNU D Compiler  
libphobos-10-dev        D standard runtime library

The D source package is made up of the following components.

The D front-end for GCC:  
- d/\*

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The DMD Compiler implementation of the D programming language:  
- d/dmd/\*

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The Zlib data compression library:  
- d/phobos/etc/c/zlib/\*

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The Phobos standard runtime library:

- d/phobos/\*

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Any

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Version 3.1, 31 March 2009

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DRuntime: Runtime Library for the D Programming Language

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```
<one line to give the program's name and a brief idea of what it does.>  
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```

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```
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```

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Version 2, June 1991

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=====

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Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable.

Therefore, we have designed this version of the GPL to prohibit the practice

for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

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@heading TERMS AND CONDITIONS

@enumerate 0

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The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

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# 1.150 libcrypt-dev 4.4.18-4

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## 1.154 libasan6 10.2.1-6

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```

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```

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## 1.158 mercurial-common 5.6.1-4

### 1.158.1 Available under license :

```
#require unix-permissions no-root
```

```
$ hg init a
```

```
$ cd a
```

```
$ echo foo > b
```

```
$ hg add b
```

```
$ hg ci -m "b"
```

```
$ chmod -w .hg/store
```

```
$ cd ..
```

```
$ hg clone a b
```

```
requesting all changes
```

```
adding changesets
```

```
adding manifests
```

```
adding file changes
```

```
added 1 changesets with 1 changes to 1 files
```

```
new changesets 97310831fa1a
```

```
updating to branch default
```

1 files updated, 0 files merged, 0 files removed, 0 files unresolved

```
$ chmod +w a/.hg/store # let test clean up
```

```
$ cd b
```

```
$ hg verify
```

checking changesets

checking manifests

crosschecking files in changesets and manifests

checking files

checked 1 changesets with 1 changes to 1 files

```
$ cd ..
```

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Greg Ward, author of the original bfiles extension

Na'Tosha Bard of Unity Technologies

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This package was debianized by Akira TAGOH <tagoh@debian.org> on Thu, 7 Mar 2002 01:05:25 +0900.

It was downloaded from <<https://download.gnome.org/sources/glib/>>.

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Julian Seward, [jseward@bzip.org](mailto:jseward@bzip.org)  
bzip2/libbzip2 version 1.0.6 of 6 September 2010

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DRuntime: Runtime Library for the D Programming Language

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## 1.161 junit 4.13.2

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# 1.169 dgryski-go-rendezvous 0.0.0-20200823014737-9f7001d12a5f

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# 1.172 gopkg.in-tomb 2.0.0-20161208151619-d5d1b5820637

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## 1.173 prometheus-procfs 0.7.3

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## 1.178 backoff 4.1.0

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# 1.181 grpc-protobuf 1.39.0

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```

Found in path(s):

```
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-
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Found in path(s):

```
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-jar/io/grpc/protobuf/package-info.java
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-jar/io/grpc/protobuf/ProtoMethodDescriptorSupplier.java
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-jar/io/grpc/protobuf/ProtoServiceDescriptorSupplier.java
*
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-jar/io/grpc/protobuf/StatusProto.java
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Found in path(s):

```
* /opt/cola/permits/1218584014_1635037059.25/0/grpc-protobuf-1-39-0-sources-
```

# 1.182 protobuf 1.27.1

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Upstream-Name: liblz4

Upstream-Contact: Yann Collet <Cyan4973@github.com>

Source: <https://github.com/lz4/lz4>

Files: \*

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## 1.185 libpkit 0.23.22-1

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Upstream-Name: p11-kit

Source: <https://p11-glue.github.io/p11-glue/p11-kit.html>

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Files: common/vsock.c common/vsock.h

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Files: p11-kit/server.c

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\* copied from putty/windows/winsecur.c in the PuTTY source code as of

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## 1.191 netty 4.1.70.Final

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Manifest-Version: 1.0

Implementation-Title: Netty/All-in-One

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name:

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.all

Implementation-Version: 4.1.70.Final

Built-By: norman

Bnd-LastModified: 1635932641304

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Bundle-Name: Netty/All-in-One

Bundle-Version: 4.1.70.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk:

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Implementation-URL: <https://netty.io/netty-all/>

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Steve M. Robbins <[smr@debian.org](mailto:smr@debian.org)>

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# 1.197 go-redis-redis v8.11.4

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# 1.200 annotations 4.1.1.4

## 1.200.1 Available under license :

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```
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 * Copyright (C) 2012 The Android Open Source Project
 *
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 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
 * See the License for the specific language governing permissions and
 * limitations under the License.
 */
```

Found in path(s):

```
* /opt/cola/permits/1258811491_1643111603.33/0/annotations-4-1-1-4-sources-
jar/android/annotation/SuppressLint.java
* /opt/cola/permits/1258811491_1643111603.33/0/annotations-4-1-1-4-sources-
jar/android/annotation/TargetApi.java
```

# 1.201 proto-google-common-protos 2.0.1

## 1.201.1 Available under license :

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```
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// distributed under the License is distributed on an "AS IS" BASIS,
// agreement (which includes confidentiality provisions). These features may
```

Found in path(s):

```
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/api/launch_stage.proto
```

No license file was found, but licenses were detected in source scan.

```
/*
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- \* limitations under the License.
- \*/

Found in path(s):

- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/ExprOrBuilder.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/Http.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ProjectProperties.java
- \*
- /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ChangeType.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/AuthRequirementOrBuilder.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ConfigChange.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/cloud/audit/AuthorizationInfo.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/Expr.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/Date.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/Color.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/MonitoringProto.java
- \*
- /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ClientProto.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/LabelDescriptorOrBuilder.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/logging/type/LogSeverity.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ControlOrBuilder.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/Context.java
- \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/CustomHttpPatternOrBuilder.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/MetricProto.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/LocalizedMessage.java  
 \*  
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 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/LabelProto.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/logging/type/HttpRequestProto.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/ResourceInfo.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/BackendRule.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/longrunning/GetOperationRequest.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ControlProto.java  
 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/longrunning/WaitOperationRequestOrBuilder.java  
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 \* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/Status.java  
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jar/com/google/api/OAuthRequirementsOrBuilder.java  
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jar/com/google/api/LogDescriptor.java  
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\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/geo/type/Viewport.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/longrunning/Operation.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/ResourceReference.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/DebugInfo.java  
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\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/AuthProviderOrBuilder.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/ErrorInfoOrBuilder.java  
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\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/cloud/audit/AuditLogOrBuilder.java  
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jar/com/google/api/ResourceReferenceOrBuilder.java  
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jar/com/google/type/Quaternion.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-  
jar/com/google/api/LabelDescriptor.java  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-  
jar/com/google/type/Money.java



\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/longrunning/ListOperationsResponse.java  
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\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/CalendarPeriod.java

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/opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/type/DateTimeProto.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/ResourceInfoOrBuilder.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/cloud/audit/ResourceLocationOrBuilder.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/rpc/StatusProto.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/AnnotationsProto.java

\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/LaunchStageProto.java

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\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/com/google/api/Property.java  
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jar/com/google/longrunning/CancelOperationRequestOrBuilder.java  
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 *
 *
 * <pre>
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 * </pre>
 *
 * <code>EARLY_ACCESS = 1;</code>
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jar/com/google/api/LaunchStage.java  
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* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
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jar/google/type/money.proto
*
/opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/rpc/context/attribute_context.proto
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/api/consumer.proto
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/rpc/status.proto
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/type/expr.proto
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
jar/google/api/http.proto
* /opt/cola/permits/1258876734_1643115814.46/0/proto-google-common-protos-2-0-1-sources-
```

jar/google/api/log.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/calendar\_period.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/color.proto  
\*  
/opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/metric.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/documentation.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/usage.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/dayofweek.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/monitoring.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/fraction.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/auth.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/source\_info.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/longrunning/operations.proto  
\*  
/opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/resource.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/latlng.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/rpc/code.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/datetime.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/label.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/type/quaternion.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/geo/type/viewport.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/service.proto  
\*  
/opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/httpbody.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/logging.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/annotations.proto



\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/billing.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/logging/type/http\_request.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/field\_behavior.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/rpc/error\_details.proto  
\* /opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/backend.proto  
\*  
/opt/cola/permits/1258876734\_1643115814.46/0/proto-google-common-protos-2-0-1-sources-jar/google/api/endpoint.proto

# 1.202 animal-sniffer-annotation 1.19

## 1.202.1 Available under license :

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Found in path(s):

\* /opt/cola/permits/1258876677\_1643115784.16/0/animal-sniffer-annotations-1-19-sources-jar/META-INF/maven/org.codehaus.mojo/animal-sniffer-annotations/pom.xml

No license file was found, but licenses were detected in source scan.

```
/*
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 *
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 *
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 */
```

Found in path(s):

```
* /opt/cola/permits/1258876677_1643115784.16/0/animal-sniffer-annotations-1-19-sources-
jar/org/codehaus/mojo/animal_sniffer/IgnoreJRERequirement.java
```

## 1.203 libext2fs2 1.46.2-2

### 1.203.1 Available under license :

This package was added to the e2fsprogs debian source package by Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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Upstream Author: Theodore Ts'o <tytso@mit.edu>

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Sources were obtained from <http://sourceforge.net/projects/e2fsprogs>

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#

# This is a Makefile stub which handles the creation of BSD shared libraries.

#

# In order to use this stub, the following makefile variables must be defined.

#

# BSDLIB\_VERSION = 1.0

# BSDLIB\_IMAGE = libce

# BSDLIB\_MYDIR = et

# BSDLIB\_INSTALL\_DIR = \$(SHLIBDIR)

#

all:: image

real-subdirs:: Makefile

@echo " MKDIR pic"

@mkdir -p pic

```
BSD_LIB = $(BSDLIB_IMAGE).so.$(BSDLIB_VERSION)
```

```
BSDLIB_PIC_FLAG = -fpic
```

```
image: $(BSD_LIB)
```

```
$(BSD_LIB): $(OBJS)
```

```
(cd pic; ld -Bshareable -o $(BSD_LIB) $(LD_FLAGS_SHLIB) $(OBJS))
```

```
$(MV) pic/$(BSD_LIB) .
```

```
$(RM) -f ../$(BSD_LIB)
```

```
(cd ..; $(LN) $(LINK_BUILD_FLAGS) \
```

```
`echo $(my_dir) | sed -e 's;lib/;;' /$(BSD_LIB) $(BSD_LIB))
```

```
install-shlibs install:: $(BSD_LIB)
```

```
@echo " INSTALL_PROGRAM $(BSDLIB_INSTALL_DIR)/$(BSD_LIB)"
```

```
@$(INSTALL_PROGRAM) $(BSD_LIB) \
```

```
$(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
@-$(LDCONFIG)
```

```
install-strip: install
```

```
install-shlibs-strip:: install-shlibs
```

```
uninstall-shlibs uninstall::
```

```
$(RM) -f $(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
clean::
```

```
$(RM)
```

```
-rf pic
```

```
$(RM) -f $(BSD_LIB)
```

```
$(RM) -f ../$(BSD_LIB)
```

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This is the Debian GNU/Linux prepackaged version of the translation files of the EXT2 file system utilities. The EXT2 utilities were written by Theodore Ts'o <tytso@mit.edu> and Remy Card <card@masi.ibp.fr>.

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Index: tdbsa/tdb.c

=====

--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/

/\*

- Unix SMB/CIFS implementation.
- + trivial database library - standalone version

- trivial database library - private includes

-

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#### Appendix: How to Apply These Terms to Your New Programs

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To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19yy name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY;

for details type `show w'.

This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider

it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

This package, the EXT2 filesystem utilities, are made available under the GNU Public License version 2, with the exception of the lib/ext2fs and lib/e2p libraries, which are made available under the GNU Library General Public License Version 2, the lib/uuid library which is made available under a BSD-style license and the lib/et and lib/ss libraries which are made available under an MIT-style license. Please see lib/uuid/COPYING for more details for the license for the files comprising the libuuid library, and the source file headers of the libet and libss libraries for more information.

The most recent officially distributed version can be found at <http://e2fsprogs.sourceforge.net>. If you need to make a distribution, that's the one you should use. If there is some reason why you'd like a more recent version that is still in ALPHA testing (i.e., either using the "WIP" test distributions or one from the hg or git repository from the development branch, please contact me (tytso@mit.edu)

before you ship. The release schedules for this package are flexible, if you give me enough lead time.

Theodore Ts'o  
23-June-2007

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Version 2, June 1991

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To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

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We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain

that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

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Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered

only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.



2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of

Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

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It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to

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## END OF TERMS AND CONDITIONS

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If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name  
of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

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Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author  
Gnomovision
```

comes with ABSOLUTELY NO WARRANTY; for details type `show w'.

This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice

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Version 2, June 1991

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[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some

specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary

one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

#### Activities

other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices

stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the

ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline

functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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This package was added to the e2fsprogs debian source package by Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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## 1.204 libdebconfclient0 0.260

### 1.204.1 Available under license :

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Other contributors include:

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Attilio Fiandrotti <fiandro@tiscali.it>  
Colin Watson <cjwatson@debian.org>  
Regis Boudin <regis@debian.org>

CDebConf includes ideas and code from:  
debconf - The original, de facto, perl implementation  
(c) Joey Hess <joeyh@debian.org>

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## 1.205 libss 1.46.2-2

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```
#  
# This is a Makefile stub which handles the creation of BSD shared  
# libraries.  
#  
# In order to use this stub, the following makefile variables must be defined.  
#  
# BSDLIB_VERSION = 1.0  
# BSDLIB_IMAGE = libce  
# BSDLIB_MYDIR = et  
# BSDLIB_INSTALL_DIR = $(SHLIBDIR)  
#
```

```
all:: image
```

```
real-subdirs:: Makefile  
@echo " MKDIR pic"  
@mkdir -p pic
```

```
BSD_LIB = $(BSDLIB_IMAGE).so.$(BSDLIB_VERSION)
```

BSDLIB\_PIC\_FLAG = -fpic

image: \$(BSD\_LIB)

```
$(BSD_LIB): $(OBJS)
(cd pic; ld -Bshareable -o $(BSD_LIB) $(LDFLAGS_SHLIB) $(OBJS))
$(MV) pic/$(BSD_LIB) .
$(RM) -f ../$(BSD_LIB)
(cd ..; $(LN) $(LINK_BUILD_FLAGS) \
`echo $(my_dir) | sed -e 's;lib/;;'"/$(BSD_LIB) $(BSD_LIB))
```

```
install-shlibs install:: $(BSD_LIB)
@echo " INSTALL_PROGRAM $(BSDLIB_INSTALL_DIR)/$(BSD_LIB)"
@$(INSTALL_PROGRAM) $(BSD_LIB) \
$(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
@-$(LDCONFIG)
```

install-strip: install

install-shlibs-strip:: install-shlibs

```
uninstall-shlibs uninstall::
$(RM) -f $(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
clean::
$(RM)
-rf pic
$(RM) -f $(BSD_LIB)
$(RM) -f ../$(BSD_LIB)
```

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Index: tdbsa/tdb.c

-----  
--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/

/\*

- Unix SMB/CIFS implementation.
- + trivial database library - standalone version

- trivial database library - private includes

-

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Gadi Oxman, August 1995

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Theodore Ts'o

23-June-2007

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That's all there is to it!

This is the Debian GNU/Linux prepackaged version of the EXT2 file system utilities (e2fsck, mke2fs, etc.). The EXT2 utilities were written by Theodore Ts'o <tytso@mit.edu> and Remy Card <card@masi.ibp.fr>.

Sources were obtained from <http://sourceforge.net/projects/e2fsprogs>

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This package was added to the e2fsprogs debian source package by  
Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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This package was put together by Yann Dirson <dirson@debian.org>, from sources obtained from a mirror of:  
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## 1.206 libmount 2.36.1-8+deb11u1

### 1.206.1 Available under license :

| NR | START | END   | SECTORS | SIZE | NAME | UUID        |
|----|-------|-------|---------|------|------|-------------|
| 1  | 32    | 7679  | 7648    | 3.7M |      | 8f8378c0-01 |
| 2  | 7680  | 16383 | 8704    | 4.3M |      | 8f8378c0-02 |
| 5  | 7936  | 12799 | 4864    | 2.4M |      |             |
| 6  | 12544 | 16127 | 3584    | 1.8M |      |             |

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x ?"U@,5 @mISmIN<GimCN7g1uE

43mI,5WEV @@ WEV @mImImIAmImImI0mImImI\*mImI

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lost+found...

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# 1.207 libuuid 2.36.1-8+deb11u1

## 1.207.1 Available under license :

| NR | START | END   | SECTORS | SIZE | NAME | UUID        |
|----|-------|-------|---------|------|------|-------------|
| 1  | 32    | 7679  | 7648    | 3.7M |      | 8f8378c0-01 |
| 2  | 7680  | 16383 | 8704    | 4.3M |      | 8f8378c0-02 |
| 5  | 7936  | 12799 | 4864    | 2.4M |      |             |
| 6  | 12544 | 16127 | 3584    | 1.8M |      |             |

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```
WEV @@ WEV[B "1
x ?"U@,5 @mISmIN<GimCN7g1u|E
43mI,5WEV @@ WEV @mImImIAmImImI0mImImI*mImI
A0mImImI...
lost+found...
```

```
;9GimCN7g
```

```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
```

```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
```

```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
```

```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~WEV @@
WEV[B "1
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# 1.208 mount 2.36.1-8+deb11u1

## 1.208.1 Available under license :

| NR | START | END   | SECTORS | SIZE | NAME        | UUID |
|----|-------|-------|---------|------|-------------|------|
| 1  | 32    | 7679  | 7648    | 3.7M | 8f8378c0-01 |      |
| 2  | 7680  | 16383 | 8704    | 4.3M | 8f8378c0-02 |      |
| 5  | 7936  | 12799 | 4864    | 2.4M |             |      |
| 6  | 12544 | 16127 | 3584    | 1.8M |             |      |

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1999 Andreas Dilger (adilger@enl.ucalgary.ca)

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Files: lib/procutils.c

include/xalloc.h

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Files: \*/colors.\*

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Files: login-utils/setpwnam.h

login-utils/setpwnam.c

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1994 Salvatore Valente <svalente@mit.edu>

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Files: libfdisk/\*

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Files: lib/cpuset.c

\*/match.\*

lib/canonicalize.c

include/at.h

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Files: \*/timeutils.\*

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Files: libblkid/\*

libblkid/src/\*

libblkid/samples/\*

libblkid/src/partitions/\*

libblkid/src/superblocks/\*

libblkid/src/topology/\*

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1995, 1995, 1996, 1997, 1999, 2000, 2001, 2002, 2003, 2004

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lib/randutils.c

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Files: misc-utils/blkid.c

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```
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```

```
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WEV @@ WEV[B "1

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43mI,5WEV @@ WEV @mImImIAmImImI0mImImI\*mImI

A0mImImI...

lost+found...

;9GimCN7g

!"#\$%&'()\*+,-

./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^\_`abcdefghijklmnopqrstuvwxyz{|}~

!"#\$%&'()\*+,-

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WEV[B "1

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# 1.209 internmap 2.0.3

## 1.209.1 Available under license :

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 */
```

Found in path(s):

```
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/impl/Operator.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/Expression.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/UriUtil.java
*
/opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/UriTransient.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/impl/Modifier.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/VariableExpansionException.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/VarName.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/VarExploder.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/impl/VarSpec.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/UriTemplate.java
* /opt/cola/permits/1273317603_1645099869.69/0/handy-uri-templates-2-1-8-sources-
jar/com/damnhandy/uri/template/DefaultVarExploder.java
*
```

/opt/cola/permits/1273317603\_1645099869.69/0/handy-uri-templates-2-1-8-sources-jar/com/damnhandy/uri/template/impl/UriTemplateParser.java  
\* /opt/cola/permits/1273317603\_1645099869.69/0/handy-uri-templates-2-1-8-sources-jar/com/damnhandy/uri/template/impl/VarExploderFactory.java  
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Found in path(s):

\* /opt/cola/permits/1273317603\_1645099869.69/0/handy-uri-templates-2-1-8-sources-jar/com/damnhandy/uri/template/MalformedUriTemplateException.java

## 1.211 javax-annotation-api 1.3.2

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# 1.212 cyrus-sasl 2.1.27+dfsg-2.1+deb11u1

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 * Tim Martin
 * Rob Earhart
 * Rob Siemborski
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Upstream-Name: Cyrus SASL

Source: <ftp://ftp.cyrusimap.org/cyrus-sasl/>

Files-Excluded: dlcompat-20010505

doc/rfc\*

doc/draft\*

Files: \*

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Files: debian/\*

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## 1.215 sysv-init 2.96-7+deb11u1

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This package was debianized by Akira TAGOH <tagoh@debian.org> on Thu, 7 Mar 2002 01:05:25 +0900.

It was downloaded from <<https://download.gnome.org/sources/glib/>>.

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any

executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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Version 3.1, 31 March 2009

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DRuntime: Runtime Library for the D Programming Language

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## 1.219 gson 2.9.0

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jar/com/google/gson/internal/bind/DateTypeAdapter.java
* /opt/cola/permits/1296849109_1648622539.88/0/gson-2-9-0-sources-
jar/com/google/gson/internal/bind/TreeTypeAdapter.java
* /opt/cola/permits/1296849109_1648622539.88/0/gson-2-9-0-sources-
jar/com/google/gson/internal/UnsafeAllocator.java
*
/opt/cola/permits/1296849109_1648622539.88/0/gson-2-9-0-sources-
jar/com/google/gson/internal/sql/SqlDateTypeAdapter.java
* /opt/cola/permits/1296849109_1648622539.88/0/gson-2-9-0-sources-
```

jar/com/google/gson/internal/ConstructorConstructor.java  
\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-  
jar/com/google/gson/internal/LazilyParsedNumber.java  
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\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/FieldAttributes.java  
\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonParser.java  
\*  
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\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/JsonTreeReader.java

\*

/opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/JsonTreeWriter.java

\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/ArrayTypeAdapter.java

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\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/CollectionTypeAdapterFactory.java

\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/JsonReaderInternalAccess.java

\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/ReflectiveTypeAdapterFactory.java

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/opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/bind/MapTypeAdapterFactory.java

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jar/com/google/gson/stream/MalformedJsonException.java  
\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/stream/JsonWriter.java  
\* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/stream/JsonToken.java  
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/opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/stream/JsonReader.java  
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jar/com/google/gson/annotations/JsonAdapter.java  
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jar/com/google/gson/internal/bind/JsonAdapterAnnotationTypeAdapterFactory.java  
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- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonElement.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/Excluder.java
- \*
- /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/ExclusionStrategy.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonParseException.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/internal/\$Gson\$Preconditions.java
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- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonObject.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/InstanceCreator.java
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- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/annotations/SerializedName.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonDeserializationContext.java
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- /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/FieldNamingPolicy.java
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- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonSerializer.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonSerializationContext.java
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- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/GsonBuilder.java
- \* /opt/cola/permits/1296849109\_1648622539.88/0/gson-2-9-0-sources-jar/com/google/gson/JsonArray.java

# 1.220 re2j 1.6

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\* /opt/cola/permits/1300482759\_1649149014.06/0/re2j-1-6-sources-jar/com/google/re2j/MachineInput.java

\* /opt/cola/permits/1300482759\_1649149014.06/0/re2j-1-6-sources-jar/com/google/re2j/Regexp.java

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\* /opt/cola/permits/1300482759\_1649149014.06/0/re2j-1-6-sources-jar/com/google/re2j/Inst.java

\* /opt/cola/permits/1300482759\_1649149014.06/0/re2j-1-6-sources-jar/com/google/re2j/Pattern.java

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## 1.222 guava 31.1-jre

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Found in path(s):

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/VerifyException.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Verify.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/SubscriberExceptionContext.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/CharSequenceReader.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/WrappingScheduledExecutorService.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/SubscriberExceptionHandler.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/TypeVisitor.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredMultimapValues.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/Runnables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/HashingInputStream.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Utf8.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/thirdparty/publicsuffix/PublicSuffixType.java  
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* the License.
*/
/*
* This method was rewritten in Java from an intermediate step of the Murmur hash function in
* http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the
* following header:
*
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* hereby disclaims
copyright to this source code.
*/
```

Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/base/SmallCharMatcher.java
```

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*/
```

Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/MapMaker.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/JdkFutureAdapters.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/xml/XmlEscapers.java
*
```

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/ByteArrayDataInput.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/Cut.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/Callables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/annotations/GwtIncompatible.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/AbstractExecutionThreadService.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/annotations/GwtCompatible.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/Escapers.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/SignedBytes.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/SparseImmutableTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/LocalCache.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/ArrayBasedCharEscaper.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/HostSpecifier.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/Platform.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/CacheBuilder.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/UnsignedBytes.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ForwardingFuture.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/InternetDomainName.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ForwardingFluentFuture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ForwardingListenableFuture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/Service.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/TypeResolver.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Splitter.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/LineProcessor.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/MapMakerInternalMap.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/ReferenceEntry.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/RegularImmutableTable.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/AbstractIdleService.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/UrlEscapers.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Platform.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/ArrayBasedEscaperMap.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/AbstractService.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/DenseImmutableTable.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/ByteProcessor.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/SettableFuture.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/ArrayBasedUnicodeEscaper.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/ByteArrayDataOutput.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/html/HtmlEscapers.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/package-info.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/FinalizablePhantomReference.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/LineBuffer.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Function.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/LittleEndianDataOutputStream.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Throwables.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/CountingOutputStream.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/Closeables.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/DeadEvent.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Preconditions.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Supplier.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ListenableFuture.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/MultiInputStream.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Primitives.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/package-info.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Objects.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/LineReader.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/Interners.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/AsyncEventBus.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/CountingInputStream.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/Subscribe.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/package-info.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-

jar/com/google/common/base/FinalizableReference.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/DirectExecutor.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/AbstractIterator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/ExecutionList.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/eventbus/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/ByteStreams.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/EnumMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/FinalizableReferenceQueue.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Functions.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/eventbus/AllowConcurrentEvents.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/HashBiMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/Resources.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/FinalizableSoftReference.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/CharStreams.java  
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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Defaults.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Predicate.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Charsets.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Suppliers.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/FinalizableWeakReference.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/Files.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/AbstractFuture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/Flushables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/eventbus/EventBus.java  
\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/LittleEndianDataInputStream.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Predicates.java  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/DescendingMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ForwardingBlockingDeque.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredSetMultimap.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredEntryMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/RegularImmutableAsList.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/CompactLinkedHashSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingImmutableList.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingImmutableMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/TransformedIterator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/DescendingImmutableSortedSet.java  
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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/EvictingQueue.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/CompactLinkedHashMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingDeque.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredEntrySetMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractNavigableMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredKeySetMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredMultimap.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ImmutableEnumMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractSortedKeySortedSetMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AllEqualOrdering.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/UnmodifiableSortedMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingBlockingDeque.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/TreeTraverser.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingNavigableSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/SortedMultisetBridge.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/RangeMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingNavigableMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/CompactHashSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/CompactHashMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FilteredKeyListMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/TransformedListIterator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingImmutableSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/TreeRangeMap.java



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jar/com/google/common/hash/MacHashFunction.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/LittleEndianByteArray.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/CombinedFuture.java

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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/ReaderInputStream.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/InterruptibleTask.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/AggregateFutureState.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/FarmHashFingerprint64.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/AsyncCallable.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ConsumingQueueIterator.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/Platform.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/MultimapBuilder.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ImmutableMapEntry.java  
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\* Holder for web specializations of methods of { @code Floats }. Intended to be empty for regular  
\* version.  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ListenableScheduledFuture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/BaseEncoding.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ImmutableRangeMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/Stats.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/PairedStats.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/StatsAccumulator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/xml/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/Closer.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/SmoothRateLimiter.java  
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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/SipHashFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/Parameter.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/FileWriteMode.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/PairedStatsAccumulator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/CartesianList.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/TypeCapture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/LongAddable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-

jar/com/google/common/hash/LongAddables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/cache/LongAddable.java  
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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/escape/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/ServiceManager.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/Invokable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/cache/LongAddables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/CharSource.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/StandardSystemProperty.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/ChecksumHashFunction.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/AbstractByteHasher.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/ClassPath.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/TypeToInstanceMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/math/LinearTransformation.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/CharSink.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/ByteSource.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/ImmutableTypeToInstanceMap.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/AbstractInvocationHandler.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/RateLimiter.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableRangeSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/MutableTypeToInstanceMap.java  
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 */
/**
 * Holder for extra methods of {@code Objects} only in web. Intended to be empty for regular
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 */
```

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* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
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jar/com/google/common/hash/LongAdder.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/LongAdder.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/Striped64.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Striped64.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/AtomicDoubleArray.java
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/UsingToStringOrdering.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/MutableClassToInstanceMap.java  
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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingListIterator.java  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/Synchronized.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ImmutableSet.java  
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jar/com/google/common/collect/ForwardingSortedSet.java  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/AbstractMapBasedMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/AbstractSortedSetMultimap.java

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* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
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jar/com/google/common/collect/BiMap.java
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/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ClassToInstanceMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/NaturalOrdering.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingSortedMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ReverseOrdering.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Iterators.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingConcurrentMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/TreeMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/SortedSetMultimap.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableList.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Multimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/LinkedHashMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/package-info.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/HashMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/AbstractMapBasedMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ByFunctionOrdering.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/MapDifference.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Sets.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-

```



```
jar/com/google/common/collect/Interner.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/SetMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/NullsLastOrdering.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/AbstractIterator.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingMultiset.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingIterator.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingSet.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingList.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Multisets.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/EnumHashBiMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingObject.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Maps.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/AbstractSetMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Multimaps.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/CompoundOrdering.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ForwardingCollection.java
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Found in path(s):

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/SortedMultiset.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/SortedMultisets.java

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\*/

/\*\*

\* Returns an array containing all of the elements in the specified collection. This method

\* returns the elements in the order they are returned by the collection's iterator. The returned

\* array is "safe" in that no references to it are maintained by the collection. The caller is

\* thus free to modify the returned

array.

\*

\* <p>This method assumes that the collection size doesn't change while the method is running.

\*

\* <p>TODO(kevinb): support concurrently modified collections?

\*

\* @param c the collection for which to return an array of elements

\*/

Found in path(s):

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ObjectArrays.java

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*/
/*
* This method was rewritten in Java from an intermediate step of the Murmur hash function in
* http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the
* following header:
*
* MurmurHash3 was written by Austin Appleby, and is placed in the public domain. The author
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disclaims copyright to this source code.
*/
```

Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Hashing.java
```

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Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/Traverser.java
```

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
```

jar/com/google/common/util/concurrent/ClosingFuture.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/graph/AbstractBaseGraph.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/graph/BaseGraph.java  
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Found in path(s):  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Streams.java  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/IndexedImmutableSet.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/JdkBackedImmutableBiMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/JdkBackedImmutableMap.java

\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/BaseImmutableMultimap.java

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/\*\*

\* Holder for web specializations of methods of { @code Shorts }. Intended to be empty for regular  
\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/ShortsMethodsForWeb.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/reflect/Reflection.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/annotations/package-info.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/Atomics.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/package-info.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/SortedLists.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/package-info.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/annotations/Beta.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ContiguousSet.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ForwardingBlockingQueue.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ThreadFactoryBuilder.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Ascii.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Equivalence.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/UncaughtExceptionHandler.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-

jar/com/google/common/util/concurrent/ListeningExecutorService.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/Monitor.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/Strings.java  
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jar/com/google/common/util/concurrent/ForwardingLock.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/ForwardingCondition.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/ImmutableIntArray.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/AbstractHashFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/ImmutableDoubleArray.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/ImmutableLongArray.java  
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jar/com/google/common/primitives/Platform.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/Internal.java

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\* Holder for web specializations of methods of { @code Doubles }. Intended to be empty for regular  
\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/DoublesMethodsForWeb.java

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*/
/*
 * This method was written by Doug Lea with assistance from members of JCP JSR-166 Expert Group
 * and released to the public domain, as explained at
 * http://creativecommons.org/licenses/publicdomain
 *
 * As of 2010/06/11, this method is identical to the (package private) hash method in OpenJDK 7's
 * java.util.HashMap
class.
*/
```

Found in path(s):

```
*/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/Striped.java
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*/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/ServiceManagerBridge.java
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*/  
/**  
 * Not supported. <b>You are attempting to create a map that may contain a non-{@code Comparable}  
 * key.</b> Proper calls will resolve to the version in {@code ImmutableSortedMap}, not this dummy  
 * version.  
 *  
 * @throws UnsupportedOperationException always  
 * @deprecated <b>Pass a key of type {@code Comparable}  
to use {@link  
 *   ImmutableSortedMap#of(Comparable, Object)}.</b>  
*/
```

Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableSortedMapFauxverideShim.java
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```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/package-info.java
```

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```

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* the License.
*/
/**
* Outer class that exists solely to let us write {@code Partially.GwtIncompatible} instead of plain
* {@code GwtIncompatible}. This is more accurate for {@link Futures#catching}, which is available
* under GWT but with a slightly different signature.
*
* <p>We can't use {@code PartiallyGwtIncompatible} because then the GWT compiler
wouldn't recognize
* it as a {@code GwtIncompatible} annotation. And for {@code Futures.catching}, we need the GWT
* compiler to autostrip the normal server method in order to expose the special, inherited GWT
* version.
*/

```

Found in path(s):

```

* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/Partially.java

```

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```

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```

* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/Network.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/PredecessorsFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/ImmutableGraph.java
*

```

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/MutableGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/RecursiveDeleteOption.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/SuccessorsFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/Graph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/ImmutableNetwork.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/Graphs.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/TopKSelector.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/MutableNetwork.java  
\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/InsecureRecursiveDeleteException.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/JdkBackedImmutableSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/ImmutableSupplier.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ExecutionSequencer.java  
\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/JdkBackedImmutableMultiset.java

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 */
```

Found in path(s):

```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/RegularImmutableSortedSet.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableAsList.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ComparisonChain.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableClassToInstanceMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/SingletonImmutableList.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/TableCollectors.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/DiscreteDomain.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableSortedMap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableSortedSetFauxverideShim.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/SingletonImmutableTable.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableEnumSet.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/EmptyImmutableSetMultimap.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/AbstractIndexedListIterator.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/RegularImmutableList.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
```

jar/com/google/common/collect/ImmutableTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ComputationException.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableSetMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ForwardingTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ArrayTable.java  
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```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/PeekingIterator.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableEntry.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableBiMap.java  
*  
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Serialization.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/HashBasedTable.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMapValues.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMultiset.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMap.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMapKeySet.java  
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
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jar/com/google/common/collect/ImmutableSortedSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMultimap.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/CollectPreconditions.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Tables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/RegularImmutableMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/UnmodifiableIterator.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/SingletonImmutableBiMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/thirdparty/publicsuffix/PublicSuffixPatterns.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/StandardRowSortedTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableMapEntrySet.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Collections2.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/StandardTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableCollection.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/RegularImmutableBiMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Table.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/TreeBasedTable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableListMultimap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Platform.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Range.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/EmptyImmutableListMultimap.java  
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/NullnessCasts.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/NullnessCasts.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/NullnessCasts.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/CycleDetectingLockFactory.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/AbstractHasher.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/UnsignedInteger.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/UnsignedLongs.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/cache/CacheStats.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-



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jar/com/google/common/base/FunctionalEquivalence.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/reflect/TypeParameter.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/DoubleMath.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/MessageDigestHashFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/base/PairwiseEquivalence.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/BloomFilter.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/ListeningScheduledExecutorService.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/TreeRangeSet.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/Weigher.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/net/HttpHeaders.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/base/Present.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Crc32cHashFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/RegularContiguousSet.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/LoadingCache.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/AbstractCache.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/FutureCallback.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/RegularImmutableMultiset.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Murmur3_32HashFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/RemovalListener.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/reflect/Types.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/HashCode.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/IntMath.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Funnel.java
*

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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/DoubleUtils.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/AbstractNonStreamingHashFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/AsyncFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/BoundType.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/HashingOutputStream.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/AbstractLoadingCache.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/LongMath.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ExecutionError.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/HashFunction.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/package-info.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/CacheBuilderSpec.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/cache/Cache.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/EmptyContiguousSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/AbstractScheduledService.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/Hashing.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/Uninterruptibles.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Optional.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/ParseRequest.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractSortedMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Enums.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/UnsignedInts.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/DescendingImmutableSortedMultiset.java

```

* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/RemovalCause.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/AbstractCompositeHashFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/primitives/UnsignedLong.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/base/Absent.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/ForwardingExecutorService.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/PrimitiveSink.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/AbstractStreamingHasher.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/ForwardingLoadingCache.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/ForwardingListeningExecutorService.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Funnels.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/net/MediaType.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/MathPreconditions.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/base/Ticker.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/ForwardingCache.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/BigIntegerMath.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Hasher.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/WrappingExecutorService.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/net/HostAndPort.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Murmur3_128HashFunction.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/RemovalNotification.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/BloomFilterStrategies.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/RemovalListeners.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-

```

```
jar/com/google/common/cache/CacheLoader.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/UncheckedExecutionException.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/Queues.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/AbstractListeningExecutorService.java
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```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/LinkedHashMapMultimapGwtSerializationDependencies.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/EndpointPairIterator.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/ForwardingNetwork.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/ForwardingGraph.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/AbstractGraph.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/ElementOrder.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/NetworkConnections.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/UndirectedNetworkConnections.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/EdgesConnecting.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/MultiEdgesConnecting.java
```

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/Comparators.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/AbstractGraphBuilder.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/GraphConnections.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/AbstractDirectedNetworkConnections.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/AbstractNetwork.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/ImmutableValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/ValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/UndirectedGraphConnections.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/MapRetrievalCache.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/HashMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/ValueGraphBuilder.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/StandardMutableNetwork.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/NetworkBuilder.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/MutableValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/StandardMutableValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/ForwardingValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/GraphConstants.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/UndirectedMultiNetworkConnections.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/StandardMutableGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/EndpointPair.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/AbstractValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/StandardValueGraph.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-

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jar/com/google/common/graph/DirectedMultiNetworkConnections.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/GraphBuilder.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ArrayListMultimapGwtSerializationDependencies.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/AbstractUndirectedNetworkConnections.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/RangeGwtSerializationDependencies.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/DirectedGraphConnections.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/MapIteratorCache.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/CollectCollectors.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/MoreCollectors.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableMultisetGwtSerializationDependencies.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/StandardNetwork.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/graph/DirectedNetworkConnections.java
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```
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/Fingerprint2011.java
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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/graph/IncidentEdgeSet.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Joiner.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/InetAddresses.java

\*

\*/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/MultiReader.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/FluentIterable.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/net/PercentEscaper.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Doubles.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Chars.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Bytes.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/SequentialExecutor.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Longs.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Ints.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Booleans.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ListenableFutureTask.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/escape/Escaper.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Shorts.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/internal/Finalizer.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/FileBackedOutputStream.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/thirdparty/publicsuffix/TrieParser.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Stopwatch.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/CharMatcher.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/primitives/Floats.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/Converter.java

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\* Holder for web specializations of methods of { @code Ints }. Intended to be empty for regular  
\* version.

\*/

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/TrustedListenableFutureTask.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/Subscriber.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/base/MoreObjects.java

\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/util/concurrent/ListenerCallQueue.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/Quantiles.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/Dispatcher.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/eventbus/SubscriberRegistry.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ForwardingSortedMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableSortedMultisetFauxverideShim.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/GeneralRange.java  
\*  
/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/Count.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/RegularImmutableSortedMultiset.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/SortedIterable.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/RangeSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/AbstractRangeSet.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/SortedIterables.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ImmutableSortedMultiset.java  
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jar/com/google/common/util/concurrent/AtomicLongMap.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-

jar/com/google/common/collect/GwtTransient.java  
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jar/com/google/common/graph/package-info.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ImmutableBiMapFauxverideShim.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/CollectSpliterators.java
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jar/com/google/common/util/concurrent/OverflowAvoidingLockSupport.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/BigDecimalMath.java
```

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/io/Java8Compatibility.java

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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/hash/Java8Compatibility.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/math/ToDoubleRounder.java

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\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/UnmodifiableListIterator.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/RowSortedTable.java

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/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/MinMaxPriorityQueue.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingImmutableCollection.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/AbstractSequentialIterator.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/SortedMapDifference.java

\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-jar/com/google/common/collect/ForwardingSortedSetMultimap.java

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jar/com/google/common/html/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/net/ParametricNullness.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/math/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/xml/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/hash/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/eventbus/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/primitives/ParametricNullness.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/html/ElementTypesAreNonnullByDefault.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/collect/ElementTypesAreNonnullByDefault.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/cache/ElementTypesAreNonnullByDefault.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/io/ElementTypesAreNonnullByDefault.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
```

jar/com/google/common/escape/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/hash/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/math/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/ElementTypesAreNonnullByDefault.java  
\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/xml/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/primitives/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/collect/ParametricNullness.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/eventbus/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/net/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/ParametricNullness.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/reflect/ParametricNullness.java  
\*

/opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/io/ParametricNullness.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/graph/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/escape/ParametricNullness.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/graph/ParametricNullness.java

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jar/com/google/common/base/PatternCompiler.java  
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jar/com/google/common/base/JdkPattern.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/base/CommonMatcher.java  
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jar/com/google/common/base/CommonPattern.java

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jar/com/google/common/util/concurrent/ImmediateFuture.java  
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jar/com/google/common/util/concurrent/FakeTimeLimiter.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/GwtFuturesCatchingSpecialization.java  
\*  
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jar/com/google/common/escape/CharEscaperBuilder.java  
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jar/com/google/common/util/concurrent/TimeoutFuture.java  
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jar/com/google/common/util/concurrent/Futures.java  
\* /opt/cola/permits/1301953781\_1649307346.56/0/guava-31-1-jre-sources-1-  
jar/com/google/common/util/concurrent/CollectionFuture.java  
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jar/com/google/common/base/CaseFormat.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/GwtFluentFutureCatchingSpecialization.java
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jar/com/google/common/annotations/VisibleForTesting.java
*
/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/FuturesGetChecked.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/UncheckedTimeoutException.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/TimeLimiter.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/reflect/TypeToken.java
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jar/com/google/common/util/concurrent/AbstractCatchingFuture.java
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jar/com/google/common/escape/CharEscaper.java
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jar/com/google/common/util/concurrent/AbstractTransformFuture.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
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/opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/FluentFuture.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/io/AppendableWriter.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/util/concurrent/AggregateFuture.java
* /opt/cola/permits/1301953781_1649307346.56/0/guava-31-1-jre-sources-1-
jar/com/google/common/io/PatternFilenameFilter.java
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jar/com/google/common/util/concurrent/MoreExecutors.java

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jar/io/perfmark/TaskCloseable.java  
\* /opt/cola/permits/1302049233\_1649313702.49/0/perfmark-api-0-23-0-sources-1-  
jar/io/perfmark/StringFunction.java

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- \* /opt/cola/permits/1302049233\_1649313702.49/0/perfmark-api-0-23-0-sources-1-jar/io/perfmark/package-info.java
- \* /opt/cola/permits/1302049233\_1649313702.49/0/perfmark-api-0-23-0-sources-1-jar/io/perfmark/Link.java
- \*
- /opt/cola/permits/1302049233\_1649313702.49/0/perfmark-api-0-23-0-sources-1-jar/io/perfmark/PerfMark.java
- \* /opt/cola/permits/1302049233\_1649313702.49/0/perfmark-api-0-23-0-sources-1-jar/io/perfmark/Impl.java

# 1.224 tomb 2.0.0-20161208151619-d5d1b5820637

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tomb - support for clean goroutine termination in Go.

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Files: debian/bin/svnwrap

debian/man/svnwrap.1

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Files: debian/contrib/svn-clean

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debian/contrib/emacs/psvn.el

debian/contrib/emacs/dsvn.el

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Files: debian/contrib/svn\_load\_dirs/\*

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Files: subversion/libsvn\_subr/x509.h

subversion/libsvn\_subr/x509parse.c

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build/ac-macros/ax\_boost\_unit\_test\_framework.m4

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# 1.228 javapoet 1.13.0

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Found in path(s):

```
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/LineWrapper.java
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Found in path(s):

```
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/ClassName.java
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 */
```

Found in path(s):

```
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/JavaFile.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/AnnotationSpec.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/TypeName.java
*
  /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/CodeWriter.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/MethodSpec.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/TypeVariableName.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/NameAllocator.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/FieldSpec.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/CodeBlock.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-jar/com/squareup/javapoet/Util.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/ParameterizedTypeName.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/TypeSpec.java
*
  /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/ArrayTypeName.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/WildcardTypeName.java
* /opt/cola/permits/1312156089_1650477546.68/0/javapoet-1-13-0-sources-1-
jar/com/squareup/javapoet/ParameterSpec.java
```



# 1.229 libmpfr6 4.1.0-3

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Version 3, 29 June 2007

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## 1.231 liblzma 5.2.5-2.1~deb11u1

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Upstream-Name: XZ Utils

Upstream-Contact:

Lasse Collin <lasse.collin@tukaani.org>

<https://tukaani.org/xz/lists.html>

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Comment:

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To: Jonathan Nieder <jrnieder@gmail.com>

Subject: Re: XZ utils for Debian

Date: Sun, 19 Jul 2009 13:28:23 +0300

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```
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jar/google/api/visibility.proto
```

```
* /opt/cola/permits/1319211721_1651231546.54/0/proto-google-common-protos-2-7-4-
```

jar/google/geo/type/viewport.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/consumer.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/system\_parameter.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/distribution.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/type/dayofweek.proto  
\*  
/opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/resource.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/rpc/status.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/type/color.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/usage.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/type/timeofday.proto  
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jar/google/api/endpoint.proto  
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\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/log.proto  
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\*  
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jar/google/logging/type/log\_severity.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/control.proto  
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jar/google/cloud/audit/audit\_log.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-

jar/google/api/backend.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/http.proto  
\*  
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\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/longrunning/operations.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/type/fraction.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/monitored\_resource.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/metric.proto  
\*  
/opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/field\_behavior.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/logging/type/http\_request.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/documentation.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/rpc/error\_details.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/quota.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/type/localized\_text.proto  
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jar/google/type/calendar\_period.proto  
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jar/google/api/config\_change.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/context.proto  
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\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/api/monitoring.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-jar/google/api/routing.proto  
\* /opt/cola/permits/1319211721\_1651231546.54/0/proto-google-common-protos-2-7-4-  
jar/google/type/datetime.proto

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procfs provides functions to retrieve system, kernel and process metrics from the pseudo-filesystem proc.

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# 1.238 logrus 1.8.1

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# 1.239 ion-java 1.0.2

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-----

Local-Date: Fri, 06 Jun 2003 13:18:52 -0400  
Date: Fri, 6 Jun 2003 10:18:52 -0700  
From: Juan Gomez <juang@us.ibm.com>  
To: Stephen Frost <sfrost@debian.org>  
X-Mailer: Lotus Notes Release 5.0.2a (Intl) 23 November 1999  
Subject: Re: Juan C. Gomez license in OpenLDAP Source

Stephen,

"There is no restriction on modifications and derived works" on the work I did for the openldap server as long as this is consistent with the openldap license. Please forward this email to Kurt so he does the appropriate changes to the files to reflect this.

Regards, Juan

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MA

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-----

Local-Date: Thu, 05 Jun 2003 16:53:32 -0400

Date: Thu, 5 Jun 2003 16:53:32 -0400 (EDT)

From: Mark Adamson <adamson@andrew.cmu.edu>

To: Stephen Frost <sfrost@debian.org>

Subject: Re: Mark Adamson license in OpenLDAP source

Hi Stephen,

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-Mark

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---

After discussing this license with the OpenLDAP Foundation we received clarification on it:

---

- \* To: Stephen Frost <sfrost@snowman.net>
- \* Subject: Re: OpenLDAP Licenseing issues
- \* From: "Kurt D. Zeilenga" <Kurt@OpenLDAP.org>
- \* Date: Wed, 28 May 2003 10:55:44 -0700
- \* Cc: Steve Langasek <vorlon@netexpress.net>,debian-legal@lists.debian.org, openldap-devel@OpenLDAP.org
- \* In-reply-to: <20030528162613.GB8524@ns.snowman.net>
- \* Message-id: <5.2.0.9.0.20030528094229.02924780@127.0.0.1>
- \* Old-return-path: <Kurt@OpenLDAP.org>

Steven,

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Regards, Kurt  
-----

## 1.242 reflectasm 1.11.3

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\* /opt/cola/permits/1335933469\_1654004406.6611712/0/reflectasm-1-11-3-sources-2-jar/com/esotericsoftware/reflectasm/AccessClassLoader.java  
\* /opt/cola/permits/1335933469\_1654004406.6611712/0/reflectasm-1-11-3-sources-2-jar/com/esotericsoftware/reflectasm/ConstructorAccess.java  
\* /opt/cola/permits/1335933469\_1654004406.6611712/0/reflectasm-1-11-3-sources-2-jar/com/esotericsoftware/reflectasm/FieldAccess.java  
\*  
/opt/cola/permits/1335933469\_1654004406.6611712/0/reflectasm-1-11-3-sources-2-jar/com/esotericsoftware/reflectasm/PublicConstructorAccess.java  
\* /opt/cola/permits/1335933469\_1654004406.6611712/0/reflectasm-1-11-3-sources-2-jar/com/esotericsoftware/reflectasm/MethodAccess.java

## 1.243 perfmark-api 0.25.0

### 1.243.1 Available under license :

Apache-2.0

## 1.244 zstd-jni 1.5.2-1

### 1.244.1 Available under license :

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Manifest-Version: 1.0

Automatic-Module-Name: com.github.luben.zstd\_jni

Bnd-LastModified: 1642851452470

Bundle-Description: JNI bindings for Zstd native library that provides fast and high compression lossless algorithm for Java and all JVM languages.

Bundle-License: <https://opensource.org/licenses/BSD-2-Clause>;description=BSD 2-Clause License

Bundle-ManifestVersion: 2

Bundle-Name: zstd-jni

Bundle-NativeCode: darwin/x86\_64/libzstd-jni-1.5.2-1.dylib;osname=MacOS;osname=MacOSX;processor=x86\_64, darwin/aarch64/libzstd-jni-1.5.2-1.dylib;osname=MacOS;osname=MacOSX;processor=aarch64, freebsd/amd64/libzstd-jni-1.5.2-1.so;osname=FreeBSD;processor=amd64, freebsd/i386/libzstd-jni-1.5.2-1.so;osname=FreeBSD;processor=i386, linux/aarch64/libzstd-jni-1.5.2-1.so;osname=Linux;processor=aarch64, linux/amd64/libzstd-jni-1.5.2-1.so;osname=Linux;processor=amd64, linux/arm/libzstd-jni-1.5.2-1.so;osname=Linux;processor=arm,

linux/i386/libzstd-jni-1.5.2-1.  
so;osname=Linux;processor=i386, linux/mips64/libzstd-jni-1.5.2-1.so;o  
sname=Linux;processor=mips64, linux/ppc64/libzstd-jni-1.5.2-1.so;osna  
me=Linux;processor=ppc64, linux/ppc64le/libzstd-jni-1.5.2-1.so;osna  
me=Linux;processor=ppc64le, linux/s390x/libzstd-jni-1.5.2-1.so;osname=L  
inux;processor=s390x, win/amd64/libzstd-jni-1.5.2-1.dll;osname=Win32;  
processor=amd64, win/x86/libzstd-jni-1.5.2-1.dll;osname=Win32;process  
or=x86  
Bundle-SymbolicName: com.github.luben.zstd-jni  
Bundle-Vendor: com.github.luben  
Bundle-Version: 1.5.2.1  
Created-By: 11.0.14 (Debian)  
Export-Package: com.github.luben.zstd;version="1.5.2.1",com.github.lub  
en.zstd.util;version="1.5.2.1"  
Implementation-Title: zstd-jni  
Implementation-Vendor: com.github.luben  
Implementation-Vendor-Id: com.github.luben  
Implementation-Version: 1.5.2-1  
Import-Package: org.osgi.framework;resolution:=optional  
Private-Package: linux.amd64,linux.i386,linux.aarch64,linux.arm,linux.  
ppc64,linux.ppc64le,linux.mips64,linux.s390x,darwin.x86\_64,darwin.aar  
ch64,win.amd64,win.x86,freebsd.amd64,freebsd.i386  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=11.0))  
"  
Specification-Title: zstd-jni  
Specification-Vendor: com.github.luben  
Specification-Version: 1.5.2-1  
Tool: Bnd-4.0.0.201805111645

Found in path(s):

\* /opt/cola/permits/1337889408\_1654234488.39181/0/zstd-jni-1-5-2-1-jar/META-INF/MANIFEST.MF

## 1.245 everit-json-schema 1.14.1

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\* /opt/cola/permits/1347861461\_1655734144.0687535/0/everit-json-schema-1-14-1-sources-jar/org/everit/json/schema/JSONPointerException.java

\* /opt/cola/permits/1347861461\_1655734144.0687535/0/everit-json-schema-1-14-1-sources-jar/org/everit/json/schema/JSONPointer.java

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\* /opt/cola/permits/1347861461\_1655734144.0687535/0/everit-json-schema-1-14-1-sources-jar/META-INF/maven/com.github.erosb/everit-json-schema/pom.xml

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\* /opt/cola/permits/1347861461\_1655734144.0687535/0/everit-json-schema-1-14-1-sources-jar/org/everit/json/schema/internal/JSONWriter.java

# 1.246 listenablefuture 9999.0-empty-to-avoid-conflict-with-guava

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/GwtTransient.java

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Found in path(s):

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AtomicLongMap.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/Funnel.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/Uninterruptibles.java  
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 /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/FunctionalEquivalence.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/AbstractStreamingHasher.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/BigIntegerMath.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Optional.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/AbstractNonStreamingHashFunction.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/Weigher.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/WrappingExecutorService.java  
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 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/UnsignedInteger.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/HashingOutputStream.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/EmptyContiguousSet.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/package-info.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/TypeParameter.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/RemovalListeners.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/PairwiseEquivalence.java  
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 /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/package-info.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/ParseRequest.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/net/HttpHeaders.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/DescendingImmutableSortedMultiset.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/UnsignedLong.java  
 \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-



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jar/com/google/common/util/concurrent/AsyncFunction.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/HashFunction.java
*
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/ListeningScheduledExecutorService.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/math/MathPreconditions.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/ForwardingListeningExecutorService.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/HashCode.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/AbstractCompositeHashFunction.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/cache/RemovalListener.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/Hasher.java
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jar/com/google/common/cache/ForwardingLoadingCache.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/AbstractSortedMultiset.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/cache/RemovalCause.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/AbstractListeningExecutorService.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/Crc32cHashFunction.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/RegularContiguousSet.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/CacheLoader.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/RemovalNotification.java

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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/BloomFilter.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/AbstractHasher.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/UnsignedLongs.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Enums.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/AbstractLoadingCache.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/TreeRangeSet.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/PrimitiveSink.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/MessageDigestHashFunction.java

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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/DoubleUtils.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Queues.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/Hashing.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/LongMath.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/RegularImmutableMultiset.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/Murmur3\_128HashFunction.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/BloomFilterStrategies.java

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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/Funnels.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AbstractScheduledService.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/Murmur3\_32HashFunction.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Absent.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/FutureCallback.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/math/IntMath.java  
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jar/com/google/common/cache/LoadingCache.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/cache/AbstractCache.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/reflect/Types.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/BoundType.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/UncheckedExecutionException.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Present.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ForwardingExecutorService.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/cache/CacheBuilderSpec.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/net/HostAndPort.java  
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Found in path(s):

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableSortedMultiset.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RegularImmutableSortedMultiset.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/SortedIterables.java

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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/SortedIterable.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/collect/AbstractRangeSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/GeneralRange.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableSortedMultisetFauxverideShim.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ForwardingSortedMultiset.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RangeSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/Count.java

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Found in path(s):

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/CountingInputStream.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/LittleEndianDataInputStream.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Primitives.java  
\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Throwables.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/LittleEndianDataOutputStream.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/package-info.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/LineBuffer.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/eventbus/package-info.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/HashBiMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/AllowConcurrentEvents.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/DirectExecutor.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Predicate.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/FinalizableReferenceQueue.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/package-info.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/LineReader.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/FinalizableSoftReference.java  
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```
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 *
 * As of 2010/06/11, this method is identical to the (package private) hash method in OpenJDK 7's
 * java.util.HashMap
class.
*/
```

Found in path(s):

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/Striped.java
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jar/com/google/common/graph/IncidentEdgeSet.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/CompactHashing.java
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* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/Fingerprint2011.java
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jar/com/google/common/util/concurrent/ServiceManagerBridge.java  
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jar/com/google/common/reflect/Reflection.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/SubscriberExceptionHandler.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/Runnables.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/SubscriberExceptionContext.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/TypeVisitor.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/WrappingScheduledExecutorService.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Verify.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/VerifyException.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/HashingInputStream.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/Utf8.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/FilteredMultimapValues.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/thirdparty/publicsuffix/PublicSuffixType.java  
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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SortedMultisetBridge.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/UnmodifiableSortedMultiset.java
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- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingImmutableSet.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/CompactLinkedHashMap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/CompactLinkedHashSet.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/TreeTraverser.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/FilteredMultimap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/FilteredEntrySetMultimap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/CompactHashMap.java
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- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/FilteredKeySetMultimap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingImmutableList.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/TreeRangeMap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingNavigableSet.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/DescendingImmutableSortedSet.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractSortedKeySortedSetMultimap.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/DescendingMultiset.java
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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/collect/ForwardingImmutableMap.java  
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jar/com/google/common/collect/RangeMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RegularImmutableAsList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableEnumMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ForwardingBlockingDeque.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/TransformedIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/TransformedListIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/FilteredSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/AbstractNavigableMap.java  
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jar/com/google/common/util/concurrent/ForwardingBlockingDeque.java  
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jar/com/google/common/collect/CompactHashSet.java  
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jar/com/google/common/collect/EvictingQueue.java  
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jar/com/google/common/collect/AllEqualOrdering.java  
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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/InterruptibleTask.java
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- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/CombinedFuture.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/Platform.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/LittleEndianByteArray.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/MacHashFunction.java
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/LongAdder.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AbstractIdleService.java

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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Cut.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/ArrayBasedCharEscaper.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/ByteProcessor.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

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jar/com/google/common/collect/MapMakerInternalMap.java  
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jar/com/google/common/primitives/UnsignedBytes.java  
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jar/com/google/common/collect/MapMaker.java  
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jar/com/google/common/base/Platform.java  
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jar/com/google/common/util/concurrent/Service.java  
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jar/com/google/common/cache/ReferenceEntry.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ForwardingFluentFuture.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/escape/ArrayBasedEscaperMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RegularImmutableTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/SignedBytes.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/html/HtmlEscapers.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/DenseImmutableTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/TypeResolver.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/ByteArrayDataOutput.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ForwardingListenableFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ForwardingFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/annotations/GwtCompatible.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/annotations/GwtIncompatible.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/ArrayBasedUnicodeEscaper.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SparseImmutableTable.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Maps.java

\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SortedSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/LexicographicalOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ClassToInstanceMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingObject.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/EnumBiMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/UsingToStringOrdering.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/LinkedListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingQueue.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingCollection.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/MutableClassToInstanceMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/MapDifference.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractMultiset.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractMapBasedMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/CompoundOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractMapBasedMultiset.java  
\*



/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/NullsFirstOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ArrayListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SingletonImmutableSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingMultiset.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Lists.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Interner.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/LinkedHashMultiset.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingConcurrentMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ConcurrentHashMultiset.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingSortedSet.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ReverseNaturalOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/TreeMultiset.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/NullsLastOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Multisets.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractMapEntry.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingListIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Iterables.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Multiset.java

\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Sets.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingSortedMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/HashMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Ordering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Multimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/Synchronized.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractBiMap.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ByFunctionOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/EnumHashBiMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/TreeMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/NaturalOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/BiMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingMapEntry.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/package-info.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ReverseOrdering.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractSortedSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/LinkedHashMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/RegularImmutableSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableSet.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ArrayTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableSortedMap.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableClassToInstanceMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableAsList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ComputationException.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/RegularImmutableList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SingletonImmutableTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractIndexedListIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/EmptyImmutableSetMultimap.java  
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/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableEnumSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableSortedSetFauxverideShim.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/DiscreteDomain.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableTable.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/RegularImmutableSortedSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ComparisonChain.java  
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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/PredecessorsFunction.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/Graphs.java
- \*
- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ImmutableNetwork.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/MutableNetwork.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/SuccessorsFunction.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/Graph.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/Network.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/MutableGraph.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ImmutableGraph.java

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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/collect/NullnessCasts.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/NullnessCasts.java  
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* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-  
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* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Java8Compatibility.java  
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/math/ToDoubleRounder.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/HashMultimapGwtSerializationDependencies.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/AbstractNetwork.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/DirectedGraphConnections.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/StandardValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/NetworkBuilder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/GraphConstants.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/UndirectedMultiNetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/MapIteratorCache.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/RangeGwtSerializationDependencies.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/UndirectedGraphConnections.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/AbstractDirectedNetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/AbstractGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ImmutableValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/AbstractGraphBuilder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/EndpointPair.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/StandardMutableNetwork.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/DirectedNetworkConnections.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/EdgesConnecting.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ForwardingValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ForwardingNetwork.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/StandardMutableValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ElementOrder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-



jar/com/google/common/graph/ValueGraphBuilder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/AbstractValueGraph.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/GraphBuilder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/StandardMutableGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ArrayListMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/MutableValueGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/UndirectedNetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/GraphConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/EndpointPairIterator.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/LinkedHashMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/Comparators.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/ForwardingGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/AbstractUndirectedNetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/MapRetrievalCache.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableMultisetGwtSerializationDependencies.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/MultiEdgesConnecting.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/NetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/DirectedMultiNetworkConnections.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/graph/StandardNetwork.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/primitives/ShortsMethodsForWeb.java

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jar/com/google/common/primitives/FloatsMethodsForWeb.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AbstractTransformFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/TimeoutFuture.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/PatternFilenameFilter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AbstractCatchingFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/CollectionFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/Futures.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/GwtFuturesCatchingSpecialization.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/CaseFormat.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/TypeToken.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/FakeTimeLimiter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/AggregateFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/FuturesGetChecked.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/annotations/VisibleForTesting.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/GwtFluentFutureCatchingSpecialization.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/SimpleTimeLimiter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/UncheckedTimeoutException.java  
\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/FluentFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/AppendableWriter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/CharEscaper.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/CharEscaperBuilder.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/TimeLimiter.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/Dispatcher.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/MoreObjects.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/TrustedListenableFutureTask.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ListenerCallQueue.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/Subscriber.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/eventbus/SubscriberRegistry.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/Quantiles.java  
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```

```
*/
```

```
/*
```

```
* This method was rewritten in Java from an intermediate step of the Murmur hash function in
* http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the
* following header:
```

```
*
```

```
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*/
```

Found in path(s):

```
*/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/base/SmallCharMatcher.java
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*
```

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```

```
* the License.
```

```
*/
```

```
/**
```

```
* Outer class that exists solely to let us write {@code Partially.GwtIncompatible} instead of plain
* {@code GwtIncompatible}. This is more accurate for {@link Futures#catching}, which is available
* under GWT but with a slightly different signature.
```

```
*
```

```
* <p>We can't use {@code PartiallyGwtIncompatible} because then the GWT compiler
wouldn't recognize
```

```
* it as a {@code GwtIncompatible} annotation. And for {@code Futures.catching}, we need the GWT
```

\* compiler to autostrip the normal server method in order to expose the special, inherited GWT  
\* version.  
\*/

Found in path(s):

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/Partially.java

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jar/com/google/common/hash/ImmutableSupplier.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ExecutionSequencer.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/base/CommonPattern.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/JdkPattern.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/CommonMatcher.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/PatternCompiler.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RegularImmutableMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/Range.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableSortedSet.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/StandardTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableMapKeySet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/Platform.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RegularImmutableBiMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableMapEntrySet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ImmutableBiMap.java

```

*
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableMultiset.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableCollection.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableEntry.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/Tables.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/Serialization.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/UnmodifiableIterator.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/CollectPreconditions.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/Collections2.java
*
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/thirdparty/publicsuffix/PublicSuffixPatterns.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/HashBasedTable.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/TreeBasedTable.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/StandardRowSortedTable.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/Table.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableMap.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableMapValues.java
*
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/PeekingIterator.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/EmptyImmutableListMultimap.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableMultimap.java
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*/
/**
 * Not supported. <b>You are attempting to create a map that may contain a non-{@code Comparable}
 * key.</b> Proper calls will resolve to the version in {@code ImmutableSortedMap}, not this dummy
 * version.
 *
 * @throws UnsupportedOperationException always
 * @deprecated <b>Pass a key of type {@code Comparable}
 to use {@link
 *   ImmutableSortedMap#of(Comparable, Object)}.</b>
 */

```

Found in path(s):

```

* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/collect/ImmutableSortedMapFauxverideShim.java

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 */
/**
 * Holder for web specializations of methods of {@code Doubles}. Intended to be empty for regular
 * version.
 */

```

Found in path(s):

```

* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/primitives/DoublesMethodsForWeb.java

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 */
```

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```
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jar/com/google/common/primitives/Platform.java
```

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```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/base/Ascii.java
```

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/UncaughtExceptionHandler.java
```

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/primitives/package-info.java
```

```
*
```

```
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/Atomics.java
```

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/base/Strings.java
```

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
```

jar/com/google/common/collect/ContiguousSet.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ListeningExecutorService.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/annotations/Beta.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/Monitor.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ThreadFactoryBuilder.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/net/package-info.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/SortedLists.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Equivalence.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ForwardingBlockingQueue.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/annotations/package-info.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/RowSortedTable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ForwardingSortedSetMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/ForwardingImmutableCollection.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/MinMaxPriorityQueue.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/AbstractSequentialIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/UnmodifiableListIterator.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/SortedMapDifference.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingListMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ForwardingSetMultimap.java  
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\* Holder for extra methods of { @code Objects } only in web. Intended to be empty for regular  
\* version.

\*/

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/ExtraObjectsMethodsForWeb.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/BaseImmutableMultimap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/IndexedImmutableSet.java  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/LongAddables.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/xml/package-info.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/PairedStatsAccumulator.java  
\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/package-info.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/ChecksumHashFunction.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/CharSink.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/ClassPath.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/ByteSource.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/AbstractByteHasher.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/CharSource.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/SipHashFunction.java

\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/MutableTypeToInstanceMap.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableRangeMap.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ImmutableRangeSet.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/FileWriteMode.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/Invokable.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/LongAddable.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/html/package-info.java

\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/LongAddables.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/LongAddable.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/Parameter.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/PairedStats.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/Closer.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/AbstractInvocationHandler.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/StatsAccumulator.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/BaseEncoding.java

\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ListenableScheduledFuture.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/StandardSystemProperty.java

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/Stats.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/SmoothRateLimiter.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/ByteSink.java

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/collect/CartesianList.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/reflect/TypeCapture.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/RateLimiter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/escape/package-info.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ServiceManager.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/reflect/TypeToInstanceMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/math/LinearTransformation.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/FilteredKeyMultimap.java  
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jar/com/google/common/escape/Escaper.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/CharMatcher.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Ints.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Doubles.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/escape/UnicodeEscaper.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Stopwatch.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/base/Converter.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/FileBackedOutputStream.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Floats.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Bytes.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/ListenableFutureTask.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/FluentIterable.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/internal/Finalizer.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/Joiner.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Longs.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Shorts.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/util/concurrent/SequentialExecutor.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Chars.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/net/PercentEscaper.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/thirdparty/publicsuffix/TrieParser.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/io/MultiReader.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/net/InetAddresses.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/primitives/Booleans.java  
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- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/base/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/net/ElementTypesAreNonnullByDefault.java
- \*
- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/xml/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/reflect/ElementTypesAreNonnullByDefault.java
- \*
- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/math/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/cache/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/hash/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/io/ParametricNullness.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ElementTypesAreNonnullByDefault.java
- \*
- /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/escape/ElementTypesAreNonnullByDefault.java
- \* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-

jar/com/google/common/eventbus/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/net/ParametricNullness.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/html/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/base/ParametricNullness.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/xml/ElementTypesAreNonnullByDefault.java  
\*  
/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/cache/ElementTypesAreNonnullByDefault.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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jar/com/google/common/eventbus/ParametricNullness.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/SortedMultisets.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-  
jar/com/google/common/collect/SortedMultiset.java  
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*/
/**
* Holder for web specializations of methods of { @code Ints}. Intended to be empty for regular
* version.
*/
```

Found in path(s):

```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/primitives/IntsMethodsForWeb.java
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```
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/primitives/ImmutableDoubleArray.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/util/concurrent/ForwardingCondition.java
* /opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/primitives/ImmutableIntArray.java
*
/opt/cola/permits/1352724522_1656396262.6124718/0/guava-31-1-android-sources-1-
jar/com/google/common/hash/AbstractHashFunction.java
```

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ForwardingLock.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/primitives/ImmutableLongArray.java  
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\* This method was rewritten in Java from an intermediate step of the Murmur hash function in

\* <http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp>, which contained the

\* following header:

\*

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\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/util/concurrent/ClosingFuture.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/Traverser.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/AbstractBaseGraph.java  
\*

/opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/graph/BaseGraph.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ObjectCountLinkedHashMap.java  
\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ObjectCountHashMap.java  
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/\*\*

\* Returns an array containing all of the elements in the specified collection. This method

\* returns the elements in the order they are returned by the collection's iterator. The returned

\* array is "safe" in that no references to it are maintained by the collection. The caller is

\* thus free to modify the returned

array.

\*

\* <p>This method assumes that the collection size doesn't change while the method is running.

\*

\* <p>TODO(kevinb): support concurrently modified collections?

\*

\* @param c the collection for which to return an array of elements

\*/

Found in path(s):

\* /opt/cola/permits/1352724522\_1656396262.6124718/0/guava-31-1-android-sources-1-jar/com/google/common/collect/ObjectArrays.java

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```

\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

-----  
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\* Regular  
expression support

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Subsequently modified by:



1986 John Gilmore hoptoad!gnu  
1987 James A. Woods ames!jaw  
1993 Christopher Seiwald seiwald@vix.com  
2000, 2002 Christopher Seiwald <seiwald@perforce.com>  
2010 Steve Bennett <steveb@workware.net.au>  
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\*

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\*

\* @author Vincent Rijmen <vincent.rijmen@esat.kuleuven.ac.be>

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  - com.fasterxml.jackson.core:jackson-core:2.12.4
  - com.fasterxml.jackson.core:jackson-databind:2.12.4
  - com.fasterxml.jackson.module:jackson-module-jsonSchema:2.12.4
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flink-shaded-netty

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- io.netty:netty-buffer:4.1.70.Final
- io.netty:netty-codec:4.1.70.Final
- io.netty:netty-codec-dns:4.1.70.Final
- io.netty:netty-codec-haproxy:4.1.70.Final
- io.netty:netty-codec-http:4.1.70.Final
- io.netty:netty-codec-http2:4.1.70.Final
- io.netty:netty-codec-memcache:4.1.70.Final
- io.netty:netty-codec-mqtt:4.1.70.Final
- io.netty:netty-codec-redis:4.1.70.Final
- io.netty:netty-codec-smtp:4.1.70.Final
- io.netty:netty-codec-socks:4.1.70.Final
- io.netty:netty-codec-stomp:4.1.70.Final
- io.netty:netty-codec-xml:4.1.70.Final
- io.netty:netty-common:4.1.70.Final
- io.netty:netty-handler:4.1.70.Final
- io.netty:netty-handler-proxy:4.1.70.Final
- io.netty:netty-resolver:4.1.70.Final
- 
- io.netty:netty-resolver-dns:4.1.70.Final
- io.netty:netty-resolver-dns-classes-macos:4.1.70.Final
- io.netty:netty-resolver-dns-native-macos:osx-x86\_64:4.1.70.Final
- io.netty:netty-resolver-dns-native-macos:osx-aarch\_64:4.1.70.Final
- io.netty:netty-transport:4.1.70.Final
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- io.netty:netty-transport-native-kqueue:osx-x86\_64:4.1.70.Final
- io.netty:netty-transport-native-kqueue:osx-aarch\_64:4.1.70.Final
- io.netty:netty-transport-native-unix-common:4.1.70.Final
- io.netty:netty-transport-rxtx:4.1.70.Final
- io.netty:netty-transport-sctp:4.1.70.Final
- io.netty:netty-transport-udt:4.1.70.Final

ASM: a very small and fast Java bytecode manipulation framework

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- com.google.guava:failureaccess:1.0.1

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- io.netty:netty-buffer:4.1.70.Final
- io.netty:netty-codec:4.1.70.Final
- io.netty:netty-common:4.1.70.Final
- io.netty:netty-handler:4.1.70.Final
- io.netty:netty-resolver:4.1.70.Final
- io.netty:netty-transport:4.1.70.Final
- io.netty:netty-transport-native-epoll:4.1.70.Final
- io.netty:netty-transport-native-unix-common:4.1.70.Final
- org.apache.curator:curator-client:5.2.0
- org.apache.curator:curator-framework:5.2.0

- org.apache.curator:curator-recipes:5.2.0
- org.apache.zookeeper:zookeeper:3.5.9
- org.apache.zookeeper:zookeeper-jute:3.5.9

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- io.dropwizard.metrics:metrics-core:3.2.5
- io.netty:netty-buffer:4.1.70.Final
- io.netty:netty-codec:4.1.70.Final
- io.netty:netty-common:4.1.70.Final
- io.netty:netty-handler:4.1.70.Final
- io.netty:netty-resolver:4.1.70.Final
- io.netty:netty-transport:4.1.70.Final
- io.netty:netty-transport-native-epoll:4.1.70.Final
- io.netty:netty-transport-native-unix-common:4.1.70.Final
- org.apache.curator:curator-client:5.2.0
- org.apache.curator:curator-framework:5.2.0
- org.apache.curator:curator-recipes:5.2.0
- org.apache.zookeeper:zookeeper:3.6.3
- org.apache.zookeeper:zookeeper-jute:3.6.3

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- com.fasterxml.jackson.dataformat:jackson-dataformat-yaml:2.12.4
- com.fasterxml.jackson.datatype:jackson-datatype-jdk8:2.12.4
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# 1.253 x-sync 0.0.0-20220722155255-886fb9371eb4

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Local-Date: Fri, 06 Jun 2003 13:18:52 -0400  
Date: Fri, 6 Jun 2003 10:18:52 -0700  
From: Juan Gomez <juang@us.ibm.com>  
To: Stephen Frost <sfrost@debian.org>  
X-Mailer: Lotus Notes Release 5.0.2a (Intl) 23 November 1999  
Subject: Re: Juan C. Gomez license in OpenLDAP Source

Stephen,

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did for the openldap server as long as this is consistent with the openldap  
license. Please forward this email to Kurt so he does the appropriate  
changes to the files to reflect this.

Regards, Juan

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MA

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Local-Date: Thu, 05 Jun 2003 16:53:32 -0400

Date: Thu, 5 Jun 2003 16:53:32 -0400 (EDT)

From: Mark Adamson <adamson@andrew.cmu.edu>

To: Stephen Frost <sfrost@debian.org>

Subject: Re: Mark Adamson license in OpenLDAP source

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- \* To: Stephen Frost <sfrost@snowman.net>
- \* Subject: Re: OpenLDAP Licenseing issues
- \* From: "Kurt D. Zeilenga" <Kurt@OpenLDAP.org>
- \* Date: Wed, 28 May 2003 10:55:44 -0700
- \* Cc: Steve Langasek <vorlon@netexpress.net>,debian-legal@lists.debian.org, openldap-devel@OpenLDAP.org
- \* In-reply-to: <20030528162613.GB8524@ns.snowman.net>
- \* Message-id: <5.2.0.9.0.20030528094229.02924780@127.0.0.1>
- \* Old-return-path: <Kurt@OpenLDAP.org>

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#+TITLE: List of code with permissive licenses as used by GnuPG.  
#+STARTUP: showall
```

\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

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\* Regular  
expression support

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Subsequently modified by:

1986 John Gilmore hoptoad!gnu  
1987 James A. Woods ames!jaw  
1993 Christopher Seiwald seiwald@vix.com  
2000, 2002 Christopher Seiwald <seiwald@perforce.com>  
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regexp/utf8.[ch] (see regexp/LICENSE):

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compiler/cpp/src/generate/t\_xsd\_generator.cc  
compiler/cpp/src/main.cc  
compiler/cpp/src/parse/t\_field.h  
compiler/cpp/src/parse/t\_program.h  
compiler/cpp/src/platform.h  
compiler/cpp/src/thriftl.ll  
compiler/cpp/src/thrifty.yy  
lib/csharp/src/Protocol/TBinaryProtocol.cs  
lib/csharp/src/Protocol/TField.cs  
lib/csharp/src/Protocol/TList.cs  
lib/csharp/src/Protocol/TMap.cs  
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lib/csharp/src/Protocol/TMessageType.cs  
lib/csharp/src/Protocol/TProtocol.cs  
lib/csharp/src/Protocol/TProtocolException.cs  
lib/csharp/src/Protocol/TProtocolFactory.cs  
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lib/csharp/src/Protocol/TStruct.cs

lib/csharp/src/Protocol/TType.cs  
lib/csharp/src/Server/TServer.cs  
lib/csharp/src/Server/TSimpleServer.cs  
lib/csharp/src/Server/TThreadPoolServer.cs  
lib/csharp/src/TApplicationException.cs  
lib/csharp/src/Thrift.csproj  
lib/csharp/src/Thrift.sln  
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lib/csharp/src/Transport/TTransportFactory.cs  
lib/csharp/ThriftMSBuildTask/Properties/AssemblyInfo.cs  
lib/csharp/ThriftMSBuildTask/ThriftBuild.cs  
lib/csharp/ThriftMSBuildTask/ThriftMSBuildTask.csproj  
lib/rb/lib/thrift.rb  
lib/st/README  
lib/st/thrift.st  
test/OptionalRequiredTest.cpp  
test/OptionalRequiredTest.thrift  
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compiler/cpp/src/generate/t\_rb\_generator.cc  
compiler/cpp/src/generate/t\_st\_generator.cc  
compiler/cpp/src/generate/t\_xsd\_generator.cc  
compiler/cpp/src/main.cc  
compiler/cpp/src/parse/t\_field.h  
compiler/cpp/src/parse/t\_program.h  
compiler/cpp/src/platform.h  
compiler/cpp/src/thrift.l  
compiler/cpp/src/thrift.yy  
lib/csharp/src/Protocol/TBinaryProtocol.cs  
lib/csharp/src/Protocol/TField.cs  
lib/csharp/src/Protocol/TList.cs  
lib/csharp/src/Protocol/TMap.cs  
lib/csharp/src/Protocol/TMessage.cs  
lib/csharp/src/Protocol/TMessageType.cs  
lib/csharp/src/Protocol/TProtocol.cs  
lib/csharp/src/Protocol/TProtocolException.cs  
lib/csharp/src/Protocol/TProtocolFactory.cs  
lib/csharp/src/Protocol/TProtocolUtil.cs  
lib/csharp/src/Protocol/TSet.cs  
lib/csharp/src/Protocol/TStruct.cs  
lib/csharp/src/Protocol/TType.cs  
lib/csharp/src/Server/TServer.cs  
lib/csharp/src/Server/TSimpleServer.cs  
lib/csharp/src/Server/TThreadPoolServer.cs  
lib/csharp/src/TApplicationException.cs



lib/csharp/src/Thrift.csproj  
lib/csharp/src/Thrift.sln  
lib/csharp/src/TProcessor.cs  
lib/csharp/src/Transport/TServerSocket.cs  
lib/csharp/src/Transport/TServerTransport.cs  
lib/csharp/src/Transport/TSocket.cs  
lib/csharp/src/Transport/TStreamTransport.cs  
lib/csharp/src/Transport/TTransport.cs  
lib/csharp/src/Transport/TTransportException.cs  
lib/csharp/src/Transport/TTransportFactory.cs  
lib/csharp/ThriftMSBuildTask/Properties/AssemblyInfo.cs  
lib/csharp/ThriftMSBuildTask/ThriftBuild.cs  
lib/csharp/ThriftMSBuildTask/ThriftMSBuildTask.csproj  
lib/rb/lib/thrift.rb  
lib/st/README  
lib/st/thrift.st  
test/OptionalRequiredTest.cpp  
test/OptionalRequiredTest.thrift  
test/ThriftTest.thrift

-----  
For the aclocal/ax\_boost\_base.m4 and contrib/fb303/aclocal/ax\_boost\_base.m4 components:

```
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-----  
For the compiler/cpp/src/md5.[ch] components:

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```
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```
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\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

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```
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##+TITLE: List of code with permissive licenses as used by GnuPG.  
##+STARTUP: showall
```

\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

-----  
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\* Regular  
expression support

regexp/jimregexp.[ch]:

Originally:



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Subsequently modified by:

1986 John Gilmore hoptoad!gnu

1987 James A. Woods ames!jaw

1993 Christopher Seiwald seiwald@vix.com

2000, 2002 Christopher Seiwald <seiwald@perforce.com>

2010 Steve Bennett <steveb@workware.net.au>

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Version 3, 29 June 2007

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```
# COPYING.other          *- org *-  
#+TITLE: List of code with permissive licenses as used by GnuPG.  
#+STARTUP: showall
```

\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

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\* TinySCHEME (tests/gpgscm/LICENSE.TinySCHEME)

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\* Regular  
expression support

regex/jimregex.[ch]:

Originally:

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Written by Henry Spencer. Not derived from licensed software.

Subsequently modified by:

1986 John Gilmore hoptoad!gnu  
1987 James A. Woods ames!jaw  
1993 Christopher Seiwald seiwald@vix.com  
2000, 2002 Christopher Seiwald <seiwald@perforce.com>  
2010 Steve Bennett <steveb@workware.net.au>  
2020 NIIBE Yutaka <gniibe@fsj.org>

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regexp/utf8.[ch] (see regexp/LICENSE):

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## 1.264 url-connection-client 2.17.122

### 1.264.1 Available under license :

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## 1.265 zlib 1.2.11.dfsg-2+deb11u2

## 1.265.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
/* trees.c -- output deflated data using Huffman coding
* Copyright (C) 1995-2017 Jean-loup Gailly
* detect_data_type() function provided freely by Cosmin Truta, 2006
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/trees.c
```

No license file was found, but licenses were detected in source scan.

```
/*
* gzlog.c
* Copyright (C) 2004, 2008, 2012, 2016 Mark Adler, all rights reserved
* For conditions of distribution and use, see copyright notice in gzlog.h
* version 2.2, 14 Aug 2012
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzlog.c
```

No license file was found, but licenses were detected in source scan.

MiniZip - Copyright (c) 1998-2010 - by Gilles Vollant - version 1.1 64 bits from Mathias Svensson

Introduction

-----  
MiniZip 1.1 is built from MiniZip 1.0 by Gilles Vollant ( <http://www.winimage.com/zLibDll/minizip.html> )

When adding ZIP64 support into minizip it would result into risk of breaking compatibility with minizip 1.0. All possible work was done for compatibility.

Background

-----  
When adding ZIP64 support Mathias Svensson found that Even Rouault have added ZIP64 support for unzip.c into minizip for a open source project called gdal ( <http://www.gdal.org/> )

That was used as a starting point. And after that ZIP64 support was added to zip.c some refactoring and code cleanup was also done.

Changed from MiniZip 1.0 to MiniZip 1.1

-----  
\* Added ZIP64 support for unzip ( by Even Rouault )  
\* Added ZIP64 support for zip ( by Mathias Svensson

)

- \* Reverted some changes that Even Rouault did.
- \* Bunch of patches received from Gilles Vollant that he received for MiniZip from various users.
- \* Added unzip patch for BZIP Compression method (patch created by Daniel Borca)
- \* Added BZIP Compress method for zip
- \* Did some refactoring and code cleanup

## Credits

Gilles Vollant - Original MiniZip author  
Even Rouault - ZIP64 unzip Support  
Daniel Borca - BZip Compression method support in unzip  
Mathias Svensson - ZIP64 zip support  
Mathias Svensson - BZip Compression method support in zip

## Resources

ZipLayout <http://result42.com/projects/ZipFileLayout>

Command line tool for Windows that shows the layout and information of the headers in a zip archive.  
Used when debugging and validating the creation of zip files using MiniZip64

ZIP App Note <http://www.pkware.com/documents/casestudies/APPNOTE.TXT>  
Zip File specification

## Notes.

- \* To be able to use BZip compression method in zip64.c or unzip64.c the BZIP2 lib is needed and HAVE\_BZIP2 need to be defined.

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\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/MiniZip64\_info.txt

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/\* zpipe.c: example of proper use of zlib's inflate() and deflate()

Not copyrighted -- provided to the public domain

Version 1.4 11 December 2005 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zpipe.c

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/\* unzip.h -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - ( <http://www.winimage.com/zLibDll/minizip.html> )

Copyright (C) 1998-2010 Gilles Vollant (minizip) ( <http://www.winimage.com/zLibDll/minizip.html> )

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

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For more info read MiniZip\_info.txt

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## Changes

See header of unzip64.c

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.h

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/\* unzip.c -- IO for uncompress .zip files using zlib

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---

Decryption code comes from crypt.c by Info-ZIP but has been greatly reduced in terms of compatibility with older software. The following is from the original crypt.c.

Code woven in by Terry Thorsen 1/2003.

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See the accompanying

file LICENSE, version 2000-Apr-09 or later

(the contents of which are also included in zip.h) for terms of use.

If, for some reason, all these files are missing, the Info-ZIP license also may be found at: <ftp://ftp.info-zip.org/pub/infozip/license.html>



crypt.c (full version) by Info-ZIP. Last revised: [see crypt.h]

The encryption/decryption parts of this source code (as opposed to the non-echoing password parts) were originally written in Europe. The whole source package can be freely distributed, including from the USA. (Prior to January 2000, re-export from the US was a violation of US law.)

This encryption code is a direct transcription of the algorithm from Roger Schlafly, described by Phil Katz in the file appnote.txt. This file (appnote.txt) is distributed with the PKZIP program (even in the version without encryption capabilities).

-----

#### Changes in unzip.c

2007-2008 - Even Rouault - Addition of cpl\_unzGetCurrentFileZStreamPos  
2007-2008 - Even Rouault - Decoration of symbol names unz\* -> cpl\_unz\*  
2007-2008 - Even Rouault - Remove old C style function prototypes  
2007-2008 - Even Rouault - Add unzip support for ZIP64

Copyright (C) 2007-2008 Even Rouault

Oct-2009 - Mathias Svensson - Removed cpl\_\* from symbol names (Even Rouault added them but since this is now moved to a new project (minizip64) I renamed them again).

Oct-2009 - Mathias Svensson - Fixed problem if uncompressed size was > 4G and compressed size was <4G  
should only read the compressed/uncompressed size from the Zip64 format if  
the size from normal header was 0xFFFFFFFF

Oct-2009 - Mathias Svensson - Applied some bug fixes from patches received from Gilles Vollant

Oct-2009 - Mathias Svensson - Applied support to unzip files with compression method  
BZIP2 (bzip2 lib is required)

Patch created by Daniel Borca

Jan-2010 - back to unzip and minizip 1.0 name scheme, with compatibility layer

Copyright (C) 1998 - 2010 Gilles Vollant, Even Rouault, Mathias Svensson

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.c

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/\* Adler32.c -- compute the Adler-32 checksum of a data stream

\* Copyright (C) 1995-2011, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/adler32.c  
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/\* fitblk.c: example of fitting compressed output to a specified size  
Not copyrighted -- provided to the public domain  
Version 1.1 25 November 2004 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/fitblk.c  
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/\*

Additional tools for Minizip  
Code: Xavier Roche '2004  
License: Same as ZLIB (www.gzip.org)

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.c  
\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.h  
No license file was found, but licenses were detected in source scan.

/\* gzclose.c -- zlib gzclose() function  
\* Copyright (C) 2004, 2010 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzclose.c  
No license file was found, but licenses were detected in source scan.

/\* gzwrite.c -- zlib functions for writing gzip files  
\* Copyright (C) 2004-2017 Mark Adler  
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\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzwrite.c  
No license file was found, but licenses were detected in source scan.

/\* inffast.h -- header to use inffast.c  
\* Copyright (C) 1995-2003, 2010 Mark Adler

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\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.h

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/\* deflate.h -- internal compression state

\* Copyright (C) 1995-2016 Jean-loup Gailly

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Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.h

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/\* zip.h -- IO on .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - ( <http://www.winimage.com/zLibDll/minizip.html> )

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Modifications for Zip64 support

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-----  
Changes

See header of zip.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/zip.h

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/\* gzjoin -- command to join gzip files into one gzip file

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version 1.2, 14 Aug 2012

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Mark Adler madler@alumni.caltech.edu

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzjoin.c

No license file was found, but licenses were detected in source scan.

/\* compress.c -- compress a memory buffer

\* Copyright (C) 1995-2005, 2014, 2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/compress.c

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/\* zconf.h -- configuration of the zlib compression library

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\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-

1.2.11.dfsg/zconf.h.cmakein

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h.in

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h

No license file was found, but licenses were detected in source scan.

/\* gzread.c -- zlib functions for reading gzip files

\* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzread.c

No license file was found, but licenses were detected in source scan.

/\* zran.c -- example of zlib/gzip stream indexing and random access

\* Copyright (C) 2005, 2012 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

Version 1.1 29 Sep 2012 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-

1.2.11.dfsg/examples/zran.c

No license file was found, but licenses were detected in source scan.

/\* deflate.c -- compress data using the deflation algorithm

\* Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.c

No license file was found, but licenses were detected in source scan.

/\* inffast.c -- fast decoding

\* Copyright (C) 1995-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.c

No license file was found, but licenses were detected in source scan.

/\* inftrees.c -- generate Huffman trees for efficient decoding

\* Copyright (C) 1995-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inftrees.c

No license file was found, but licenses were detected in source scan.

/\* inftrees.h -- header to use inftrees.c

\* Copyright (C) 1995-2005, 2010 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inftrees.h

No license file was found, but licenses were detected in source scan.

/\* inflate.c -- zlib decompression

\* Copyright (C) 1995-2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inflate.c

No license file was found, but licenses were detected in source scan.

/\* zutil.h -- internal interface and configuration of the compression library

\* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.h

No license file was found, but licenses were detected in source scan.

/\* uncompr.c -- decompress a memory buffer

\* Copyright (C) 1995-2003, 2010, 2014, 2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/uncompr.c

No license file was found, but licenses were detected in source scan.

```
/* zutil.c -- target dependent utility functions for the compression library
* Copyright (C) 1995-2017 Jean-loup Gailly
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.c
```

No license file was found, but licenses were detected in source scan.

```
/* example.c -- usage example of the zlib compression library
* Copyright (C) 1995-2006, 2011, 2016 Jean-loup Gailly
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/example.c
```

No license file was found, but licenses were detected in source scan.

```
/* infcover.c -- test zlib's inflate routines with full code coverage
* Copyright (C) 2011, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/infcover.c
```

No license file was found, but licenses were detected in source scan.

```
/* gzlib.c -- zlib functions common to reading and writing gzip files
* Copyright (C) 2004-2017 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzlib.c
```

No license file was found, but licenses were detected in source scan.

```
/* gun.c -- simple gunzip to give an example of the use of inflateBack()
* Copyright (C) 2003, 2005, 2008, 2010, 2012 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
Version 1.7 12 August 2012 Mark Adler */
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gun.c
```

No license file was found, but licenses were detected in source scan.

Not copyrighted -- provided to the public domain

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zlib_how.html
```

No license file was found, but licenses were detected in source scan.

```
/* infback.c -- inflate using a call-back interface
```

```
* Copyright (C) 1995-2016 Mark Adler
```

```
* For conditions of distribution and use, see copyright notice in zlib.h
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/infback.c
```

No license file was found, but licenses were detected in source scan.

```
/* gzlog.h
```

```
Copyright (C) 2004, 2008, 2012 Mark Adler, all rights reserved  
version 2.2, 14 Aug 2012
```

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```
Mark Adler  madler@alumni.caltech.edu
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1400134737_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzlog.h
```

No license file was found, but licenses were detected in source scan.

```
/* gzappend -- command to append to a gzip file
```



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version 1.2, 11 Oct 2012

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Mark Adler madler@alumni.caltech.edu

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzappend.c

No license file was found, but licenses were detected in source scan.

## ZLIB DATA COMPRESSION LIBRARY

zlib 1.2.11 is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

All functions of the compression library are documented in the file `zlib.h` (volunteer to write man pages welcome, contact [zlib@gzip.org](mailto:zlib@gzip.org)). A usage example of the library is given in the file `test/example.c` which also tests that the library is working correctly. Another example is given in the file `test/minigzip.c`. The compression library itself is composed of all source files in the root directory.

To compile all files and run the test program, follow the instructions given at the top of `Makefile.in`. In short `./configure; make test`, and if that goes well, `make install` should work

for most flavors of Unix. For Windows, use one of the special makefiles in win32/ or contrib/vstudio/. For VMS, use make\_vms.com.

Questions about zlib should be sent to <zlib@gzip.org>, or to Gilles Vollant <info@winimage.com> for the Windows DLL version. The zlib home page is <http://zlib.net/>. Before reporting a problem, please check this site to verify that you have the latest version of zlib; otherwise get the latest version and check whether the problem still exists or not.

PLEASE read the zlib FAQ [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html) before asking for help.

Mark Nelson <markn@ieee.org> wrote an article about zlib for the Jan. 1997 issue of Dr. Dobbs's Journal; a copy of the article is available at <http://marknelson.us/1997/01/01/zlib-engine/>.

The changes made in version 1.2.11 are documented in the file ChangeLog.

Unsupported third party contributions are provided in directory contrib/.

zlib is available in Java using the java.util.zip package, documented at <http://java.sun.com/developer/technicalArticles/Programming/compression/>.

A Perl interface to zlib written by Paul Marquess <pmqs@cpan.org> is available at CPAN (Comprehensive Perl Archive Network) sites, including <http://search.cpan.org/~pmqs/IO-Compress-Zlib/>.

A Python interface to zlib written by A.M. Kuchling <amk@amk.ca> is available in Python 1.5 and later versions, see <http://docs.python.org/library/zlib.html>.

zlib is built into tcl: <http://wiki.tcl.tk/4610>.

An experimental package to read and write files in .zip format, written on top of zlib by Gilles Vollant <info@winimage.com>, is available in the contrib/minizip directory of zlib.

Notes for some targets:

- For Windows DLL versions, please see win32/DLL\_FAQ.txt
- For 64-bit Irix, deflate.c must be compiled without any optimization. With -O, one libpng test fails. The test works in 32 bit mode (with the -n32 compiler flag). The compiler bug has been reported to SGI.
- zlib doesn't work with gcc 2.6.3 on a DEC 3000/300LX under

OSF/1 2.1 it works  
when compiled with cc.

- On Digital Unix 4.0D (formely OSF/1) on AlphaServer, the cc option -std1 is necessary to get gzprintf working correctly. This is done by configure.

- zlib doesn't work on HP-UX 9.05 with some versions of /bin/cc. It works with other compilers. Use "make test" to check your compiler.

- gzdopen is not supported on RISCOS or BEOS.

- For PalmOs, see <http://palmzlib.sourceforge.net/>

#### Acknowledgments:

The deflate format used by zlib was defined by Phil Katz. The deflate and zlib specifications were written by L. Peter Deutsch. Thanks to all the people who reported problems and suggested various improvements in zlib; they are too numerous to cite here.

#### Copyright notice:

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Jean-loup Gailly      Mark Adler  
jloup@gzip.org      madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate \*not\* receiving lengthy legal documents to sign. The sources are provided for free but without warranty of any kind. The library has been entirely written by Jean-loup

Gailly and Mark Adler; it does not include third-party code.

If you redistribute modified sources, we would appreciate that you include in the file ChangeLog history information documenting your changes. Please read the FAQ for more information on the distribution of modified source versions.

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/README  
No license file was found, but licenses were detected in source scan.

```
/* crc32.c -- compute the CRC-32 of a data stream
* Copyright (C) 1995-2006, 2010, 2011, 2012, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*
* Thanks to Rodney Brown <rbrown64@csc.com.au> for his contribution of faster
* CRC methods: exclusive-oring 32 bits of data at a time, and pre-computing
* tables for updating the shift register in one step with three exclusive-ors
* instead of four steps with four exclusive-ors. This results in about a
* factor of two increase in speed on a Power PC G4 (PPC7455) using gcc -O3.
*/
```

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/crc32.c  
No license file was found, but licenses were detected in source scan.

```
/* gzguts.h -- zlib internal header definitions for gz* operations
* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzguts.h  
No license file was found, but licenses were detected in source scan.

#### Frequently Asked Questions about zlib

If your question is not there, please check the zlib home page <http://zlib.net/> which may have more recent information. The latest zlib FAQ is at [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html)

#### 1. Is zlib Y2K-compliant?

Yes. zlib doesn't handle dates.

#### 2. Where can I get a Windows DLL version?

The zlib sources can be compiled without change to produce a DLL. See the file win32/DLL\_FAQ.txt in the zlib distribution. Pointers to the precompiled DLL are found in the zlib web site at <http://zlib.net/> .

3. Where can I get a Visual Basic interface to zlib?

See

- \* <http://marknelson.us/1997/01/01/zlib-engine/>
- \* win32/DLL\_FAQ.txt in the zlib distribution

4. compress() returns Z\_BUF\_ERROR.

Make sure that before the call of compress(), the length of the compressed buffer is equal to the available size of the compressed buffer and not zero. For Visual Basic, check that this parameter is passed by reference ("as any"), not by value ("as long").

5. deflate() or inflate() returns Z\_BUF\_ERROR.

Before making the call, make sure that avail\_in and avail\_out are not zero. When setting the parameter flush equal to Z\_FINISH, also make sure that avail\_out is big enough to allow processing all pending input. Note that a Z\_BUF\_ERROR is not fatal--another call to deflate() or inflate() can be made with more input or output space. A Z\_BUF\_ERROR may in fact be unavoidable depending on how the functions are used, since it is not possible to tell whether or not there is more output pending when strm.avail\_out returns with zero. See [http://zlib.net/zlib\\_how.html](http://zlib.net/zlib_how.html) for a heavily annotated example.

6. Where's the zlib documentation (man pages, etc.)?

It's in zlib.h . Examples of zlib usage are in the files test/example.c and test/minigzip.c, with more in examples/ .

7. Why don't you use GNU autoconf or libtool or ...?

Because we would like to keep zlib as a very small and simple package. zlib is rather portable and doesn't need much configuration.

8. I found a bug in zlib.

Most of the time, such problems are due to an incorrect usage of zlib. Please try to reproduce the problem with a small program and send the corresponding source to us at [zlib@gzip.org](mailto:zlib@gzip.org) . Do not send multi-megabyte data files without prior agreement.

9. Why do I get "undefined reference to gzputc"?

If "make test" produces something like

```
example.o(.text+0x154): undefined reference to `gzputc'
```

check that you don't have old files libz.\* in /usr/lib, /usr/local/lib or /usr/X11R6/lib. Remove any old versions, then do "make install".

10. I need a Delphi interface to zlib.

See the contrib/delphi directory in the zlib distribution.

11. Can zlib handle .zip archives?

Not by itself, no. See the directory contrib/minizip in the zlib distribution.

12.

Can zlib handle .Z files?

No, sorry. You have to spawn an uncompress or gunzip subprocess, or adapt the code of uncompress on your own.

13. How can I make a Unix shared library?

By default a shared (and a static) library is built for Unix. So:

```
make distclean
./configure
make
```

14. How do I install a shared zlib library on Unix?

After the above, then:

```
make install
```

However, many flavors of Unix come with a shared zlib already installed.

Before going to the trouble of compiling a shared version of zlib and trying to install it, you may want to check if it's already there! If you can `#include <zlib.h>`, it's there. The `-lz` option will probably link to it. You can check the version at the top of `zlib.h` or with the `ZLIB_VERSION` symbol defined in `zlib.h`.

15. I have a question about OttoPDF.

We are not the authors of OttoPDF. The real author is on the OttoPDF web site: Joel Hainley, [jhainley@myndkryme.com](mailto:jhainley@myndkryme.com).

16.

Can zlib decode Flate data in an Adobe PDF file?

Yes. See <http://www.pdflib.com/> . To modify PDF forms, see <http://sourceforge.net/projects/acroformtool/> .

17. Why am I getting this "register\_frame\_info not found" error on Solaris?

After installing zlib 1.1.4 on Solaris 2.6, running applications using zlib generates an error such as:

```
ld.so.1: rpm: fatal: relocation error: file /usr/local/lib/libz.so:
symbol __register_frame_info: referenced symbol not found
```

The symbol `__register_frame_info` is not part of zlib, it is generated by the C compiler (cc or gcc). You must recompile applications using zlib which have this problem. This problem is specific to Solaris. See <http://www.sunfreeware.com> for Solaris versions of zlib and applications using zlib.

18. Why does gzip give an error on a file I make with compress/deflate?

The compress and deflate functions produce data in the zlib format, which is different and incompatible with the gzip format. The `gz*` functions in zlib on the other hand use the gzip format. Both the zlib and gzip formats use the same compressed data format internally, but have different headers and trailers around the compressed data.

19. Ok, so why are there two different formats?

The gzip format was designed to retain the directory information about a single file, such as the name and last modification date. The zlib format on the other hand was designed for in-memory and communication channel applications, and has a much more compact header and trailer and uses a faster integrity check than gzip.

20. Well that's nice, but how do I make a gzip file in memory?

You can request that deflate write the gzip format instead of the zlib format using `deflateInit2()`. You can also request that inflate decode the gzip format using `inflateInit2()`. Read `zlib.h` for more details.

21. Is zlib thread-safe?

Yes. However any library routines that zlib uses and any application-provided memory allocation routines must also be thread-safe. zlib's gz\* functions use stdio library routines, and most of zlib's functions use the library memory allocation routines by default. zlib's \*Init\* functions allow for the application to provide custom memory allocation routines.

Of course, you should only operate on any given zlib or gzip stream from a single thread at a time.

22. Can I use zlib in my commercial application?

Yes. Please read the license in zlib.h.

23. Is zlib under the GNU license?

No. Please read the license in zlib.h.

24. The license says that altered source versions must be "plainly marked". So what exactly do I need to do to meet that requirement?

You need to change the ZLIB\_VERSION and ZLIB\_VERNUM #defines in zlib.h. In particular, the final version number needs to be changed to "f", and an identification string should be appended to ZLIB\_VERSION. Version numbers x.x.x.f are reserved for modifications to zlib by others than the zlib maintainers. For example, if the version of the base zlib you are altering is "1.2.3.4", then in zlib.h you should change ZLIB\_VERNUM to 0x123f, and ZLIB\_VERSION to something like "1.2.3.f-zachary-mods-v3". You can also update the version strings in deflate.c and infrees.c.

For altered source distributions, you should also note the origin and nature of the changes in zlib.h, as well as in ChangeLog and README, along with the dates of the alterations. The origin should include at least your name (or your company's name), and an email address to contact for help or issues with the library.

Note that distributing a compiled zlib library along with zlib.h and zconf.h is also a source distribution, and so you should change ZLIB\_VERSION and ZLIB\_VERNUM and note the origin and nature of the changes in zlib.h as you would for a full source distribution.

25.

Will zlib work on a big-endian or little-endian architecture, and can I exchange compressed data between them?

Yes and yes.

26. Will zlib work on a 64-bit machine?



Yes. It has been tested on 64-bit machines, and has no dependence on any data types being limited to 32-bits in length. If you have any difficulties, please provide a complete problem report to [zlib@gzip.org](mailto:zlib@gzip.org)

27. Will zlib decompress data from the PKWare Data Compression Library?

No. The PKWare DCL uses a completely different compressed data format than does PKZIP and zlib. However, you can look in zlib's contrib/blast directory for a possible solution to your problem.

28. Can I access data randomly in a compressed stream?

No, not without some preparation. If when compressing you periodically use `Z_FULL_FLUSH`, carefully write all the pending data at those points, and keep an index of those locations, then you can start decompression at those points. You have to be careful to not use `Z_FULL_FLUSH` too often, since it can significantly degrade compression. Alternatively, you can scan a deflate stream once to generate an index, and then use that index for random access. See `examples/zran.c`.

29. Does zlib work on MVS, OS/390, CICS, etc.?

It has in the past, but we have not heard of any recent evidence. There were working ports of zlib 1.1.4 to MVS, but those links no longer work. If you know of recent, successful applications of zlib on these operating systems, please let us know. Thanks.

30. Is there some simpler, easier to read version of inflate I can look at to understand the deflate format?

First off, you should read RFC 1951. Second, yes. Look in zlib's contrib/puff directory.

31. Does zlib infringe on any patents?

As far as we know, no. In fact, that was originally the whole point behind zlib. Look here for some more information:

<http://www.gzip.org/#faq11>

32. Can zlib work with greater than 4 GB of data?

Yes. `inflate()` and `deflate()` will process any amount of data correctly. Each call of `inflate()` or `deflate()` is limited to input and output chunks of the maximum value that can be stored in the compiler's "unsigned int"

type, but there is no limit to the number of chunks. Note however that the `strm.total_in` and `strm_total_out` counters may be limited to 4 GB. These counters are provided as a convenience and are not used internally by `inflate()` or `deflate()`. The application can easily set up its own counters updated after each call of `inflate()` or `deflate()` to count beyond 4 GB. `compress()` and `uncompress()` may be limited to 4 GB, since they operate in a single call. `gzseek()` and `gztell()` may be limited to 4 GB depending on how `zlib` is compiled. See the `zlibCompileFlags()` function in `zlib.h`.

The word "may" appears several times above since there is a 4 GB limit only if the compiler's "long" type is 32 bits. If the compiler's "long" type is 64 bits, then the limit is 16 exabytes.

### 33. Does `zlib` have any security vulnerabilities?

The only one that we are aware of is potentially in `gzprintf()`. If `zlib` is compiled to use `sprintf()` or `vsprintf()`, then there is no protection against a buffer overflow of an 8K string space (or other value as set by `gzbuffer()`), other than the caller of `gzprintf()` assuring that the output will not exceed 8K. On the other hand, if `zlib` is compiled to use `snprintf()` or `vsnprintf()`, which should normally be the case, then there is no vulnerability. The `./configure` script will display warnings if an insecure variation of `sprintf()` will be used by `gzprintf()`. Also the `zlibCompileFlags()` function will return information on what variant of `sprintf()` is used by `gzprintf()`.

If you don't have `snprintf()` or `vsnprintf()` and would like one, you can find a portable implementation here:

<http://www.ijs.si/software/snprintf/>

Note that you should be using the most recent version of `zlib`. Versions 1.1.3 and before were subject to a double-free vulnerability, and versions 1.2.1 and 1.2.2 were subject to an access exception when decompressing invalid compressed data.

### 34. Is there a Java version of `zlib`?

Probably what you want is to use `zlib` in Java. `zlib` is already included as part of the Java SDK in the `java.util.zip` package. If you really want a version of `zlib` written in the Java language, look on the `zlib` home page for links: <http://zlib.net/>.

### 35. I get this or that compiler or source-code scanner warning when I crank it up to maximally-pedantic. Can't you guys write proper code?

Many years ago, we gave up attempting to avoid warnings on every compiler

in the universe. It just got to be a waste of time, and some compilers were downright silly as well as contradicted each other. So now, we simply make sure that the code always works.

36. Valgrind (or some similar memory access checker) says that deflate is performing a conditional jump that depends on an uninitialized value. Isn't that a bug?

No. That is intentional for performance reasons, and the output of deflate is not affected. This only started showing up recently since zlib 1.2.x uses malloc() by default for allocations, whereas earlier versions used calloc(), which zeros out the allocated memory. Even though the code was correct, versions 1.2.4 and later was changed to not stimulate these checkers.

37. Will zlib read the (insert any ancient or arcane format here) compressed data format?

Probably not. Look in the comp.compression FAQ for pointers to various formats and associated software.

38. How can I encrypt/decrypt zip files with zlib?

zlib doesn't support encryption. The original PKZIP encryption is very weak and can be broken with freely available programs. To get strong encryption, use GnuPG, <http://www.gnupg.org/>, which already includes zlib compression. For PKZIP compatible "encryption", look at <http://www.info-zip.org/>

39. What's the difference between the "gzip" and "deflate" HTTP 1.1 encodings?

"gzip" is the gzip format, and "deflate" is the zlib format. They should probably have called the second one "zlib" instead to avoid confusion with the raw deflate compressed data format. While the HTTP 1.1 RFC 2616 correctly points to the zlib specification in RFC 1950 for the "deflate" transfer encoding, there have been reports of servers and browsers that incorrectly produce or expect raw deflate data per the deflate specification in RFC 1951, most notably Microsoft. So even though the "deflate" transfer encoding using the zlib format would be the more efficient approach (and in fact exactly what the zlib format was designed for), using the "gzip" transfer encoding is probably more reliable due to an unfortunate choice of name on the part of the HTTP 1.1 authors.

Bottom line: use the gzip format for HTTP 1.1 encoding.

40. Does zlib support the new "Deflate64" format introduced by PKWare?

No. PKWare has apparently decided to keep that format proprietary, since they have not documented it as they have previous compression formats. In any case, the compression improvements are so modest compared to other more modern approaches, that it's not worth the effort to implement.

41. I'm having a problem with the zip functions in zlib, can you help?

There are no zip functions in zlib. You are probably using minizip by Giles Vollant, which is found in the contrib directory of zlib. It is not part of zlib. In fact none of the stuff in contrib is part of zlib. The files in there are not supported by the zlib authors. You need to contact the authors of the respective contribution for help.

42. The match.asm code in contrib is under the GNU General Public License.

Since it's part of zlib, doesn't that mean that all of zlib falls under the GNU GPL?

No. The files in contrib are not part of zlib. They were contributed by other authors and are provided as a convenience to the user within the zlib distribution. Each item in contrib has its own license.

43. Is zlib subject to export controls? What is its ECCN?

zlib is not subject to export controls, and so is classified as EAR99.

44. Can you please sign these lengthy legal documents and fax them back to us so that we can use your software in our product?

No. Go away. Shoo.

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/FAQ  
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/\* minizip.c -- simulate gzip using the zlib compression library

\* Copyright (C) 1995-2006, 2010, 2011, 2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/minigzip.c

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/\* inflate.h -- internal inflate state definition

\* Copyright (C) 1995-2016 Mark Adler

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\*/

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\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/Makefile.emx

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/msdos/Makefile.emx

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/os2/Makefile.os2

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

\*/

Found in path(s):

\* /opt/cola/permits/1400134737\_1661788173.3023732/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zlib.h

# 1.266 futures 3.3.0

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## 1.267 d3-pprof 2.0.0

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```
WEV @@ WEV[B "1
```

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### 1.0.39

#### 1.273.1 Available under license :

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#### 1.274.1 Available under license :

Apache-2.0

# 1.275 netbase 6.3

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# 1.276 ucf 3.0043

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## 1.282 x-text 0.4.0

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## 1.283 protobuf-java 3.13.0

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Found in path(s):

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* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/google/protobuf/source_context.proto
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/MessageSchema.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/ArrayDecoders.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/BinaryWriter.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/SingleFieldBuilderV3.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/google/protobuf/field_mask.proto
*
/opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/google/protobuf/wrappers.proto
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/BooleanArrayList.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/RepeatedFieldBuilder.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-
jar/com/google/protobuf/DynamicMessage.java
* /opt/cola/permits/1448051180_1666320489.16473/0/protobuf-java-3-13-0-sources-2-jar/google/protobuf/api.proto

```

# 1.284 x-net 0.1.0

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## 1.285 x-sys 0.1.0

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```
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/MapTypeAdapterFactory.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/TypeAdapterFactory.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/JsonReaderInternalAccess.java
```

```
*
/opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/TypeAdapter.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/TypeAdapters.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/JsonTreeReader.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/ObjectTypeAdapter.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/TypeAdapterRuntimeTypeWrapper.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/ReflectiveTypeAdapterFactory.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/ArrayTypeAdapter.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/JsonTreeWriter.java
*
```

```
/opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
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jar/com/google/gson/internal/LinkedTreeMap.java

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jar/com/google/gson/internal/bind/DateTypeAdapter.java

\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/internal/LazilyParsedNumber.java

\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/internal/bind/TreeTypeAdapter.java

\*  
/opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/internal/sql/SqlDateTypeAdapter.java

\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/internal/ConstructorConstructor.java

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jar/com/google/gson/internal/UnsafeAllocator.java

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jar/com/google/gson/internal/sql/SqlTimeTypeAdapter.java

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jar/com/google/gson/internal/JavaVersion.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/PreJava9DateFormatProvider.java
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jar/com/google/gson/internal/Streams.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/JsonSyntaxException.java
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jar/com/google/gson/annotations/Since.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/FieldNamingPolicy.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/Primitives.java
*
/opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/FieldNamingStrategy.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/annotations/Expose.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/ObjectConstructor.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/bind/DefaultDateTypeAdapter.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/annotations/Until.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/JsonSerializationContext.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/ExclusionStrategy.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/internal/$Gson$Preconditions.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/JsonElement.java
*
/opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/JsonPrimitive.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/JsonSerializer.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
jar/com/google/gson/InstanceCreator.java
* /opt/cola/permits/1455481167_1667022567.4713087/0/gson-2-10-sources-
```

jar/com/google/gson/internal/Excluder.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/JsonDeserializationContext.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/JsonIOException.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/JsonArray.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/JsonObject.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/JsonDeserializer.java  
\*  
/opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/GsonBuilder.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/JsonParseException.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/annotations/SerializedName.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/Gson.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/reflect/TypeToken.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-jar/com/google/gson/JsonNull.java  
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jar/com/google/gson/internal/\$Gson\$Types.java  
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jar/com/google/gson/ToNumberPolicy.java  
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jar/com/google/gson/ToNumberStrategy.java

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jar/com/google/gson/JsonStreamParser.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/LongSerializationPolicy.java  
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jar/com/google/gson/stream/JsonReader.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/stream/JsonScope.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/stream/JsonToken.java  
\*  
/opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/stream/MalformedJsonException.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/stream/JsonWriter.java

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jar/com/google/gson/internal/bind/JsonAdapterAnnotationTypeAdapterFactory.java  
\* /opt/cola/permits/1455481167\_1667022567.4713087/0/gson-2-10-sources-  
jar/com/google/gson/annotations/JsonAdapter.java

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# 1.293 netty-transport-udt 4.1.85.Final

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```
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/package-info.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/DefaultUdtChannelConfig.java
*
/opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/UdtChannelConfig.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/UdtMessage.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
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jar/io/netty/channel/udt/UdtServerChannelConfig.java

\* /opt/cola/permits/1475197278\_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-  
jar/io/netty/channel/udt/DefaultUdtServerChannelConfig.java

\*

/opt/cola/permits/1475197278\_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-  
jar/io/netty/channel/udt/UdtChannelOption.java

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* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/UdtChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtByteAcceptorChannel.java
*
/opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtMessageAcceptorChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtByteRendezvousChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtMessageRendezvousChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtProvider.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtMessageConnectorChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtAcceptorChannel.java
* /opt/cola/permits/1475197278_1668596578.3828294/0/netty-transport-udt-4-1-85-final-sources-
jar/io/netty/channel/udt/nio/NioUdtByteConnectorChannel.java
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\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/ProxyConnectionEvent.java  
\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/Socks4ProxyHandler.java  
\*  
/opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/Socks5ProxyHandler.java  
\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/HttpProxyHandler.java  
\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/ProxyConnectException.java  
\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/package-info.java  
\* /opt/cola/permits/1475197334\_1668596572.7727456/0/netty-handler-proxy-4-1-85-final-sources-jar/io/netty/handler/proxy/ProxyHandler.java

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# 1.295 netty-transport-classes-kqueue

## 4.1.85.Final

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\* /opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/AbstractKQueueDatagramChannel.java

\*

/opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/KQueueDomainDatagramChannelConfig.java

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/opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/KQueueEventArray.java

\* /opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/Native.java

\* /opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/AbstractKQueueChannel.java

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\* /opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/KQueueRecvByteAllocatorHandle.java

\* /opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/KQueueStaticallyReferencedJniMethods.java

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/opt/cola/permits/1475197320\_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-jar/io/netty/channel/kqueue/KQueueChannelConfig.java

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* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueChannelOption.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueDomainSocketChannel.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueServerSocketChannel.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/BsdSocket.java
*
/opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueDomainSocketChannelConfig.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueServerChannelConfig.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueDatagramChannel.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
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jar/io/netty/channel/kqueue/package-info.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueSocketChannelConfig.java
*
/opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueEventLoop.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueue.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/NativeLongArray.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/AcceptFilter.java
* /opt/cola/permits/1475197320_1668596561.065882/0/netty-transport-classes-kqueue-4-1-85-final-sources-
jar/io/netty/channel/kqueue/KQueueEventLoopGroup.java

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## 1.296 netty-codec-memcache 4.1.85.Final

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\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/AbstractMemcacheObjectEncoder.java

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/opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/MemcacheObject.java

\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheRequestDecoder.java

\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/AbstractBinaryMemcacheEncoder.java

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\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/MemcacheMessage.java

\*

/opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheOpCodes.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheRequestEncoder.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheMessage.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/DefaultBinaryMemcacheRequest.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/FullMemcacheMessage.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/DefaultFullBinaryMemcacheResponse.java  
\*  
/opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheResponseDecoder.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/LastMemcacheContent.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/AbstractMemcacheObject.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheObjectAggregator.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/package-info.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheResponseEncoder.java  
\*  
/opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheClientCodec.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/AbstractMemcacheObjectDecoder.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/DefaultLastMemcacheContent.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/AbstractBinaryMemcacheDecoder.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/MemcacheContent.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheRequest.java  
\*  
/opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/DefaultMemcacheContent.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/FullBinaryMemcacheRequest.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/DefaultFullBinaryMemcacheRequest.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-jar/io/netty/handler/codec/memcache/binary/FullBinaryMemcacheResponse.java  
\* /opt/cola/permits/1475197236\_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-

```
jar/io/netty/handler/codec/memcache/package-info.java
* /opt/cola/permits/1475197236_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-
jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheResponse.java
* /opt/cola/permits/1475197236_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-
jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheServerCodec.java
*
/opt/cola/permits/1475197236_1668596558.2160223/0/netty-codec-memcache-4-1-85-final-sources-
jar/io/netty/handler/codec/memcache/binary/BinaryMemcacheResponseStatus.java
```

# 1.297 netty-codec-stomp 4.1.85.Final

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Found in path(s):

```
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-jar/META-
INF/maven/io.netty/netty-codec-stomp/pom.xml
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* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompSubframeDecoder.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompSubframe.java
*
/opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompSubframeAggregator.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/package-info.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompHeaders.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/DefaultStompHeadersSubframe.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompCommand.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompFrame.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompHeadersSubframe.java
*
/opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompContentSubframe.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompSubframeEncoder.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/DefaultStompContentSubframe.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/DefaultStompFrame.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/StompConstants.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/DefaultLastStompContentSubframe.java
* /opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/DefaultStompHeaders.java
*
/opt/cola/permits/1475197292_1668596553.3857033/0/netty-codec-stomp-4-1-85-final-sources-
jar/io/netty/handler/codec/stomp/LastStompContentSubframe.java

```

## 1.298 netty-transport-sctp 4.1.85.Final



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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpChannelOption.java

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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/DefaultSctpServerChannelConfig.java

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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/oio/OioSctpChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/package-info.java  
\*  
/opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/oio/package-info.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/nio/package-info.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/handler/codec/sctp/SctpOutboundByteStreamHandler.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/oio/OioSctpServerChannel.java  
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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-  
jar/io/netty/channel/sctp/DefaultSctpChannelConfig.java

\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/AssociationChangeNotification.java  
\*  
/opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/nio/NioSctpChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/SendFailedNotification.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/SctpStandardSocketOptions.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/SctpSocketOption.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpMessage.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/AbstractNotificationHandler.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/nio/NioSctpServerChannel.java  
\*  
/opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpServerChannelConfig.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/MessageInfo.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/PeerAddressChangeNotification.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/package-info.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/SctpChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/SctpServerChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/HandlerResult.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/Notification.java  
\*  
/opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/NotificationHandler.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/ShutdownNotification.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/com/sun/nio/sctp/UnsupportedOperationException.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpServerChannel.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpChannelConfig.java  
\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-

jar/com/sun/nio/sctp/Association.java

\*

/opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/channel/sctp/SctpNotificationHandler.java

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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/META-INF/maven/io.netty/netty-transport-sctp/pom.xml

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\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/handler/codec/sctp/package-info.java

\* /opt/cola/permits/1475197285\_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-jar/io/netty/handler/codec/sctp/SctpMessageToMessageDecoder.java

```
*
/opt/cola/permits/1475197285_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-
jar/io/netty/handler/codec/sctp/SctpMessageCompletionHandler.java
* /opt/cola/permits/1475197285_1668596570.1165512/0/netty-transport-sctp-4-1-85-final-sources-
jar/io/netty/handler/codec/sctp/SctpInboundByteStreamHandler.java
```

## 1.299 netty-resolver-dns-classes-macos

### 4.1.85.Final

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* /opt/cola/permits/1475197252_1668596574.0739276/0/netty-resolver-dns-classes-macos-4-1-85-final-sources-
jar/io/netty/resolver/dns/macos/MacOSDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197252_1668596574.0739276/0/netty-resolver-dns-classes-macos-4-1-85-final-sources-
jar/io/netty/resolver/dns/macos/DnsResolver.java
*
/opt/cola/permits/1475197252_1668596574.0739276/0/netty-resolver-dns-classes-macos-4-1-85-final-sources-
jar/io/netty/resolver/dns/macos/package-info.java
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\* /opt/cola/permits/1475197252\_1668596574.0739276/0/netty-resolver-dns-classes-macos-4-1-85-final-sources-jar/META-INF/maven/io.netty/netty-resolver-dns-classes-macos/pom.xml

# 1.300 netty-transport-rxtx 4.1.85.Final

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\* /opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/package-info.java  
\* /opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/RxtxDeviceAddress.java  
\*  
/opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/RxtxChannelOption.java  
\* /opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/RxtxChannelConfig.java  
\* /opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/DefaultRxtxChannelConfig.java  
\* /opt/cola/permits/1475197306\_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/io/netty/channel/rxtx/RxtxChannel.java

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* /opt/cola/permits/1475197306_1668596562.6155424/0/netty-transport-rxtx-4-1-85-final-sources-jar/META-INF/maven/io.netty/netty-transport-rxtx/pom.xml
```

## 1.301 netty-codec-mqtt 4.1.85.Final

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```
* /opt/cola/permits/1475197307_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io.netty.handler.codec.mqtt/MqttSubscriptionOption.java
* /opt/cola/permits/1475197307_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-
```

jar/io/netty/handler/codec/mqtt/MqttPubReplyMessageVariableHeader.java

\*

/opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttMessageIdAndPropertiesVariableHeader.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttProperties.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttUnsubAckPayload.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttReasonCodeAndPropertiesVariableHeader.java

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jar/io/netty/handler/codec/mqtt/MqttConnAckVariableHeader.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-  
jar/io/netty/handler/codec/mqtt/MqttPublishVariableHeader.java

\*

/opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-  
jar/io/netty/handler/codec/mqtt/MqttUnsubAckMessage.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttDecoder.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttEncoder.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttSubscribePayload.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttCodecUtil.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttConnAckMessage.java

\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-

jar/io/netty/handler/codec/mqtt/MqttSubscribeMessage.java



\*  
/opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttConnectVariableHeader.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttTopicSubscription.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttMessageIdVariableHeader.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttVersion.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttUnacceptableProtocolVersionException.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttFixedHeader.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttMessageType.java

\*  
/opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttUnsubscribeMessage.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttConnectMessage.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttSubAckPayload.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttMessage.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttConnectPayload.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttConnectReturnCode.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttPubAckMessage.java

\*  
/opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttSubAckMessage.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttIdentifierRejectedException.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttUnsubscribePayload.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttPublishMessage.java  
\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/MqttMessageFactory.java

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\* /opt/cola/permits/1475197307\_1668596554.8305566/0/netty-codec-mqtt-4-1-85-final-sources-jar/io/netty/handler/codec/mqtt/package-info.java

## 1.302 netty-codec-smtp 4.1.85.Final

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\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/SmtpRequest.java

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/opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/SmtpResponseDecoder.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/SmtpContent.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/SmtpRequestEncoder.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/SmtpCommand.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/DefaultSmtpRequest.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/DefaultLastSmtpContent.java

\* /opt/cola/permits/1475197229\_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-jar/io/netty/handler/codec/smtp/LastSmtpContent.java

\*

```
/opt/cola/permits/1475197229_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-
jar/io/netty/handler/codec/smtp/SntpRequests.java
* /opt/cola/permits/1475197229_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-
jar/io/netty/handler/codec/smtp/SntpUtils.java
* /opt/cola/permits/1475197229_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-
jar/io/netty/handler/codec/smtp/DefaultSntpContent.java
* /opt/cola/permits/1475197229_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-
jar/io/netty/handler/codec/smtp/SntpResponse.java
* /opt/cola/permits/1475197229_1668596564.088437/0/netty-codec-smtp-4-1-85-final-sources-
jar/io/netty/handler/codec/smtp/DefaultSntpResponse.java
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## 1.303 netty-resolver-dns 4.1.85.Final

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jar/io/netty/resolver/dns/DnsQueryContext.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsNameResolver.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsAddressResolverGroup.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsServerAddresses.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsResolveContext.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
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jar/io/netty/resolver/dns/DefaultDnsCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/RoundRobinDnsAddressResolverGroup.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NoopDnsCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/InflightNameResolver.java
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\* /opt/cola/permits/1475197327\_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-jar/io/netty/resolver/dns/UnixResolverOptions.java

\* /opt/cola/permits/1475197327\_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-jar/io/netty/resolver/dns/LoggingDnsQueryLifeCycleObserverFactory.java

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\* /opt/cola/permits/1475197327\_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-

```
jar/io/netty/resolver/dns/DnsNameResolverException.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/RotationalDnsServerAddresses.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DefaultDnsServerAddresses.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/ShuffledDnsServerAddressStream.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsNameResolverBuilder.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsQueryContextManager.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/SequentialDnsServerAddressStream.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsServerAddressStream.java
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INF/native-image/io.netty/netty-resolver-dns/native-image.properties
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jar/io/netty/resolver/dns/PreferredAddressTypeComparator.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
```



```
jar/io/netty/resolver/dns/TcpDnsQueryContext.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DatagramDnsQueryContext.java
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jar/io/netty/resolver/dns/UnixResolverDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/BiDnsQueryLifecycleObserverFactory.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NoopDnsQueryLifecycleObserverFactory.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsServerAddressStreamProviders.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DefaultDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/UniSequentialDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsCacheEntry.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsNameResolverTimeoutException.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/SingletonDnsServerAddressStreamProvider.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsQueryLifecycleObserver.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NoopDnsQueryLifecycleObserver.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
```

```
jar/io/netty/resolver/dns/DnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/MultiDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/BiDnsQueryLifecycleObserver.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsQueryLifecycleObserverFactory.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/SequentialDnsServerAddressStreamProvider.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/LoggingDnsQueryLifecycleObserver.java
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jar/io/netty/resolver/dns/DefaultDnsCnameCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/AuthoritativeDnsServerCache.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsAddressDecoder.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NoopDnsCnameCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsRecordResolveContext.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsAddressResolveContext.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NoopAuthoritativeDnsServerCache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DirContextUtils.java
```

```
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DefaultAuthoritativeDnsServerCache.java
*
/opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/NameServerComparator.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/AuthoritativeDnsServerCacheAdapter.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/Cache.java
* /opt/cola/permits/1475197327_1668596568.7309096/0/netty-resolver-dns-4-1-85-final-sources-
jar/io/netty/resolver/dns/DnsCnameCache.java
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jar/io/netty/handler/codec/haproxy/HAProxyTLV.java
* /opt/cola/permits/1475197271_1668596556.8811443/0/netty-codec-haproxy-4-1-85-final-sources-
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\* /opt/cola/permits/1475197271\_1668596556.8811443/0/netty-codec-haproxy-4-1-85-final-sources-jar/io/netty/handler/codec/haproxy/HAProxyProtocolVersion.java

\*

/opt/cola/permits/1475197271\_1668596556.8811443/0/netty-codec-haproxy-4-1-85-final-sources-jar/io/netty/handler/codec/haproxy/HAProxyProxiedProtocol.java

\* /opt/cola/permits/1475197271\_1668596556.8811443/0/netty-codec-haproxy-4-1-85-final-sources-jar/io/netty/handler/codec/haproxy/HAProxyProtocolException.java

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## 1.305 netty-codec-dns 4.1.85.Final

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jar/io/netty/handler/codec/dns/DnsResponseDecoder.java

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/opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsQueryEncoder.java

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\* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/AbstractDnsOptPseudoRrRecord.java

\*

/opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DefaultDnsOptEcsRecord.java

\* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DefaultDnsPtrRecord.java

\* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsPtrRecord.java

\* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsOptPseudoRecord.java

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* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
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- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DefaultDnsQuestion.java
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- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsRawRecord.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsResponse.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DatagramDnsResponse.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsResponseCode.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/AbstractDnsMessage.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsQuery.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsQuestion.java
- \*
- /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsRecordType.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DefaultDnsResponse.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsRecord.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DatagramDnsQueryEncoder.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DefaultDnsRecordDecoder.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DatagramDnsQueryDecoder.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsRecordDecoder.java
- \*
- /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DnsOpCode.java
- \* /opt/cola/permits/1475197299\_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-jar/io/netty/handler/codec/dns/DatagramDnsQuery.java



```

* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DatagramDnsResponseEncoder.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/AbstractDnsRecord.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DatagramDnsResponseDecoder.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DnsSection.java
*
/opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DnsMessageUtil.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DnsRecordEncoder.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/package-info.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DefaultDnsRecordEncoder.java
* /opt/cola/permits/1475197299_1668596575.6103935/0/netty-codec-dns-4-1-85-final-sources-
jar/io/netty/handler/codec/dns/DnsMessage.java

```

# 1.306 netty-codec-redis 4.1.85.Final

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```

* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-jar/META-
INF/maven/io.netty/netty-codec-redis/pom.xml

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jar/io/netty/handler/codec/redis/InlineCommandRedisMessage.java  
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\* /opt/cola/permits/1475197250\_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-  
jar/io/netty/handler/codec/redis/AbstractStringRedisMessage.java  
\* /opt/cola/permits/1475197250\_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-  
jar/io/netty/handler/codec/redis/BulkStringHeaderRedisMessage.java  
\*  
/opt/cola/permits/1475197250\_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-  
jar/io/netty/handler/codec/redis/DefaultLastBulkStringRedisContent.java  
\* /opt/cola/permits/1475197250\_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-  
jar/io/netty/handler/codec/redis/package-info.java  
\* /opt/cola/permits/1475197250\_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-  
jar/io/netty/handler/codec/redis/RedisMessageType.java

```

* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisConstants.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisMessagePool.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/FullBulkStringRedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/IntegerRedisMessage.java
*
/opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/DefaultBulkStringRedisContent.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/SimpleStringRedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/ErrorRedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/ArrayRedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/BulkStringRedisContent.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/FixedRedisMessagePool.java
*
/opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisCodecUtil.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/ArrayHeaderRedisMessage.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/LastBulkStringRedisContent.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisDecoder.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisCodecException.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisEncoder.java
*
/opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisArrayAggregator.java
* /opt/cola/permits/1475197250_1668596565.6194344/0/netty-codec-redis-4-1-85-final-sources-
jar/io/netty/handler/codec/redis/RedisBulkStringAggregator.java

```

## 1.307 netty-codec-socks 4.1.85.Final

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```
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v4/package-info.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5InitialResponseDecoder.java
*
/opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5Message.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4ServerEncoder.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthResponseDecoder.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4ClientEncoder.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/AbstractSocksMessage.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4Message.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5CommandRequestDecoder.java
*
/opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5ServerEncoder.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5ClientEncoder.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/AbstractSocks5Message.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5CommandResponseDecoder.java
```

```
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v4/AbstractSocks4Message.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5InitialRequestDecoder.java
*
/opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/package-info.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
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\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksRequestType.java

\*

/opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksAddressType.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthStatus.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksCmdStatus.java

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\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksMessageType.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksAuthStatus.java

\*

/opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksProtocolVersion.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5CommandStatus.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5CommandType.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksCmdType.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5AuthMethod.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/SocksVersion.java

\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksResponseType.java

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- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/DefaultSocks5CommandRequest.java
- \*
- /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/DefaultSocks5InitialResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5CommandRequest.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksMessage.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksAuthResponseDecoder.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v4/DefaultSocks4CommandResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksInitResponse.java
- \*
- /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksCmdRequest.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/DefaultSocks5CommandResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/SocksMessage.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksInitResponseDecoder.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v4/Socks4CommandRequest.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5InitialResponse.java
- \*
- /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socksx/v4/Socks4ClientDecoder.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksInitRequest.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksCmdResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-jar/io/netty/handler/codec/socks/SocksAuthResponse.java
- \* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-

jar/io/netty/handler/codec/socksx/v5/DefaultSocks5PasswordAuthRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksCmdResponseDecoder.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v4/Socks4CommandResponse.java  
\*  
/opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksAuthRequestDecoder.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/UnknownSocksRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksResponse.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksCommonUtils.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v5/package-info.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksInitRequestDecoder.java  
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/opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v5/Socks5InitialRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksCmdRequestDecoder.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v4/Socks4CommandType.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksAuthRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksRequest.java  
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jar/io/netty/handler/codec/socksx/v5/DefaultSocks5InitialRequest.java  
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jar/io/netty/handler/codec/socksx/v4/DefaultSocks4CommandRequest.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/package-info.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/UnknownSocksResponse.java  
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jar/io/netty/handler/codec/socksx/v5/DefaultSocks5PasswordAuthResponse.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socks/SocksMessageEncoder.java  
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jar/io/netty/handler/codec/socksx/v4/Socks4ServerDecoder.java  
\* /opt/cola/permits/1475197264\_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-  
jar/io/netty/handler/codec/socksx/v4/Socks4CommandStatus.java



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jar/io/netty/handler/codec/socksx/SocksPortUnificationServerHandler.java
* /opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5AddressDecoder.java
*
/opt/cola/permits/1475197264_1668596571.4906313/0/netty-codec-socks-4-1-85-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5AddressEncoder.java
```

## 1.308 netty-codec-xml 4.1.85.Final

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\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlElementStart.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlAttribute.java

\*

/opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlEntityReference.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlCdata.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlDTD.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlDocumentEnd.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlComment.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlElement.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlNamespace.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlElementEnd.java

\*

/opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlProcessingInstruction.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlSpace.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/package-info.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlDocumentStart.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlDecoder.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlContent.java

\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/io/netty/handler/codec/xml/XmlCharacters.java

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\* /opt/cola/permits/1475197222\_1668596559.7368999/0/netty-codec-xml-4-1-85-final-sources-jar/META-INF/maven/io.netty/netty-codec-xml/pom.xml

## 1.309 kerberos 1.18.3-6+deb11u3

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## 1.310 jackson-annotations 2.14.1

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# 1.312 jackson-dataformat-cbor 2.14.1

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not-a-legal-formal-parameter-tuple.scala:2: error: not a legal formal parameter.  
Note: Tuples cannot be directly destructured in method or function parameters.  
Either create a single parameter accepting the Tuple2,  
or consider a pattern matching anonymous function: `{ case (a, b) => ... }`  
val x: ((Int, Int) => Int) = (((a, b)) => a)

not-a-legal-formal-parameter-tuple.scala:3: error: not a legal formal parameter.  
Note: Tuples cannot be directly destructured in method or function parameters.

Either create a single parameter accepting the Tuple2,  
or consider a pattern matching anonymous function: `{ case (param1, param2) => ... }`  
val y: ((Int, Int, Int) => Int) = (((a, !)) => a)  
^

not-a-legal-formal-parameter-tuple.scala:4: error: not a legal formal parameter.

Note: Tuples cannot be directly deconstructed in method or function parameters.

Either create a single parameter accepting the  
Tuple3,  
or consider a pattern matching anonymous function: `{ case (param1, ..., param3) => ... }`  
val z: ((Int, Int, Int) => Int) = (((a, NotAPatternVariableName, c)) => a)  
^

three errors found

```
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<div class="version-notice">This is the specification of a previous version of Scala. See the <a href="{ {  
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\* <http://gee.cs.oswego.edu/cgi-bin/viewcvs.cgi/jsr166/>

\* <http://viewvc.jboss.org/cgi-bin/viewvc.cgi/jboss/cache/experimental/jsr166/>

This product contains a modified version of Robert Harder's Public Domain Base64 Encoder and Decoder, which can be obtained at:

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\* HOMEPAGE:

\* <http://iharder.sourceforge.net/current/java/base64/>

This product contains a modified portion of 'Webbit', an event based WebSocket and HTTP server, which can be obtained at:

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\* HOMEPAGE:

\* <https://github.com/joewalnes/webbit>

This product contains a modified portion of 'SLF4J', a simple logging

facade for Java,  
which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.slf4j.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://www.slf4j.org/>

This product contains a modified portion of 'Apache Harmony', an open source Java SE, which can be obtained at:

- \* NOTICE:
  - \* license/NOTICE.harmony.txt
- \* LICENSE:
  - \* license/LICENSE.harmony.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://archive.apache.org/dist/harmony/>

This product contains a modified portion of 'jzip2', a Java bzip2 compression and decompression library written by Matthew J. Francis. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.jzip2.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://code.google.com/p/jzip2/>

This product contains a modified portion of 'libdivsufsort', a C API library to construct the suffix array and the Burrows-Wheeler transformed string for any input string of a constant-size alphabet written by Yuta Mori. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.libdivsufsort.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://github.com/y-256/libdivsufsort>

This product contains a modified portion of Nitsan Wakart's 'JCTools', Java Concurrency Tools for the JVM, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.jctools.txt (ASL2 License)
- \* HOMEPAGE:
  - \* <https://github.com/JCTools/JCTools>

This product optionally depends on 'JZlib', a re-implementation of zlib in pure Java, which can be obtained at:

- \* LICENSE:

- \* license/LICENSE.jzlib.txt (BSD style License)

- \* HOMEPAGE:

- \* <http://www.jcraft.com/jzlib/>

This product optionally depends on 'Compress-LZF', a Java library for encoding and decoding data in LZF format, written by Tatu Saloranta. It can be obtained at:

- \* LICENSE:

- \* license/LICENSE.compress-lzf.txt (Apache License 2.0)

- \* HOMEPAGE:

- \* <https://github.com/ning/compress>

This product optionally depends on 'lz4', a LZ4 Java compression and decompression library written by Adrien Grand. It can be obtained at:

- \* LICENSE:

- \* license/LICENSE.lz4.txt

(Apache License 2.0)

- \* HOMEPAGE:

- \* <https://github.com/jpountz/lz4-java>

This product optionally depends on 'lzma-java', a LZMA Java compression and decompression library, which can be obtained at:

- \* LICENSE:

- \* license/LICENSE.lzma-java.txt (Apache License 2.0)

- \* HOMEPAGE:

- \* <https://github.com/jponge/lzma-java>

This product optionally depends on 'zstd-jni', a zstd-jni Java compression and decompression library, which can be obtained at:

- \* LICENSE:

- \* license/LICENSE.zstd-jni.txt (Apache License 2.0)

- \* HOMEPAGE:

- \* <https://github.com/luben/zstd-jni>

This product contains a modified portion of 'jfastlz', a Java port of FastLZ compression and decompression library written by William Kinney. It can be obtained at:

- \* LICENSE:

- \* license/LICENSE.jfastlz.txt (MIT License)

- \* HOMEPAGE:

- \* <https://code.google.com/p/jfastlz/>

This product contains a modified portion of and optionally depends on 'Protocol Buffers', Google's data interchange

format, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.protobuf.txt (New BSD License)
- \* HOMEPAGE:
  - \* <https://github.com/google/protobuf>

This product optionally depends on 'Bouncy Castle Crypto APIs' to generate a temporary self-signed X.509 certificate when the JVM does not provide the equivalent functionality. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.bouncycastle.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://www.bouncycastle.org/>

This product optionally depends on 'Snappy', a compression library produced by Google Inc, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.snappy.txt (New BSD License)
- \* HOMEPAGE:
  - \* <https://github.com/google/snappy>

This product optionally depends on 'JBoss Marshalling', an alternative Java serialization API, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.jboss-marshalling.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://github.com/jboss-remoting/jboss-marshalling>

This product optionally depends on 'Caliper', Google's micro-benchmarking framework, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.caliper.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://github.com/google/caliper>

This product optionally depends on 'Apache Commons Logging', a logging framework, which can be obtained at:

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  - \* license/LICENSE.commons-logging.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://commons.apache.org/logging/>

This product optionally depends on 'Apache Log4J', a logging framework, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.log4j.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://logging.apache.org/log4j/>

This product optionally depends on 'Aalto XML', an ultra-high performance non-blocking XML processor, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.aalto-xml.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://wiki.fasterxml.com/AaltoHome>

This product contains a modified version of 'HPACK', a Java implementation of the HTTP/2 HPACK algorithm written by Twitter. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.hpack.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://github.com/twitter/hpack>

This product contains a modified version of 'HPACK', a Java implementation of the HTTP/2 HPACK algorithm written by Cory Benfield. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.hyper-hpack.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://github.com/python-hyper/hpack/>

This product contains a modified version of 'HPACK', a Java implementation of the HTTP/2 HPACK algorithm written by Tatsuhiro Tsujikawa. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.nghttp2-hpack.txt (MIT License)
- \* HOMEPAGE:
  - \* <https://github.com/nghttp2/nghttp2/>

This product contains a modified portion of 'Apache Commons Lang', a Java library provides utilities for the java.lang API, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.commons-lang.txt (Apache License)

2.0)

\* HOMEPAGE:

\* <https://commons.apache.org/proper/commons-lang/>

This product contains the Maven wrapper scripts from 'Maven Wrapper', that provides an easy way to ensure a user has everything necessary to run the Maven build.

\* LICENSE:

\* license/LICENSE.mvn-wrapper.txt (Apache License 2.0)

\* HOMEPAGE:

\* <https://github.com/takari/maven-wrapper>

This product contains the dnsinfo.h header file, that provides a way to retrieve the system DNS configuration on MacOS.

This private header is also used by Apple's open source mDNSResponder (<https://opensource.apple.com/tarballs/mDNSResponder/>).

\* LICENSE:

\* license/LICENSE.dnsinfo.txt (Apple Public Source License 2.0)

\* HOMEPAGE:

\* <https://www.opensource.apple.com/source/configd/configd-453.19/dnsinfo/dnsinfo.h>

This product optionally depends on 'Brotli4j', Brotli compression and decompression for Java., which can be obtained at:

\* LICENSE:

\* license/LICENSE.brotli4j.txt (Apache License 2.0)

\* HOMEPAGE:

\* <https://github.com/hyperxpro/Brotli4j>

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Apache Harmony

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# 1.315 netty-transport-native-epoll 4.1.85.Final

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 * WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the
 * License for the specific language governing permissions and limitations
 * under the License.
 */
```

Found in path(s):

```
* /opt/cola/permits/1501752506_1670492918.1945343/0/netty-transport-native-epoll-4-1-85-final-sources-jar/netty_epoll_native.c
```

No license file was found, but licenses were detected in source scan.

```
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 *
 */
```

```
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* under the License.
*/
```

Found in path(s):

```
* /opt/cola/permits/1501752506_1670492918.1945343/0/netty-transport-native-epoll-4-1-85-final-sources-
jar/netty_epoll_linuxsocket.h
* /opt/cola/permits/1501752506_1670492918.1945343/0/netty-transport-native-epoll-4-1-85-final-sources-
jar/netty_epoll_linuxsocket.c
```

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~ under the License.
-->
```

Found in path(s):

```
* /opt/cola/permits/1501752506_1670492918.1945343/0/netty-transport-native-epoll-4-1-85-final-sources-
jar/META-INF/maven/io.netty/netty-transport-native-epoll/pom.xml
```

## 1.316 netty-resolver-dns-native-macos

### 4.1.85.Final

#### 1.316.1 Available under license :

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```
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~ under the License.  
-->

Found in path(s):

\* /opt/cola/permits/1501917810\_1689673698.0563817/0/netty-resolver-dns-native-macos-4-1-85-final-jar/META-INF/maven/io.netty/netty-resolver-dns-native-macos/pom.xml

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Resolver/DNS/Native/MacOS

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.resolver.dns.macos.osx.aarch\_64

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.resolver-dns-native-macos

Implementation-Version: 4.1.85.Final

Built-By: chris

Bnd-LastModified: 1668019112741

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Bundle-Name: Netty/Resolver/DNS/Native/MacOS

Bundle-Version:

4.1.85.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_312

Implementation-URL: <https://netty.io/netty-resolver-dns-native-macos/>

Found in path(s):

\* /opt/cola/permits/1501917810\_1689673698.0563817/0/netty-resolver-dns-native-macos-4-1-85-final-jar/META-INF/MANIFEST.MF

# 1.317 netty-transport-native-kqueue

## 4.1.85.Final

### 1.317.1 Available under license :

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~ WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the
~ License for the specific language governing permissions and limitations
~ under the License.
-->
```

Found in path(s):

```
* /opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
jar/META-INF/maven/io.netty/netty-transport-native-kqueue/pom.xml
```

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```
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*/
```

Found in path(s):

```
* /opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
```

```
jar/netty_kqueue_bsdsocket.h
* /opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
jar/netty_kqueue_eventarray.h
* /opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
jar/netty_kqueue_native.c
*
/opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
jar/netty_kqueue_eventarray.c
* /opt/cola/permits/1501918358_1670505562.1510534/0/netty-transport-native-kqueue-4-1-85-final-sources-
jar/netty_kqueue_bsdsocket.c
```

# 1.318 netty 4.1.86.Final

## 1.318.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
Manifest-Version: 1.0
Implementation-Title: Netty/Transport/Classes/Epoll
Bundle-Description: Netty is an asynchronous event-driven network appl
ication framework for rapid development of maintainable high perfo
rmance protocol servers and clients.
Automatic-Module-Name: io.netty.transport.classes.epoll
Bundle-License: https://www.apache.org/licenses/LICENSE-2.0
Bundle-SymbolicName: io.netty.transport-classes-epoll
Implementation-Version: 4.1.86.Final
Built-By: root
Bnd-LastModified: 1670851209269
Bundle-ManifestVersion: 2
Implementation-Vendor-Id: io.netty
Bundle-DocURL: https://netty.io/
Bundle-Vendor: The Netty Project
Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel,io.
netty.channel.socket;version="[4.1,5)",io.netty.channel.unix;version=
"[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.collection;ve
rsion="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.u
til.internal;version="[4.1,5)",io.netty.util.internal.logging;version
="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;vers
ion="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2
)";resolution:=optional
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"
Tool: Bnd-2.4.1.201501161923
Implementation-Vendor: The Netty Project
Export-Package: io.netty.channel.epoll;uses:="io.netty.buffer,io.netty
.channel,io.netty.channel.socket,io.netty.channel.unix,io.netty.util,
io.netty.util.concurrent";version="4.1.86"
Bundle-Name: Netty/Transport/Classes/Epoll
Bundle-Version: 4.1.86.Final
```

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_352

Implementation-URL: <https://netty.io/netty-transport-classes-epoll/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-classes-epoll-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Transport/Native/Unix/Common

Bundle-Description: Static library which contains common unix utilities.

Automatic-Module-Name: io.netty.transport.unix.common

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.transport-native-unix-common

Implementation-Version: 4.1.86.Final

Built-By: norman

Bnd-LastModified: 1670855190526

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel,io.

io.netty.channel.socket;version="[4.1,5)",io.netty.util;version="[4.1,5)

",io.netty.util.internal;version="[4.1,5)",sun.nio.ch;resolution:=opt

ional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.

eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool:

Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.channel.unix;uses="io.netty.buffer,io.netty.

channel,io.netty.channel.socket,io.netty.util";version="4.1.86"

Bundle-Name: Netty/Transport/Native/Unix/Common

Bundle-Version: 4.1.86.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_252

Implementation-URL: [https://netty.io/netty-transport-native-unix-commo  
n/](https://netty.io/netty-transport-native-unix-common/)

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-native-unix-common-4-1-86-final-jar/META-INF/MANIFEST.MF

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Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-classes-epoll-4-1-86-final-jar/META-INF/maven/io.netty/netty-transport-classes-epoll/pom.xml

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Handler/Proxy

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.handler.proxy

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.handler-proxy

Implementation-Version: 4.1.86.Final

Built-By: root

Bnd-LastModified: 1670851161046

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.handler.codec.base64;version="[4.1,5)",io.netty.handler.codec.http;version="[4.1,5)",io.netty.handler.codec.socksv4;version="[4.1,5)",io.netty.handler.codec.socksv5;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.handler.proxy;uses:="io.netty.channel,io.netty.handler.codec.http,io.netty.util.concurrent";version="4.1.86"



Bundle-Name: Netty/Handler/Proxy  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_352  
Implementation-URL: <https://netty.io/netty-handler-proxy/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-handler-proxy-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/Resolver  
Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.  
Automatic-Module-Name: io.netty.resolver  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>  
Bundle-SymbolicName: io.netty.resolver  
Implementation-Version: 4.1.86.Final  
Built-By: norman  
Bnd-LastModified: 1670855159282  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.resolver;uses:="io.netty.util.concurrent";version="4.1.86"  
Bundle-Name: Netty/Resolver  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://netty.io/netty-resolver/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-resolver-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/Common  
Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.  
Automatic-Module-Name: io.netty.common  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>  
Bundle-SymbolicName: io.netty.common  
Implementation-Version: 4.1.86.Final  
Built-By: norman  
Bnd-LastModified: 1670855137664  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: sun.misc;resolution:=optional,com.oracle.svm.core.annotate;resolution:=optional,javax.security.cert;resolution:=optional,org.apache.commons.logging;resolution:=optional;version="[1.2,2)",org.apache.log4j;resolution:=optional;version="[2.17,3)",org.apache.logging.log4j;resolution:=optional;version="[2.17,3)",org.apache.logging.log4j.message;resolution:=optional;version="[2.17,3)",org.apache.logging.log4j.spi;resolution:=optional;version="[2.17,3)",org.slf4j;resolution:=optional;version="[1.7,2)",org.slf4j.helpers;resolution:=optional;version="[1.7,2)",org.slf4j.spi;resolution:=optional;version="[1.7,2)",reactor.blockhound;resolution:=optional,reactor.blockhound.integration;resolution:=optional  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
DynamicImport-Package: \*  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.util;uses:="io.netty.util.concurrent,io.netty.util.internal";version="4.1.86",io.netty.util.collection;version="4.1.86",io.netty.util.concurrent;uses:="io.netty.util.internal";version="4.1.86",io.netty.util.internal;uses:="io.netty.util,io.netty.util.concurrent,io.netty.util.internal.logging,javax.security.cert,reactor.blockhound,reactor.blockhound.integration";version="4.1.86",io.netty.util.internal.logging;version="4.1.86",io.netty.util.internal.svm;version="4.1.86"  
Bundle-Name: Netty/Common  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://netty.io/netty-common/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-common-4-1-86-final-jar/META-INF/MANIFEST.MF

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<!--
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-->
```

Found in path(s):

```
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-common-4-1-86-final-jar/META-INF/maven/io.netty/netty-common/pom.xml
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-buffer-4-1-86-final-jar/META-INF/maven/io.netty/netty-buffer/pom.xml
*
/opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-codec-4-1-86-final-jar/META-INF/maven/io.netty/netty-codec/pom.xml
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-transport-4-1-86-final-jar/META-INF/maven/io.netty/netty-transport/pom.xml
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-handler-4-1-86-final-jar/META-INF/maven/io.netty/netty-handler/pom.xml
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-codec-http-4-1-86-final-jar/META-INF/maven/io.netty/netty-codec-http/pom.xml
* /opt/cola/permits/1509095589_1671715267.5524309/0/netty-zip/netty/netty-codec-socks-4-1-86-final-jar/META-INF/maven/io.netty/netty-codec-socks/pom.xml
```

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Manifest-Version: 1.0  
Implementation-Title: Netty/Transport/Native/Epoll  
Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.  
Automatic-Module-Name: io.netty.transport.epoll.linux.x86\_64  
Bundle-License: https://www.apache.org/licenses/LICENSE-2.0  
Bundle-SymbolicName: io.netty.transport-native-epoll  
Implementation-Version: 4.1.86.Final  
Built-By: root  
Bnd-LastModified: 1670851257748  
Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty  
Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;  
version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="  
[1,2)";resolution:=optional  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Bundle-Name: Netty/Transport/Native/Epoll  
Bundle-Version:  
4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_352  
Implementation-URL: <https://netty.io/netty-transport-native-epoll/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-native-epoll-4-1-86-final-jar/META-INF/MANIFEST.MF

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# under the License.
io.netty.util.internal.Hidden$NettyBlockHoundIntegration
```

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-common-4-1-86-final-jar/META-INF/services/reactor.blockhound.integration.BlockHoundIntegration

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/Codec/HTTP2  
Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.  
Automatic-Module-Name: io.netty.codec.http2  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>  
Bundle-SymbolicName: io.netty.codec-http2

Implementation-Version: 4.1.86.Final  
Built-By: root  
Bnd-LastModified: 1670851101053  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Bundle-DocURL: https://netty.io/  
Bundle-Vendor: The Netty Project  
Import-Package: com.aayushatharva.brotli4j.encoder;resolution:=optional,io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.channel.embedded;version="[4.1,5)",io.netty.handler.codec,io.netty.handler.codec.base64;version="[4.1,5)",io.netty.handler.codec.compression;version="[4.1,5)",io.netty.handler.codec.http;version="[4.1,5)",io.netty.handler.logging;version="[4.1,5)",io.netty.handler.ssl;version="[4.1,5)",io.netty.handler.stream;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.collection;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",javax.net.ssl,sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.handler.codec.http2;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.embedded,io.netty.handler.codec,io.netty.handler.codec.compression,io.netty.handler.codec.http,io.netty.handler.logging,io.netty.handler.stream,io.netty.util,io.netty.util.collection,io.netty.util.concurrent";version="4.1.86"  
Bundle-Name:  
  Netty/Codec/HTTP2  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_352  
Implementation-URL: https://netty.io/netty-codec-http2/

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-http2-4-1-86-final-jar/META-INF/MANIFEST.MF

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Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-native-epoll-4-1-86-final-jar/META-INF/maven/io.netty/netty-transport-native-epoll/pom.xml

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-http2-4-1-86-final-jar/META-INF/maven/io.netty/netty-codec-http2/pom.xml

\*

/opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-resolver-4-1-86-final-jar/META-INF/maven/io.netty/netty-resolver/pom.xml

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-handler-proxy-4-1-86-final-jar/META-INF/maven/io.netty/netty-handler-proxy/pom.xml

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Handler

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.handler

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.handler

Implementation-Version: 4.1.86.Final

Built-By: norman

Bnd-LastModified: 1670855199960

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: sun.security.x509;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional,io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.channel.socket;version="[4.1,5)",io.netty.channel.unix;version="[4.1,5)",io.netty.handler.codec;version="[4.1,5)",io.netty.handler.codec.base64;version="[4.1,5)",io.netty.internal.tcnative;version="[2.0,3)";resolution:=optional,io.netty.resolver;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",javax.crypto,javax.crypto.spec,javax.net.ssl,javax.security.auth.x500,javax.security.cert,org.bouncycastle.asn1.pkcs;version="[1.69,2)";resolution:=optional,org.bouncycastle.asn1.x500;version="[1.69,2)";resolution:=op

tional,org.bouncycastle.cert;version="[1.69,2)";resolution:=optional,  
org.bouncycastle.cert.jcajce;version="[1.69,2)";resolution:=optional,  
org.bouncycastle.jce.provider;version="[1.69,2)";resolution:=optional  
,org.bouncycastle.openssl;version="[1.69,2)";resolution:=optional,org  
.bouncycastle.openssl.jcajce;version="[1.69,2)";resolution:=optional,  
org.bouncycastle.operator;version="[1.69,2)";resolution:=optional,org  
.bouncycastle.operator.jcajce;version="[1.69,2)";resolution:=optional  
,org.bouncycastle.pkcs;version="[1.69,2)";resolution:=optional,org.co  
nscript;version="[2.5,3)";resolution:=optional,sun.nio.ch;resolution:  
=optional

Require-Capability: osgi.ee:filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.handler.address;uses:="io.netty.channel,io.net  
ty.resolver";version="4.1.86",io.netty.handler.flow;uses:="io.netty.  
channel";version="4.1.86",io.netty.handler.flush;uses:="io.netty.chan  
nel";version="4.1.86",io.netty.handler.ipfilter;uses:="io.netty.chann  
el";version="4.1.86",io.netty.handler.logging;uses:="io.netty.channel  
,io.netty.util.internal.logging";version="4.1.86",io.netty.handler.pc  
ap;uses:="io.netty.channel";version="4.1.86",io.netty.handler.ssl;use  
s:="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.  
util,io.netty.util.concurrent,javax.crypto,javax.net.ssl";version="4.  
1.86",io.netty.handler.ssl.ocsp;uses:="io.netty.channel,io.netty.hand  
ler.ssl";version="4.1.86",io.netty.handler.ssl.util;uses:="javax.net.  
ssl,javax.security.auth.x500,javax.security.cert";version="4.1.86",io  
.netty.handler.stream;uses:="io.netty.buffer,io.netty.channel";versio  
n="4.1.86",io.netty.handler.timeout;uses:="io.netty.channel";version=  
"4.1.86",io.netty.handler.traffic;uses:="io.netty.channel,io.netty.ut  
il.concurrent";version="4.1.86"

Bundle-Name: Netty/Handler

Bundle-Version: 4.1.86.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_252

Implementation-URL: <https://netty.io/netty-handler/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-handler-4-1-86-final-jar/META-  
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\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-http2-4-1-86-final-jar/META-  
INF/native-image/io.netty/netty-codec-http2/native-image.properties

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-4-1-86-final-jar/META-INF/native-image/io.netty/netty-transport/native-image.properties  
\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-http-4-1-86-final-jar/META-INF/native-image/io.netty/netty-codec-http/native-image.properties  
\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-buffer-4-1-86-final-jar/META-INF/native-image/io.netty/netty-buffer/native-image.properties  
\*  
/opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-common-4-1-86-final-jar/META-INF/native-image/io.netty/netty-common/native-image.properties  
\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-4-1-86-final-jar/META-INF/native-image/io.netty/netty-codec/native-image.properties  
\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-handler-4-1-86-final-jar/META-INF/native-image/io.netty/netty-handler/native-image.properties  
No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Codec/Socks

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.codec.socks

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.codec.socks

Implementation-Version: 4.1.86.Final

Built-By: root

Bnd-LastModified: 1670851140833

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.handler.codec,io.netty.util;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.handler.codec.socks;uses="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.socksx;uses="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.socksx.v5";version="4.1.86",io.netty.handler.codec.socksx.v4;uses="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.socksx";version="4.1.86",io.netty.handler.codec.socksx.v5;uses="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.socksx";version="4.1.86"



Bundle-Name: Netty/Codec/Socks  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_352  
Implementation-URL: <https://netty.io/netty-codec-socks/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-socks-4-1-86-final-jar/META-INF/MANIFEST.MF

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```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
```

```
<modelVersion>4.0.0</modelVersion>
```

```
<artifactId>jctools-core</artifactId>
```

```
<groupId>org.jctools</groupId>
```

```
<version>3.1.0</version>
```

```
<name>Java Concurrency Tools Core Library</name>
```

```
<description>Java Concurrency Tools Core Library</description>
```

```
<packaging>bundle</packaging>
```

```
<dependencies>
```

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<groupId>org.hamcrest</groupId>
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<artifactId>hamcrest-all</artifactId>
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<version>${hamcrest.version}</version>
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<scope>test</scope>
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<dependency>
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<groupId>junit</groupId>
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<artifactId>junit</artifactId>
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```
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<scope>test</scope>
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<groupId>com.google.guava</groupId>
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```
<artifactId>guava-testlib</artifactId>
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```
<version>${guava-testlib.version}</version>
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<scope>test</scope>
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</dependency>
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<build>
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<plugins>
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<plugin>
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<artifactId>maven-surefire-plugin</artifactId>
<version>3.0.0-M3</version>
<configuration>
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    <include>*</include>
  </includes>
</configuration>
</plugin>
<plugin>
<groupId>org.apache.felix</groupId>
<artifactId>maven-bundle-plugin</artifactId>
<version>4.2.1</version>
<extensions>>true</extensions>
<configuration>
  <instructions>
    <Import-Package>sun.misc;resolution:=optional</Import-Package>
  </instructions>
</configuration>
</plugin>
<plugin>
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-source-plugin</artifactId>
<version>3.2.0</version>
<executions>
  <execution>
    <id>attach-sources</id>
    <phase>verify</phase>
    <goals>
      <goal>jar-no-fork</goal>
    </goals>
  </execution>
</executions>
</plugin>
<plugin>
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-javadoc-plugin</artifactId>
<version>3.1.1</version>
<configuration>
  <additionalOptions>
    <additionalOption>-Xdoclint:none</additionalOption>
  </additionalOptions>
  <source>8</source>
</configuration>
<executions>
  <execution>
    <id>attach-javadocs</id>
    <goals>
      <goal>jar</goal>
    </goals>
  </execution>
</executions>

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```

    </goals>
  </execution>
</executions>
</plugin>
</plugins>
</build>

<distributionManagement>
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    <id>bintray-jctools-jctools</id>
    <name>jctools-jctools</name>
    <url>https://api.bintray.com/maven/jctools/jctools/jctools-core/;publish=1</url>
  </repository>
</distributionManagement>

<url>https://github.com/JCTools</url>
<inceptionYear>2013</inceptionYear>

<licenses>
  <license>
    <name>Apache
License, Version 2.0</name>
    <url>http://www.apache.org/licenses/LICENSE-2.0.txt</url>
    <distribution>repo</distribution>
  </license>
</licenses>

<scm>
  <url>https://github.com/JCTools/JCTools</url>
  <connection>scm:git:https://github.com/JCTools/JCTools</connection>
  <tag>HEAD</tag>
</scm>

<developers>
  <developer>
    <url>https://github.com/nitsanw</url>
  </developer>
  <developer>
    <url>https://github.com/mjpt777</url>
  </developer>
  <developer>
    <url>https://github.com/RichardWarburton</url>
  </developer>
  <developer>
    <url>https://github.com/kay</url>
  </developer>
  <developer>
    <url>https://github.com/franz1981</url>
  </developer>

```

```

</developer>
</developers>

<prerequisites>
<maven>3.5.0</maven>
</prerequisites>

<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<java.version>1.6</java.version>
<java.test.version>1.8</java.test.version>

<maven.compiler.source>${java.version}</maven.compiler.source>
<maven.compiler.target>${java.version}</maven.compiler.target>
<maven.compiler.testSource>${java.test.version}</maven.compiler.testSource>
<maven.compiler.testTarget>${java.test.version}</maven.compiler.testTarget>

<hamcrest.version>1.3</hamcrest.version>
<junit.version>4.12</junit.version>
<guava-testlib.version>21.0</guava-testlib.version>
</properties>
</project>

```

#### Found

in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-common-4-1-86-final-jar/META-INF/maven/org.jctools/jctools-core/pom.xml

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-->

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-native-unix-common-4-1-86-final-jar/META-INF/maven/io.netty/netty-transport-native-unix-common/pom.xml

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/Codec  
Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.  
Automatic-Module-Name: io.netty.codec  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>  
Bundle-SymbolicName: io.netty.codec  
Implementation-Version: 4.1.86.Final  
Built-By: norman  
Bnd-LastModified: 1670855178734  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: com.aayushatharva.brotli4j;resolution:=optional,com.aayushatharva.brotli4j.decoder;resolution:=optional,com.aayushatharva.brotli4j.encoder;resolution:=optional,com.github.luben.zstd;version="[1.5,2)";resolution:=optional,com.google.protobuf;version="[2.6,3)";resolution:=optional,com.google.protobuf.nano;resolution:=optional,com.jcraft.jzlib;resolution:=optional,com.ning.compress;version="[1.0,2)";resolution:=optional,com.ning.compress.lzf;version="[1.0,2)";resolution:=optional,com.ning.compress.lzf.util;version="[1.0,2)";resolution:=optional,io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.channel.socket;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",lzma.sdk;resolution:=optional,lzma.sdk.lzma;resolution:=optional,net.jpountz.lz4;resolution:=optional,net.jpountz.xxhash;resolution:=optional,org.jboss.marshalling;resolution:=optional,sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.handler.codec;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.socket,io.netty.util";version="4.1.86",io.netty.handler.codec.base64;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.bytes;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.compression;uses:="com.aayushatharva.brotli4j.encoder,io.netty.buffer,io.netty.channel,io.netty.handler.codec,net.jpountz.lz4";version="4.1.86",io.netty.handler.codec.json;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version

= "4.1.86",io.netty.handler.codec.marshalling;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec,org.jboss.marshalling";version="4.1.86",io.netty.handler.codec.protobuf;uses:="com.google.protobuf,com.google.protobuf.nano,io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.serialization;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.string;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86",io.netty.handler.codec.xml;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec";version="4.1.86"

Bundle-Name: Netty/Codec

Bundle-Version: 4.1.86.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_252

Implementation-URL: <https://netty.io/netty-codec/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Codec/HTTP

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.codec.http

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.codec-http

Implementation-Version: 4.1.86.Final

Built-By: norman

Bnd-LastModified: 1670855212920

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: com.aayushatharva.brotli4j.encoder;resolution:=optional,com.jcraft.jzlib;resolution:=optional,io.netty.buffer;version="[4.1,5)",io.netty.channel;version="[4.1,5)",io.netty.channel.embedded;version="[4.1,5)",io.netty.handler.codec,io.netty.handler.codec.base64;version="[4.1,5)",io.netty.handler.codec.compression;version="[4.1,5)",io.netty.handler.ssl;version="[4.1,5)",io.netty.handler.stream;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.handler.codec.http;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.embedded,io.netty.handler.codec,io.netty.handler.codec.compression,io.netty.handler.codec.http.cookie,io.netty.handler.stream,io.netty.util";version="4.1.86",io.netty.handler.codec.http.cookie;version="4.1.86",io.netty.handler.codec.http.cors;uses:="io.netty.channel,io.netty.handler.codec.http";version="4.1.86",io.netty.handler.codec.http.multipart;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.http,io.netty.handler.stream,io.netty.util";version="4.1.86",io.netty.handler.codec.http.websocketx;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.http,io.netty.handler.stream,io.netty.util,io.netty.util.internal.logging";version="4.1.86",io.netty.handler.codec.http.websocketx.extensions;uses:="io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.http.websocketx";version="4.1.86",io.netty.handler.codec.http.websocketx.extensions.compression;uses:="io.netty.channel,io.netty.handler.codec.http.websocketx.extensions";version="4.1.86",io.netty.handler.codec.rtsp;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec.http,io.netty.util";version="4.1.86",io.netty.handler.codec.spdy;uses:="io.netty.buffer,io.netty.channel,io.netty.handler.codec,io.netty.handler.codec.http,io.netty.util";version="4.1.86"

Bundle-Name:

Netty/Codec/HTTP

Bundle-Version: 4.1.86.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_252

Implementation-URL: <https://netty.io/netty-codec-http/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-codec-http-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Transport

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.transport

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.transport

Implementation-Version: 4.1.86.Final

Built-By: norman

Bnd-LastModified: 1670855167311

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.resolver;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.bootstrap;uses:="io.netty.channel,io.netty.resolver,io.netty.util";version="4.1.86",io.netty.channel;uses:="io.netty.bootstrap,io.netty.buffer,io.netty.util,io.netty.util.concurrent";version="4.1.86",io.netty.channel.embedded;uses:="io.netty.channel";version="4.1.86",io.netty.channel.group;uses:="io.netty.channel,io.netty.util.concurrent";version="4.1.86",io.netty.channel.internal;version="4.1.86",io.netty.channel.local;uses:="io.netty.channel";version="4.1.86",io.netty.channel.nio;uses:="io.netty.buffer,io.netty.channel,io.netty.util,io.netty.util.concurrent";version="4.1.86",io.netty.channel.oio;uses:="io.netty.buffer,io.netty.channel";version="4.1.86",io.netty.channel.pool;uses:="io.netty.bootstrap,io.netty.channel,io.netty.util.concurrent";version="4.1.86",io.netty.channel.socket;uses:="io.netty.buffer,io.netty.channel,io.netty.util";version="4.1.86",io.netty.channel.socket.nio;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.nio,io.netty.channel.socket";version="4.1.86",io.netty.channel.socket.oio;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.oio,io.netty.channel.socket";version="4.1.86"  
Bundle-Name: Netty/Transport  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://netty.io/netty-transport/>

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-transport-4-1-86-final-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Implementation-Title: Netty/Buffer

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.buffer

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.buffer

Implementation-Version: 4.1.86.Final



Built-By: norman  
Bnd-LastModified: 1670855150807  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Bundle-DocURL: https://netty.io/  
Bundle-Vendor: The Netty Project  
Import-Package: io.netty.util;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability:  
  osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.buffer;uses:="io.netty.util";version="4.1.86",io.netty.buffer.search;uses:="io.netty.util";version="4.1.86"  
Bundle-Name: Netty/Buffer  
Bundle-Version: 4.1.86.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: https://netty.io/netty-buffer/

Found in path(s):

\* /opt/cola/permits/1509095589\_1671715267.5524309/0/netty-zip/netty/netty-buffer-4-1-86-final-jar/META-INF/MANIFEST.MF

# 1.319 netty-handler 4.1.86.Final

## 1.319.1 Available under license :

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 * License for the specific language governing permissions and limitations
 * under the License.
 */
```

Found in path(s):

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/traffic/TrafficCounter.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/traffic/ChannelTrafficShapingHandler.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/traffic/package-info.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/traffic/GlobalTrafficShapingHandler.java

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Found in path(s):

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslSession.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/DefaultOpenSslKeyMaterial.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslCachingX509KeyManagerFactory.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterial.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SignatureAlgorithmConverter.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslPrivateKey.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslX509KeyManagerFactory.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterialProvider.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

jar/io/netty/handler/ssl/OpenSslX509TrustManagerWrapper.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

jar/io/netty/handler/ssl/OpenSslCachingKeyMaterialProvider.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

jar/io/netty/handler/ssl/ExtendedOpenSslSession.java

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Found in path(s):

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

jar/io/netty/handler/traffic/GlobalChannelTrafficShapingHandler.java

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Found in path(s):

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

jar/io/netty/handler/ssl/SslContextBuilder.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolAccessor.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ClientAuth.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslSessionTicketKey.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/LazyJavaxX509Certificate.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolNames.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolNegotiationHandler.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ipfilter/package-info.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/BouncyCastleSelfSignedCertGenerator.java

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/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/OpenJdkSelfSignedCertGenerator.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ipfilter/UniqueIpFilter.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolUtil.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/JdkSslServerContext.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

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jar/io/netty/handler/ssl/OpenSslDefaultApplicationProtocolNegotiator.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/util/InsecureTrustManagerFactory.java
*
/opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/util/SimpleTrustManagerFactory.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/PemReader.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslSessionStats.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/traffic/GlobalChannelTrafficCounter.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslEngine.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/ApplicationProtocolConfig.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ipfilter/IpFilterRule.java
*
/opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/SslUtils.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslEngineMap.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
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* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslSessionContext.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslServerContext.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ipfilter/RuleBasedIpFilter.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/JettyNpnSslEngine.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/JdkBaseApplicationProtocolNegotiator.java
*
/opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/OpenSslContext.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/util/LazyX509Certificate.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ipfilter/IpFilterRuleType.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/CipherSuiteFilter.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/ApplicationProtocolNegotiator.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/ssl/JdkApplicationProtocolNegotiator.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/JettyAlpnSslEngine.java  
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/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SslContext.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslNpnApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SniHandler.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/JdkAlpnApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ipfilter/IpSubnetFilterRule.java  
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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslServerSessionContext.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/IdentityCipherSuiteFilter.java  
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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/FingerprintTrustManagerFactory.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SupportedCipherSuiteFilter.java  
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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ipfilter/AbstractRemoteAddressFilter.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/Java7SslParametersUtils.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSsl.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/CipherSuiteConverter.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/ThreadLocalInsecureRandom.java  
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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/BouncyCastle.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslClientSessionCache.java  
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/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/BouncyCastleAlpnSslUtils.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/AsyncRunnable.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SslProtocols.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/BouncyCastleAlpnSslEngine.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslAsyncPrivateKeyMethod.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/Ciphers.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslSessionId.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SslContextOption.java  
\*  
/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslSessionCache.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/GroupsConverter.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslContextOption.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SslMasterKeyHandler.java

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/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/KeyManagerFactoryWrapper.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/X509KeyManagerWrapper.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/address/DynamicAddressConnectHandler.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/SimpleKeyManagerFactory.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/address/package-info.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/timeout/ReadTimeoutHandler.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/timeout/WriteTimeoutHandler.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/timeout/package-info.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/package-info.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/logging/LogLevel.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-

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jar/io/netty/handler/stream/ChunkedStream.java
* /opt/cola/permits/1509095619_1671044640.6558812/0/netty-handler-4-1-86-final-sources-
jar/io/netty/handler/timeout/IdleStateHandler.java
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jar/io/netty/handler/logging/package-info.java
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jar/io/netty/handler/timeout/WriteTimeoutException.java
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```

Found in path(s):

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/PemEncoded.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/DelegatingSslContext.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/PemPrivateKey.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslCertificateException.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslServerContext.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/flow/package-info.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslContext.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/util/X509TrustManagerWrapper.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterialManager.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/Java8SslUtils.java

\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/flush/FlushConsolidationHandler.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/flush/package-info.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/PemX509Certificate.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/PemValue.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslClientContext.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslEngine.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ipfilter/IpSubnetFilter.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ipfilter/IpSubnetFilterRuleComparator.java  
\*

/opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/address/ResolveAddressHandler.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/logging/ByteBufFormat.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ssl/util/FingerprintTrustManagerFactoryBuilder.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ssl/SslHandshakeTimeoutException.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ssl/SslClosedEngineException.java  
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jar/io/netty/handler/ssl/util/SelfSignedCertificate.java  
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jar/io/netty/handler/ssl/OpenSslCertificateCompressionAlgorithm.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-  
jar/io/netty/handler/ssl/BouncyCastlePemReader.java

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jar/io/netty/handler/ssl/OpenSslCertificateCompressionConfig.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/PcapWriter.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/package-info.java  
\*  
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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/IPPacket.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/PcapWriteHandler.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/UDPPacket.java  
\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/pcap/TCPpacket.java

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jar/io/netty/handler/ssl/SslHandshakeCompletionEvent.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/AbstractSniHandler.java

\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/SslCloseCompletionEvent.java

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\* /opt/cola/permits/1509095619\_1671044640.6558812/0/netty-handler-4-1-86-final-sources-jar/io/netty/handler/ssl/ocsp/package-info.java

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jar/io/netty/handler/codec/spdy/SpdyGoAwayFrame.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyWindowUpdateFrame.java
*
/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyRstStreamFrame.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdySessionStatus.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyCodecUtil.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockRawEncoder.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/FullHttpRequest.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHttpCodec.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHttpDecoder.java
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/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocketProtocolHandler.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyVersion.java
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jar/io/netty/handler/codec/spdy/SpdyFrame.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/DefaultSpdyRstStreamFrame.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdyPingFrame.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/FullHttpRequest.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdySettingsFrame.java  
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/FullHttpResponse.java  
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/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/DefaultSpdyHeadersFrame.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketFrameAggregator.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdySynReplyFrame.java  
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/DefaultFullHttpResponse.java  
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/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdySessionHandler.java  
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jar/io/netty/handler/codec/spdy/DefaultSpdySynStreamFrame.java
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/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/DefaultSpdyPingFrame.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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jar/io/netty/handler/codec/http/ComposedLastHttpContent.java
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jar/io/netty/handler/codec/http/websocketx/WebSocketFrameEncoder.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/DefaultSpdyHeaders.java
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/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/DefaultFullHttpRequest.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHeaders.java
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jar/io/netty/handler/codec/http/websocketx/WebSocketServerHandshakeException.java
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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jar/io/netty/handler/codec/http/multipart/DeleteFileOnExitHook.java

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/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshakeException.java

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- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtensionHandshaker.java
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- /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdyHeaderBlockZlibDecoder.java
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketServerHandshakerFactory.java  
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientProtocolConfig.java  
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/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtensionFilter.java  
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/CorruptedWebSocketFrameException.java  
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- /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/DefaultHttpHeaders.java
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- /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/multipart/InterfaceHttpData.java
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- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/rtsp/RtspObjectEncoder.java
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- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/HttpObjectAggregator.java
- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/HttpObject.java
- \*
- /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/rtsp/RtspRequestDecoder.java
- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker13.java
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- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/multipart/MemoryFileUpload.java
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- \* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/HttpClientCodec.java

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/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/spdy/SpdyHttpHeaders.java  
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker.java  
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jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker07.java
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/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocketFrame.java
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jar/io/netty/handler/codec/http/multipart/FileUpload.java
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHttpResponseStreamIdHandler.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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*
/opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/HttpHeaders.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/http/multipart/MixedAttribute.java
* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
jar/io/netty/handler/codec/rtsp/RtspObjectDecoder.java

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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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* /opt/cola/permits/1509095605_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-
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*
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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/HttpHeaderValidationUtil.java

\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/multipart/AbstractMixedHttpData.java

\*

/opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/TooLongHttpLineException.java

\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/TooLongHttpContentException.java

\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-jar/io/netty/handler/codec/http/TooLongHttpHeaderException.java

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\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-  
jar/io/netty/handler/codec/http/cors/CorsHandler.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-  
jar/io/netty/handler/codec/http/cors/CorsConfig.java

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jar/io/netty/handler/codec/http/websocketx/Utf8Validator.java  
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jar/io/netty/handler/codec/http/CompressionEncoderFactory.java  
\* /opt/cola/permits/1509095605\_1671044635.8033464/0/netty-codec-http-4-1-86-final-sources-  
jar/io/netty/handler/codec/http/HttpMessageDecoderResult.java  
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# 1.321 netty-resolver 4.1.86.Final

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\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/HostsFileEntriesProvider.java

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\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/NoopAddressResolverGroup.java

\*

/opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/package-info.java

\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/AddressResolverGroup.java

\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/NoopAddressResolver.java

\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-jar/io/netty/resolver/NameResolver.java

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jar/io/netty/resolver/HostsFileEntries.java  
\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-  
jar/io/netty/resolver/ResolvedAddressTypes.java

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jar/io/netty/resolver/DefaultHostsFileEntriesResolver.java  
\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-  
jar/io/netty/resolver/AbstractAddressResolver.java  
\*

/opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-  
jar/io/netty/resolver/DefaultAddressResolverGroup.java  
\* /opt/cola/permits/1509095582\_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-  
jar/io/netty/resolver/InetSocketAddressResolver.java

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* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
jar/io/netty/resolver/DefaultNameResolver.java
* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
jar/io/netty/resolver/InetAddressResolver.java
* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
jar/io/netty/resolver/AddressResolver.java
* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
jar/io/netty/resolver/CompositeNameResolver.java
* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
jar/io/netty/resolver/HostsFileParser.java
* /opt/cola/permits/1509095582_1671044586.3678293/0/netty-resolver-4-1-86-final-sources-
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jar/io/netty/resolver/RoundRobinInetAddressResolver.java
```

## 1.322 netty-codec 4.1.86.Final

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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/AsciiHeadersEncoder.java

\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2Constants.java

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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/json/package-info.java

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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2MoveToFrontTable.java

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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2BitWriter.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/MessageAggregationException.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2BitReader.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2Decoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Crc32.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2HuffmanAllocator.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2BlockDecompressor.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/LzfEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Bzip2Rand.java  
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*/
/**
 * Enumeration of supported Base64 dialects.
 * <p>
 * The internal lookup tables in this class has been derived from
 * <a href="http://iharder.sourceforge.net/current/java/base64/">Robert
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 */
```

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```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
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```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
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 */
/*
 * Written by Robert Harder and released to the public domain, as explained at
 * https://creativecommons.org/licenses/publicdomain
 */
/**
 * Utility class for {@link ByteBuf} that encodes and decodes to and from
 * Base64 notation.
 * <p>
 * The encoding and decoding algorithm in this class has been derived from
 * http://iharder.sourceforge.net/current/java/base64/ Robert Harder's Public Domain
```

\* Base64 Encoder/Decoder</a>.

\*/

Found in path(s):

\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/base64/Base64.java

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/\*\*

\* A decoder that splits the received { @link ByteBuf}s dynamically by the  
\* value of the length field in the message. It is particularly useful when you  
\* decode a binary message which has an integer header field that represents the  
\* length of the message body or the whole message.

\*

<p>

\* { @link LengthFieldBasedFrameDecoder } has many configuration parameters so  
\* that it can decode any message with a length field, which is often seen in  
\* proprietary client-server protocols. Here are some example that will give  
\* you the basic idea on which option does what.

\*

\* <h3>2 bytes length field at offset 0, do not strip header</h3>

\*

\* The value of the length field in this example is <tt>12 (0x0C)</tt> which  
\* represents the length of "HELLO, WORLD". By default, the decoder assumes  
\* that the length field represents the number of the bytes that follows the  
\* length field. Therefore, it can be decoded with the simplistic parameter  
\* combination.

\* <pre>

\* <b>lengthFieldOffset</b> = <b>0</b>

\* <b>lengthFieldLength</b> = <b>2</b>

\* lengthAdjustment = 0

\* initialBytesToStrip = 0 (= do not strip header)

\*

```

* BEFORE DECODE (14 bytes)    AFTER DECODE (14 bytes)
* +-----+-----+ +-----+-----+
* | Length | Actual Content
* |---->| Length | Actual Content |
* | 0x000C | "HELLO, WORLD" | | 0x000C | "HELLO, WORLD" |
* +-----+-----+ +-----+-----+
* </pre>

```

\* <h3>2 bytes length field at offset 0, strip header</h3>

\* Because we can get the length of the content by calling  
\* { @link ByteBuf#readableBytes() }, you might want to strip the length  
\* field by specifying <tt>initialBytesToStrip</tt>. In this example, we  
\* specified <tt>2</tt>, that is same with the length of the length field, to  
\* strip the first two bytes.

```

* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 2
* lengthAdjustment = 0
* <b>initialBytesToStrip</b> = <b>2</b> (= the length of the Length field)

```

```

* BEFORE DECODE (14 bytes)    AFTER DECODE (12 bytes)
* +-----+-----+ +-----+
* | Length | Actual Content |---->| Actual Content |
* | 0x000C | "HELLO, WORLD" | | "HELLO, WORLD" |
* +-----+-----+ +-----+
* </pre>

```

\* <h3>2 bytes length field at offset 0, do not strip header, the length field  
\* represents the length of the whole message</h3>

\* In most cases, the length field represents the length of the message body  
\* only, as shown in the previous examples. However, in some protocols, the  
\* length field represents the length of the whole message, including the  
\* message header. In such a case, we specify a non-zero  
\* <tt>lengthAdjustment</tt>. Because the length value in this example message  
\* is always greater than the body length by <tt>2</tt>, we specify <tt>-2</tt>  
\* as <tt>lengthAdjustment</tt> for compensation.

```

* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>-2</b> (= the length of the Length field)
* initialBytesToStrip = 0

```

```

* BEFORE DECODE (14 bytes)    AFTER DECODE (14 bytes)
* +-----+-----+ +-----+-----+
* | Length | Actual Content |---->| Length | Actual

```

```

Content |
* | 0x000E | "HELLO, WORLD" | | 0x000E | "HELLO, WORLD" |
* +-----+-----+-----+-----+
* </pre>
*
* <h3>3 bytes length field at the end of 5 bytes header, do not strip header</h3>
*
* The following message is a simple variation of the first example. An extra
* header value is prepended to the message. <tt>lengthAdjustment</tt> is zero
* again because the decoder always takes the length of the prepended data into
* account during frame length calculation.
* <pre>
* <b>lengthFieldOffset</b> = <b>2</b> (= the length of Header 1)
* <b>lengthFieldLength</b> = <b>3</b>
* lengthAdjustment = 0
* initialBytesToStrip = 0
*
* BEFORE DECODE (17 bytes)          AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Header 1 | Length | Actual Content |----->| Header 1 | Length | Actual Content |
* | 0xCAFE | 0x00000C | "HELLO, WORLD" | | 0xCAFE | 0x00000C | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
*
* <h3>3 bytes length field at the beginning of 5 bytes header, do not strip header</h3>
*
* This is an advanced example that shows the case where there is an extra
* header between the length field and the message body. You have to specify a
* positive <tt>lengthAdjustment</tt> so that the decoder counts the extra
* header into the frame length calculation.
* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 3
* <b>lengthAdjustment</b> = <b>2</b> (= the length of Header 1)
* initialBytesToStrip = 0
*
* BEFORE DECODE (17 bytes)          AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Length | Header 1 | Actual Content |----->| Length | Header 1 | Actual Content |
* | 0x00000C | 0xCAFE | "HELLO, WORLD" | | 0x00000C | 0xCAFE | "HELLO,
* WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
*
* <h3>2 bytes length field at offset 1 in the middle of 4 bytes header,
* strip the first header field and the length field</h3>
*

```

\* This is a combination of all the examples above. There are the prepended header before the length field and the extra header after the length field.  
 \* The prepended header affects the `<tt>lengthFieldOffset</tt>` and the extra header affects the `<tt>lengthAdjustment</tt>`. We also specified a non-zero `<tt>initialBytesToStrip</tt>` to strip the length field and the prepended header from the frame. If you don't want to strip the prepended header, you could specify `<tt>0</tt>` for `<tt>initialBytesToSkip</tt>`.

\* `<pre>`

\* `lengthFieldOffset = 1` (= the length of HDR1)

\* `lengthFieldLength = 2`

\* `<b>lengthAdjustment</b> = <b>1</b>` (= the length of HDR2)

\* `<b>initialBytesToStrip</b> = <b>3</b>` (= the length of HDR1 + LEN)

\*

\* BEFORE DECODE (16 bytes)

AFTER DECODE (13 bytes)

\* +-----+-----+-----+-----+ +-----+-----+

\* | HDR1 | Length | HDR2 | Actual Content |-----| HDR2 | Actual Content |

\* | 0xCA | 0x000C | 0xFE | "HELLO, WORLD" | | 0xFE | "HELLO, WORLD" |

\* +-----+-----+-----+-----+ +-----+-----+

\* `</pre>`

\*

\* `<h3>`2 bytes length field at offset 1 in the middle of 4 bytes header,

\* strip the first header field and the length field, the length field

\* represents the length of the whole message`</h3>`

\*

\* Let's give another twist to the previous example. The only difference from

\* the previous example is that the length field represents the length of the

\* whole message instead of the message body, just like the third example.

\* We have to count the length of HDR1 and Length into `<tt>lengthAdjustment</tt>`.

\* Please note that we don't need to take the length of HDR2 into account

\* because

the length field already includes the whole header length.

\* `<pre>`

\* `lengthFieldOffset = 1`

\* `lengthFieldLength = 2`

\* `<b>lengthAdjustment</b> = <b>-3</b>` (= the length of HDR1 + LEN, negative)

\* `<b>initialBytesToStrip</b> = <b>3</b>`

\*

\* BEFORE DECODE (16 bytes)

AFTER DECODE (13 bytes)

\* +-----+-----+-----+-----+ +-----+-----+

\* | HDR1 | Length | HDR2 | Actual Content |-----| HDR2 | Actual Content |

\* | 0xCA | 0x0010 | 0xFE | "HELLO, WORLD" | | 0xFE | "HELLO, WORLD" |

\* +-----+-----+-----+-----+ +-----+-----+

\* `</pre>`

\* @see LengthFieldPrepender

\*/

Found in path(s):

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/LengthFieldBasedFrameDecoder.java
```

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*
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*/
```

Found in path(s):

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufEncoder.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/HeadersUtils.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/ProtocolDetectionResult.java
```

```
*
```

```
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/ProtocolDetectionState.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufVarint32LengthFieldPrepender.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/UnsupportedValueConverter.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufVarint32FrameDecoder.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufDecoderNano.java
```

```
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufEncoderNano.java
```

```
*
```

```
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/protobuf/ProtobufDecoder.java
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```

```
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```

```
*
```



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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/DecompressionException.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/base64/Base64Decoder.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/package-info.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/ReferenceMap.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/JZlibDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/ThreadLocalUnmarshallerProvider.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/DefaultMarshallerProvider.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/string/StringDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/FixedLengthFrameDecoder.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/ZlibWrapper.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/ReplayingDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/ByteToMessageDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/DecoderException.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/CompactObjectInputStream.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/PrematureChannelClosureException.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/ZlibUtil.java

```

*
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/UnsupportedMessageTypeException.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/ObjectDecoderInputStream.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/compression/SnappyFrameDecoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/LimitingByteInput.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/MessageToMessageDecoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/ReplayingDecoderByteBuf.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/compression/ZlibCodecFactory.java
*
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/MessageToByteEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/CompatibleObjectEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/DefaultUnmarshallerProvider.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/LengthFieldPrepender.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/ChannelBufferByteInput.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/ChannelBufferByteOutput.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/DecoderResult.java
*
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/string/StringEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/compression/JdkZlibEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/MessageToMessageCodec.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/CorruptedFrameException.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/DelimiterBasedFrameDecoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/xml/package-info.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/compression/package-info.java
*
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/MessageAggregator.java

```

\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/MessageToMessageEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/CompatibleMarshallingDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/base64/Base64Encoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/SnappyFrameEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/ObjectDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/ClassResolver.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/MarshallerProvider.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/Delimiters.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/CachingClassResolver.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/ObjectEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/Snappy.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/bytes/ByteArrayDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/CompressionException.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/serialization/ClassResolvers.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/protobuf/package-info.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/ZlibDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/MarshallingEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/MarshallingDecoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/UnmarshallerProvider.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/compression/ZlibEncoder.java  
\*  
/opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/CodecException.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/marshalling/CompatibleMarshallingEncoder.java  
\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-

```
jar/io/netty/handler/codec/serialization/package-info.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/LineBasedFrameDecoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/ThreadLocalMarshallerProvider.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/TooLongFrameException.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/CompactObjectOutputStream.java
*
/opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/base64/package-info.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/marshalling/ContextBoundUnmarshallerProvider.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/bytes/ByteArrayEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/ObjectEncoderOutputStream.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/SoftReferenceMap.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/ByteToMessageCodec.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/package-info.java
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jar/io/netty/handler/codec/bytes/package-info.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/WeakReferenceMap.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/string/package-info.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/compression/JZlibEncoder.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/serialization/ClassLoaderClassResolver.java
* /opt/cola/permits/1509095575_1671044644.0113554/0/netty-codec-4-1-86-final-sources-
jar/io/netty/handler/codec/EncoderException.java
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jar/io/netty/handler/codec/xml/XmlFrameDecoder.java  
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jar/io/netty/handler/codec/compression/ZstdOptions.java  
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jar/io/netty/handler/codec/compression/BrotliEncoder.java

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jar/io/netty/handler/codec/compression/StandardCompressionOptions.java

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jar/io/netty/handler/codec/compression/BrotliDecoder.java

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jar/io/netty/handler/codec/compression/ZstdEncoder.java

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jar/io/netty/handler/codec/compression/BrotliOptions.java
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jar/io/netty/handler/codec/compression/Brotli.java
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jar/io/netty/handler/codec/compression/GzipOptions.java
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\* /opt/cola/permits/1509095575\_1671044644.0113554/0/netty-codec-4-1-86-final-sources-jar/io/netty/handler/codec/CharSequenceValueConverter.java

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jar/io/netty/bootstrap/FailedChannel.java

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jar/io/netty/channel/socket/oio/DefaultOioDatagramChannelConfig.java



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/opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/PendingBytesTracker.java  
\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/nio/SelectedSelectionKeySetSelector.java  
\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/socket/ChannelInputShutdownReadComplete.java  
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/opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/oio/AbstractOioMessageChannel.java
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* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/socket/DefaultServerSocketChannelConfig.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/CombinedChannelDuplexHandler.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/bootstrap/Bootstrap.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/ChannelDuplexHandler.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/FixedRecvByteBufAllocator.java
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/opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/AdaptiveRecvByteBufAllocator.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-
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jar/io/netty/channel/ChannelPromise.java  
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\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/ChannelPromiseNotifier.java  
\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/embedded/EmbeddedEventLoop.java  
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jar/io/netty/channel/socket/DuplexChannelConfig.java  
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jar/io/netty/channel/pool/AbstractChannelPoolMap.java  
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\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/ReflectiveChannelFactory.java

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/\*\*

\* Handles an I/O event or intercepts an I/O operation, and forwards it to its next handler in  
\* its { @link ChannelPipeline }.

\*

\* <h3>Sub-types</h3>

\* <p>

\* { @link ChannelHandler } itself does not provide many methods, but you usually have to implement one of its  
subtypes:

\* <ul>

\* <li>{ @link

ChannelInboundHandler} to handle inbound I/O events, and</li>

\* <li>{ @link ChannelOutboundHandler} to handle outbound I/O operations.</li>

\* </ul>

\* </p>

\* <p>

\* Alternatively, the following adapter classes are provided for your convenience:

\* <ul>

\* <li>{ @link ChannelInboundHandlerAdapter} to handle inbound I/O events,</li>

\* <li>{ @link ChannelOutboundHandlerAdapter} to handle outbound I/O operations, and</li>

\* <li>{ @link ChannelDuplexHandler} to handle both inbound and outbound events</li>

\* </ul>

\* </p>

\* <p>

\* For more information, please refer to the documentation of each subtype.

\* </p>

\*

\* <h3>The context object</h3>

\* <p>

\* A { @link ChannelHandler} is provided with a { @link ChannelHandlerContext}

\* object. A { @link ChannelHandler} is supposed to interact with the

\* { @link ChannelPipeline} it belongs to via a context object. Using the

\* context object, the { @link ChannelHandler} can pass events upstream or

\* downstream, modify the pipeline dynamically,

or store the information

(using { @link AttributeKey}s) which is specific to the handler.

\*

\* <h3>State management</h3>

\*

\* A { @link ChannelHandler} often needs to store some stateful information.

\* The simplest and recommended approach is to use member variables:

\* <pre>

\* public interface Message {

\* // your methods here

\* }

\*

\* public class DataServerHandler extends { @link SimpleChannelInboundHandler}&lt;Message&gt; {

\*

\* <b>private boolean loggedIn;</b>

\*

\* { @code @Override}

\* public void channelRead0({ @link ChannelHandlerContext} ctx, Message message) {

\* if (message instanceof LoginMessage) {

\* authenticate((LoginMessage) message);

\* <b>loggedIn = true;</b>

\* } else (message instanceof GetDataMessage) {

\* if (<b>loggedIn</b>) {

\* ctx.writeAndFlush(fetchSecret((GetDataMessage) message));

\* } else {

```

*         fail();
*     }
*
* }
* }
* ...
* }
* </pre>

```

\* Because the handler instance has a state variable which is dedicated to one connection, you have to create a new handler instance for each new channel to avoid a race condition where a unauthenticated client can get the confidential information:

```

* <pre>
* // Create a new handler instance per channel.
* // See { @link ChannelInitializer#initChannel(Channel)}.
* public class DataServerInitializer extends { @link ChannelInitializer}&lt;{ @link Channel}&gt; {
*     { @code @Override}
*     public void initChannel({ @link Channel} channel) {
*         channel.pipeline().addLast("handler", <b>new DataServerHandler()</b>);
*     }
* }
*
* </pre>

```

\* <h4>Using { @link AttributeKey}s</h4>

\* Although it's recommended to use member variables to store the state of a handler, for some reason you might not want to create many handler instances. In such a case, you can use { @link AttributeKey}s which is provided by { @link ChannelHandlerContext}:

```

* <pre>
* public interface Message {
*     // your methods here
* }
*
* { @code @Sharable}
* public class DataServerHandler extends { @link SimpleChannelInboundHandler}&lt;Message&gt; {
*     private final { @link AttributeKey}&lt;{ @link Boolean}&gt; auth =
*         { @link AttributeKey#valueOf(String) AttributeKey.valueOf("auth")};
*
*     { @code @Override}
*     public void channelRead({ @link ChannelHandlerContext} ctx, Message message) {
*         { @link Attribute}&lt;{ @link Boolean}&gt; attr = ctx.attr(auth);
*         if (message instanceof LoginMessage) {
*             authenticate((LoginMessage) o);
*             <b>attr.set(true)</b>;
*         } else (message instanceof GetDataMessage) {
*             if (<b>Boolean.TRUE.equals(attr.get())</b>) {

```

```

*         ctx.writeAndFlush(fetchSecret((GetDataMessage o));
*     } else {
*         fail();
*     }
* }
* }
* ...
* }
* </pre>

```

\* Now that the state of the handler is attached to the { @link ChannelHandlerContext}, you can add the same handler instance to different pipelines:

```

* <pre>
* public class DataServerInitializer extends { @link ChannelInitializer}&lt;&gt;{ @link Channel}&gt; {
*
*     private static final DataServerHandler <b>SHARED</b> = new DataServerHandler();
*
*     { @code @Override}
*     public void initChannel({ @link Channel} channel) {
*         channel.pipeline().addLast("handler", <b>SHARED</b>);
*     }
* }
* </pre>

```

\* <h4>The { @code @Sharable} annotation</h4>

\* <p>In the example above which used an { @link AttributeKey}, you might have noticed the { @code @Sharable} annotation.

\* <p>If a { @link ChannelHandler} is annotated with the { @code @Sharable} annotation, it means you can create an instance of the handler just once and add it to one or more { @link ChannelPipeline}s multiple times without a race condition.

\* <p>If this annotation is not specified, you have to create a new handler instance every time you add it to a pipeline because it has unshared state such as member variables.

\* <p>This annotation is provided for documentation purpose, just like [the JCIP annotations](http://www.javaconcurrencyinpractice.com/annotations/doc/).

\* <h3>Additional resources worth reading</h3>

\* <p>Please refer to the { @link ChannelHandler}, and { @link ChannelPipeline} to find out more about inbound and outbound operations, what fundamental differences they have, how they flow in a pipeline, and how to handle

\* the operation in your application.

\*/

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\* /opt/cola/permits/1509095609\_1671044607.123572/0/netty-transport-4-1-86-final-sources-jar/io/netty/channel/ChannelHandler.java

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jar/io/netty/channel/socket/DuplexChannel.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-
jar/io/netty/channel/ChannelInboundInvoker.java
*
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jar/io/netty/channel/SelectStrategy.java
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jar/io/netty/bootstrap/ServerBootstrapConfig.java
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jar/io/netty/channel/PreferHeapByteBufAllocator.java
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jar/io/netty/bootstrap/AbstractBootstrapConfig.java
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jar/io/netty/channel/DefaultSelectStrategy.java
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jar/io/netty/channel/SelectStrategyFactory.java
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jar/io/netty/channel/DefaultSelectStrategyFactory.java
*
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jar/io/netty/channel/WriteBufferWaterMark.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-
jar/io/netty/channel/group/VoidChannelGroupFuture.java
* /opt/cola/permits/1509095609_1671044607.123572/0/netty-transport-4-1-86-final-sources-
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\* /opt/cola/permits/1509095595\_1671044615.8406854/0/netty-transport-native-unix-common-4-1-86-final-sources-jar/io/netty/channel/unix/UnixChannelUtil.java

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/opt/cola/permits/1509095595\_1671044615.8406854/0/netty-transport-native-unix-common-4-1-86-final-sources-jar/io/netty/channel/unix/GenericUnixChannelOption.java

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Matthias Urlichs <smurf@debian.org>.

It is now maintained by Andreas Metzler <ametzler@debian.org>, Eric Dorland  
<eric@debian.org> and James Westby <jw+debian@jameswestby.net>

It was downloaded from <https://ftp.gnu.org/gnu/libtasn1/>

Upstream Authors: Fabio Fiorina <fiorinaf@gnutls.org>  
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lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c  
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lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
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lib/gssapi/mechglue/mglueP.h  
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lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

include/iprop\_hdr.h  
kadmin/server/ipropd\_svc.c  
lib/kdb/iprop.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
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lib/gss\_mechs/mech\_spnego/mech/gssapiP\_spnego.h  
lib/gss\_mechs/mech\_spnego/mech/spnego\_mech.c  
lib/krb5/kadm5/kadm\_host\_srv\_names.c  
lib/krb5/kdb/kdb\_convert.c  
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lib/libgss/g\_dsp\_name.c  
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lib/libgss/g\_verify.c  
lib/libgss/gssd\_pname\_to\_uid.c  
uts/common/gssapi/include/gssapi\_err\_generic.h  
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lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c

lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c  
lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c  
lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

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the following new or changed files:

include/ipropr\_hdr.h  
kadmin/server/ipropr\_svc.c  
lib/kdb/ipropr.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
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The implementations of GSSAPI mechglue in GSSAPI-SPNEGO in "src/lib/gssapi", including the following files:

- lib/gssapi/generic/gssapi\_err\_generic.et
- lib/gssapi/mechglue/g\_accept\_sec\_context.c
- lib/gssapi/mechglue/g\_acquire\_cred.c
- lib/gssapi/mechglue/g\_canon\_name.c
- lib/gssapi/mechglue/g\_compare\_name.c
- lib/gssapi/mechglue/g\_context\_time.c
- lib/gssapi/mechglue/g\_delete\_sec\_context.c
- lib/gssapi/mechglue/g\_dsp\_name.c
- lib/gssapi/mechglue/g\_dsp\_status.c
- lib/gssapi/mechglue/g\_dup\_name.c
- lib/gssapi/mechglue/g\_exp\_sec\_context.c
- lib/gssapi/mechglue/g\_export\_name.c
- lib/gssapi/mechglue/g\_glue.c
- lib/gssapi/mechglue/g\_imp\_name.c

lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c  
lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c  
lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

include/iprop\_hdr.h  
kadmin/server/ipropd\_svc.c  
lib/kdb/iprop.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
slave/kpropd\_rpc.c  
slave/kproplog.c

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cmd/krb5/slave/kpropd\_rpc.c  
lib/gss\_mechs/mech\_krb5/et/kdb5\_err.c  
lib/gss\_mechs/mech\_spnego/mech/gssapiP\_spnego.h  
lib/gss\_mechs/mech\_spnego/mech/spnego\_mech.c  
lib/krb5/kadm5/kadm\_host\_srv\_names.c  
lib/krb5/kdb/kdb\_convert.c  
lib/krb5/kdb/kdb\_hdr.h  
lib/krb5/kdb/kdb\_log.c  
lib/krb5/kdb/kdb\_log.h  
lib/libgss/g\_accept\_sec\_context.c  
lib/libgss/g\_acquire\_cred.c  
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The implementations of GSSAPI mechglue in GSSAPI-SPNEGO in "src/lib/gssapi", including the following files:

- lib/gssapi/generic/gssapi\_err\_generic.et
- lib/gssapi/mechglue/g\_accept\_sec\_context.c
- lib/gssapi/mechglue/g\_acquire\_cred.c
- lib/gssapi/mechglue/g\_canon\_name.c
- lib/gssapi/mechglue/g\_compare\_name.c
- lib/gssapi/mechglue/g\_context\_time.c
- lib/gssapi/mechglue/g\_delete\_sec\_context.c
- lib/gssapi/mechglue/g\_dsp\_name.c
- lib/gssapi/mechglue/g\_dsp\_status.c
- lib/gssapi/mechglue/g\_dup\_name.c
- lib/gssapi/mechglue/g\_exp\_sec\_context.c
- lib/gssapi/mechglue/g\_export\_name.c
- lib/gssapi/mechglue/g\_glue.c
- lib/gssapi/mechglue/g\_imp\_name.c
- lib/gssapi/mechglue/g\_imp\_sec\_context.c
- lib/gssapi/mechglue/g\_init\_sec\_context.c
- lib/gssapi/mechglue/g\_initialize.c
- lib/gssapi/mechglue/g\_inquire\_context.c
- lib/gssapi/mechglue/g\_inquire\_cred.c
- lib/gssapi/mechglue/g\_inquire\_names.c
- lib/gssapi/mechglue/g\_process\_context.c
- lib/gssapi/mechglue/g\_rel\_buffer.c
- lib/gssapi/mechglue/g\_rel\_cred.c
- lib/gssapi/mechglue/g\_rel\_name.c
- lib/gssapi/mechglue/g\_rel\_oid\_set.c
- lib/gssapi/mechglue/g\_seal.c
- lib/gssapi/mechglue/g\_sign.c
- lib/gssapi/mechglue/g\_store\_cred.c
- lib/gssapi/mechglue/g\_unseal.c
- lib/gssapi/mechglue/g\_userok.c
- lib/gssapi/mechglue/g\_utils.c
- lib/gssapi/mechglue/g\_verify.c
- lib/gssapi/mechglue/gssd\_pname\_to\_uid.c
- lib/gssapi/mechglue/mglueP.h
- lib/gssapi/mechglue/oid\_ops.c
- lib/gssapi/spnego/gssapiP\_spnego.h
- lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

- include/iprop\_hdr.h
- kadmin/server/ipropd\_svc.c
- lib/kdb/iprop.x
- lib/kdb/kdb\_convert.c

lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
slave/kpropd\_rpc.c  
slave/kproplog.c

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lib/gss\_mechs/mech\_krb5/et/kdb5\_err.c  
lib/gss\_mechs/mech\_spnego/mech\_gssapiP\_spnego.h  
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lib/krb5/kadm5/kadm\_host\_srv\_names.c  
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lib/libgss/g\_utils.c  
lib/libgss/g\_verify.c  
lib/libgss/gssd\_pname\_to\_uid.c  
uts/common/gssapi/include/gssapi\_err\_generic.h  
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lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
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lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c  
lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c  
lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c  
lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation,  
including  
the following new or changed files:

include/ipropr\_hdr.h  
kadmin/server/ipropr\_svc.c  
lib/kdb/ipropr.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
kprop/kpropd\_rpc.c  
kprop/kproplog.c

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lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
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lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c  
lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c  
lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation, including  
the following new or changed files:

include/ipropr\_hdr.h



kadmin/server/ipropd\_svc.c  
lib/kdb/iprop.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
slave/kpropd\_rpc.c  
slave/kproplog.c

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The implementations of GSSAPI mechglue in GSSAPI-SPNEGO in "src/lib/gssapi", including the following files:

lib/gssapi/generic/gssapi\_err\_generic.et  
lib/gssapi/mechglue/g\_accept\_sec\_context.c  
lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c  
lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c  
lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
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lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation,  
including  
the following new or changed files:

include/ipropr\_hdr.h  
kadmin/server/ipropr\_svc.c  
lib/kdb/ipropr.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
kprop/kpropd\_rpc.c  
kprop/kproplog.c

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jar/com/google/protobuf/util/FieldMaskUtil.java  
* /opt/cola/permits/1518087455_1671610010.5919955/0/protobuf-java-util-3-21-10-sources-  
jar/com/google/protobuf/util/JsonFormat.java  
*  
/opt/cola/permits/1518087455_1671610010.5919955/0/protobuf-java-util-3-21-10-sources-  
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jar/io/netty/channel/epoll/SegmentedDatagramPacket.java
 * /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollDomainDatagramChannelConfig.java
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 */
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 * Set the {@code TCP_MD5SIG} option on the socket. See {@code linux/tcp.h} for more details.
 * Keys can only be set on, not read to prevent a potential leak, as they are confidential.
 * Allowing them being read would mean anyone with access to the channel could get them.
 */
/**
```

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\* /opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-  
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\* /opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-jar/io/netty/channel/epoll/EpollDatagramChannel.java

\*

/opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-jar/io/netty/channel/epoll/package-info.java

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\* /opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-jar/io/netty/channel/epoll/EpollTcpInfo.java

\* /opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-jar/io/netty/channel/epoll/EpollServerSocketChannel.java

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\* /opt/cola/permits/1518493128\_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-jar/io/netty/channel/epoll/NativeDatagramPacketArray.java

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* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollRecvByteAllocatorHandle.java
*
/opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollMode.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollServerChannelConfig.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
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* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollServerDomainSocketChannel.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/AbstractEpollStreamChannel.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollDomainSocketChannelConfig.java
*
/opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollChannelConfig.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/EpollDomainSocketChannel.java
* /opt/cola/permits/1518493128_1671636502.660997/0/netty-transport-classes-epoll-4-1-86-final-sources-
jar/io/netty/channel/epoll/AbstractEpollServerChannel.java
```

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## 1.336 protobuf-java 3.21.12

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\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/google/protobuf/timestamp.proto

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/com/google/protobuf/ListFieldSchema.java

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/com/google/protobuf/PrimitiveNonBoxingCollection.java

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/com/google/protobuf/WireFormat.java

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/com/google/protobuf/InvalidProtocolBufferException.java

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/google/protobuf/source\_context.proto

\*

/opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-jar/com/google/protobuf/LazyStringList.java

\* /opt/cola/permits/1521222018\_1672206959.0969713/0/protobuf-java-3-21-12-sources-



# 1.337 libksba 1.5.0-3+deb11u2

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## 1.338 kotlin-scripting-compiler-impl-embeddable 1.7.20

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## 1.340 protobuf-java 3.21.12

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Manifest-Version: 1.0  
Automatic-Module-Name: com.google.protobuf  
Bnd-LastModified: 1671050201631  
Build-Jdk: 11.0.13  
Built-By: kfm  
Bundle-Description: Core Protocol Buffers library. Protocol Buffers are a way of encoding structured data in an efficient yet extensible format.  
Bundle-DocURL: <https://developers.google.com/protocol-buffers/>  
Bundle-License: <https://opensource.org/licenses/BSD-3-Clause>  
Bundle-ManifestVersion: 2  
Bundle-Name: Protocol Buffers [Core]  
Bundle-SymbolicName: com.google.protobuf  
Bundle-Version: 3.21.12  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.google.protobuf;version="3.21.12"  
Import-Package: sun.misc;resolution:=optional,com.google.protobuf;version="[3.21,4)"  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.7))"  
Tool: Bnd-3.0.0.201509101326

Found in path(s):

\* /opt/cola/permits/1535600625\_1674018919.1448016/0/protobuf-java-3-21-12-jar/META-INF/MANIFEST.MF  
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\* /opt/cola/permits/1535600625\_1674018919.1448016/0/protobuf-java-3-21-12-jar/google/protobuf/source\_context.proto  
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/opt/cola/permits/1535600625\_1674018919.1448016/0/protobuf-java-3-21-12-jar/google/protobuf/field\_mask.proto  
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# 1.341 gson 2.10.1

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# 1.342 jackson 2.14.2

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## 1.343 jackson-annotations 2.14.2

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It was originally written by Tatu Saloranta ([tatu.saloranta@iki.fi](mailto:tatu.saloranta@iki.fi)), and has  
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# 1.345 wire-compiler 3.7.1

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```
* /opt/cola/permits/1551206746_1675341574.9799197/0/wire-compiler-3-7-1-sources-
jar/com/squareup/wire/schema/WireRun.kt
* /opt/cola/permits/1551206746_1675341574.9799197/0/wire-compiler-3-7-1-sources-
jar/com/squareup/wire/schema/Target.kt
* /opt/cola/permits/1551206746_1675341574.9799197/0/wire-compiler-3-7-1-sources-
jar/com/squareup/wire/schema/Root.kt
*
/opt/cola/permits/1551206746_1675341574.9799197/0/wire-compiler-3-7-1-sources-
jar/com/squareup/wire/schema/ProfileLoader.kt
* /opt/cola/permits/1551206746_1675341574.9799197/0/wire-compiler-3-7-1-sources-
jar/com/squareup/wire/schema/SchemaLoader.kt
```

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Found in path(s):

- \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/WireLogger.kt
  - \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/ConsoleWireLogger.kt
  - \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/WireCompiler.kt
  - \*
  - \*/opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/WireException.kt
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- \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/schema/PartitionedSchema.kt
- \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/Manifest.kt
- \* /opt/cola/permits/1551206746\_1675341574.9799197/0/wire-compiler-3-7-1-sources-jar/com/squareup/wire/schema/DirectedAcyclicGraph.kt

# 1.346 glue 2.17.122

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```
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jar/com/amazonaws/services/schemaregistry/serializers/protobuf/ProtobufWireFormatEncoder.java
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<<<<<<< HEAD
 *
 * This will be removed once Apicurio releases the latest version with the json_name fix
 * https://github.com/Apicurio/apicurio-registry/blob/master/utis/protobuf-schema-
utilities/src/main/java/io/apicurio/registry/utis/protobuf/schema/ProtobufFile.java
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```

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\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/utills/apicurio/ProtobufSchema.java

\*

/opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/utills/apicurio/MessageDefinition.java

\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/utills/apicurio/DynamicSchema.java

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\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/avro/AvroSerializer.java  
\*  
/opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/SerializationDataEncoder.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonDataWithSchema.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializerImpl.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializerFactory.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializerFactory.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializerImpl.java  
\*  
/opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializer.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializerDataParser.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/protobuf/ProtobufWireFormatDecoder.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonSerializer.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/protobuf/ProtobufDeserializer.java  
\*  
/opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/deserializers/avro/AWSKafkaAvroDeserializer.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonValidator.java  
\* /opt/cola/permits/1551206578\_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-jar/com/amazonaws/services/schemaregistry/utils/AVROUtils.java

```
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryKafkaDeserializer.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/serializers/avro/AWSKafkaAvroSerializer.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializationFacade.java
*
/opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/deserializers/SecondaryDeserializer.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializer.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializationFacade.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
jar/com/amazonaws/services/schemaregistry/serializers/protobuf/ProtobufSerializer.java
* /opt/cola/permits/1551206578_1675341673.5921674/0/schema-registry-serde-1-1-13-sources-
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INF/maven/software.amazon.glue/schema-registry-serde/pom.xml
```

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```

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```
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```

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```
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`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

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```
<one line to give the program's name and a brief idea of what it does.>  
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```

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```
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Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c'  
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```

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```
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```

`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

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This package was debianized by Christoph Martin martin@uni-mainz.de on Fri, 22 Nov 1996 21:29:51 +0100.

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# 1.357 gnutls 3.7.1-5+deb11u3

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## Constant-time SSSE3 AES core implementation.

## version 0.1

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Version 3, 29 June 2007

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\*/

package tasks

import groovy.util.Node

import groovy.xml.XmlParser

import org.gradle.api.DefaultTask

import org.gradle.api.file.RegularFileProperty

import org.gradle.api.provider.Property

import org.gradle.api.tasks.Input

import org.gradle.api.tasks.InputFile

import org.gradle.api.tasks.OutputFile

import org.gradle.api.tasks.TaskAction

import java.util.\*

abstract class WriteCopyrightToFile : DefaultTask() {

    @InputFile

    val path = project.file("\${project.rootDir}/.idea/copyright/apache.xml")

    @get:OutputFile

    abstract val outputFile: RegularFileProperty

    @get:Input

    val commented: Property<Boolean> = project.objects.property(Boolean::class.java).convention(true)

    @TaskAction

    fun write() {

        val file = outputFile.asFile.get()

        file.writeText(if

(commented.get()) readCopyrightCommented() else readCopyright())

    }

    private fun readCopyright(): String {

        assert(path.exists()) {

            "File \$path with copyright not found"

        }

    val xmlParser = XmlParser()

    val node = xmlParser.parse(path)

```

assert(node.attribute("name") == "CopyrightManager") {
    "Format changed occasionally?"
}

val copyrightBlock = node.children().filterIsInstance<Node>().single()
val noticeNode = copyrightBlock.children().filterIsInstance<Node>().single { it.attribute("name") == "notice" }
return noticeNode.attribute("value").toString().replace("#36;today.year",
GregorianCalendar()[Calendar.YEAR].toString())
}

```

```

private fun readCopyrightCommented(): String {
    return "/*\n" + readCopyright().prependIndent(" * ") + "\n */"
}
}
/*
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*/

```

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zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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jloup@gzip.org      madler@alumni.caltech.edu

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From strings/apr\_fnmatch.c, include/apr\_fnmatch.h, misc/unix/getopt.c, file\_io/unix/mktemp.c, strings/apr\_strings.c:

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From network\_io/unix/inet\_ntop.c, network\_io/unix/inet\_pton.c:

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From strings/apr\_strnatcmp.c, include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.  
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## 1.359 netty-resolver 4.1.89.Final

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```
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/META-INF/maven/io.netty/netty-resolver/pom.xml
```

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```
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/package-info.java
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/NoopAddressResolver.java
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/NameResolver.java
*
/opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/SimpleNameResolver.java
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/AddressResolverGroup.java
* /opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/NoopAddressResolverGroup.java
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- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/AddressResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/InetAddressResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/AbstractAddressResolver.java
- \*
- /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/CompositeNameResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/DefaultNameResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/HostsFileParser.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/DefaultAddressResolverGroup.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/DefaultHostsFileEntriesResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/InetSocketAddressResolver.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/HostsFileEntriesResolver.java

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- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/ResolvedAddressTypes.java
- \* /opt/cola/permits/1568674899\_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-jar/io/netty/resolver/HostsFileEntries.java



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```
*/opt/cola/permits/1568674899_1676616979.8880045/0/netty-resolver-4-1-89-final-sources-
jar/io/netty/resolver/RoundRobinInetAddressResolver.java
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jar/io/netty/resolver/HostsFileEntriesProvider.java
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## 1.360 netty-codec-http 4.1.89.Final

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jar/io.netty.handler.codec/http/cors/CorsConfigBuilder.java
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketScheme.java

\*

/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/ReadOnlyHttpHeaders.java

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jar/io/netty/handler/codec/http/websocketx/WebSocket08FrameDecoder.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocket07FrameDecoder.java
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* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/TooLongHttpHeaderException.java
*
/opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/multipart/AbstractMixedHttpData.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/HttpHeaderValidationUtil.java
```

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerMessageDeflateDecoder.java

\*

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/spdy/SpdyFrameDecoder.java

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/ServerCookieEncoder.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtensionHandler.java

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jar/io/netty/handler/codec/spdy/SpdyFrameEncoder.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtensionUtil.java  
\*  
/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtensionData.java  
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jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerMessageDeflateClientExtensionHandshaker.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/Utf8FrameValidator.java  
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jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketClientExtensionHandler.java  
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jar/io/netty/handler/codec/http/ClientCookieEncoder.java  
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jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerMessageDeflateServerExtensionHandshaker.java  
\*  
/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/compression/DeflateFrameServerExtensionHandshaker.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/spdy/SpdyFrameCodec.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtension.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/compression/package-info.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockDecoder.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerMessageDeflateEncoder.java  
\*  
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jar/io/netty/handler/codec/spdy/SpdyProtocolException.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtension.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/HttpChunkedInput.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/HttpHeaderValues.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/rtsp/RtspHeaderNames.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockRawDecoder.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/websocketx/extensions/compression/DeflateFrameClientExtensionHandshaker.java  
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/opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/compression/DeflateEncoder.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtensionHandshaker.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerFrameDeflateEncoder.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/spdy/SpdyFrameDecoderDelegate.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockZlibDecoder.java
*
/opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/package-info.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
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* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
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jar/io/netty/handler/codec/http/websocketx/extensions/compression/DeflateDecoder.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/HttpHeaderNames.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/compression/WebSocketServerCompressionHandler.java
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* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/cookie/CookieHeaderNames.java
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* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/CombinedHttpHeaders.java
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/ClientCookieEncoder.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/CookieEncoder.java  
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/EmptyHttpHeaders.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/package-info.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/CookieDecoder.java  
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/CookieUtil.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/DefaultCookie.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpExpectationFailedEvent.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/cookie/Cookie.java  
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- /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/LastHttpContent.java
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- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/TextWebSocketFrame.java
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- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/HttpPostRequestDecoder.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/spdy/SpdyHttpResponseStreamIdHandler.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/spdy/DefaultSpdySettingsFrame.java
- \*
- /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/AbstractHttpData.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/spdy/package-info.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/DefaultHttpDataFactory.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpMessage.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/DiskAttribute.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/AbstractMemoryHttpData.java
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- /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/multipart/package-info.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpServerCodec.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/QueryStringEncoder.java
- \* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpConstants.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HTTPHeaderDateFormat.java

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/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker13.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketUtil.java

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/CookieDecoder.java

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\*

/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/spdy/SpdyHttpEncoder.java

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpContent.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/rtsp/RtspRequestDecoder.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker07.java

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/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/DefaultHttpResponse.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/QueryStringDecoder.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/rtsp/RtspMethods.java

\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/PongWebSocketFrame.java

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/DefaultHttpObject.java  
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jar/io/netty/handler/codec/http/HttpVersion.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/HttpContentDecoder.java  
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jar/io/netty/handler/codec/http/multipart/HttpPostMultipartRequestDecoder.java  
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jar/io/netty/handler/codec/spdy/SpdySession.java  
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jar/io/netty/handler/codec/rtsp/RtspRequestEncoder.java  
\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-  
jar/io/netty/handler/codec/http/HttpResponseEncoder.java  
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jar/io/netty/handler/codec/http/package-info.java  
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jar/io/netty/handler/codec/http/multipart/FileUpload.java

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* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/multipart/InterfaceHttpData.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/rtsp/RtspResponseStatuses.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/HttpContentDecompressor.java
*
/opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/rtsp/RtspHeaders.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/multipart/HttpPostStandardRequestDecoder.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/HttpContentEncoder.java
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jar/io/netty/handler/codec/http/DefaultHttpMessage.java
* /opt/cola/permits/1568674933_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-
jar/io/netty/handler/codec/http/HttpResponseDecoder.java
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/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientProtocolConfig.java  
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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/META-INF/maven/io.netty/netty-codec-http/pom.xml

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\* /opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketChunkedInput.java  
\*  
/opt/cola/permits/1568674933\_1676616896.0296044/0/netty-codec-http-4-1-89-final-sources-jar/io/netty/handler/codec/http/HttpServerKeepAliveHandler.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/TooLongFrameException.java  
\*  
/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/ThreadLocalUnmarshallerProvider.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/CodecException.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/serialization/CachingClassResolver.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-

jar/io/netty/handler/codec/MessageToByteEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/DecoderResult.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/string/StringEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/CorruptedFrameException.java  
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/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/SnappyFrameDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/ByteToMessageDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/marshalling/package-info.java  
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jar/io/netty/handler/codec/MessageAggregator.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
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jar/io/netty/handler/codec/package-info.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/ZlibCodecFactory.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/base64/Base64Decoder.java  
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jar/io/netty/handler/codec/marshalling/MarshallingDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/UnsupportedMessageTypeException.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Snappy.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/LineBasedFrameDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/ZlibUtil.java  
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jar/io/netty/handler/codec/LengthFieldPrepender.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/marshalling/MarshallingEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/base64/package-info.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/ObjectDecoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/bytes/ByteArrayEncoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/ContextBoundUnmarshallerProvider.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/serialization/ObjectEncoderOutputStream.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/PrematureChannelClosureException.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/ChannelBufferByteInput.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/DelimiterBasedFrameDecoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/LimitingByteInput.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/string/package-info.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/JdkZlibEncoder.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/ReplayingDecoderByteBuf.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/bytes/ByteArrayDecoder.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/ReplayingDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/bytes/package-info.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/CompactObjectOutputStream.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/ReferenceMap.java  
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jar/io/netty/handler/codec/compression/JZlibEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
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/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/MessageToMessageCodec.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/ZlibDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/Delimiters.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/package-info.java  
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jar/io/netty/handler/codec/compression/DecompressionException.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/ObjectEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/MessageToMessageEncoder.java  
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jar/io/netty/handler/codec/marshalling/CompatibleMarshallingEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/CompatibleObjectEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/CompactObjectInputStream.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/serialization/ClassResolvers.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/FixedLengthFrameDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/EncoderException.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/marshalling/MarshallerProvider.java  
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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/UnmarshallerProvider.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/marshalling/ChannelBufferByteOutput.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/CompressionException.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/string/StringDecoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/ByteToMessageCodec.java  
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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/DefaultHeadersImpl.java  
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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/ByteBufChecksum.java

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/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/string/LineSeparator.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/CodecOutputList.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/string/LineEncoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/CompressionUtil.java

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jar/io/netty/handler/codec/compression/Bzip2MTFAndRLE2StageEncoder.java  
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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/FastLz.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Bzip2Constants.java  
\*  
/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/json/package-info.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/DecoderResultProvider.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Bzip2BlockCompressor.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/FastLzFrameEncoder.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Lz4Constants.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Bzip2Rand.java  
\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/SnappyFramedDecoder.java  
\*

```
/opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/Bzip2BitReader.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/Bzip2HuffmanStageDecoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/Lz4FrameEncoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/LzmaFrameEncoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/LzfDecoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/SnappyFramedEncoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/Bzip2HuffmanStageEncoder.java
*
/opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/MessageAggregationException.java
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* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/EncoderUtil.java
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* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/META-INF/native-
image/io.netty.netty-codec/native-image.properties
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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/EmptyHeaders.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/Headers.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/DefaultHeaders.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/BrotliOptions.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/compression/Brotli.java

```
*
/opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/StandardCompressionOptions.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/DeflateOptions.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/Zstd.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/ZstdConstants.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/GzipOptions.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/BrotliDecoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/ZstdEncoder.java
*
/opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/BrotliEncoder.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/ZstdOptions.java
* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/compression/CompressionOptions.java
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```

```
*/
/**
* A decoder that splits the received {@link ByteBuf}s dynamically by the
* value of the length field in the message. It is particularly useful when you
* decode a binary message which has an integer header field that represents the
* length of the message body or the whole message.
*
* <p>
* {@link LengthFieldBasedFrameDecoder} has many configuration parameters so
* that it can decode any message with a length field, which is often seen in
```

\* proprietary client-server protocols. Here are some example that will give  
 \* you the basic idea on which option does what.

\*

\* **<h3>2 bytes length field at offset 0, do not strip header</h3>**

\*

\* The value of the length field in this example is `<tt>12 (0x0C)</tt>` which  
 \* represents the length of "HELLO, WORLD". By default, the decoder assumes  
 \* that the length field represents the number of the bytes that follows the  
 \* length field. Therefore, it can be decoded with the simplistic parameter  
 \* combination.

\* `<pre>`

```
* lengthFieldOffset = 0
* lengthFieldLength = 2
* lengthAdjustment = 0
* initialBytesToStrip = 0 (= do not strip header)
```

\*

\* BEFORE DECODE (14 bytes)      AFTER DECODE (14 bytes)

```
* +-----+-----+ +-----+-----+
* | Length | Actual Content
* |---->| Length | Actual Content |
* | 0x000C | "HELLO, WORLD" | | 0x000C | "HELLO, WORLD" |
* +-----+-----+ +-----+-----+
* </pre>
```

\*

\* **<h3>2 bytes length field at offset 0, strip header</h3>**

\*

\* Because we can get the length of the content by calling  
 \* `{ @link ByteBuf#readableBytes() }`, you might want to strip the length  
 \* field by specifying `<tt>initialBytesToStrip</tt>`. In this example, we  
 \* specified `<tt>2</tt>`, that is same with the length of the length field, to  
 \* strip the first two bytes.

\* `<pre>`

```
* lengthFieldOffset = 0
* lengthFieldLength = 2
* lengthAdjustment = 0
* initialBytesToStrip = 2 (= the length of the Length field)
```

\*

\* BEFORE DECODE (14 bytes)      AFTER DECODE (12 bytes)

```
* +-----+-----+ +-----+
* | Length | Actual Content |---->| Actual Content |
* | 0x000C | "HELLO, WORLD" | | "HELLO, WORLD" |
* +-----+-----+ +-----+
* </pre>
```

\*

\* **<h3>2 bytes length field at offset 0, do not strip header, the length field  
 \* represents the length of the whole message</h3>**

\*

\* In most cases, the length field represents the length of the message body

\* only, as shown in the previous examples. However, in some protocols, the  
 \* length field represents the length of the whole message, including the  
 \* message header. In such a case, we specify a non-zero  
 \* `<tt>lengthAdjustment</tt>`. Because the length value in this example message  
 \* is always greater than the body length by `<tt>2</tt>`, we specify `<tt>-2</tt>`  
 \* as `<tt>lengthAdjustment</tt>` for compensation.

```
* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>-2</b> (= the length of the Length field)
* initialBytesToStrip = 0
*
```

```
* BEFORE DECODE (14 bytes)      AFTER DECODE (14 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Length | Actual Content |---->| Length | Actual
* Content |
* | 0x000E | "HELLO, WORLD" |   | 0x000E | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
```

\* `<h3>3 bytes length field at the end of 5 bytes header, do not strip header</h3>`

\* The following message is a simple variation of the first example. An extra  
 \* header value is prepended to the message. `<tt>lengthAdjustment</tt>` is zero  
 \* again because the decoder always takes the length of the prepended data into  
 \* account during frame length calculation.

```
* <pre>
* <b>lengthFieldOffset</b> = <b>2</b> (= the length of Header 1)
* <b>lengthFieldLength</b> = <b>3</b>
* lengthAdjustment = 0
* initialBytesToStrip = 0
*
```

```
* BEFORE DECODE (17 bytes)      AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Header 1 | Length | Actual Content |---->| Header 1 | Length | Actual Content |
* | 0xCAFE | 0x00000C | "HELLO, WORLD" |   | 0xCAFE | 0x00000C | "HELLO, WORLD" |
* | 0xCAFE | 0x00000C | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
```

\* `<h3>3 bytes length field at the beginning of 5 bytes header, do not strip header</h3>`

\* This is an advanced example that shows the case where there is an extra  
 \* header between the length field and the message body. You have to specify a  
 \* positive `<tt>lengthAdjustment</tt>` so that the decoder counts the extra  
 \* header into the frame length calculation.

```
* <pre>
* lengthFieldOffset = 0
```



```

* lengthFieldLength = 3
* <b>lengthAdjustment</b> = <b>2</b> (= the length of Header 1)
* initialBytesToStrip = 0
*
* BEFORE DECODE (17 bytes)          AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Length | Header 1 | Actual Content |---->| Length | Header 1 | Actual Content |
* | 0x00000C | 0xCAFE | "HELLO, WORLD" |   | 0x00000C | 0xCAFE | "HELLO,
WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
*
* <h3>2 bytes length field at offset 1 in the middle of 4 bytes header,
* strip the first header field and the length field</h3>
*
* This is a combination of all the examples above. There are the prepended
* header before the length field and the extra header after the length field.
* The prepended header affects the <tt>lengthFieldOffset</tt> and the extra
* header affects the <tt>lengthAdjustment</tt>. We also specified a non-zero
* <tt>initialBytesToStrip</tt> to strip the length field and the prepended
* header from the frame. If you don't want to strip the prepended header, you
* could specify <tt>0</tt> for <tt>initialBytesToSkip</tt>.
* <pre>
* lengthFieldOffset = 1 (= the length of HDR1)
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>1</b> (= the length of HDR2)
* <b>initialBytesToStrip</b> = <b>3</b> (= the length of HDR1 +
LEN)
*
* BEFORE DECODE (16 bytes)          AFTER DECODE (13 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | HDR1 | Length | HDR2 | Actual Content |---->| HDR2 | Actual Content |
* | 0xCA | 0x000C | 0xFE | "HELLO, WORLD" |   | 0xFE | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>
*
* <h3>2 bytes length field at offset 1 in the middle of 4 bytes header,
* strip the first header field and the length field, the length field
* represents the length of the whole message</h3>
*
* Let's give another twist to the previous example. The only difference from
* the previous example is that the length field represents the length of the
* whole message instead of the message body, just like the third example.
* We have to count the length of HDR1 and Length into <tt>lengthAdjustment</tt>.
* Please note that we don't need to take the length of HDR2 into account
* because
the length field already includes the whole header length.
* <pre>

```

```

* lengthFieldOffset = 1
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>-3</b> (= the length of HDR1 + LEN, negative)
* <b>initialBytesToStrip</b> = <b> 3</b>
*
* BEFORE DECODE (16 bytes)           AFTER DECODE (13 bytes)
* +-----+-----+-----+-----+ +-----+-----+
* | HDR1 | Length | HDR2 | Actual Content |---->| HDR2 | Actual Content |
* | 0xCA | 0x0010 | 0xFE | "HELLO, WORLD" |   | 0xFE | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+
* </pre>
* @see LengthFieldPrepender
*/

```

Found in path(s):

```

* /opt/cola/permits/1568674801_1676616995.6618445/0/netty-codec-4-1-89-final-sources-
jar/io/netty/handler/codec/LengthFieldBasedFrameDecoder.java

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*/
/**
* Utility class for {@link ByteBuf} that encodes and decodes to and from
* <a href="https://en.wikipedia.org/wiki/Base64">Base64</a> notation.
* <p>
* The encoding and decoding algorithm in this class has been derived from
* <a href="http://iharder.sourceforge.net/current/java/base64/">Robert Harder's Public Domain
* Base64 Encoder/Decoder</a>.
*/

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/base64/Base64.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/Lz4XXHash32.java

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\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/xml/XmlFrameDecoder.java

\*

/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/compression/Crc32c.java

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/\*\*

\* Enumeration of supported Base64 dialects.

\* <p>

\* The internal lookup tables in this class has been derived from

\* <a href="http://iharder.sourceforge.net/current/java/base64/">Robert  
Harder's Public Domain  
\* Base64 Encoder/Decoder</a>.  
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jar/io/netty/handler/codec/protobuf/ProtobufDecoderNano.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/ProtocolDetectionState.java

\*

/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/protobuf/ProtobufDecoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/UnsupportedValueConverter.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/HeadersUtils.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/protobuf/ProtobufEncoder.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/protobuf/ProtobufVarint32LengthFieldPrepender.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/ProtocolDetectionResult.java

\* /opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-  
jar/io/netty/handler/codec/protobuf/ProtobufEncoderNano.java

\*

/opt/cola/permits/1568674801\_1676616995.6618445/0/netty-codec-4-1-89-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufVarint32FrameDecoder.java

# 1.362 netty-transport-classes-epoll

## 4.1.89.Final

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```
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/NativeStaticallyReferencedJniMethods.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/LinuxSocket.java
```

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\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollEventLoopGroup.java

\*

/opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/NativeDatagramPacketArray.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollSocketChannel.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollChannelOption.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollEventLoop.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollServerSocketChannel.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollTcpInfo.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/package-info.java

\*

/opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/AbstractEpollChannel.java

\* /opt/cola/permits/1568674843\_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-jar/io/netty/channel/epoll/EpollDatagramChannel.java

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 */
/**
 * Set the { @code TCP_MD5SIG } option on the socket. See { @code linux/tcp.h } for more details.
 * Keys can only be set on, not read to prevent a potential leak, as they are confidential.
 * Allowing them being read would mean anyone with access to the channel could get them.
 */
```

Found in path(s):

```
*/opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollServerSocketChannelConfig.java
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jar/io/netty/channel/epoll/EpollDatagramChannelConfig.java
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/**
 * Set the { @code TCP_MD5SIG } option on the socket. See { @code linux/tcp.h } for more details.
 * Keys can only be set on, not read to prevent a potential leak, as they are confidential.
 * Allowing them being read would mean anyone with access to the channel could get them.
 */
/**
 * Set the { @code TCP_QUICKACK } option on the socket.
 * See <a href="https://linux.die.net/man/7/tcp">TCP_QUICKACK</a>
 * for more details.
 */
```

Found in path(s):

```
*/opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollSocketChannelConfig.java
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jar/io/netty/channel/epoll/EpollRecvByteAllocatorHandle.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollServerChannelConfig.java
*
/opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollEventArray.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollDomainSocketChannel.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollDomainSocketChannelConfig.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollChannelConfig.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollMode.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/AbstractEpollServerChannel.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollServerDomainSocketChannel.java
*
/opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/TcpMd5Util.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/AbstractEpollStreamChannel.java
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-
jar/io/netty/channel/epoll/EpollRecvByteAllocatorStreamingHandle.java
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jar/io/netty/channel/epoll/EpollDomainDatagramChannel.java
```

```
* /opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-  
jar/io/netty/channel/epoll/SegmentedDatagramPacket.java
```

```
*
```

```
/opt/cola/permits/1568674843_1676616924.7168643/0/netty-transport-classes-epoll-4-1-89-final-sources-  
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jar/META-INF/native-image/io.netty/netty-transport-classes-epoll/native-image.properties
```

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jar/io/netty/channel/ServerChannelRecvByteBufAllocator.java

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jar/io/netty/channel/socket/nio/SelectorProviderUtil.java

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jar/io/netty/channel/PendingBytesTracker.java

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jar/io/netty/channel/socket/oio/OioDatagramChannelConfig.java

\*

/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-  
jar/io/netty/bootstrap/FailedChannel.java

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jar/io/netty/channel/nio/SelectedSelectionKeySetSelector.java

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jar/io/netty/channel/socket/oio/DefaultOioDatagramChannelConfig.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-  
jar/io/netty/channel/socket/ChannelOutputShutdownException.java

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jar/io/netty/channel/socket/ChannelInputShutdownReadComplete.java

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jar/io/netty/channel/internal/ChannelUtils.java

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jar/io/netty/channel/socket/ChannelOutputShutdownEvent.java

\*

/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-  
jar/io/netty/channel/DelegatingChannelPromiseNotifier.java

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jar/io/netty/channel/internal/package-info.java

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/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelHandlerMask.java

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/\*\*

\* Handles an I/O event or intercepts an I/O operation, and forwards it to its next handler in

\* its { @link ChannelPipeline }.

\*

\* <h3>Sub-types</h3>

\* <p>

\* { @link ChannelHandler } itself does not provide many methods, but you usually have to implement one of its subtypes:

\* <ul>

\* <li>{ @link

ChannelInboundHandler } to handle inbound I/O events, and</li>

\* <li>{ @link ChannelOutboundHandler } to handle outbound I/O operations.</li>

\* </ul>

\* </p>

\* <p>

\* Alternatively, the following adapter classes are provided for your convenience:

\* <ul>

\* <li>{ @link ChannelInboundHandlerAdapter } to handle inbound I/O events,</li>

\* <li>{ @link ChannelOutboundHandlerAdapter } to handle outbound I/O operations, and</li>

\* <li>{ @link ChannelDuplexHandler } to handle both inbound and outbound events</li>

\* </ul>

\* </p>

\* <p>

\* For more information, please refer to the documentation of each subtype.

\* </p>

\*

\* <h3>The context object</h3>

```

* <p>
* A {@link ChannelHandler} is provided with a {@link ChannelHandlerContext}
* object. A {@link ChannelHandler} is supposed to interact with the
* {@link ChannelPipeline} it belongs to via a context object. Using the
* context object, the {@link ChannelHandler} can pass events upstream or
* downstream, modify the pipeline dynamically,
* or store the information
* (using {@link AttributeKey}s) which is specific to the handler.
*
* <h3>State management</h3>
*
* A {@link ChannelHandler} often needs to store some stateful information.
* The simplest and recommended approach is to use member variables:
* <pre>
* public interface Message {
*     // your methods here
* }
*
* public class DataServerHandler extends {@link SimpleChannelInboundHandler}&lt;Message&gt; {
*
*     <b>private boolean loggedIn;</b>
*
*     {@code @Override}
*     public void channelRead0({@link ChannelHandlerContext} ctx, Message message) {
*         if (message instanceof LoginMessage) {
*             authenticate((LoginMessage) message);
*             <b>loggedIn = true;</b>
*         } else (message instanceof GetDataMessage) {
*             if (<b>loggedIn</b>) {
*                 ctx.writeAndFlush(fetchSecret((GetDataMessage) message));
*             } else {
*                 fail();
*             }
*         }
*     }
* }
*
* ...
* }
* </pre>
*
* Because the handler instance has a state variable which is dedicated to
* one connection, you have to create a new handler instance for each new
* channel to avoid a race condition where an unauthenticated client can get
* the confidential information:
* <pre>
* // Create a new handler instance per channel.
* // See {@link ChannelInitializer#initChannel(Channel)}.
* public class DataServerInitializer extends {@link ChannelInitializer}&lt;{@link Channel}&gt; {
*     {@code @Override}

```



```

* public void initChannel({ @link Channel} channel) {
*     channel.pipeline().addLast("handler", <b>new DataServerHandler()</b>);
* }
* }
*
* </pre>
*
* <h4>Using { @link AttributeKey}s</h4>
*
* Although it's recommended to use member variables to store the state of a
* handler, for some reason you might not want to create many handler instances.
* In such a case, you can use { @link AttributeKey}s which is provided by
* { @link ChannelHandlerContext}:
* <pre>
* public interface Message {
*     // your methods here
* }
*
* { @code @Sharable}
* public class DataServerHandler extends { @link SimpleChannelInboundHandler}&lt;Message&gt; {
*     private final { @link AttributeKey}&lt;Boolean&gt; auth =
*         { @link AttributeKey#valueOf(String) AttributeKey.valueOf("auth")};
*
*     { @code @Override}
*     public void channelRead({ @link ChannelHandlerContext} ctx, Message message) {
*         { @link Attribute}&lt;Boolean&gt; attr = ctx.attr(auth);
*         if (message instanceof LoginMessage) {
*             authenticate((LoginMessage) o);
*             <b>attr.set(true)</b>;
*         } else (message instanceof GetDataMessage) {
*             if (<b>Boolean.TRUE.equals(attr.get())</b>) {
*                 ctx.writeAndFlush(fetchSecret((GetDataMessage) o));
*             } else {
*                 fail();
*             }
*         }
*     }
* }
* ...
* }
* </pre>
*
* Now that the
* state of the handler is attached to the { @link ChannelHandlerContext}, you can add the
* same handler instance to different pipelines:
* <pre>
* public class DataServerInitializer extends { @link ChannelInitializer}&lt;Channel&gt; {
*
*     private static final DataServerHandler <b>SHARED</b> = new DataServerHandler();
*
* }

```

```

* { @code @Override }
* public void initChannel({ @link Channel } channel) {
*     channel.pipeline().addLast("handler", <b>SHARED</b>);
* }
* }
* </pre>
*
*
* <h4>The { @code @Sharable } annotation</h4>
* <p>
* In the example above which used an { @link AttributeKey },
* you might have noticed the { @code @Sharable } annotation.
* <p>
* If a { @link ChannelHandler } is annotated with the { @code @Sharable }
* annotation, it means you can create an instance of the handler just once and
* add it to one or more { @link ChannelPipeline }s multiple times without
* a race condition.
* <p>
* If this annotation is not specified, you have to create
* a new handler
* instance every time you add it to a pipeline because it has unshared state
* such as member variables.
* <p>
* This annotation is provided for documentation purpose, just like
* <a href="http://www.javaconcurrencyinpractice.com/annotations/doc/">the JCIP annotations</a>.
*
* <h3>Additional resources worth reading</h3>
* <p>
* Please refer to the { @link ChannelHandler }, and
* { @link ChannelPipeline } to find out more about inbound and outbound operations,
* what fundamental differences they have, how they flow in a pipeline, and how to handle
* the operation in your application.
*/

```

Found in path(s):

```

* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelHandler.java

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* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/META-
INF/native-image/io.netty.netty-transport/native-image.properties

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* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/ChannelHealthChecker.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultMaxMessagesRecvByteBufAllocator.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/MaxBytesRecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultMaxBytesRecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/FixedChannelPool.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/SimpleChannelPool.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/AbstractChannelPoolMap.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/ChannelPool.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/ChannelPoolMap.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/ChannelPoolHandler.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/MaxMessagesRecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/pool/AbstractChannelPoolHandler.java
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* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/embedded/EmbeddedChannelId.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ReflectiveChannelFactory.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelFactory.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/PendingWriteQueue.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AbstractEventLoop.java
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\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/AbstractCoalescingBufferQueue.java

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\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/SimpleUserEventChannelHandler.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/nio/NioChannelOption.java

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* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/PreferHeapByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelInboundInvoker.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/DuplexChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/SelectStrategyFactory.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/AbstractBootstrapConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/BootstrapConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/ServerBootstrapConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultSelectStrategy.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/VoidChannelGroupFuture.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/WriteBufferWaterMark.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelOutboundInvoker.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultSelectStrategyFactory.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/SelectStrategy.java
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* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/SelectedSelectionKeySet.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultMessageSizeEstimator.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/DefaultOioSocketChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelProgressiveFuture.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/ChannelGroupException.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelId.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelProgressiveFutureListener.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultChannelProgressivePromise.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/OioServerSocketChannelConfig.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/ChannelFactory.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AbstractEventLoopGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/ChannelMatchers.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/MessageSizeEstimator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
```

```
jar/io/netty/channel/ChannelProgressivePromise.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AddressedEnvelope.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ConnectTimeoutException.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultAddressedEnvelope.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelHandlerAdapter.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelOutboundBuffer.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultChannelId.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/ChannelGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/SimpleChannelInboundHandler.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/DefaultOioServerSocketChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/ChannelMatcher.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/OioSocketChannelConfig.java
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jar/io/netty/channel/socket/DuplexChannelConfig.java
```



\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/StacklessClosedChannelException.java

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\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/EventLoop.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/ServerSocketChannelConfig.java

```

*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/AbstractNioChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/AbstractBootstrap.java
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jar/io/netty/channel/oio/AbstractOioChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/FixedRecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelFlushPromiseNotifier.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelFuture.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/local/LocalAddress.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/local/LocalEventLoopGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/NioTask.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/InternetProtocolFamily.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelOutboundHandlerAdapter.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/DefaultSocketChannelConfig.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultFileRegion.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/oio/OioEventLoopGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/ServerSocketChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelInboundHandlerAdapter.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AdaptiveRecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultChannelPipeline.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ThreadPerChannelEventLoop.java

```

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/group/ChannelGroupFuture.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/oio/AbstractOioMessageChannel.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/local/package-info.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/group/CombinedIterator.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/DatagramChannelConfig.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/SucceededChannelFuture.java  
\*  
/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/nio/NioSocketChannel.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelPipeline.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/local/LocalChannelRegistry.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelException.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/MultithreadEventLoopGroup.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/embedded/EmbeddedSocketAddress.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelOutboundHandler.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/nio/AbstractNioMessageChannel.java  
\*  
/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/local/LocalServerChannel.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/group/DefaultChannelGroupFuture.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/AbstractServerChannel.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/DefaultServerSocketChannelConfig.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/bootstrap/Bootstrap.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ThreadPerChannelEventLoopGroup.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelPromise.java  
\*  
/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelInboundHandler.java  
\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-

```

jar/io/netty/channel/nio/NioEventLoop.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/EventLoopGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/oio/AbstractOioByteChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/DatagramPacket.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/EventLoopException.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/group/ChannelGroupFutureListener.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/SingleThreadEventLoop.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/FailedChannelFuture.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/bootstrap/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelOption.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/SocketChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/AbstractNioByteChannel.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/nio/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/CompleteChannelFuture.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/package-info.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/DefaultChannelPromise.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelPromiseNotifier.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/local/LocalChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/nio/NioEventLoopGroup.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/oio/OioSocketChannel.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/DatagramChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AbstractChannel.java

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\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/Channel.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/SocketChannel.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelHandlerContext.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/bootstrap/ServerBootstrap.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/package-info.java

\*

/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/CombinedChannelDuplexHandler.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/nio/NioDatagramChannelConfig.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelFutureListener.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/oio/OioServerSocketChannel.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/nio/ProtocolFamilyConverter.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelMetadata.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/embedded/EmbeddedEventLoop.java

\*

/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/embedded/package-info.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/DefaultEventLoopGroup.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelPromiseAggregator.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/FileRegion.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/ChannelInputShutdownEvent.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ServerChannel.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/oio/OioDatagramChannel.java

\*

/opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/VoidChannelPromise.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/ChannelDuplexHandler.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-jar/io/netty/channel/socket/nio/NioServerSocketChannel.java

\* /opt/cola/permits/1568674937\_1676616970.4674265/0/netty-transport-4-1-89-final-sources-

```
jar/io/netty/channel/embedded/EmbeddedChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelPipelineException.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/AbstractChannelHandlerContext.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelInitializer.java
*
/opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/DefaultDatagramChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/ChannelConfig.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/RecvByteBufAllocator.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/socket/nio/NioDatagramChannel.java
* /opt/cola/permits/1568674937_1676616970.4674265/0/netty-transport-4-1-89-final-sources-
jar/io/netty/channel/oio/package-info.java
```

## 1.364 netty-handler 4.1.89.Final

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* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/traffic/TrafficCounter.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/traffic/ChannelTrafficShapingHandler.java
*
```

```
/opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/traffic/GlobalTrafficShapingHandler.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
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jar/io/netty/handler/ssl/util/SelfSignedCertificate.java
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jar/io/netty/handler/traffic/AbstractTrafficShapingHandler.java
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* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/TCPpacket.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/PcapWriteHandler.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/package-info.java
*
/opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/PcapHeaders.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/EthernetPacket.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/PcapWriter.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/UDPPacket.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/pcap/IPPacket.java
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jar/io/netty/handler/ssl/SslHandshakeCompletionEvent.java

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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslSessionContext.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/ApplicationProtocolNegotiator.java

\*

/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/JettyNpnSslEngine.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslSessionStats.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/package-info.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/util/ThreadLocalInsecureRandom.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslApplicationProtocolNegotiator.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/JdkSslClientContext.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/CipherSuiteFilter.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-

jar/io/netty/handler/ssl/OpenSslClientContext.java  
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jar/io/netty/handler/ssl/JdkApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/IpFilterRuleType.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/PemReader.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/IdentityCipherSuiteFilter.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslEngineMap.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/util/OpenJdkSelfSignedCertGenerator.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/RuleBasedIpFilter.java  
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/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/util/InsecureTrustManagerFactory.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/JdkDefaultApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/IpFilterRule.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/AbstractRemoteAddressFilter.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/JdkSslServerContext.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ipfilter/IpSubnetFilterRule.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/ApplicationProtocolConfig.java  
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jar/io/netty/handler/ssl/OpenSsl.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslEngine.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslServerSessionContext.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/SniHandler.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/SupportedCipherSuiteFilter.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslContext.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/JdkAlpnApplicationProtocolNegotiator.java  
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/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/BouncyCastleSelfSignedCertGenerator.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/Java7SslParametersUtils.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslContext.java  
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/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/JdkBaseApplicationProtocolNegotiator.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/JdkSslContext.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/JettyAlpnSslEngine.java  
\*  
/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslDefaultApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslProvider.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslServerContext.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/CipherSuiteConverter.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolUtil.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterialProvider.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterial.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslX509TrustManagerWrapper.java  
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslCachingKeyMaterialProvider.java  
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\*  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/ExtendedOpenSslSession.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/DefaultOpenSslKeyMaterial.java  
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jar/io/netty/handler/ssl/StacklessSSLHandshakeException.java

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- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/PseudoRandomFunction.java
- \*
- /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/KeyManagerFactoryWrapper.java
- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/address/DynamicAddressConnectHandler.java
- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/X509KeyManagerWrapper.java
- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/TrustManagerFactoryWrapper.java
- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslMasterKeyHandler.java
- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/SimpleKeyManagerFactory.java
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- \* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslCompletionEvent.java
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/AbstractSniHandler.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/ConscryptAlpnSslEngine.java  
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/opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/PemPrivateKey.java
```

```
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/ReferenceCountedOpenSslServerContext.java
```

```
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/util/X509TrustManagerWrapper.java
```

```
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/ReferenceCountedOpenSslClientContext.java
```

```
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/OpenSslKeyMaterialManager.java
```

```
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-  
jar/io/netty/handler/ssl/DelegatingSslContext.java
```

\*  
/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/flow/package-info.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/OpenSslCertificateException.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslContext.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/Java8SslUtils.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/flush/FlushConsolidationHandler.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/flush/package-info.java  
\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/PemValue.java

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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/util/FingerprintTrustManagerFactoryBuilder.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslClosedEngineException.java

\*

/opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ipfilter/IpSubnetFilter.java

\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/address/ResolveAddressHandler.java

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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/SslHandshakeTimeoutException.java

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jar/io/netty/handler/logging/ByteBufFormat.java

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jar/io/netty/handler/logging/LoggingHandler.java

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jar/io/netty/handler/ssl/util/package-info.java

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jar/io/netty/handler/timeout/IdleStateEvent.java

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/opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/timeout/WriteTimeoutHandler.java
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jar/io/netty/handler/timeout/IdleState.java
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jar/io/netty/handler/ssl/NotSslRecordException.java
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jar/io/netty/handler/stream/ChunkedNioFile.java
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jar/io/netty/handler/timeout/ReadTimeoutException.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/stream/ChunkedNioStream.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/stream/ChunkedWriteHandler.java
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/opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/logging/package-info.java
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jar/io/netty/handler/timeout/WriteTimeoutException.java
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jar/io/netty/handler/stream/ChunkedFile.java
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jar/io/netty/handler/timeout/TimeoutException.java
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jar/io/netty/handler/logging/LogLevel.java
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jar/io/netty/handler/ssl/SslHandler.java
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jar/io/netty/handler/timeout/package-info.java
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\* /opt/cola/permits/1568674963\_1676616950.4538956/0/netty-handler-4-1-89-final-sources-jar/io/netty/handler/ssl/BouncyCastleAlpnSslUtils.java  
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jar/io/netty/handler/ssl/OpenSslSessionId.java
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jar/io/netty/handler/ssl/SslContextOption.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/ssl/SslProtocols.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/ssl/AsyncRunnable.java
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jar/io/netty/handler/ssl/OpenSslContextOption.java
*
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jar/io/netty/handler/ssl/OpenSslSessionCache.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/ssl/BouncyCastle.java
* /opt/cola/permits/1568674963_1676616950.4538956/0/netty-handler-4-1-89-final-sources-
jar/io/netty/handler/ssl/BouncyCastleAlpnSslEngine.java
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```

## 1.365 netty-transport-native-unix-common

### 4.1.89.Final

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\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/netty\_unix\_socket.c  
\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/Errors.java  
\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/DomainSocketChannel.java  
\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-

jar/io/netty/channel/unix/DomainSocketChannelConfig.java

\*

/opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/netty\_unix\_socket.h

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\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/package-info.java

\*

/opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/Unix.java

\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/UnixChannelOption.java

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\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/RawUnixChannelOption.java

\*

/opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/GenericUnixChannelOption.java

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\* /opt/cola/permits/1568674786\_1676616960.6248045/0/netty-transport-native-unix-common-4-1-89-final-sources-jar/io/netty/channel/unix/UnixChannelUtil.java

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## 1.366 wire-profiles 3.7.1

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\* /opt/cola/permits/1569088931\_1676645219.9753337/0/wire-profiles-3-7-1-sources-  
jar/com/squareup/wire/java/AdapterConstant.kt  
\* /opt/cola/permits/1569088931\_1676645219.9753337/0/wire-profiles-3-7-1-sources-  
jar/com/squareup/wire/java/internal/ProfileParser.kt  
\* /opt/cola/permits/1569088931\_1676645219.9753337/0/wire-profiles-3-7-1-sources-  
jar/com/squareup/wire/java/Profile.kt  
\*  
/opt/cola/permits/1569088931\_1676645219.9753337/0/wire-profiles-3-7-1-sources-  
jar/com/squareup/wire/java/internal/ProfileFileElement.kt  
\* /opt/cola/permits/1569088931\_1676645219.9753337/0/wire-profiles-3-7-1-sources-  
jar/com/squareup/wire/java/internal/TypeConfigElement.kt

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jar/com/squareup/wire/kotlin/grpcserver/KotlinGrpcGenerator.kt  
\* /opt/cola/permits/1569088938\_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-  
jar/com/squareup/wire/kotlin/grpcserver/BlockingStubGenerator.kt  
\*  
/opt/cola/permits/1569088938\_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-  
jar/com/squareup/wire/kotlin/grpcserver/ServiceDescriptorGenerator.kt  
\* /opt/cola/permits/1569088938\_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-

```
jar/com/squareup/wire/kotlin/grpcserver/StubGenerator.kt
* /opt/cola/permits/1569088938_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-
jar/com/squareup/wire/kotlin/grpcserver/ImplBaseGenerator.kt
* /opt/cola/permits/1569088938_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-
jar/com/squareup/wire/kotlin/grpcserver/LegacyAdapterGenerator.kt
* /opt/cola/permits/1569088938_1676645221.8978014/0/wire-grpc-server-generator-3-7-1-sources-
jar/com/squareup/wire/kotlin/grpcserver/MethodDescriptorGenerator.kt
```

## 1.368 wire-swift-generator 3.7.1

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* /opt/cola/permits/1569088940_1676645225.320955/0/wire-java-generator-3-7-1-sources-1-
jar/com/squareup/wire/java/JavaGenerator.java
```

## 1.370 amazon-kinesis-client 2.4.5

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\*

/opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CollectionsEmptyMapSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/UnmodifiableCollectionsSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/KryoReflectionFactorySupport.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CopyForIterateMapSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CollectionsEmptyListSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/DateSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CollectionsSingletonListSerializer.java

\*

/opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/ArraysAsListSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/wicket/MiniMapSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/SubListSerializers.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/jodatime/JodaDateTimeSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CollectionsEmptySetSerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/JdkProxySerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/CompatibleFieldSerializerReflectionFactorySupport.java

\*

/opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-jar/de/javakaffee/kryoserializers/cglib/CGLibProxySerializer.java

\* /opt/cola/permits/1578184356\_1677539946.000331/0/kryo-serializers-0-45-sources-1-

```
jar/de/javakaffee/kryoserializers/CollectionsSingletonSetSerializer.java
* /opt/cola/permits/1578184356_1677539946.000331/0/kryo-serializers-0-45-sources-1-
jar/de/javakaffee/kryoserializers/SynchronizedCollectionsSerializer.java
* /opt/cola/permits/1578184356_1677539946.000331/0/kryo-serializers-0-45-sources-1-
jar/de/javakaffee/kryoserializers/EnumMapSerializer.java
* /opt/cola/permits/1578184356_1677539946.000331/0/kryo-serializers-0-45-sources-1-
jar/de/javakaffee/kryoserializers/EnumSetSerializer.java
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```
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jar/de/javakaffee/kryoserializers/jodatime/JodaIntervalSerializer.java
```

# 1.375 aws-kinesisanalytics-runtime 1.2.0

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```
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# This comes from X11R5 (mit/util/scripts/install.sh).  
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misc/unix/getopt.c,  
file\_io/unix/mktemp.c, strings/apr\_strings.c:

/\*

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- ```
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```

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- ```
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From strings/apr\_strnatcmp.c, include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.  
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The following was received February 23, 2000 From: "Linn, John" February 19, 2000

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## STACK-LESS JUST-IN-TIME COMPILER

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Upstream-Name: package

Source: <https://sourceforge.net/projects/libtirpc/>

Files: \*

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Files: src/auth\_des.c

src/auth\_none.c

src/auth\_unix.c

src/authdes\_prot.c

src/authunix\_prot.c

src/bindresvport.c

src/clnt\_bcast.c

src/clnt\_perror.c

src/clnt\_raw.c



src/clnt\_simple.c  
src/clnt\_vc.c  
src/debug.c  
src/debug.h  
src/des\_crypt.c  
src/getnetconfig.c  
src/getnetpath.c  
src/getrpcent.c  
src/getrpcport.c  
src/key\_call.c  
src/key\_prot\_xdr.c  
src/pmap\_clnt.c  
src/pmap\_getmaps.c  
src/pmap\_getport.c  
src/pmap\_prot.c  
src/pmap\_prot2.c  
src/pmap\_rmt.c  
src/rpc\_callmsg.c  
src/rpc\_com.h  
src/rpc\_commdata.c  
src/rpc\_dtablesize.c  
src/rpc\_generic.c  
src/rpc\_prot.c  
src/rpc\_soc.c  
src/rpcb\_prot.c  
src/rpcb\_st\_xdr.c  
src/rtime.c  
src/svc\_auth.c  
src/svc\_auth\_des.c  
src/svc\_auth\_unix.c  
src/svc\_dg.c  
src/svc\_generic.c  
src/svc\_raw.c  
src/svc\_simple.c  
src/svc\_vc.c  
src/xdr\_array.c  
src/xdr\_float.c  
src/xdr\_mem.c  
src/xdr\_rec.c  
src/xdr\_reference.c  
src/xdr\_sizeof.c  
src/xdr\_stdio.c  
tirpc/rpc/auth\_des.h  
tirpc/rpc/auth\_unix.h  
tirpc/rpc/des\_crypt.h  
tirpc/rpc/pmap\_clnt.h  
tirpc/rpc/pmap\_prot.h  
tirpc/rpc/pmap\_rmt.h

tirpc/rpc/raw.h  
tirpc/rpc/rpc\_com.h

tirpc/rpc/rpc\_msg.h  
tirpc/rpc/rpcb\_clnt.h  
tirpc/rpc/rpcb\_prot.h  
tirpc/rpc/svc\_auth.h

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aclocal.m4  
compile  
config.guess  
config.sub  
configure  
depcomp  
doc/Makefile.in  
install-sh  
ltmain.sh  
m4/libtool.m4  
m4/ltoptions.m4  
m4/ltsugar.m4  
m4/ltversion.m4  
m4/lt~obsolete.m4  
man/Makefile.in  
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man/rpc\_gss\_get\_mech\_info.3t  
man/rpc\_gss\_get\_mechanisms.3t  
man/rpc\_gss\_get\_principal\_name.3t  
man/rpc\_gss\_get\_versions.3t  
man/rpc\_gss\_getcred.3t  
man/rpc\_gss\_is\_installed.3t  
man/rpc\_gss\_max\_data\_length.3t  
man/rpc\_gss\_mech\_to\_oid.3t  
man/rpc\_gss\_qop\_to\_num.3t

man/rpc\_gss\_seccreate.3t  
man/rpc\_gss\_set\_callback.3t  
man/rpc\_gss\_set\_defaults.3t  
man/rpc\_gss\_set\_svc\_name.3t  
man/rpc\_gss\_svc\_max\_data\_length.3t  
man/rpcsec\_gss.3t

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Files: src/auth\_gss.c  
src/authgss\_prot.c  
src/svc\_auth\_gss.c  
src/svc\_auth\_none.c  
tirpc/rpc/auth\_gss.h

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Files: src/binddynport.c  
src/rpc\_gss\_utils.c  
tirpc/rpc/rpcsec\_gss.h  
tirpc/rpc/svc\_auth\_gss.h

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Files: src/clnt\_generic.c  
src/rpcb\_clnt.c

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Files: src/crypt\_client.c  
tirpc/rpcsvc/crypt.x

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Files: src/des\_impl.c

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Files: `src/getpeereid.c`  
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Files: `tirpc/un-namespace.h`  
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Files: `src/epoll_sub.c`  
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Files:  
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From strings/apr\_strnatcmp.c,  
include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.  
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From  
strings/apr\_snprintf.c:

- \*
- \* cvt - IEEE floating point formatting routines.
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/opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/json/JSONSerializer.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/io/github/classgraph/FieldInfo.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/classloaderhandler/TomcatWebappClassLoaderBaseHandler.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/fastzipfilereader/ZipFileSlice.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/json/ClassFieldCache.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/io/github/classgraph/TypeSignature.java  
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 jar/io/github/classgraph/ClassRefTypeSignature.java  
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 jar/nonapi/io/github/classgraph/Utils/ReflectionUtils.java  
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 jar/io/github/classgraph/HierarchicalTypeSignature.java  
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 jar/io/github/classgraph/ClassGraphException.java  
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 jar/nonapi/io/github/classgraph/classloaderhandler/ParentLastDelegationOrderTestClassLoaderHandler.java  
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 jar/nonapi/io/github/classgraph/classloaderhandler/OSGiDefaultClassLoaderHandler.java  
 \* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-  
 jar/nonapi/io/github/classgraph/Utils/URLPathEncoder.java  
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jar/io/github/classgraph/PotentiallyUnmodifiableList.java  
\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-  
jar/nonapi/io/github/classgraph/concurrency/WorkQueue.java  
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jar/nonapi/io/github/classgraph/json/JSONReference.java  
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jar/nonapi/io/github/classgraph/fastzipfilereader/LogicalZipFile.java  
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jar/nonapi/io/github/classgraph/json/ReferenceEqualityKey.java  
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jar/nonapi/io/github/classgraph/json/ClassFields.java  
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jar/nonapi/io/github/classgraph/classpath/ClasspathFinder.java  
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jar/nonapi/io/github/classgraph/concurrency/SingletonMap.java  
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jar/nonapi/io/github/classgraph/classloaderhandler/EquinoxClassLoaderHandler.java

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jar/io/github/classgraph/ClassGraph.java  
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jar/io/github/classgraph/GraphvizDotfileGenerator.java  
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jar/nonapi/io/github/classgraph/json/JSONArray.java  
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jar/nonapi/io/github/classgraph/Utils/StringUtils.java  
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\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-  
jar/nonapi/io/github/classgraph/classloaderhandler/UnoOneJarClassLoaderHandler.java  
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jar/nonapi/io/github/classgraph/json/FieldTypeInfo.java  
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jar/nonapi/io/github/classgraph/classloaderhandler/JPMSCClassLoaderHandler.java  
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jar/nonapi/io/github/classgraph/fastzipfilereader/NestedJarHandler.java  
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jar/io/github/classgraph/ScanResult.java  
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jar/io/github/classgraph/ObjectTypedValueWrapper.java  
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jar/io/github/classgraph/PackageInfo.java  
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jar/nonapi/io/github/classgraph/scanspec/AcceptReject.java  
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jar/nonapi/io/github/classgraph/recycler/RecycleOnClose.java  
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jar/io/github/classgraph/Scanner.java

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\* Author: Luke Hutchison

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\* Hosted at: <https://github.com/classgraph/classgraph>

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\* Author: Luke Hutchison ([luke.hutch@gmail.com](mailto:luke.hutch@gmail.com))

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jar/io/github/classgraph/ResourceList.java

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jar/nonapi/io/github/classgraph/classloaderhandler/SpringBootRestartClassLoaderHandler.java

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\* Author: Harith Elrufaie

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\* Hosted at: <https://github.com/classgraph/classgraph>

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Found in path(s):

\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/classloaderhandler/JBossClassLoaderHandler.java

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/\*

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\*

\* Author: @mcollovati

\*

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\* /opt/cola/permits/1611898211\_1680234953.7192042/0/classgraph-4-8-120-sources-2-jar/nonapi/io/github/classgraph/classloaderhandler/QuarkusClassLoaderHandler.java

## 1.395 jimfs 1.1

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```

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```
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include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.  
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\*

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/\*

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## 1.397 protobuf-java 3.22.2

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# 1.398 client-spi 2.19.14

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*/
/**
 * Set the {@code TCP_MD5SIG} option on the socket. See {@code linux/tcp.h} for more details.
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 * Allowing them being read would mean anyone with access to the channel could get them.
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```

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```
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Found in path(s):

\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/META-INF/maven/io.netty/netty-transport-classes-epoll/pom.xml

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\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollDomainDatagramChannelConfig.java

\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollDomainDatagramChannel.java

\*

/opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/SegmentedDatagramPacket.java

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\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/NativeStaticallyReferencedJniMethods.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/LinuxSocket.java

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\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/Native.java

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jar/io/netty/channel/epoll/AbstractEpollChannel.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollChannelOption.java
*
/opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollTcpInfo.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/NativeDatagramPacketArray.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollEventLoop.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollDatagramChannel.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollSocketChannel.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/EpollServerSocketChannel.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/package-info.java
*
/opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
jar/io/netty/channel/epoll/Epoll.java
* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
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*/
/**
 * Set the {@code TCP_MD5SIG} option on the socket. See {@code linux/tcp.h} for more details.
 * Keys can only be set on, not read to prevent a potential leak, as they are confidential.
 * Allowing them being read would mean anyone with access to the channel could get them.
*/
*/
/**
 * Set the {@code TCP_QUICKACK} option on the socket.
 * See <a href="https://linux.die.net/man/7/tcp">TCP_QUICKACK</a>
 * for more details.
*/

```

Found in path(s):

```

* /opt/cola/permits/1620675266_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-
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\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/AbstractEpollStreamChannel.java  
\*  
/opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollServerChannelConfig.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollRecvByteAllocatorStreamingHandle.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/TcpMd5Util.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollEventArray.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollMode.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/AbstractEpollServerChannel.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollServerDomainSocketChannel.java  
\*  
/opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollRecvByteAllocatorHandle.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollDomainSocketChannelConfig.java  
\* /opt/cola/permits/1620675266\_1680116307.60289/0/netty-transport-classes-epoll-4-1-90-final-sources-jar/io/netty/channel/epoll/EpollDomainSocketChannel.java

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jar/io/netty/handler/codec/socksx/v5/Socks5ClientEncoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5ServerEncoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4ClientEncoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5InitialRequestDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4Message.java
*
/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5CommandRequestDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5Message.java
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```

```
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5AddressEncoder.java
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/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/SocksPortUnificationServerHandler.java
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\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v5/DefaultSocks5CommandResponse.java  
\*  
/opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v4/DefaultSocks4CommandRequest.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5InitialResponse.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v4/DefaultSocks4CommandResponse.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v4/Socks4ServerDecoder.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/SocksMessage.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/SocksAuthResponse.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/SocksCmdRequest.java  
\*  
/opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/SocksInitRequest.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/UnknownSocksRequest.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v4/Socks4CommandResponse.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v5/package-info.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socksx/v5/Socks5InitialRequest.java  
\* /opt/cola/permits/1620675433\_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-jar/io/netty/handler/codec/socks/SocksMessageEncoder.java

```

*
/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4CommandRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/DefaultSocks5PasswordAuthRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksAuthRequestDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/DefaultSocks5CommandRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5CommandRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksInitRequestDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4CommandType.java
*
/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksAuthRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksAuthResponseDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksInitResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/UnknownSocksResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksCmdResponseDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksCmdResponse.java
*
/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5CommandResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/DefaultSocks5PasswordAuthResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/package-info.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/DefaultSocks5InitialRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/SocksMessage.java
*
/opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksCommonUtils.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v4/Socks4ClientDecoder.java

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* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/Socks5PasswordAuthRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksInitResponseDecoder.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksRequest.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socksx/v5/DefaultSocks5InitialResponse.java
* /opt/cola/permits/1620675433_1680116262.0139341/0/netty-codec-socks-4-1-90-final-sources-
jar/io/netty/handler/codec/socks/SocksCmdRequestDecoder.java
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## 1.429 netty-resolver 4.1.90.Final

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```
* /opt/cola/permits/1620675276_1680234965.994694/0/netty-resolver-4-1-90-final-sources-
jar/io/netty/resolver/HostsFileEntriesProvider.java
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\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/InetSocketAddressResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/DefaultAddressResolverGroup.java

\*

/opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/InetNameResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/DefaultHostsFileEntriesResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/AbstractAddressResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/HostsFileEntriesResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/DefaultNameResolver.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/HostsFileParser.java

\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-

jar/io/netty/resolver/CompositeNameResolver.java

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\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-jar/io/netty/resolver/ResolvedAddressTypes.java

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jar/io/netty/resolver/SimpleNameResolver.java  
\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-  
jar/io/netty/resolver/NoopAddressResolverGroup.java  
\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-  
jar/io/netty/resolver/NoopAddressResolver.java  
\*  
/opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-  
jar/io/netty/resolver/package-info.java  
\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-  
jar/io/netty/resolver/NameResolver.java  
\* /opt/cola/permits/1620675276\_1680234965.994694/0/netty-resolver-4-1-90-final-sources-  
jar/io/netty/resolver/AddressResolverGroup.java

# 1.430 netty-handler-proxy 4.1.90.Final

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\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/META-INF/maven/io.netty/netty-handler-proxy/pom.xml

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\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/ProxyHandler.java

\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/ProxyConnectionEvent.java

\*

/\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/HttpProxyHandler.java

\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/package-info.java

\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/Socks4ProxyHandler.java

\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/ProxyConnectException.java

\* /opt/cola/permits/1620675501\_1680234968.1694567/0/netty-handler-proxy-4-1-90-final-sources-jar/io/netty/handler/proxy/Socks5ProxyHandler.java

## 1.431 netty-handler 4.1.90.Final

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/traffic/GlobalChannelTrafficShapingHandler.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/Conscrypt.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SniCompletionEvent.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SslCloseCompletionEvent.java  
\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/ConscryptAlpnSslEngine.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OptionalSslHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/ocsp/OcspClientHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SslCompletionEvent.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/ocsp/package-info.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/AbstractSniHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JdkAlpnSslEngine.java  
\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JdkAlpnSslUtils.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SslClientHelloHandler.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/flush/package-info.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/PemEncoded.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslServerContext.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/PemPrivateKey.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/PemValue.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslEngine.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/Java8SslUtils.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/flush/FlushConsolidationHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/OpenSslCertificateException.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/DelegatingSslContext.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/PemX509Certificate.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslClientContext.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ReferenceCountedOpenSslContext.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/util/X509TrustManagerWrapper.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/flow/package-info.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/OpenSslKeyMaterialManager.java  
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jar/io/netty/handler/ssl/SslHandshakeCompletionEvent.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslSessionContext.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SslProvider.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/CipherSuiteConverter.java

\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JdkSslEngine.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ipfilter/RuleBasedIpFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ipfilter/UniqueIpFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ipfilter/IpFilterRule.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ipfilter/IpSubnetFilterRule.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/util/InsecureTrustManagerFactory.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/Java7SslParametersUtils.java

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/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/JdkAlpnApplicationProtocolNegotiator.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/SupportedCipherSuiteFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/SslContext.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/CipherSuiteFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ipfilter/IpFilterRuleType.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/JdkSslServerContext.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/OpenSslEngine.java

\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/SslUtils.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ipfilter/AbstractRemoteAddressFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/util/SimpleTrustManagerFactory.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/JdkSslContext.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolConfig.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolUtil.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/JdkBaseApplicationProtocolNegotiator.java

\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/OpenSslContext.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/OpenSslSessionStats.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/IdentityCipherSuiteFilter.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-

jar/io/netty/handler/ssl/JdkApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/PemReader.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslEngineMap.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/LazyX509Certificate.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslDefaultApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslServerContext.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslClientContext.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SniHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/traffic/GlobalChannelTrafficCounter.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslServerSessionContext.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JettyAlpnSslEngine.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/BouncyCastleSelfSignedCertGenerator.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/ApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslNpnApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSsl.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JdkNpnApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/OpenJdkSelfSignedCertGenerator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslApplicationProtocolNegotiator.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JdkDefaultApplicationProtocolNegotiator.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/JettyNpnSslEngine.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/FingerprintTrustManagerFactory.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/ThreadLocalInsecureRandom.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ipfilter/package-info.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/JdkSslClientContext.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ClientAuth.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/ApplicationProtocolAccessor.java

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/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/util/LazyJavaxX509Certificate.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/ApplicationProtocolNames.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/ApplicationProtocolNegotiationHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslSessionTicketKey.java
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*/
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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/timeout/ReadTimeoutException.java

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*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/WriteTimeoutHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedFile.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/logging/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedWriteHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/TimeoutException.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedInput.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/logging/LoggingHandler.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedStream.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedNioFile.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/SslHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/IdleStateHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/ReadTimeoutHandler.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/util/package-info.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/IdleStateEvent.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/ChunkedNioStream.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/NotSslRecordException.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/logging/LogLevel.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/stream/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/timeout/IdleState.java
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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslCertificateCompressionAlgorithm.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/BouncyCastlePemReader.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/SslMasterKeyHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/OpenSslPrivateKeyMethod.java  
\*

/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/KeyManagerFactoryWrapper.java

\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/ssl/util/TrustManagerFactoryWrapper.java



```
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/PseudoRandomFunction.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/util/X509KeyManagerWrapper.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/address/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/util/SimpleKeyManagerFactory.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/address/DynamicAddressConnectHandler.java
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```
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/traffic/package-info.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/traffic/TrafficCounter.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/traffic/ChannelTrafficShapingHandler.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/traffic/GlobalTrafficShapingHandler.java
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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/ssl/StacklessSSLHandshakeException.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/META-INF/native-image/io.netty.handler/native-image.properties

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-jar/io/netty/handler/pcap/State.java

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\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/PcapWriter.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/EthernetPacket.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/PcapHeaders.java  
\*  
/opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/PcapWriteHandler.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/UDPPacket.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/IPPacket.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/package-info.java  
\* /opt/cola/permits/1620675508\_1680116263.024557/0/netty-handler-4-1-90-final-sources-  
jar/io/netty/handler/pcap/TCPpacket.java  
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* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslSession.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslKeyMaterial.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslKeyMaterialProvider.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslX509TrustManagerWrapper.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslCachingKeyMaterialProvider.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslPrivateKey.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/SignatureAlgorithmConverter.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/DefaultOpenSslKeyMaterial.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslX509KeyManagerFactory.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/ExtendedOpenSslSession.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslCachingX509KeyManagerFactory.java
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jar/io/netty/handler/ssl/SslClosedEngineException.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/address/ResolveAddressHandler.java
```

```
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/SslHandshakeTimeoutException.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/logging/ByteBufFormat.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ipfilter/IpSubnetFilterRuleComparator.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/util/FingerprintTrustManagerFactoryBuilder.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ipfilter/IpSubnetFilter.java
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jar/io/netty/handler/ssl/BouncyCastleAlpnSslUtils.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/Ciphers.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslSessionCache.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslSessionId.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/BouncyCastleAlpnSslEngine.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/GroupsConverter.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/BouncyCastle.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslAsyncPrivateKeyMethod.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
```

```
jar/io/netty/handler/ssl/OpenSslClientSessionCache.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/AsyncRunnable.java
*
/opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/OpenSslContextOption.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/SslProtocols.java
* /opt/cola/permits/1620675508_1680116263.024557/0/netty-handler-4-1-90-final-sources-
jar/io/netty/handler/ssl/SslContextOption.java
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## 1.432 proto-google-common-protos 2.11.0

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jar/google/rpc/error_details.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/type/fraction.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/cloud/extended_operations.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/type/month.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/api/service.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/api/logging.proto
*
/opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/api/error_reason.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/api/quota.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/logging/type/http_request.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/type/money.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
jar/google/geo/type/viewport.proto
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-
```

jar/google/rpc/status.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/log.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/latlng.proto  
\*  
/opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/phone\_number.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/longrunning/operations.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/visibility.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/rpc/code.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/postal\_address.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/auth.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/documentation.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/usage.proto  
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/opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/color.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/context.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/routing.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/timeofday.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/interval.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/billing.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/monitoring.proto  
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jar/google/api/client.proto  
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jar/google/api/metric.proto  
\*  
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jar/google/rpc/context/attribute\_context.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/expr.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/config\_change.proto

\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/cloud/audit/audit\_log.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/source\_info.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/field\_behavior.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/logging/type/log\_severity.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/type/datetime.proto  
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\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/backend.proto  
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\*  
/opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/type/date.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/httpbody.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/consumer.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/type/quaternion.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/endpoint.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/http.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/system\_parameter.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/api/label.proto  
\* /opt/cola/permits/1620675467\_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-jar/google/type/calendar\_period.proto  
\*



```
/opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/type/decimal.proto
```

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Found in path(s):

```
* /opt/cola/permits/1620675467_1680234968.5745006/0/proto-google-common-protos-2-11-0-1-  
jar/google/api/launch_stage.proto
```

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jar/io/netty/handler/codec/http/multipart/MemoryFileUpload.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/HttpResponse.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/multipart/AbstractDiskHttpData.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocketHandshakeException.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/multipart/HttpDataFactory.java

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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpObjectAggregator.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/SpdySession.java

\*

/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/CaseIgnoringComparator.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/Attribute.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/package-info.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketUtil.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpRequestDecoder.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker07.java

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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/BinaryWebSocketFrame.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpClientCodec.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/Cookie.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/DiskAttribute.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpResponseDecoder.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpObject.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpMessage.java

\*

/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/HttpPostRequestEncoder.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketFrame.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/rtsp/RtspResponseDecoder.java

\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/FileUpload.java

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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/PongWebSocketFrame.java

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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/rtsp/RtspRequestEncoder.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/QueryStringDecoder.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/package-info.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/MixedAttribute.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/package-info.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/rtsp/RtspRequestDecoder.java  
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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocket00FrameEncoder.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/DefaultHttpContent.java  
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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-

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jar/io/netty/handler/codec/http/HttpObjectEncoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHttpResponseStreamIdHandler.java
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jar/io/netty/handler/codec/http/HttpConstants.java
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jar/io/netty/handler/codec/http/multipart/HttpPostMultipartRequestDecoder.java
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jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshaker00.java
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jar/io/netty/handler/codec/rtsp/RtspMethods.java
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* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
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jar/io/netty/handler/codec/http/multipart/InterfaceHttpPostRequestDecoder.java
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jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshakerFactory.java
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* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/rtsp/RtspResponseStatuses.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/DefaultLastHttpContent.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
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*
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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/ServerCookieEncoder.java  
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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/rtsp/RtspHeaderValues.java  
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jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketClientExtension.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockDecoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerFrameDeflateEncoder.java
*
/opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtensionHandshaker.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/HttpStatusClass.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/HttpHeadersEncoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/spdy/SpdyFrameCodec.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/spdy/SpdyHeaderBlockZlibDecoder.java
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/opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtension.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/compression/PerMessageDeflateServerExtensionHandshaker.
java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketServerExtension.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/spdy/SpdyFrameEncoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/HttpChunkedInput.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/extensions/WebSocketExtensionData.java
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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/cookie/CookieEncoder.java  
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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/HttpUtil.java  
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jar/io/netty/handler/codec/http/cookie/ClientCookieEncoder.java

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- \* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/DefaultSpdyPingFrame.java
- \* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/SpdyHeaderBlockRawEncoder.java
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* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
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jar/io/netty/handler/codec/spdy/SpdyFrame.java
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/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/SpdyCodecUtil.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/SpdyStreamFrame.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/ComposedLastHttpContent.java  
\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/spdy/SpdyHeaders.java

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\* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocketClientHandshakeException.java

\*

/opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/multipart/DeleteFileOnExitHook.java

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* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocket13FrameDecoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocket07FrameDecoder.java
* /opt/cola/permits/1620675358_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-
jar/io/netty/handler/codec/http/websocketx/WebSocket08FrameDecoder.java
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- \* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocket07FrameEncoder.java
- \* /opt/cola/permits/1620675358\_1680234971.5069332/0/netty-codec-http-4-1-90-final-sources-jar/io/netty/handler/codec/http/websocketx/WebSocket13FrameEncoder.java

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\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/StacklessClosedChannelException.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/socket/DuplexChannelConfig.java

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/\*\*

\* Handles an I/O event or intercepts an I/O operation, and forwards it to its next handler in

\* its { @link ChannelPipeline }.

\*

\* <h3>Sub-types</h3>

\* <p>

\* { @link ChannelHandler } itself does not provide many methods, but you usually have to implement one of its subtypes:

\* <ul>

\* <li>{ @link

ChannelInboundHandler } to handle inbound I/O events, and</li>

\* <li>{ @link ChannelOutboundHandler } to handle outbound I/O operations.</li>

\* </ul>

\* </p>

\* <p>

\* Alternatively, the following adapter classes are provided for your convenience:

\* <ul>

\* <li>{ @link ChannelInboundHandlerAdapter } to handle inbound I/O events,</li>

\* <li>{ @link ChannelOutboundHandlerAdapter } to handle outbound I/O operations, and</li>

\* <li>{ @link ChannelDuplexHandler } to handle both inbound and outbound events</li>

\* </ul>

\* </p>

\* <p>

\* For more information, please refer to the documentation of each subtype.

\* </p>

\*

\* <h3>The context object</h3>

\* <p>

\* A { @link ChannelHandler } is provided with a { @link ChannelHandlerContext }

\* object. A { @link ChannelHandler } is supposed to interact with the

\* { @link ChannelPipeline } it belongs to via a context object. Using the

\* context object, the { @link ChannelHandler } can pass events upstream or

\* downstream, modify the pipeline dynamically,

or store the information

\* (using { @link AttributeKey }s) which is specific to the handler.

\*

\* <h3>State management</h3>

\*

\* A { @link ChannelHandler } often needs to store some stateful information.

\* The simplest and recommended approach is to use member variables:

\* <pre>

\* public interface Message {

\* // your methods here

\* }

\*

\* public class DataServerHandler extends { @link SimpleChannelInboundHandler } &lt;Message &gt; {

\*

\* <b>private boolean loggedIn;</b>

\*

\* { @code @Override }

\* public void channelRead0({ @link ChannelHandlerContext } ctx, Message message) {

\* if (message instanceof LoginMessage) {

\* authenticate((LoginMessage) message);

\* <b>loggedIn = true;</b>

\* } else (message instanceof GetDataMessage) {

\* if (<b>loggedIn</b>) {

\* ctx.writeAndFlush(fetchSecret((GetDataMessage) message));

\* } else {

\* fail();

\* }

\*

}

\*

}

\*

}

\* </pre>

\* Because the handler instance has a state variable which is dedicated to

\* one connection, you have to create a new handler instance for each new

\* channel to avoid a race condition where an unauthenticated client can get

\* the confidential information:

\* <pre>

```

* // Create a new handler instance per channel.
* // See {@link ChannelInitializer#initChannel(Channel)}.
* public class DataServerInitializer extends {@link ChannelInitializer}&lt;{@link Channel}&gt; {
*     {@code @Override}
*     public void initChannel({@link Channel} channel) {
*         channel.pipeline().addLast("handler", <b>new DataServerHandler()</b>);
*     }
* }
*
* </pre>
*
* <h4>Using {@link AttributeKey}s</h4>
*
* Although it's recommended to use member variables to store the state of a
* handler, for some reason you might not want to create many handler instances.
* In such a case, you can use {@link AttributeKey}s which is provided by
* {@link ChannelHandlerContext}:
* <pre>
* public interface Message {
*     // your methods here
* }
*
* {@code @Sharable}
* public class DataServerHandler extends {@link SimpleChannelInboundHandler}&lt;Message&gt; {
*     private final {@link AttributeKey}&lt;{@link Boolean}&gt; auth =
*         {@link AttributeKey#valueOf(String) AttributeKey.valueOf("auth")};
*
*     {@code @Override}
*     public void channelRead({@link ChannelHandlerContext} ctx, Message message) {
*         {@link Attribute}&lt;{@link Boolean}&gt; attr = ctx.attr(auth);
*         if (message instanceof LoginMessage) {
*             authenticate((LoginMessage) o);
*             <b>attr.set(true)</b>;
*         } else (message instanceof GetDataMessage) {
*             if (<b>Boolean.TRUE.equals(attr.get())</b>) {
*                 ctx.writeAndFlush(fetchSecret((GetDataMessage) o));
*             } else {
*                 fail();
*             }
*         }
*     }
* }
* ...
* }
* </pre>
*
* Now that the
* state of the handler is attached to the {@link ChannelHandlerContext}, you can add the
* same handler instance to different pipelines:
* <pre>

```

```

* public class DataServerInitializer extends { @link ChannelInitializer}&lt;&gt;{ @link Channel}&lt;&gt; {
*
*     private static final DataServerHandler <b>SHARED</b> = new DataServerHandler();
*
*     { @code @Override}
*     public void initChannel({ @link Channel} channel) {
*         channel.pipeline().addLast("handler", <b>SHARED</b>);
*     }
* }
* </pre>

```

\* <h4>The { @code @Sharable} annotation</h4>

\* <p>

\* In the example above which used an { @link AttributeKey},  
 \* you might have noticed the { @code @Sharable} annotation.

\* <p>

\* If a { @link ChannelHandler} is annotated with the { @code @Sharable}  
 \* annotation, it means you can create an instance of the handler just once and  
 \* add it to one or more { @link ChannelPipeline}s multiple times without  
 \* a race condition.

\* <p>

\* If this annotation is not specified, you have to create  
 a new handler

\* instance every time you add it to a pipeline because it has unshared state  
 \* such as member variables.

\* <p>

\* This annotation is provided for documentation purpose, just like  
 \* <a href="http://www.javaconcurrencyinpractice.com/annotations/doc/">the JCIP annotations</a>.

\*

\* <h3>Additional resources worth reading</h3>

\* <p>

\* Please refer to the { @link ChannelHandler}, and  
 \* { @link ChannelPipeline} to find out more about inbound and outbound operations,  
 \* what fundamental differences they have, how they flow in a pipeline, and how to handle  
 \* the operation in your application.

\*/

Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
 jar/io/netty/channel/ChannelHandler.java

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jar/io/netty/channel/oio/OioByteStreamChannel.java

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jar/io/netty/channel/socket/ChannelInputShutdownReadComplete.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/socket/ChannelOutputShutdownEvent.java

\*  
/opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/DelegatingChannelPromiseNotifier.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/nio/SelectedSelectionKeySetSelector.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/internal/ChannelUtils.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/bootstrap/FailedChannel.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/socket/oio/OioDatagramChannelConfig.java

```
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/internal/package-info.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/socket/ChannelOutputShutdownException.java
*
/opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/socket/oio/DefaultOioDatagramChannelConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/PendingBytesTracker.java
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jar/io/netty/channel/socket/DuplexChannel.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/bootstrap/BootstrapConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/ChannelInboundInvoker.java
*
/opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/bootstrap/ServerBootstrapConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/SelectStrategyFactory.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/bootstrap/AbstractBootstrapConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/WriteBufferWaterMark.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/group/VoidChannelGroupFuture.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/ChannelOutboundInvoker.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
```

jar/io/netty/channel/PreferHeapByteBufAllocator.java

\*

/opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/SelectStrategy.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/DefaultSelectStrategyFactory.java

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jar/io/netty/channel/ChannelHandlerAdapter.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/socket/oio/DefaultOioSocketChannelConfig.java

\*

/opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/SimpleChannelInboundHandler.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/ChannelId.java

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jar/io/netty/channel/ChannelProgressiveFutureListener.java

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jar/io/netty/channel/DefaultChannelId.java

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jar/io/netty/channel/MessageSizeEstimator.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/ConnectTimeoutException.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/ChannelProgressiveFuture.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-

jar/io/netty/channel/DefaultAddressedEnvelope.java

```

*
/opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/group/ChannelGroupException.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/socket/oio/OioServerSocketChannelConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/socket/oio/DefaultOioServerSocketChannelConfig.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/nio/SelectedSelectionKeySet.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
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* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/bootstrap/ChannelFactory.java
*
/opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/DefaultMessageSizeEstimator.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/ChannelOutboundBuffer.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/ChannelProgressivePromise.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/DefaultChannelProgressivePromise.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/AddressedEnvelope.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/group/ChannelGroup.java
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jar/io/netty/channel/group/DefaultChannelGroup.java
* /opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/AbstractEventLoopGroup.java
*
/opt/cola/permits/1620675365_1680116232.4282322/0/netty-transport-4-1-90-final-sources-
jar/io/netty/channel/group/ChannelMatcher.java
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jar/io/netty/channel/group/ChannelMatchers.java
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\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/SimpleChannelPool.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/MaxBytesRecvByteBufAllocator.java

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/opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/ChannelPoolMap.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/ChannelPool.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/AbstractChannelPoolHandler.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/ChannelHealthChecker.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/MaxMessagesRecvByteBufAllocator.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/DefaultMaxBytesRecvByteBufAllocator.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/pool/FixedChannelPool.java

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- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/FailedChannelFuture.java
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- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/embedded/EmbeddedEventLoop.java
- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/oio/AbstractOioChannel.java
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- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/CompleteChannelFuture.java
- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/AdaptiveRecvByteBufAllocator.java
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- \* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/ChannelFuture.java
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\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/ChannelHandlerContext.java

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Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/ServerChannelRecvByteBufAllocator.java

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Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/SimpleUserEventChannelHandler.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/socket/nio/NioChannelOption.java

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Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/ChannelHandlerMask.java

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/ExtendedClosedChannelException.java

\*

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/EventLoopTaskQueueFactory.java

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Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/AbstractCoalescingBufferQueue.java

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\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-  
jar/io/netty/channel/CoalescingBufferQueue.java

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Found in path(s):

\* /opt/cola/permits/1620675365\_1680116232.4282322/0/netty-transport-4-1-90-final-sources-jar/io/netty/channel/socket/nio/SelectorProviderUtil.java

# 1.442 auth 2.19.2

## 1.442.1 Available under license :

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```

Found in path(s):

```
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/NetUtilInitializations.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/NetUtilSubstitutions.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/DomainWildcardMappingBuilder.java
```

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```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
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```

```
<artifactId>jctools-core</artifactId>
```



```

<groupId>org.jctools</groupId>
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<name>Java Concurrency Tools Core Library</name>
<description>Java Concurrency Tools Core Library</description>
<packaging>bundle</packaging>

<dependencies>
<dependency>
<groupId>org.hamcrest</groupId>
<artifactId>hamcrest-all</artifactId>
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<artifactId>guava-testlib</artifactId>
<version>${guava-testlib.version}</version>
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</dependency>
</dependencies>
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<plugins>
<plugin>
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<includes>
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</configuration>
</plugin>
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</instructions>
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</execution>
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</plugin>
</plugins>
</build>

<distributionManagement>
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<url>https://api.bintray.com/maven/jctools/jctools/jctools-core/;publish=1</url>
</repository>
</distributionManagement>

<url>https://github.com/JCTools</url>

```

<inceptionYear>2013</inceptionYear>

<licenses>

<license>

<name>Apache

License, Version 2.0</name>

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<distribution>repo</distribution>

</license>

</licenses>

<scm>

<url>https://github.com/JCTools/JCTools</url>

<connection>scm:git:https://github.com/JCTools/JCTools</connection>

<tag>HEAD</tag>

</scm>

<developers>

<developer>

<url>https://github.com/nitsanw</url>

</developer>

<developer>

<url>https://github.com/mjpt777</url>

</developer>

<developer>

<url>https://github.com/RichardWarburton</url>

</developer>

<developer>

<url>https://github.com/kay</url>

</developer>

<developer>

<url>https://github.com/franz1981</url>

</developer>

</developers>

<prerequisites>

<maven>3.5.0</maven>

</prerequisites>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

<java.version>1.6</java.version>

<java.test.version>1.8</java.test.version>

<maven.compiler.source>\${java.version}</maven.compiler.source>

<maven.compiler.target>\${java.version}</maven.compiler.target>

<maven.compiler.testSource>\${java.test.version}</maven.compiler.testSource>

<maven.compiler.testTarget>\${java.test.version}</maven.compiler.testTarget>

```
<hamcrest.version>1.3</hamcrest.version>
<junit.version>4.12</junit.version>
<guava-testlib.version>21.0</guava-testlib.version>
</properties>
</project>
```

#### Found

in path(s):

```
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/META-INF/maven/org.jctools/jctools-core/pom.xml
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```
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/ByteProcessor.java
```

```
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/MathUtil.java
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- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/DefaultFutureListeners.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/Future.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/ResourceLeakDetector.java
- \*
- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/ConcurrentSet.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/ScheduledFutureTask.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/TypeParameterMatcher.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/ReferenceCountUtil.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/ConstantPool.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/ReadOnlyIterator.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/RecyclableArrayList.java
- \*
- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/GenericFutureListener.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/ProgressivePromise.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/AbstractFuture.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/EmptyArrays.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/DefaultThreadFactory.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/DefaultPromise.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/package-info.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/CompleteFuture.java
- \*
- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/Recycler.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/ReferenceCounted.java

```
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/ImmediateExecutor.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/ResourceLeak.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/ImmediateEventExecutor.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/PromiseTask.java
*
/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/PlatformDependent0.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/ProgressiveFuture.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/AbstractEventExecutorGroup.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/AbstractEventExecutor.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/AbstractReferenceCounted.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/GenericProgressiveFutureListener.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/FutureListener.java
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/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/ScheduledFuture.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/logging/package-info.java
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/Version.java
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jar/io/netty/util/concurrent/Promise.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/ResourceLeakException.java
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/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/ObjectCleaner.java  
\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/SuppressForbidden.java

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jar/io/netty/util/internal/logging/Log4J2LoggerFactory.java

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jar/io/netty/util/concurrent/PromiseCombiner.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-  
jar/io/netty/util/concurrent/OrderedEventExecutor.java

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jar/io/netty/util/concurrent/EventExecutorChooserFactory.java

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jar/io/netty/util/internal/ThrowableUtil.java

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jar/io/netty/util/concurrent/RejectedExecutionHandlers.java

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jar/io/netty/util/DomainNameMappingBuilder.java

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jar/io/netty/util/internal/logging/Log4J2Logger.java



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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/ResourceLeakDetectorFactory.java
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jar/io/netty/util/IntSupplier.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/ConstantTimeUtils.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/DefaultEventExecutorChooserFactory.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/OutOfDirectMemoryError.java
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/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/internal/SocketUtils.java
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jar/io/netty/util/BooleanSupplier.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/concurrent/NonStickyEventExecutorGroup.java
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jar/io/netty/util/internal/svm/package-info.java  
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jar/io/netty/util/internal/Hidden.java  
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jar/io/netty/util/internal/svm/PlatformDependentSubstitution.java  
\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-  
jar/io/netty/util/internal/svm/UnsafeRefArrayAccessSubstitution.java  
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jar/io/netty/util/internal/svm/PlatformDependent0Substitution.java  
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jar/io/netty/util/internal/ObjectPool.java  
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jar/io/netty/util/internal/ReferenceCountUpdater.java  
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/shaded/org/jctools/queues/ConcurrentSequencedCircularArrayQueue.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/internal/shaded/org/jctools/queues/MessagePassingQueueUtil.java
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jar/io/netty/util/internal/shaded/org/jctools/queues/atomic/BaseLinkedAtomicQueue.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/shaded/org/jctools/queues/SupportsIterator.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/shaded/org/jctools/queues/atomic/SpsscGrowableAtomicArrayQueue.java

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/opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/shaded/org/jctools/queues/ConcurrentCircularArrayQueue.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/shaded/org/jctools/queues/spec/Ordering.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/shaded/org/jctools/queues/MpmcUnboundedXaddChunk.java

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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/internal/shaded/org/jctools/queues/IndexedQueueSizeUtil.java
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jar/io/netty/util/internal/shaded/org/jctools/queues/atomic/MpscGrowableAtomicArrayQueue.java
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jar/io/netty/util/internal/shaded/org/jctools/util/UnsafeJvmInfo.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/shaded/org/jctools/queues/atomic/LinkedListAtomicNode.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/shaded/org/jctools/queues/SpscUnboundedArrayQueue.java
* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/shaded/org/jctools/queues/atomic/SpscAtomicArrayQueue.java
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- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/AbstractInternalLogger.java
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- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/JdkLoggerFactory.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/Log4JLoggerFactory.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/Slf4JLogger.java
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- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/GlobalEventExecutor.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/SingleThreadEventExecutor.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/DefaultEventExecutorGroup.java
- \*
- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/AbstractConstant.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/EventExecutor.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/InternalLogLevel.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/IllegalReferenceCountException.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/DefaultEventExecutor.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/CommonsLoggerFactory.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/Signal.java
- \*
- /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/package-info.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/AttributeKey.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/Attribute.java  
\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/FailedFuture.java  
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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/InternalLoggerFactory.java  
\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/Slf4JLoggerFactory.java  
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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/package-info.java  
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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/logging/JdkLogger.java

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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
jar/io/netty/util/internal/logging/InternalLogger.java

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* /opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-
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jar/io/netty/util/internal/ResourcesUtil.java

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io.netty.util.internal.Hidden$NettyBlockHoundIntegration
```

Found in path(s):

```
*/opt/cola/permits/1620675283_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/META-
INF/services/reactor.blockhound.integration.BlockHoundIntegration
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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/FormattingTuple.java

\*

/opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/logging/MessageFormatter.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/LongCollections.java

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\*

/opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/IntCollections.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ByteObjectMap.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/CharObjectHashMap.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ShortCollections.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/LongObjectHashMap.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/ObjectUtil.java

\*

/opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ShortObjectHashMap.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ShortObjectMap.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/IntObjectMap.java

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\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ByteCollections.java

\* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/collection/ByteObjectHashMap.java

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- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/concurrent/FastThreadLocalThread.java
- \* /opt/cola/permits/1620675283\_1680116247.569084/0/netty-common-4-1-90-final-sources-jar/io/netty/util/internal/CleanerJava6.java

# 1.444 endpoints-spi 2.19.2

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```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/BrotliOptions.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/GzipOptions.java
*
```

/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/BrotliDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ZstdConstants.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/Zstd.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/DeflateOptions.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ZstdEncoder.java  
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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/BrotliEncoder.java  
\*

/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/CompressionOptions.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/Brotli.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/StandardCompressionOptions.java  
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\* A decoder that splits the received { @link ByteBuffer}s dynamically by the  
 \* value of the length field in the message. It is particularly useful when you  
 \* decode a binary message which has an integer header field that represents the  
 \* length of the message body or the whole message.

\*

<p>

\* { @link LengthFieldBasedFrameDecoder } has many configuration parameters so  
 \* that it can decode any message with a length field, which is often seen in  
 \* proprietary client-server protocols. Here are some example that will give  
 \* you the basic idea on which option does what.

\*

\* <h3>2 bytes length field at offset 0, do not strip header</h3>

\*

\* The value of the length field in this example is <tt>12 (0x0C)</tt> which  
 \* represents the length of "HELLO, WORLD". By default, the decoder assumes  
 \* that the length field represents the number of the bytes that follows the  
 \* length field. Therefore, it can be decoded with the simplistic parameter  
 \* combination.

\* <pre>

\* <b>lengthFieldOffset</b> = <b>0</b>  
 \* <b>lengthFieldLength</b> = <b>2</b>  
 \* lengthAdjustment = 0  
 \* initialBytesToStrip = 0 (= do not strip header)

\*

\* BEFORE DECODE (14 bytes)      AFTER DECODE (14 bytes)

\* +-----+-----+      +-----+-----+

\* | Length | Actual Content

|---->| Length | Actual Content |

\* | 0x000C | "HELLO, WORLD" |      | 0x000C | "HELLO, WORLD" |

\* +-----+-----+      +-----+-----+

\* </pre>

\*

\* <h3>2 bytes length field at offset 0, strip header</h3>

\*

\* Because we can get the length of the content by calling  
 \* { @link ByteBuffer#readableBytes() }, you might want to strip the length

```

* field by specifying <tt>initialBytesToStrip</tt>. In this example, we
* specified <tt>2</tt>, that is same with the length of the length field, to
* strip the first two bytes.
* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 2
* lengthAdjustment = 0
* <b>initialBytesToStrip</b> = <b>2</b> (= the length of the Length field)
*
* BEFORE DECODE (14 bytes)    AFTER DECODE (12 bytes)
* +-----+-----+ +-----+
* | Length | Actual Content |---->| Actual Content |
* | 0x000C | "HELLO, WORLD" |   | "HELLO, WORLD" |
* +-----+-----+ +-----+
* </pre>
*
* <h3>2 bytes length field at offset 0, do not strip header, the length field
* represents the length of the whole message</h3>
*
* In most cases, the length field represents the length of the message body
* only, as shown in the previous examples. However, in some protocols, the
* length field represents the length of the whole message, including the
* message header. In such a case, we specify a non-zero
* <tt>lengthAdjustment</tt>. Because the length value in this example message
* is always greater than the body length by <tt>2</tt>, we specify <tt>-2</tt>
* as <tt>lengthAdjustment</tt> for compensation.
* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>-2</b> (= the length of the Length field)
* initialBytesToStrip = 0
*
* BEFORE DECODE (14 bytes)    AFTER DECODE (14 bytes)
* +-----+-----+ +-----+-----+
* | Length | Actual Content |---->| Length | Actual
  Content |
* | 0x000E | "HELLO, WORLD" |   | 0x000E | "HELLO, WORLD" |
* +-----+-----+ +-----+-----+
* </pre>
*
* <h3>3 bytes length field at the end of 5 bytes header, do not strip header</h3>
*
* The following message is a simple variation of the first example. An extra
* header value is prepended to the message. <tt>lengthAdjustment</tt> is zero
* again because the decoder always takes the length of the prepended data into
* account during frame length calculation.
* <pre>
* <b>lengthFieldOffset</b> = <b>2</b> (= the length of Header 1)

```



```

* <b>lengthFieldLength</b> = <b>3</b>
* lengthAdjustment = 0
* initialBytesToStrip = 0
*
* BEFORE DECODE (17 bytes)          AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Header 1 | Length | Actual Content |---->| Header 1 | Length | Actual Content |
* | 0xCAFE | 0x00000C | "HELLO, WORLD" |    | 0xCAFE | 0x00000C | "HELLO, WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>

```

\* <h3>3 bytes length field at the beginning of 5 bytes header, do not strip header</h3>

\* This is an advanced example that shows the case where there is an extra header between the length field and the message body. You have to specify a positive <tt>lengthAdjustment</tt> so that the decoder counts the extra header into the frame length calculation.

```

* <pre>
* lengthFieldOffset = 0
* lengthFieldLength = 3
* <b>lengthAdjustment</b> = <b>2</b> (= the length of Header 1)
* initialBytesToStrip = 0
*
* BEFORE DECODE (17 bytes)          AFTER DECODE (17 bytes)
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* | Length | Header 1 | Actual Content |---->| Length | Header 1 | Actual Content |
* | 0x00000C | 0xCAFE | "HELLO, WORLD" |    | 0x00000C | 0xCAFE | "HELLO,
WORLD" |
* +-----+-----+-----+-----+ +-----+-----+-----+-----+
* </pre>

```

\* <h3>2 bytes length field at offset 1 in the middle of 4 bytes header, strip the first header field and the length field</h3>

\* This is a combination of all the examples above. There are the prepended header before the length field and the extra header after the length field. The prepended header affects the <tt>lengthFieldOffset</tt> and the extra header affects the <tt>lengthAdjustment</tt>. We also specified a non-zero <tt>initialBytesToStrip</tt> to strip the length field and the prepended header from the frame. If you don't want to strip the prepended header, you could specify <tt>0</tt> for <tt>initialBytesToSkip</tt>.

```

* <pre>
* lengthFieldOffset = 1 (= the length of HDR1)
* lengthFieldLength = 2
* <b>lengthAdjustment</b> = <b>1</b> (= the length of HDR2)
* <b>initialBytesToStrip</b> = <b>3</b> (= the length of HDR1 +

```

LEN)

\*

```
* BEFORE DECODE (16 bytes)          AFTER DECODE (13 bytes)
* +-----+-----+-----+-----+-----+ +-----+-----+
* | HDR1 | Length | HDR2 | Actual Content |---->| HDR2 | Actual Content |
* | 0xCA | 0x000C | 0xFE | "HELLO, WORLD" |    | 0xFE | "HELLO, WORLD" |
* +-----+-----+-----+-----+-----+ +-----+-----+
```

\*

\* `<h3>`2 bytes length field at offset 1 in the middle of 4 bytes header,  
\* strip the first header field and the length field, the length field  
\* represents the length of the whole message`</h3>`

\*

\* Let's give another twist to the previous example. The only difference from  
\* the previous example is that the length field represents the length of the  
\* whole message instead of the message body, just like the third example.  
\* We have to count the length of HDR1 and Length into `<tt>lengthAdjustment</tt>`.  
\* Please note that we don't need to take the length of HDR2 into account  
\* because  
the length field already includes the whole header length.

\* `<pre>`

\* `lengthFieldOffset = 1`

\* `lengthFieldLength = 2`

\* `<b>lengthAdjustment</b> = <b>-3</b>` (= the length of HDR1 + LEN, negative)

\* `<b>initialBytesToStrip</b> = <b>3</b>`

\*

```
* BEFORE DECODE (16 bytes)          AFTER DECODE (13 bytes)
* +-----+-----+-----+-----+-----+ +-----+-----+
* | HDR1 | Length | HDR2 | Actual Content |---->| HDR2 | Actual Content |
* | 0xCA | 0x0010 | 0xFE | "HELLO, WORLD" |    | 0xFE | "HELLO, WORLD" |
* +-----+-----+-----+-----+-----+ +-----+-----+
```

\*

\* @see LengthFieldPrepender

\*/

Found in path(s):

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/LengthFieldBasedFrameDecoder.java

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* https://creativecommons.org/licenses/publicdomain
*/
/**
* Utility class for {@link ByteBuffer} that encodes and decodes to and from
* Base64 notation.
* <p>
* The encoding and decoding algorithm in this class has been derived from
* Robert Harder's Public Domain
\* Base64 Encoder/Decoder.
*/
```

Found in path(s):

```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/base64/Base64.java
```

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```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/DatagramPacketDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/CodecOutputList.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/DateFormatter.java
```

\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ByteBufChecksum.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/string/LineEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/DatagramPacketEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/CompressionUtil.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/string/LineSeparator.java  
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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufEncoderNano.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufEncoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufVarint32LengthFieldPrepender.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/ProtocolDetectionResult.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/ProtocolDetectionState.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/HeadersUtils.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/UnsupportedValueConverter.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufVarint32FrameDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/protobuf/ProtobufDecoderNano.java

\*

/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/ProtobufDecoder.java

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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/EncoderUtil.java

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\*/

/\*\*

\* Enumeration of supported Base64 dialects.

```
* <p>
* The internal lookup tables in this class has been derived from
* <a href="http://iharder.sourceforge.net/current/java/base64/">Robert
  Harder's Public Domain
* Base64 Encoder/Decoder</a>.
*/
```

Found in path(s):

```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/base64/Base64Dialect.java
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```
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```

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```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Crc32c.java
```

```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/xml/XmlFrameDecoder.java
```

```
*
```

```
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/JdkZlibDecoder.java
```

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* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/META-INF/native-
image/io.netty.netty-codec/native-image.properties
```

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```
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/LzmaFrameEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2MoveToFrontTable.java
*
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/json/package-info.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/SnappyFramedEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Crc32.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Lz4Constants.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/LzfEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2BlockDecompressor.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2MTFAndRLE2StageEncoder.java
*
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/DecoderResultProvider.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2DivSufSort.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/json/JsonObjectDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2Decoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2BlockCompressor.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
```

```
jar/io/netty/handler/codec/compression/Bzip2HuffmanAllocator.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2HuffmanStageDecoder.java
*
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/AsciiHeadersEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/SnappyFramedDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2Encoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Lz4FrameDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/LzfDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/FastLzFrameDecoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Lz4FrameEncoder.java
*
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2Rand.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2HuffmanStageEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/FastLzFrameEncoder.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2BitWriter.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/FastLz.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/MessageAggregationException.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2BitReader.java
*
/opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/compression/Bzip2Constants.java
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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/MessageToMessageDecoder.java

\*

/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/Snappy.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/MessageAggregator.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/xml/package-info.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ZlibWrapper.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/base64/package-info.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/serialization/SoftReferenceMap.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/MessageToMessageCodec.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/CorruptedFrameException.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/ByteToMessageDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ClassResolvers.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/PrematureChannelClosureException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/MarshallingDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/CompatibleMarshallingDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/string/StringDecoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/compression/SnappyFrameEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ObjectEncoderOutputStream.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/MarshallingEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/CompatibleMarshallingEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/CompactObjectOutputStream.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/MarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/ReplayingDecoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/bytes/package-info.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/base64/Base64Decoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/ChannelBufferByteInput.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ObjectEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ObjectDecoderInputStream.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/DelimiterBasedFrameDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/package-info.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/compression/ZlibUtil.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/CodecException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/LineBasedFrameDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/bytes/ByteArrayEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/DecoderResult.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/compression/JdkZlibEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/DecoderException.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ClassResolver.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/compression/CompressionException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/LengthFieldPrepender.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/CompactObjectInputStream.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/compression/ZlibEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/LimitingByteInput.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/string/StringEncoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/ChannelBufferByteOutput.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/MessageToByteEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ClassLoaderClassResolver.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/DefaultUnmarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/serialization/ReferenceMap.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/Delimiters.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/bytes/ByteArrayDecoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/marshalling/ContextBoundUnmarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/package-info.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-  
jar/io/netty/handler/codec/string/package-info.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/JZlibEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/ByteToMessageCodec.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/SnappyFrameDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/serialization/ObjectDecoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/FixedLengthFrameDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/TooLongFrameException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ZlibDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/ZlibCodecFactory.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/marshalling/UnmarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/UnsupportedMessageTypeException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/marshalling/package-info.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/serialization/WeakReferenceMap.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/DecompressionException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/protobuf/package-info.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/MessageToMessageEncoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/JZlibDecoder.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/marshalling/ThreadLocalUnmarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/serialization/CompatibleObjectEncoder.java  
\*  
/opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/marshalling/DefaultMarshallerProvider.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/EncoderException.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/ReplayingDecoderByteBuf.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-jar/io/netty/handler/codec/compression/package-info.java  
\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/base64/Base64Encoder.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/marshalling/ThreadLocalMarshallerProvider.java

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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/DefaultHeaders.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/Headers.java

\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

jar/io/netty/handler/codec/EmptyHeaders.java

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\* /opt/cola/permits/1620675259\_1680236261.0138025/0/netty-codec-4-1-90-final-sources-

```
jar/io/netty/handler/codec/DefaultHeadersImpl.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/ValueConverter.java
* /opt/cola/permits/1620675259_1680236261.0138025/0/netty-codec-4-1-90-final-sources-
jar/io/netty/handler/codec/CharSequenceValueConverter.java
```

# 1.446 aws-query-protocol 2.19.2

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### 4.1.90.Final

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```
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty_unix_buffer.c
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/PreferredDirectByteBufAllocator.java
*
/opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty_unix_buffer.h
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/Buffer.java
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jar/netty_unix_jni.h
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
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Found in path(s):

```
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_socket.c
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/Socket.java
*
/opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/FileDescriptor.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
```

```
jar/io/netty/channel/unix/DomainSocketAddress.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/NativeInetAddress.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/UnixChannel.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/ServerDomainSocketChannel.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainSocketChannelConfig.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_errors.c
*
/opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_errors.h
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/Errors.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DatagramSocketAddress.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_filedescriptor.h
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_socket.h
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainSocketReadMode.java
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainSocketChannel.java
*
/opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix_filedescriptor.c
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* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix.c
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/netty_unix.h
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```
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jar/io/netty/channel/unix/SegmentedDatagramPacket.java
```

```
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainDatagramChannelConfig.java
```

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*
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```
/opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainDatagramChannel.java
```

```
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainDatagramSocketAddress.java
```

```
* /opt/cola/permits/1620675307_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-
jar/io/netty/channel/unix/DomainDatagramPacket.java
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\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/RawUnixChannelOption.java  
\*  
/opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/GenericUnixChannelOption.java

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\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/package-info.java  
\*  
/opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/UnixChannelOption.java

\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/Unix.java

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\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty\_unix\_limits.c  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty\_unix\_util.h  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/ErrorsStaticallyReferencedJniMethods.java  
\*  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/Limits.java  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/SocketWritableByteChannel.java  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/PeerCredentials.java  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/io/netty/channel/unix/LimitsStaticallyReferencedJniMethods.java  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty\_unix\_limits.h  
\* /opt/cola/permits/1620675307\_1680116248.8153183/0/netty-transport-native-unix-common-4-1-90-final-sources-jar/netty\_unix\_util.c

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# 1.450 opentelemetry-context 1.24.0

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\* /opt/cola/permits/1620677361\_1680116245.8199492/0/opentelemetry-context-1-24-0-sources-  
jar/io/opentelemetry/context/LazyStorage.java

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\* /opt/cola/permits/1620677361\_1680116245.8199492/0/opentelemetry-context-1-24-0-sources-jar/io/opentelemetry/context/ArrayBasedContext.java

\* /opt/cola/permits/1620677361\_1680116245.8199492/0/opentelemetry-context-1-24-0-sources-jar/io/opentelemetry/context/Context.java

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\* /opt/cola/permits/1620677361\_1680116245.8199492/0/opentelemetry-context-1-24-0-sources-jar/io/opentelemetry/context/internal/shaded/AbstractWeakConcurrentMap.java

\* /opt/cola/permits/1620677361\_1680116245.8199492/0/opentelemetry-context-1-24-0-sources-jar/io/opentelemetry/context/internal/shaded/WeakConcurrentMap.java

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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/ReflectionMethodInvoker.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/transform/EnhancedJsonErrorUnmarshaller.java
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jar/com/amazonaws/protocol/json/JsonFactory.java
```

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/SimpleTypeIonUnmarshallers.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/IonParser.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/apache/client/impl/CRC32ChecksumResponseInterceptor.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-

jar/com/amazonaws/partitions/model/Service.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/RegionImpl.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/LegacyRegionXmlLoadUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/model/Partition.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/SdkStructuredIonFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/model/CredentialScope.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/model/Endpoint.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/PartitionRegionImpl.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/apache/SdkProxyRoutePlanner.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/PartitionMetadataProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/AbstractRegionMetadataProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/InMemoryRegionsProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/LegacyRegionXmlMetadataBuilder.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/InMemoryRegionImpl.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/transform/SimpleTypeCborUnmarshallers.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/PartitionsLoader.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/partitions/model/Region.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/SdkIonGenerator.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/RegionMetadataProvider.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/annotation/SdkProtectedApi.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/annotation/NotThreadSafe.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/annotation/SdkInternalApi.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/annotation/SdkTestInternalApi.java  
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```
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/endpoint/RegionFromEndpointResolver.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/endpoint/DefaultRegionFromEndpointResolver.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
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jar/com/amazonaws/util/ServiceClientHolderInputStream.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/json/Jackson.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/metrics/MetricAdmin.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/jmx/JmxInfoProviderSupport.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/AWSSessionCredentialsProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
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jar/com/amazonaws/RequestClientOptions.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/jmx/spi/SdkMBeanRegistry.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/metrics/MetricAdminMBean.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/BasicSessionCredentials.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/ClassLoaderHelper.java
```

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWSSessionCredentials.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/config/HostRegexToRegionMapping.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/internal/ServiceMetricTypeGuesser.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/arn/AwsResource.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/CollectionUtils.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/StandardErrorUnmarshaller.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/AwsProfileEndpointDiscoveryProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/resources/package-info.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/ProgressListener.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/config/HostRegexToRegionMappingJsonHelper.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/HttpSuccessStatusAcceptor.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/EndpointDiscoveryIdentifiersRefreshCache.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-

jar/com/amazonaws/waiters/PollingStrategyContext.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/ClientConfiguration.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/PropertiesCredentials.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/handlers/RequestHandler.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/metrics/MetricType.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/retry/RetryUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/AWS4UnsignedPayloadSigner.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/ResponseMetadata.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/HttpResponse.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/Response.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/policy/package-info.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/ApiMonitoringEvent.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/AmazonWebServiceResponse.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/RepeatableInputStreamRequestEntity.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/policy/Action.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/waiters/FixedDelayStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/waiters/WaiterExecution.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/config/HttpClientConfigJsonHelper.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/EnvironmentVariableCsmConfigurationProvider.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/transform/SimpleTypeJsonUnmarshallers.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/internal/AgentMonitoringListener.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/handlers/HandlerAfterAttemptContext.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/DefaultErrorResponseHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/monitoring/internal/ClientSideMonitoringRequestHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AbstractAWSSigner.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/config/InternalConfig.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/MaxAttemptsRetryStrategy.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/HttpFailureStatusAcceptor.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/SDKGlobalConfiguration.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkPredicate.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/DaemonThreadFactory.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/RuntimeHttpUtils.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/cache/KeyConverter.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/ServiceLatencyProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/NoOpWaiterHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/AWSServiceMetrics.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/SystemPropertyTlsKeyManagersProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/ServiceNameFactory.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/internal/AuthRetryParameters.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/WaiterAcceptor.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/WaiterState.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/HttpMethod.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/NumericCondition.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/monitoring/internal/AsynchronousAgentDispatcher.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/HttpResponseHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-

jar/com/amazonaws/util/CountingInputStream.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/apachehttpclientconfig.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/handlers/HandlerChainFactory.java  
 \*  
 /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/handlers/RequestHandler2.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/http/impl/client/SdkHttpRequestRetryHandler.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/auth/AWS3Signer.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/auth/WebIdentityTokenCredentialsProvider.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/handlers/AbstractRequestHandler.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/endpointdiscovery/EndpointDiscoveryRefreshCache.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/metrics/ByteThroughputHelper.java  
 \*  
 /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/metrics/MetricCollector.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/monitoring/CsmConfiguration.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/http/AmazonHttpClient.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/monitoring/SystemPropertyCsmConfigurationProvider.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/transform/Marshaller.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/metrics/MetricFilterInputStream.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/metrics/package-info.java  
 \*  
 /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/retry/internal/RetryModeResolver.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/transform/MapEntry.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/monitoring/MonitoringEvent.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/auth/Signer.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/http/conn/SdkPlainSocketFactory.java  
 \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
 jar/com/amazonaws/waiters/WaiterHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/Policy.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/Request.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/internal/JsonPolicyWriter.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/apache/request/impl/HttpGetWithBody.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/SimpleTypeStaxUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/cache/EndpointDiscoveryCacheLoader.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/VoidStaxUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/internal/JsonDocumentFields.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/TimestampFormat.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/StringCondition.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/JsonUnmarshallerContext.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/AbstractFileTlsKeyManagersProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/RequestMetricCollector.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/handlers/RequestHandler2Adaptor.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/StructuredJsonMarshaller.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/Waiter.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/PropertiesFileCredentialsProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/BooleanCondition.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/ServiceMetricCollector.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/WaiterUnrecoverableException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/RetryPolicy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/SystemPropertyEndpointDiscoveryProvider.java  
\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/TlsKeyManagersProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/DateCondition.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/WaiterTimedOutException.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/NoOpSigner.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/handlers/CredentialsRequestHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/apache/Utils/HttpContextUtils.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/Resource.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/IpAddressCondition.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/monitoring/ApiCallMonitoringEvent.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/internal/JsonPolicyReader.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/ThroughputMetricType.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/SimpleServiceMetricType.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/actions/package-info.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/monitoring/ApiCallAttemptMonitoringEvent.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/Principal.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/VoidJsonUnmarshaller.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/EndpointDiscoveryProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/SimpleMetricType.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/PolicyReaderOptions.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/CRC32ChecksumCalculatingInputStream.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/AcceptorPathMatcher.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/Condition.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-



jar/com/amazonaws/retry/PredefinedRetryPolicies.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/policy/conditions/ConditionFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/event/ProgressListenerChain.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/AmazonServiceException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/DefaultCsmConfigurationProviderChain.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/StringUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/MonitoringListener.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
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jar/com/amazonaws/endpointdiscovery/DefaultEndpointDiscoveryProviderChain.java  
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jar/com/amazonaws/internal/config/EndpointDiscoveryConfig.java  
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jar/com/amazonaws/auth/SignerParams.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/monitoring/CsmConfigurationProviderChain.java  
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\*  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AnonymousAWSCredentials.java  
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jar/com/amazonaws/waiters/WaiterParameters.java  
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jar/com/amazonaws/client/builder/AdvancedConfig.java  
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\*  
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jar/com/amazonaws/auth/SignerFactory.java  
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jar/com/amazonaws/AmazonWebServiceClient.java  
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jar/com/amazonaws/auth/profile/internal/BasicProfileConfigFileLoader.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/FileStoreTlsKeyManagersProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/retry/internal/AuthErrorRetryStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/event/ProgressEventType.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/VersionInfoUtils.java  
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jar/com/amazonaws/ProxyAuthenticationMethod.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/ResponseMetadataCache.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/XpathUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/StaxResponseHandler.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/metrics/ServiceMetricType.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/waiters/WaiterExecutionBuilder.java  
\*  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/monitoring/ProfileCsmConfigurationProvider.java  
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jar/com/amazonaws/auth/QueryStringSigner.java  
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jar/com/amazonaws/monitoring/StaticCsmConfigurationProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/arn/Arn.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/metrics/ByteThroughputProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/endpointdiscovery/EnvironmentVariableEndpointDiscoveryProvider.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/policy/conditions/package-info.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/internal/MaxAttemptsResolver.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/PollingStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/NoneTlsKeyManagersProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/NamespaceremovingInputStream.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/internal/SignerKey.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/ProfileCredentialsProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/securitytoken/RoleInfo.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/securitytoken/STSPProfileCredentialsServiceLoader.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/ProfilesConfigFileWriter.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/SyncProgressListener.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/LengthCheckInputStream.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/securitytoken/ProfileCredentialsService.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/RequestProgressInputStream.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/internal/SignerConstants.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/internal/AWS4SignerRequestParams.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/ProgressEventFilter.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/package-info.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/UnreliableFilterInputStream.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/request/Progress.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/Releasable.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/FIFOCache.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/DeliveryMode.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/UnreliableTestConfig.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkSSLSocket.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/event/SDKProgressPublisher.java

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jar/com/amazonaws/util/Platform.java
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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/profile/internal/ProfileProcessCredentialsProvider.java
*
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jar/com/amazonaws/event/ResponseProgressInputStream.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/BoundedLinkedHashMap.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/SdkSocket.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/profile/internal/AbstractProfilesConfigFileScanner.java
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/URLEncodedUtils.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/IdempotentUtils.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/apache/client/impl/ApacheConnectionFactory.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/apache/client/impl/SdkHttpClient.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/conn/ssl/ShouldClearSslSessionPredicate.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/handlers/IRequestHandler2.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/FakeIOException.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/CapacityManager.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/DateTimeJsonSerializer.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/SdkStructuredJsonFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/CanHandleNullCredentials.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/package-info.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/SignableRequest.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/conn/ssl/privileged/PrivilegedMasterSecretValidator.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/SdkHttpUtils.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/DelegatingDnsResolver.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/ClientExecutionAbortTrackerTaskImpl.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/log/InternalLog.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/UriResourcePathUtils.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/handlers/StackedRequestHandler.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/client/HttpClientFactory.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/request/HttpRequestAbortTaskTrackerImpl.java

\*



/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/PredefinedClientConfigurations.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/DelegateSocket.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/JsonErrorUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/settings/HttpClientSettings.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/ClientExecutionAbortTrackerTask.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/http/JsonErrorCodeParser.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/ReadLimitInfo.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkInternalMap.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/client/ConnectionFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/TimeoutThreadPoolBuilder.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/SystemDefaultDnsResolver.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/request/HttpRequestAbortTask.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/handlers/HandlerContextKey.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/http/JsonErrorMessageParser.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/log/CommonsLogFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/ValidationUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/exception/HttpRequestTimeoutException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/NoOpClientExecutionAbortTrackerTask.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Base16Lower.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/ClientExecutionAbortTask.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/ClientExecutionAbortTaskImpl.java  
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jar/com/amazonaws/util/NumberUtils.java  
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jar/com/amazonaws/SdkThreadLocals.java  
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jar/com/amazonaws/http/timers/request/HttpRequestAbortTaskImpl.java  
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jar/com/amazonaws/internal/SdkSSLMetricsSocket.java  
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jar/com/amazonaws/SDKGlobalTime.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/timers/client/ClientExecutionTimer.java  
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jar/com/amazonaws/log/JulLogFactory.java  
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jar/com/amazonaws/DnsResolver.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
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jar/com/amazonaws/http/conn/ssl/MasterSecretValidators.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkMetricsSocket.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkThreadLocalsRegistry.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/JsonErrorResponseHandler.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/timers/client/ClientExecutionTimeoutException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/ComparableUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/timers/request/NoOpHttpRequestAbortTaskTracker.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkIOUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/JavaVersionParser.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/timers/request/HttpRequestAbortTaskTracker.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/conn/SdkConnectionKeepAliveStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkInternalList.java

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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/retry/internal/CredentialsEndpointRetryPolicy.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/ContainerCredentialsFetcher.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/BaseCredentialsFetcher.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/CredentialsEndpointProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/InstanceMetadataServiceResourceFetcher.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/TokenBucket.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/ExceptionUtils.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/ContainerCredentialsRetryPolicy.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/EndpointPrefixAwareSigner.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/retry/RetryMode.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/ContainerCredentialsProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/EC2ResourceFetcher.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/InstanceMetadataServiceCredentialsFetcher.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/EC2ContainerCredentialsProviderWrapper.java
```

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/ConnectionUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/internal/CredentialsEndpointRetryParameters.java  
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\* Interface for providing AWS credentials. Implementations are free to use any

\* strategy for providing AWS credentials, such as simply providing static

\* credentials that don't change, or more complicated implementations, such as

\* integrating with existing key management systems.

\*/

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWSCredentialsProvider.java

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- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/ImmutableRequest.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/SignerAsRequestSigner.java

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- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/auth/SignerProviderContext.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/adapters/types/StringToInputStreamAdapter.java

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/MetadataCache.java

- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/auth/DefaultSignerProvider.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/NullResponseMetadataCache.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/adapters/types/TypeAdapter.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/adapters/types/StringToByteBufferAdapter.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/auth/NoOpSignerProvider.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/SdkStructuredCborFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/SdkCborGenerator.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/StructuredJsonGenerator.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/SdkStructuredPlainJsonFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/JsonResponseHandler.java  
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jar/com/amazonaws/util/ImmutableMapParameter.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/config/Builder.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
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jar/com/amazonaws/internal/config/SignerConfig.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/config/JsonIndex.java
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```

```
*/
```

```
/**
```

```
* Interface for providing AWS region information. Implementations are free to use any strategy for
```

```
* providing region information.
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/regions/AwsRegionProvider.java
```

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/http/CompositeErrorCodeParser.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/http/ErrorCodeParser.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/http/IonErrorCodeParser.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/waiters/WaiterExecutorServiceFactory.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/NamedDefaultThreadFactory.java

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jar/com/amazonaws/util/Md5Utils.java

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jar/com/amazonaws/regions/Regions.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/ServiceAbbreviations.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/DateUtils.java

\*

/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/BinaryUtils.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/Unmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/XmlUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWSCredentials.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/HttpMethodName.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/SigningAlgorithm.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/AmazonClientException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/SignatureVersion.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/LegacyErrorUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/VoidUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/SimpleTypeUnmarshallers.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-

jar/com/amazonaws/internal/SdkRequestRetryHeaderProvider.java  
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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/CustomBackoffStrategy.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/ClasspathPropertiesFileCredentialsProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/http/IdleConnectionReaper.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/HandlerContextAware.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/InstanceProfileCredentialsProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/CRC32MismatchException.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/AWSCredentialsProviderChain.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/EC2MetadataClient.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/DefaultAWSCredentialsProviderChain.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/SystemPropertiesCredentialsProvider.java
*
/opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/internal/DynamoDBBackoffStrategy.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/auth/EnvironmentVariableCredentialsProvider.java
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-
jar/com/amazonaws/util/AwsHostNameUtils.java
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```
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jar/com/amazonaws/util/HostnameValidator.java
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jar/com/amazonaws/log/InternalLogApi.java
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- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/DefaultMarshallingType.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/DefaultValueSupplier.java
- \*
- /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonOperationMetadata.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/OperationInfo.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/StringInputStream.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/builder/AwsAsyncClientBuilder.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/config/SharedConfigDefaultLocationProvider.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/AwsRegionProviderChain.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/AwsSyncClientParams.java
- \*
- /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/MarshallingInfo.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/builder/AwsClientBuilder.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/RetryPolicyAdapter.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/v2/SimpleRetryPolicy.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/MapUnmarshaller.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/ClientHandler.java
- \* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/AwsErrorResponseHandler.java

\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonErrorResponseMetadata.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/SdkClock.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonErrorShapeMetadata.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/JsonMarshallerContext.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/PredefinedBackoffStrategies.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/builder/AwsSyncClientBuilder.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/AbstractErrorUnmarshaller.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/AwsProfileFileLocationProviderChain.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/SimpleTypePathMarshallers.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonContentTypeResolver.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/SdkBaseException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/StaticSignerProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/TimingInfoUnmodifiable.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/DefaultAwsRegionProviderChain.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/AwsProfileFileLocationProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/cred/CredentialsLegacyConfigLocationProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/EmptyBodyJsonMarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/ProfileKeyConstants.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/MarshallLocation.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/presign/PresignerFacade.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/request/HttpRequestFactory.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/SdkJsonGenerator.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/ProtocolMarshaller.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/builder/ExecutorFactory.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWSRefreshableSessionCredentials.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/cred/CredentialsEnvVarOverrideLocationProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/SimpleTypeJsonMarshallers.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/AwsAsyncClientParams.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/v2/RetryOnStatusCodeCondition.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/v2/FixedDelayBackoffStrategy.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/AllProfiles.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWSStaticCredentialsProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/client/ClientExecutionParams.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/V2CompatibleBackoffStrategyAdapter.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/AwsEnvVarOverrideRegionProvider.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/StructuredPojo.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/v2/RetryCondition.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/transform/PathMarshallers.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/ProtocolRequestMarshaller.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-



jar/com/amazonaws/client/ClientHandlerImpl.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/transform/ListUnmarshaller.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/RequestConfig.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/SdkClientException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/SdkJsonMarshallerFactory.java  
\*  
/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/retry/v2/RetryOnExceptionsCondition.java  
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jar/com/amazonaws/retry/v2/AndRetryCondition.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/profile/path/cred/CredentialsDefaultLocationProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/client/ClientHandlerParams.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/SdkStructuredJsonFactoryImpl.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/profile/internal/BasicProfile.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/JsonClientMetadata.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/internal/MarshallerRegistry.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/retry/v2/BackoffStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/TimingInfo.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkFunction.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/auth/profile/internal/AwsProfileNameLoader.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/util/TimingInfoFullSupport.java  
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jar/com/amazonaws/AmazonWebServiceResult.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/internal/Headermarshallers.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/regions/AwsSystemPropertyRegionProvider.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/AmazonWebServiceRequestAdapter.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/XMLWriter.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/MarshallingType.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/presign/PresignerParams.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/timers/client/SdkInterruptedException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonContent.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/V2CompatibleBackoffStrategy.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/ValueToStringConverters.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/profile/path/AwsDirectoryBasePathProvider.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/SdkHttpMetadata.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/JsonProtocolMarshallerBuilder.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/profile/internal/ProfileAssumeRoleCredentialsProvider.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/retry/v2/RetryPolicy.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/QueryParamMarshallers.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/InstanceMetadataRegionProvider.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/protocol/json/internal/JsonMarshaller.java  
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jar/com/amazonaws/util/Base32.java  
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jar/com/amazonaws/util/Base16.java  
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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Throwables.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/IOUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Base16Codec.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Base64.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/CodecUtils.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/AbortedException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/jmx/SdkMBeanRegistrySupport.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Base32Codec.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkDigestInputStream.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/jmx/MBeans.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/Region.java  
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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/ResetException.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkBufferedInputStream.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/EncodingScheme.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/RegionMetadataParser.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkFilterOutputStream.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/AbstractBase32Codec.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/regions/RegionUtils.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/SdkFilterInputStream.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/HttpClientWrappingInputStream.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/AWS4Signer.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Base64Codec.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/auth/ServiceAwareSigner.java  
\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/internal/ListWithAutoConstructFlag.java

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/opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/util/Codec.java

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jar/com/amazonaws/util/PolicyUtils.java

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jar/com/amazonaws/http/apache/Utils/Utils.java

\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/http/apache/request/impl/HttpRequestFactory.java

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\* /opt/cola/permits/1620677332\_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-jar/com/amazonaws/http/conn/ssl/SdkTLSSocketFactory.java

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* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/internal/SdkSSLContext.java
```

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```
/*
```

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```
*/
```

Found in path(s):

```
* /opt/cola/permits/1620677332_1680116258.6110294/0/aws-java-sdk-core-1-12-430-sources-  
jar/com/amazonaws/protocol/json/internal/JsonProtocolMarshaller.java
```

# 1.452 pgv-java-grpc 0.9.1

## 1.452.1 Available under license :

protoc-gen-validate

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# 1.453 kotlin-reflect 1.8.10-release-430

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Found in path(s):

```
*/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaField.kt
```

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```
*/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/DescriptorSubstitutor.java
```

```

* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/util/scopeUtils.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/ExtensionReceiver.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/builtins/functions/BuiltInFictitiousFunctionClassFactory.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/FieldOverridabilityCondition.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/JavaDescriptorUtil.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/EmptyContainerForLocal.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ModuleDescriptor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/PackageViewDescriptor.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/descriptors/DeserializedAnnotations.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/ModuleClassResolver.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/RuntimeErrorReporter.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/storage/ObservableStorageManager.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/kotlin/KotlinJvmBinaryPackageSourceElement.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/SubstitutingScope.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/LazyScopeAdapter.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/RuntimeTypeMapper.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/SupertypeLoopChecker.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/JavaCallableMemberDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/JavaMethodDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotationDescriptorImpl.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/CompositionTypeSubstitution.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/VariableAccessorDescriptor.kt

```

```

* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/ClassDeserializer.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/FunctionWithAllInvokes.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/StarProjectionImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/ClassTypeConstructorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/VariableDescriptor.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/KotlinRetention.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/KProperty1Impl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/TransientReceiver.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/DeclarationDescriptorWithSource.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotationDescriptor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/DeserializedClassDataFinder.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/overridingUtils.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/components/SignaturePropagator.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/JavaClassDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/KTypeImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/Named.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/VariableDescriptorWithInitializerImpl.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/PropertySetterDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/impl/impl/PropertySetterDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runTime/structure/ReflectJavaModifierListOwner.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/PropertySetterDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/StaticScopeForKotlinEnum.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

```

jar/kotlin/reflect/jvm/internal/impl/descriptors/PropertyDescriptor.java  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/Utils/SmartSet.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/Utils/CoreLib.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/KClassImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/LazyPackageViewDescriptorImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/DeclarationDescriptor.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/KCallablesJvm.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/kotlin/header/ReadKotlinClassHeaderAnnotationVisitor.java  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/java/components/JavaResolverCache.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/TypeParameterDescriptorImpl.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/types/TypeConstructor.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/KParameterImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaPackageFragment.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/ParameterDescriptor.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/resolve/constants/ConstantValueFactory.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/LocalClassifierTypeSettings.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/builtins/functions/FunctionInvokeDescriptor.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/DeclarationDescriptorVisitor.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/ImplicitReceiver.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/reflectLambda.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/VariableDescriptorWithAccessors.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/KPackageImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-



```

jar/kotlin/reflect/jvm/internal/impl/descriptors/ConstUtil.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/DescriptorVisibility.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/AnnotationAndConstantLoaderImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/components/DescriptorResolverUtils.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/JavaPropertyDescriptor.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/DisjointKeysUnionTypeSubstitution.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/SubpackagesScope.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/ValueParameterDescriptorImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/CompositePackageFragmentProvider.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/PackageFragmentProvider.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/ClassDescriptorBase.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/DeclarationDescriptorWithVisibility.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/constants/constantValues.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/checker/TypeCheckerProcedureCallbacksImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/JavaDescriptorVisibilities.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/moduleByClassLoader.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotationWithTarget.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/SimpleFunctionDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/ReflectionObjectRenderer.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/JavaIncompatibilityRulesOverridabilityCondition.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/Utils/WrapperValues.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/PackageFragmentDescriptor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/CallableMemberDescriptor.java

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* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ReceiverParameterDescriptor.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/impl/Utils/Printer.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/TypeParameterDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ValueParameterDescriptor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaElement.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/ErrorReporter.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/PackageFragmentDescriptorImpl.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/DeclarationDescriptorVisitorEmptyBodies.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/ReflectJvmMapping.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ClassOrPackageFragmentDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/AnnotationAndConstantLoader.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/ReceiverValue.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/descriptors/DeserializedPackageMemberScope.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/storage/StorageManager.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/MemberComparator.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/storage/storage.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotationArgumentVisitor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/typeParameterUtils.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/PropertyAccessorDescriptorImpl.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/DeserializedPackageFragment.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/util.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/ResolutionScope.kt

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* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/descriptors/DeserializedMemberScope.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/resolvers.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/VisibilityUtil.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/DeclarationDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/KDeclarationContainerImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/AbstractReceiverParameterDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/MemberScopeImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/CastImplicitClassReceiver.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/PackageFragmentProviderImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/components/JavaAnnotationMapper.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/ChainedMemberScope.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/Receiver.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/VariableDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/kotlin/DeserializedDescriptorResolver.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/KFunctionImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/DeclarationDescriptorNonRootImpl.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/checker/TypeCheckingProcedureCallbacks.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/builtins/DefaultBuiltIns.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/DeclaredMemberIndex.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/util/ModuleVisibilityHelper.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/KClassesJvm.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/util.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

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jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/AbstractLazyTypeParameterDescriptor.java

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/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/KProperty2Impl.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotatedImpl.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/MemberDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/PropertyGetterDescriptorImpl.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/resolve/jvm/JavaDescriptorResolver.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/PropertyAccessorDescriptor.java

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/AbstractReceiverValue.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/DeclarationDescriptorNonRoot.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

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\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/resolve/DescriptorFactory.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/CallableDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/LazyJavaAnnotations.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/resolve/ExternalOverridabilityCondition.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/InnerClassesScopeWrapper.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/storage/NoLock.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/load/java/sources/JavaSourceElementFactory.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/ReflectProperties.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/PropertyGetterDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/KProperty0Impl.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/annotationUtil.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/LazyClassReceiverParameterDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-



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- \*/

Found in path(s):

- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/DescriptorEquivalenceForOverrides.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/dynamicTypes.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/FlexibleTypeDeserializer.kt
- \*
- /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/AbstractTypeConstructor.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/AbstractTypeParameterDescriptor.java
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/TypeAliasDescriptor.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/ClassifierDescriptor.java
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/typeEnhancement/typeEnhancement.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/OverridingStrategy.kt
- \*
- /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/RawType.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeProjectionBase.java
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeSubstitutor.java
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/components/JavaPropertyInitializerEvaluator.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/constants/CompileTimeConstant.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/CapturedTypeApproximation.kt
- \*
- /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/renderer/DescriptorRendererOptionsImpl.kt
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/AbstractClassTypeConstructor.java
- \* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/receivers/SuperCallReceiverValue.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/context.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeSubstitution.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/ClassConstructorDescriptor.kt

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/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/Utils.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/AbstractTypeAliasDescriptor.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/AbstractClassDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/context.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/types/JavaTypeResolver.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/kotlin/DeserializationComponentsForJava.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/calls/inference/CapturedTypeConstructor.kt

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/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/ErasedOverridabilityCondition.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaTypeParameterDescriptor.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeCapabilities.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/AnnotationsImpl.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/Utils/functions.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/renderer/ClassifierNamePolicy.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/full/KTypes.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaAnnotationDescriptor.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/KotlinTypeChecker.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/FunctionPlaceholders.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/Annotations.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/descriptors/DeserializedTypeParameterDescriptor.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/JvmPackageScope.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/flexibleTypes.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/KClassifierImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/IntersectionTypeConstructor.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/TypeCheckingProcedure.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/full/KClasses.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/ClassifierDescriptorWithTypeParameters.java  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/EmptyPackageFragmentDescriptor.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/ClassicTypeCheckerState.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/MetadataPackageFragmentProvider.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/KTypeParameterImpl.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/GivenFunctionsMemberScope.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/kotlin/methodSignatureBuildingUtils.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/KTypesJvm.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/TypeIntersectionScope.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/types/RawType.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/AbstractDeserializedPackageFragmentProvider.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/Utils/SmartList.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/AnnotationDeserializer.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/KotlinReflectionInternalError.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/full/exceptions.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/KotlinTypeCheckerImpl.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-



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jar/kotlin/reflect/jvm/internal/impl/Utils/DFS.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/constants/IntegerValueTypeConstructor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ValueDescriptor.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/kotlin/JavaFlexibleTypeDeserializer.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/full/KClassifiers.kt
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*/
// A seemingly obvious way to come about this case would be to declare a special exception class, but the problem is
that
```

```
Found in path(s):
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/storage/LockBasedStorageManager.java
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```
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```

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Found in path(s):

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/NewCapturedType.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/resolve/OverridingUtil.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/checker/NewKotlinTypeChecker.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaMember.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaMethod.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/SpecialTypes.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/InvalidModuleException.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/ReflectKotlinClass.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaClass.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/container/DefaultImplementation.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/typeEnhancement/signatureEnhancement.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaAnnotation.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeUtils.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaConstructor.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/types/TypeWithEnhancement.kt

\*

/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/DescriptorDerivedFromTypeAlias.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/Utils.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/PropertyDescriptorImpl.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/ReflectKotlinClassFinder.kt

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-jar/kotlin/reflect/jvm/internal/impl/load/java/descriptors/JavaClassConstructorDescriptor.java

\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/reflectClassUtil.kt  
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\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/ContractDeserializer.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaWildcardType.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
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\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/Substitutable.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaStaticClassScope.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/deserialization/PlatformDependentDeclarationFilter.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/TypeAliasConstructorDescriptor.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/DescriptorVisibilities.java  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaClassifierType.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaAnnotationArguments.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaValueParameter.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/types/checker/IntersectionType.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/util/modifierChecks.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaScope.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/ModalityUtils.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaTypeParameter.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/builtins/BuiltInsLoader.kt  
\*  
/opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/load/java/AnnotationTypeQualifierResolver.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/builtins/BuiltInsPackageFragment.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-  
jar/kotlin/reflect/jvm/internal/impl/descriptors/deserialization/AdditionalClassPartsProvider.kt  
\* /opt/cola/permits/1620677371\_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-

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jar/kotlin/reflect/jvm/internal/impl/descriptors/annotations/BuiltInAnnotationDescriptor.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/deserialization/ClassDescriptorFactory.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaPackage.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/KotlinTypeFactory.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/findClassInModule.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/types/KotlinType.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/serialization/deserialization/DeserializedPackageFragmentImpl.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/lazy/descriptors/LazyJavaClassMemberScope.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/RuntimeModuleData.kt
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaType.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/full/KProperties.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaAnnotationOwner.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/RuntimeSourceElementFactory.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
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* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/ConstructorDescriptor.java
*
/opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/load/java/JavaClassesTracker.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/structure/ReflectJavaArrayType.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/runtime/components/ReflectJavaClassFinder.kt
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/descriptors/impl/ClassConstructorDescriptorImpl.java
* /opt/cola/permits/1620677371_1680210407.2450173/0/kotlin-reflect-1-8-10-sources-
jar/kotlin/reflect/jvm/internal/impl/resolve/scopes/SyntheticScopes.kt

```

## 1.454 jmespath-java 1.12.430

## 1.454.1 Available under license :

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\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/META-INF/maven/com.amazonaws/jmespath-java/pom.xml

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\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathExpression.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathSubExpression.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/OpLessThan.java

\*

/opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathLengthFunction.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/OpEquals.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathLiteral.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathIdentity.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathContainsFunction.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/JmesPathMultiSelectList.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-jar/com/amazonaws/jmespath/Comparator.java

\* /opt/cola/permits/1620677336\_1680234980.383754/0/jmespath-java-1-12-430-sources-

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jar/com/amazonaws/jmespath/JmesPathProjection.java
*
/opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/OpGreaterThan.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathNotExpression.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/NumericComparator.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathFlatten.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathFilter.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/OpGreaterThanOrEqualTo.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/CamelCaseUtils.java
*
/opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathAndExpression.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathField.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathFunction.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/OpNotEquals.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/OpLessThanOrEqualTo.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/InvalidTypeException.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathEvaluationVisitor.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathVisitor.java
*
/opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/JmesPathValueProjection.java
* /opt/cola/permits/1620677336_1680234980.383754/0/jmespath-java-1-12-430-sources-
jar/com/amazonaws/jmespath/ObjectMapperSingleton.java
```

# 1.455 aws-java-sdk-sts 1.12.430

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Found in path(s):

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/internal/STSPProfileCredentialsService.java

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jar/com/amazonaws/auth/SessionCredentialsProviderFactory.java

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\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/PackedPolicyTooLargeExceptionUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/IDPCommunicationErrorException.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/ExpiredTokenExceptionUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/InvalidAuthorizationMessageExceptionUnmarshaller.java  
va  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AbstractAWSSecurityTokenService.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/MalformedPolicyDocumentExceptionUnmarshaller.java  
a  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/MalformedPolicyDocumentException.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/AssumeRoleWithWebIdentityRequest.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AWSSecurityTokenServiceClientBuilder.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/DecodeAuthorizationMessageResult.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/AssumeRoleWithWebIdentityResult.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/GetAccessKeyInfoRequest.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/GetFederationTokenResult.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleRequestMarshaller.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/FederatedUserStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/GetSessionTokenRequestMarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AWSSecurityTokenServiceAsyncClientBuilder.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/DecodeAuthorizationMessageResultStaxUnmarshaller.java  
ava



\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleWithWebIdentityRequestMarshaller.java

\*

/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/auth/policy/actions/SecurityTokenServiceActions.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/InvalidIdentityTokenExceptionUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/IDPRejectedClaimExceptionUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/PackedPolicyTooLargeException.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/FederatedUser.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AWSSecurityTokenServiceAsyncClient.java

\*

/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/IDPRejectedClaimException.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleResultStaxUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/GetSessionTokenRequest.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleWithWebIdentityResultStaxUnmarshaller.java

\*

/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/AssumeRoleWithSAMLResult.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/RegionDisabledException.java

\*

/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/GetFederationTokenResultStaxUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/DecodeAuthorizationMessageRequest.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/RegionDisabledExceptionUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/DecodeAuthorizationMessageRequestMarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/IDPCommunicationErrorExceptionUnmarshaller.java

\*

/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/PolicyDescriptorTypeStaxUnmarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/transform/GetFederationTokenRequestMarshaller.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/AWSSecurityTokenServiceException.java

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-

jar/com/amazonaws/services/securitytoken/model/GetAccessKeyInfoResult.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/PolicyDescriptorType.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/GetCallerIdentityResult.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/CredentialsStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/ExpiredTokenException.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/GetCallerIdentityRequest.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/AssumeRoleRequest.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleWithSAMLResultStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/GetCallerIdentityRequestMarshaller.java  
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jar/com/amazonaws/services/securitytoken/model/Credentials.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/InvalidIdentityTokenException.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/GetAccessKeyInfoRequestMarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/GetAccessKeyInfoResultStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/package-info.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/InvalidAuthorizationMessageException.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/AssumedRoleUser.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/TagStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/AssumeRoleWithSAMLRequest.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/Tag.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/AssumeRoleWithSAMLRequestMarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/AssumedRoleUserStaxUnmarshaller.java  
\*  
/opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-  
jar/com/amazonaws/services/securitytoken/model/transform/GetCallerIdentityResultStaxUnmarshaller.java  
\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-

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jar/com/amazonaws/services/securitytoken/model/GetSessionTokenResult.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/services/securitytoken/AbstractAWSSecurityTokenServiceAsync.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/services/securitytoken/model/transform/GetSessionTokenResultStaxUnmarshaller.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/services/securitytoken/model/AssumeRoleResult.java
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* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/STSAssumeRoleWithWebIdentitySessionCredentialsProvider.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/services/securitytoken/RegionalEndpointsOptionResolver.java
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* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
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```
jar/com/amazonaws/auth/ShouldDoBlockingSessionRefresh.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/ShouldDoAsyncSessionRefresh.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/DaemonThreadFactory.java
*
/opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/RefreshableTask.java
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/SessionCredentialsHolder.java
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* and limitations under the License.
*/
/**
* <p>
* An IAM policy in JSON format that you want to use as an inline session policy.
* </p>
* <p>
* You must pass an inline or managed <a
* href="https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies.html#policies_session">session
policy</a>
* to this operation. You can pass a single JSON policy
document to use as an inline session policy. You can also
* specify up to 10 managed policy Amazon Resource Names (ARNs) to use as managed session policies.
* </p>
* <p>
* This parameter is optional. However, if you do not pass any session policies, then the resulting federated user
* session has no permissions.
* </p>
* <p>
* When you pass session policies, the session permissions are the intersection of the IAM user policies and the
* session policies that you pass. This gives you a way to further restrict the permissions for a federated user.
* You cannot use session policies to grant more permissions than those that are defined in the permissions policy
* of the IAM user. For more information, see <a
```

\* [https://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies.html#policies\\_session](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies.html#policies_session)>Session Policies</a> in the <i>IAM User Guide</i>.

</p>

<p>

\* The resulting credentials can be used to access a resource that has a resource-based policy. If that policy

\* specifically references the federated user session in the <code>Principal</code> element of the policy, the session has the permissions allowed by the policy. These permissions are granted in addition to the permissions that are granted by the session policies.

</p>

<p>

\* The plaintext that you use for both inline and managed session policies can't exceed 2,048 characters. The JSON policy characters can be any ASCII character from the space character to the end of the valid character list ( through \u00FF). It can also include the tab ( ), linefeed ( ), and carriage return ( ) characters.

</p>

<note>

<p>

\* An Amazon Web Services conversion compresses the passed inline session policy, managed policy ARNs, and session

\* tags into a packed binary format that has a separate limit. Your request can fail for this limit even if your

\* plaintext

meets the other requirements. The <code>PackedPolicySize</code> response element indicates by

\* percentage how close the policies and tags for your request are to the upper size limit.

</p>

</note>

\*/

Found in path(s):

\* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/model/GetFederationTokenRequest.java  
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\*/

/\*\*

\* <p>

\* Returns a set of temporary security credentials (consisting of an access key ID, a secret access key, and a security token) for a federated user. A typical use is in a proxy application that gets temporary security credentials on behalf of distributed applications inside a corporate network. You must call the

\* `GetFederationToken` operation using the long-term security credentials of an IAM user. As a result,

\* this call is appropriate in contexts where those credentials can be safely stored, usually in a server-based application. For a comparison of `GetFederationToken` with the other API operations that produce temporary credentials, see [Requesting Temporary Security Credentials](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html) and [Comparing the Amazon Web Services STS API operations](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html#stsapi_comparison) in the *IAM User Guide*.

\* </p>

\* <note>

\* <p>

\* You can create a mobile-based or browser-based app that can authenticate users using a web identity provider like Login with Amazon, Facebook, Google, or an OpenID Connect-compatible identity provider. In this case, we recommend that you use [Amazon Cognito](http://aws.amazon.com/cognito/) or `AssumeRoleWithWebIdentity`. For more information, see [Federation Through a Web-based Identity Provider](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html#api_assumerolewithwebidentity) in the *IAM User Guide*.

\* </p>

\* </note>

\* <p>

\* You can also call `GetFederationToken` using the security credentials of an Amazon Web Services account root user, but we do not recommend it. Instead, we recommend that you create an IAM user for the purpose of the proxy application. Then attach a policy to the IAM user that limits federated users to only the actions and resources that they need to access. For more information, see [IAM Best Practices](https://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html) in the *IAM User Guide*.

\* </p>

\* <p>

\* <b>Session duration</b>

\* </p>

\* <p>

\* The temporary credentials are valid for the specified duration, from 900 seconds (15 minutes) up to a maximum of 129,600 seconds (36 hours). The default session duration is 43,200 seconds (12 hours). Temporary credentials obtained by using the Amazon Web Services account root user credentials have a maximum duration of 3,600 seconds

\* (1 hour).

\* </p>

\* <p>

\* <b>Permissions</b>

\* </p>

\* <p>

\* You can use the temporary credentials created by <code>GetFederationToken</code> in any Amazon Web Services

\* service with the following exceptions:

\* </p>

\* <ul>

\* <li>

\* <p>

\* You cannot call any IAM operations using the CLI or the Amazon Web Services API. This limitation does not apply

\* to console sessions.

\* </p>

\* </li>

\* <li>

\* <p>

\* You cannot call any STS operations except <code>GetCallerIdentity</code>.

\* </p>

\* </li>

\* </ul>

\* <p>

\* You can use temporary credentials for single sign-on (SSO) to the console.

\* </p>

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\* You must pass an inline or managed <a

\* href="https://docs.aws.amazon.com/IAM/latest/UserGuide/access\_policies.html#policies\_session">session policy</a>

\* to this operation. You can pass a single JSON policy document to use as an inline session policy. You can also

\* specify up to 10 managed policy Amazon Resource Names (ARNs) to use as managed session policies. The

plaintext

\* that you use for both inline and managed session policies can't exceed 2,048 characters.

\* </p>

\* <p>

\* Though the session policy parameters are optional, if you do not pass a policy, then the resulting federated user

\* session has no permissions. When you pass session policies, the session permissions are the intersection of the

\* IAM user policies and the session policies that you pass.

This gives you a way to further restrict the

\* permissions for a federated user. You cannot use session policies to grant more permissions than those that are

\* defined in the permissions policy of the IAM user. For more information, see <a

\* [https://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies.html#policies\\_session](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies.html#policies_session)>Session Policies</a> in the <i>IAM User Guide</i>. For information about using <code>GetFederationToken</code> to create

- \* temporary security credentials, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_request.html#api\_getfederationtoken">https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_request.html#api\_getfederationtoken</a>

</p>

<p>

\* <b>GetFederationToken—Federation Through a Custom Identity Broker</b></p>

<p>

\* You can use the credentials to access a resource that has a resource-based policy. If that policy specifically references the federated user session in the <code>Principal</code> element of the policy, the session has the permissions allowed by the policy. These permissions are granted in addition to the permissions granted by the session policies.

</p>

<p>

\* <b>Tags</b></p>

</p>

<p>

\* (Optional) You can pass tag key-value pairs to your session. These are called session tags. For more information about session tags, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_session-tags.html">https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_session-tags.html</a>>Passing Session Tags in STS</a> in the <i>IAM User Guide</i>.

</p>

<note>

<p>

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</p>

</note>

<p>

\* An administrator must grant you the permissions necessary to pass session tags. The administrator can also create granular permissions to allow you to pass only specific session tags. For more information, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\_attribute-based-access-control.html">https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\_attribute-based-access-control.html</a>>Tutorial: Using Tags for Attribute-Based Access Control</a> in the <i>IAM User Guide</i>.

</p>

<p>

\* Tag key–value pairs are not case sensitive, but case is preserved. This means that you cannot have separate



\* `Department` and `department` tag keys. Assume that the user that you are federating has

- \* the `Department=Marketing` tag and you pass the `department=engineering`

session tag. `Department` and `department` are not saved as separate tags, and the session tag passed in the request takes precedence over the user tag.

</p>

- \* `@param` `getFederationTokenRequest`
- \* `@return` Result of the `GetFederationToken` operation returned by the service.
- \* `@throws` `MalformedPolicyDocumentException`
- \* The request was rejected because the policy document was malformed. The error message describes the specific error.
- \* `@throws` `PackedPolicyTooLargeException`
- \* The request was rejected because the total packed size of the session policies and session tags combined was too large. An Amazon Web Services conversion compresses the session policy document, session policy ARNs, and session tags into a packed binary format that has a separate limit. The error message indicates by percentage how close the policies and tags are to the upper size limit. For more information, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_session-tags.html">Passing Session Tags in STS</a> in the <i>IAM User Guide</i>.</p>
- <p>
- \* You could receive this error even though you meet other defined session policy and session tag limits. For more information, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_iam-quotas.html#reference\_iam-limits-entity-length">IAM and STS Entity Character Limits</a> in the <i>IAM User Guide</i>.
- \* `@throws` `RegionDisabledException`
- \* STS is not activated in the requested region for the account that is being asked to generate credentials. The account administrator must use the IAM console to activate STS in that region. For more information, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_enable-regions.html">Activating and Deactivating Amazon Web Services STS in an Amazon Web Services Region</a> in the <i>IAM User Guide</i>.
- \* `@sample` `AWSecurityTokenService.GetFederationToken`
- \* `@see` <a href="http://docs.aws.amazon.com/goto/WebAPI/sts-2011-06-15/GetFederationToken" target="\_top">AWS API Documentation</a>

Found in path(s):

- \* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AWSSecurityTokenServiceClient.java
- \* /opt/cola/permits/1620677385\_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-jar/com/amazonaws/services/securitytoken/AWSSecurityTokenService.java

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 *
 * http://aws.amazon.com/apache2.0
 *
 * This file is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES
 * OR CONDITIONS OF ANY KIND, either express or implied. See the
 * License for the specific language governing permissions and
 * limitations under the License.
 */
```

Found in path(s):

```
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/policy/STSActions.java
```

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 *
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 * License for the specific language governing permissions and
 * limitations under the License.
 */
```

Found in path(s):

```
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/WebIdentityFederationSessionCredentialsProvider.java
```

```
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/STSSessionCredentialsProvider.java
```

```
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/STSAssumeRoleSessionCredentialsProvider.java
```

```
*
 /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/auth/NoSessionSupportCredentials.java
```

```
* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
```

jar/com/amazonaws/auth/STSSessionCredentials.java

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\*/

/\*\*

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\* Returns a set of temporary security credentials (consisting of an access key ID, a secret access key, and a security token) for a federated user. A typical use is in a proxy application that gets temporary security credentials on behalf of distributed applications inside a corporate network. You must call the

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\* temporary credentials, see [a](#)

\* [href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_temp\\_request.html"](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html) Requesting Temporary

\* Security Credentials and [a](#)

\*

[href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_temp\\_request.html#stsapi\\_comparison"](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html#stsapi_comparison)

\* [>Comparing the Amazon Web Services STS API operations](#) in the *IAM User Guide*.

\* </p>

\* <note>

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\* Login with Amazon, Facebook, Google, or an OpenID Connect-compatible identity provider.

In this case, we

\* recommend that you use [a href="http://aws.amazon.com/cognito/"](http://aws.amazon.com/cognito/) Amazon Cognito

\* `AssumeRoleWithWebIdentity`. For more information, see [a href=](#)

\*

["https://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_temp\\_request.html#api\\_assumerolewithwebidentity"](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html#api_assumerolewithwebidentity)

\* >Federation Through a Web-based Identity Provider</a> in the <i>IAM User Guide</i>.

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\* </p>

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\* <b>Session duration</b>

\* </p>

\* <p>

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\* </li>

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\* </p>

\* <p>

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\* defined in the permissions policy of the IAM user. For more information, see <a

\* href="https://docs.aws.amazon.com/IAM/latest/UserGuide/access\_policies.html#policies\_session">Session

\* Policies</a> in the <i>IAM User Guide</i>. For information about using <code>GetFederationToken</code>

to create

\* temporary security credentials, see <a

\* href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_request.html#api\_getfederationtoken"

>GetFederationToken—Federation Through a Custom Identity Broker</a>.

\* </p>

\* <p>

\* You can use the credentials to access a resource that has a resource-based policy. If that policy specifically

\* references the federated user session in the <code>Principal</code> element of the policy, the session has the

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allowed by the policy. These permissions are granted in addition to the permissions granted by the

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\* </p>

\* <p>

\* <b>Tags</b>

\* </p>

\* <p>

\* (Optional) You can pass tag key-value pairs to your session. These are called session tags. For more information

\* about session tags, see <a href="https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_session-tags.html">Passing

\* Session Tags in STS</a> in the <i>IAM User Guide</i>.

\* </p>

\* <note>

\* <p>

\* You can create a mobile-based or browser-based app that can authenticate users using a web identity provider

like

```

* Login with Amazon, Facebook, Google, or an OpenID Connect-compatible identity provider. In this case, we
* recommend that you use <a href="http://aws.amazon.com/cognito/">Amazon Cognito</a> or
* <code>AssumeRoleWithWebIdentity</code>. For more information, see <a href=
*
"https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_temp_request.html#api_assumerolewithwebidentity"
* >Federation Through a Web-based Identity Provider</a> in the <i>IAM User Guide</i>.
* </p>
* </note>
* <p>
* An administrator must grant you the permissions necessary to pass session tags. The administrator can also
create
* granular permissions to allow you to pass only specific session tags. For more information, see <a
* href="https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_attribute-based-access-control.html">Tutorial:
control.html">Tutorial:
* Using Tags for Attribute-Based Access Control</a> in the <i>IAM User Guide</i>.
* </p>
* <p>
* Tag key–value pairs are not case sensitive, but case is preserved. This means that you cannot have separate
* <code>Department</code> and <code>department</code> tag keys. Assume that the user that you are
federating has
* the <code>Department</code>=<code>Marketing</code> tag and you pass the <code>department</code>=<code>
* <code>engineering</code>
session tag. <code>Department</code> and <code>department</code> are not saved as
* separate tags, and the session tag passed in the request takes precedence over the user tag.
* </p>
*
* @param getFederationTokenRequest
* @return A Java Future containing the result of the GetFederationToken operation returned by the service.
* @sample AWSSecurityTokenServiceAsync.GetFederationToken
* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/sts-2011-06-15/GetFederationToken"
target="_top">AWS API
* Documentation</a>
*/

```

Found in path(s):

```

* /opt/cola/permits/1620677385_1680116239.5470777/0/aws-java-sdk-sts-1-12-430-sources-
jar/com/amazonaws/services/securitytoken/AWSSecurityTokenServiceAsync.java

```

# 1.456 opentelemetry-api 1.24.0

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```

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```

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\* /opt/cola/permits/1620677369\_1680116258.2154515/0/opentelemetry-api-1-24-0-sources-  
jar/io/opentelemetry/api/internal/ReadOnlyArrayMap.java

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\* /opt/cola/permits/1620677369\_1680116258.2154515/0/opentelemetry-api-1-24-0-sources-  
jar/io/opentelemetry/api/internal/Contract.java

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\* /opt/cola/permits/1620677369\_1680116258.2154515/0/opentelemetry-api-1-24-0-sources-jar/io/opentelemetry/api/internal/PercentEscaper.java

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Found in path(s):

\* /opt/cola/permits/1620677369\_1680116258.2154515/0/opentelemetry-api-1-24-0-sources-jar/io/opentelemetry/api/common/AttributesBuilder.java

## 1.457 re2j 1.7

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\* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/MatcherInput.java

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\* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/RE2J.gwt.xml

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- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/UnicodeTables.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Prog.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Characters.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/RE2.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/MachineInput.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Unicode.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/CharGroup.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Parser.java
- \*
- /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/super/com/google/re2j/Characters.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Simplify.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Utils.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/CharClass.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Regexp.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Machine.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Pattern.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Compiler.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Matcher.java
- \*
- /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/PatternSyntaxException.java
- \* /opt/cola/permits/1620677354\_1680235716.3671062/0/re2j-1-7-sources-jar/com/google/re2j/Inst.java

# 1.458 kotlinpoet 1.7.2

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# 1.461 jsr305 3.0.2

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- \* /opt/cola/permits/1656638364\_1682593601.2844107/0/jsr305-3-0-2-sources-9-jar/javax/annotation/concurrent/NotThreadSafe.java
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- \* /opt/cola/permits/1656638364\_1682593601.2844107/0/jsr305-3-0-2-sources-9-jar/javax/annotation/concurrent/GuardedBy.java

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- \* /opt/cola/permits/1656707133\_1682600610.4687467/0/perfmark-api-0-17-0-sources-1-jar/io/perfmark/PerfMark.java
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- \*
- \*/opt/cola/permits/1656707133\_1682600610.4687467/0/perfmark-api-0-17-0-sources-1-jar/io/perfmark/Link.java
- \* /opt/cola/permits/1656707133\_1682600610.4687467/0/perfmark-api-0-17-0-sources-1-jar/io/perfmark/Tag.java

## 1.463 grep 3.6-1+deb11u1

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Version 3, 29 June 2007

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### 17.

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```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

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```
<program> Copyright (C) <year> <name of author>  
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

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## 1.464 glibc 2.31-13+deb11u6

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```

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```
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```

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```
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```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever



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b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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/\* nicstar.c v0.22 Jawaid Bazyar (bazyar@hypermall.com)

\* nicstar.c, M. Welsh (matt.welsh@cl.cam.ac.uk)

\*

\* Hacked October, 1997 by Jawaid Bazyar, Interlink Advertising Services Inc.

\* <http://www.hypermall.com/>

\* 10/1/97 - commented out CFG\_PHYIE bit - we don't care when the PHY

\* interrupts us (except possibly for removal/insertion of the cable?)

\* 10/4/97 - began heavy inline documentation of the code. Corrected typos

\* and spelling mistakes.

\* 10/5/97 - added code to handle PHY interrupts, disable PHY on

\* loss of link, and correctly re-enable PHY when link is

\* re-established. (put back CFG\_PHYIE)

\*

\* Modified to work with the IDT7721 nicstar -- AAL5 (tested) only.

\*

\* R. D. Rechenmacher <ron@fnal.gov>, Aug. 6, 1997

```

*
* Linux driver for the IDT77201 NICStAR PCI ATM controller.
* PHY component is expected to be 155 Mbps S/UNI-Lite or IDT 77155;
* see init_nicstar() for PHY initialization to change this. This driver
* expects the Linux ATM stack to support scatter-gather
lists
* (skb->atm.iovcnt != 0) for Rx skb's passed to vcc->push.
*
* Implementing minimal-copy of received data:
* IDT always receives data into a small buffer, then large buffers
* as needed. This means that data must always be copied to create
* the linear buffer needed by most non-ATM protocol stacks (e.g. IP)
* Fix is simple: make large buffers large enough to hold entire
* SDU, and leave <small_buffer_data> bytes empty at the start. Then
* copy small buffer contents to head of large buffer.
* Trick is to avoid fragmenting Linux, due to need for a lot of large
* buffers. This is done by 2 things:
* 1) skb->destructor / skb->atm.recycle_buffer
*    combined, allow nicstar_free_rx_skb to be called to
*    recycle large data buffers
* 2) skb_clone of received buffers
* See nicstar_free_rx_skb and linearize_buffer for implementation
* details.
*
*
*
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*
* M. Welsh, 6 July 1996
*
*/

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based on the debian-keyring package maintained by James Troup

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# 1.467 base-files 11.1+deb11u7

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```

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```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License.

Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

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```
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program `Gnomovision' (a program to direct compilers to make passes
at assemblers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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## 1.470 cmd/test2json (devel)

### 1.470.1 Available under license :

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035299_1692956471.8378384/0/test2json-zip/test2json/main.go
```

## 1.471 cmd/gofmt (devel)

### 1.471.1 Available under license :

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```

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```

```
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```

```
//gofmt
```

```
package typeparams
```

```
type T[P any] struct{ }
```

```
type T[P1, P2, P3 any] struct{ }
```

```
type T[P C] struct{ }
```

```
type T[P1, P2, P3 C] struct{ }
```

```
type T[P C[P]] struct{ }
```

```
type T[P1, P2, P3 C[P1, P2, P3]] struct{ }
```

```
func f[P any](x P)
```

```
func f[P1, P2, P3 any](x1 P1, x2 P2, x3 P3) struct{ }
```

```
func f[P interface{ }](x P)
```

```
func f[P1, P2, P3 interface {
    m1(P1)
    ~P2 | ~P3
}](x1 P1, x2 P2, x3 P3) struct{}
func f[P any](T1[P], T2[P]) T3[P]
```

```
func (x T[P]) m()
func (T[P]) m(x T[P]) P
```

```
func _() {
    type _ []T[P]
    var _ []T[P]
    _ = []T[P]{}
}
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/typeparams.golden

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```
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```

```
//gofmt
```

```
package main
```

```
var _ = []struct{
    S    string
    Integer int
}{
    {
        S: "Hello World",
        Integer: 42,
    },
    {
        S: "\t",
        Integer: 42,
    },
    {
        S: " ", // an actual <tab>
        Integer: 42,
    },
    {
        S: ` `, // an actual <tab>
        Integer: 42,
    },
    {
```



```
S: "\u0009",
Integer: 42,
},
}
```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/tabs.input
```

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/simplify.go
```

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```

```
//gofmt
```

```
package main
```

```
var _ = []struct {
```

```
    S    string
```

```
    Integer int
```

```
}{
```

```
{
```

```
    S:    "Hello World",
```

```
    Integer: 42,
```

```
},
```

```
{
```

```
    S:    "\t",
```

```
    Integer: 42,
```

```
},
```

```
{
```

```
    S:    " ", // an actual <tab>
```

```
    Integer: 42,
```

```
},
```

```
{
```

```
    S:    "\t", // an actual <tab>
```

```
    Integer: 42,
```

```
},
```

```
{
```

```
    S:    "\u0009",
```

```
    Integer: 42,
```

```
},
```

```
}
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/tabs.golden

No license file was found, but licenses were detected in source scan.

```
//gofmt -r=fun(x)->Fun(x)
```

```
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```

```
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```

```
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```

```
// Rewriting of calls must take the ... (ellipsis)
```

```
// attribute for the last argument into account.
```

```
package p
```

```
func fun(x []int) {}
```

```
func g(x []int) {
```

```
    Fun(x) // -r='fun(x)->Fun(x)' should rewrite this to Fun(x)
```

```
    fun(x...) // -r='fun(x)->Fun(x)' should not rewrite this
```

```
}
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite6.golden

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```
//gofmt -r=int->bool
```

```
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```

```
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```

```
// license that can be found in the LICENSE file.
```

```
package p
```

```
// Slices have nil Len values in the corresponding ast.ArrayType
```

```
// node and reflect.NewValue(slice.Len) is an invalid reflect.Value.
```

```
// The rewriter must not crash in that case. Was issue 1696.
```

```
func f() []int {}
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite2.input

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```
//gofmt -r=int->bool
```

```
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```

```
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```

```
// license that can be found in the LICENSE file.
```

```
package p
```

```
// Slices have nil Len values in the corresponding ast.ArrayType  
// node and reflect.NewValue(slice.Len) is an invalid reflect.Value.  
// The rewriter must not crash in that case. Was issue 1696.  
func f() []bool { }
```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite2.golden
```

```
No license file was found, but licenses were detected in source scan.
```

```
//gofmt -r=x->x
```

```
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```

```
package main
```

```
// Field tags are *ast.BasicLit nodes that are nil when the tag is  
// absent. These nil nodes must not be mistaken for expressions,  
// the rewriter should not try to dereference them. Was issue 2410.
```

```
type Foo struct {  
    Field int  
}
```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite3.input
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite3.golden
```

```
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```

```
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```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/gofmt_test.go
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite1.input
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite1.golden
```

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/long_test.go
```

```
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```

```
//gofmt -r=interface{ }->int
```

```
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```

// Check that literal type expression rewrites are accepted.

// Was issue 4406.

package p

type T int

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite8.golden

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//gofmt -r=fun(x...)->Fun(x)

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// Rewriting of calls must take the ... (ellipsis)

// attribute for the last argument into account.

package p

func fun(x []int) {}

func g(x []int) {

fun(x) // -r='fun(x...)->Fun(x)' should not rewrite this

fun(x...) // -r='fun(x...)->Fun(x)' should rewrite this to Fun(x)

}

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite7.input

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//gofmt -r=a&&b!=2->a

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// Issue 18987.

package p

const \_ = x != 1 && x != 2

Found in path(s):

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/internal.go
```

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```
//gofmt -r=fun(x...)->Fun(x)
```

```
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```

```
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```

```
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```

```
// Rewriting of calls must take the ... (ellipsis)
```

```
// attribute for the last argument into account.
```

```
package p
```

```
func fun(x []int) {}
```

```
func g(x []int) {
```

```
    fun(x) // -r='fun(x...)->Fun(x)' should not rewrite this
```

```
    Fun(x) // -r='fun(x...)->Fun(x)' should rewrite this to Fun(x)
```

```
}
```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite7.golden
```

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```
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```

```
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```

```
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```

```
//gofmt
```

```
package typeparams
```

```
type T[ P any] struct{ }
```

```
type T[P1, P2, P3 any] struct{ }
```

```
type T[P C] struct{ }
```

```
type T[P1,P2, P3 C] struct{ }
```

```
type T[P C[P]] struct{ }
```

```
type T[P1, P2, P3 C[P1,P2,P3]] struct{ }
```

```
func f[P any](x P)
```

```

func f[P1, P2, P3 any](x1 P1, x2 P2, x3 P3) struct{ }

func f[P interface{ }](x P)
func f[P1, P2, P3 interface{ m1(P1); ~P2|~P3 }](x1 P1, x2 P2, x3 P3) struct{ }
func f[P any](T1[P], T2[P]) T3[P]

func (x T[P]) m()
func ((T[P])) m(x T[P]) P

func _() {
    type _ []T[P]
    var _ []T[P]
    _ = []T[P]{ }
}

```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/typeparams.input  
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```
//gofmt -r=x+x->2*x
```

```
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```

```
// Rewriting of expressions containing nodes with associated comments to
// expressions without those nodes must also eliminate the associated
// comments.
```

```
package p
```

```

func f(x int) int {
    _ = x + x // this comment remains in the rewrite
    _ = x /* this comment must not be in the rewrite */ + x
    return x /* this comment must not be in the rewrite */ + x
}

```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite5.input  
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```
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```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/gofmt.go  
 \* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/doc.go  
 \* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/rewrite.go

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```
//gofmt -r=(x)->x

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// Rewriting of parenthesized expressions (x) -> x
// must not drop parentheses if that would lead to
// wrong association of the operands.
// Was issue 1847.
```

```
package main
```

```
// From example 1 of issue 1847.
func _() {
    var t = (&T{1000}).Id()
}
```

```
// From example 2 of issue 1847.
func _() {
    fmt.Println((*xpp).a)
}
```

```
// Some more test cases.
```

```
func _() {
    _ = (-x).f
    _ = (*x).f
    _ = (&x).f
    _ = (!x).f
    _ = -x.f
    _ = *x.f
    _ = &x.f
    _ = !x.f
    (-x).f()
    (*x).f()
    (&x).f()
    (!x).f()
    _ = -x.f()
    _ = *x.f()
    _ = &x.f()
    _ = !x.f()

    _ = (-x).f
    _ = (*x).f
    _ = (&x).f
    _ = (!x).f
}
```

```

_ = -x.f
_ = *x.f
_ = &x.f
_ = !x.f
(-x).f()
(*x).f()
(&x).f()
(!x).f()
_ = -x.f()
_ = *x.f()
_ = &x.f()
_ = !x.f()

_ = -x.f
_ = *x.f
_ = &x.f
_ = !x.f
_ =
-x.f
_ = *x.f
_ = &x.f
_ = !x.f
_ = -x.f()
_ = *x.f()
_ = &x.f()
_ = !x.f()
_ = -x.f()
_ = *x.f()
_ = &x.f()
_ = !x.f()
}

```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite4.golden

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```
//gofmt -r=x+x->2*x
```

```
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```

```
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```

```
// license that can be found in the LICENSE file.
```

```
// Rewriting of expressions containing nodes with associated comments to
```

```
// expressions without those nodes must also eliminate the associated
```

```
// comments.
```

```
package p
```



```
func f(x int) int {
    _ = 2 * x // this comment remains in the rewrite
    _ = 2 * x
    return 2 * x
}
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite5.golden

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```
//gofmt -r=a&&b!=2->a
```

```
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```

```
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```

```
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```

```
// Issue 18987.
```

```
package p
```

```
const _ = x != 1
```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite9.golden

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```
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```

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\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/issue28082.input

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```
//gofmt -r=a->a
```

```
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```

```
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```

```
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```

```
// Issue 33103, 33104, and 33105.
```

```
package pkg
```

```
func fn() {
    _ = func() {
        switch {
        default:
        }
    }
}
```

```
}
_ = func() string {}
_ = func() { var ptr *string; println(ptr) }
}
```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite10.input
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite10.golden
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```

```
//gofmt -r=(x)->x
```

```
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// license that can be found in the LICENSE file.
```

```
// Rewriting of parenthesized expressions (x) -> x
// must not drop parentheses if that would lead to
// wrong association of the operands.
// Was issue 1847.
```

```
package main
```

```
// From example 1 of issue 1847.
```

```
func _() {
    var t = (&T{1000}).Id()
}
```

```
// From example 2 of issue 1847.
```

```
func _() {
    fmt.Println((*xpp).a)
}
```

```
// Some more test cases.
```

```
func _() {
    _ = (-x).f
    _ = (*x).f
    _ = (&x).f
    _ = (!x).f
    _ = (-x.f)
    _ = (*x.f)
    _ = (&x.f)
    _ = (!x.f)
    (-x).f()
    (*x).f()
    (&x).f()
    (!x).f()
    _ = (-x.f())
}
```

```

_ = (*x.f())
_ = (&x.f())
_ = (!x.f())

_ = ((-x)).f
_ = ((*x)).f
_ = ((&x)).f
_ = (!!x)).f
_ = ((-x.f))
_ = ((*x.f))
_ = ((&x.f))
_ = (!!x.f))
((-x)).f()
((*x)).f()
((&x)).f()
 (!!x)).f()
_ = ((-x.f()))
_ = ((*x.f()))
_ = ((&x.f()))

-
= (!!x.f()))

_ = -(x).f
_ = *(x).f
_ = &(x).f
_ = !(x).f
_ = -x.f
_ = *x.f
_ = &x.f
_ = !x.f
_ = -(x).f()
_ = *(x).f()
_ = &(x).f()
_ = !(x).f()
_ = -x.f()
_ = *x.f()
_ = &x.f()
_ = !x.f()
}

```

Found in path(s):

\* /opt/cola/permits/1662035352\_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite4.input

No license file was found, but licenses were detected in source scan.

//gofmt -r=fun(x)->Fun(x)

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```
// license that can be found in the LICENSE file.
```

```
// Rewriting of calls must take the ... (ellipsis)
```

```
// attribute for the last argument into account.
```

```
package p
```

```
func fun(x []int) {}
```

```
func g(x []int) {
```

```
    fun(x) // -r='fun(x)->Fun(x)' should rewrite this to Fun(x)
```

```
    fun(x...) // -r='fun(x)->Fun(x)' should not rewrite this
```

```
}
```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite6.input
```

No license file was found, but licenses were detected in source scan.

```
//gofmt -r=interface{ }->int
```

```
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```

```
// Use of this source code is governed by a BSD-style
```

```
// license that can be found in the LICENSE file.
```

```
// Check that literal type expression rewrites are accepted.
```

```
// Was issue 4406.
```

```
package p
```

```
type T interface{ }
```

Found in path(s):

```
* /opt/cola/permits/1662035352_1692956183.521849/0/gofmt-zip/gofmt/testdata/rewrite8.input
```

## 1.472 cmd/addr2line (devel)

### 1.472.1 Available under license :

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```
// Copyright 2014 The Go Authors. All rights reserved.
```

Found in path(s):

```
* /opt/cola/permits/1662035349_1692956280.9049976/0/addr2line-zip/addr2line/addr2line_test.go
```

No license file was found, but licenses were detected in source scan.

```
// Copyright 2012 The Go Authors. All rights reserved.
```

Found in path(s):

\* /opt/cola/permits/1662035349\_1692956280.9049976/0/addr2line-zip/addr2line/main.go

# 1.473 cmd/fix (devel)

## 1.473.1 Available under license :

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Found in path(s):

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/buildtag.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/buildtag\_test.go

No license file was found, but licenses were detected in source scan.

// Copyright 2016 The Go Authors. All rights reserved.

Found in path(s):

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/context.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/context\_test.go

No license file was found, but licenses were detected in source scan.

// Copyright 2015 The Go Authors. All rights reserved.

Found in path(s):

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/gotypes.go

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// Copyright 2011 The Go Authors. All rights reserved.

Found in path(s):

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/main\_test.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/doc.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/fix.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/main.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/import\_test.go

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/typecheck.go

No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/egltype.go

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Found in path(s):

- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/gotypes\_test.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/printerconfig.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/netipv6zone\_test.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/netipv6zone.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/printerconfig\_test.go

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Found in path(s):

- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/egltype\_test.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/cftype\_test.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/cftype.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/jnitype\_test.go
- \* /opt/cola/permits/1662035354\_1692956376.389463/0/fix-zip/fix/jnitype.go

## 1.474 cmd/dist (devel)

### 1.474.1 Available under license :

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Found in path(s):

- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/util\_gc.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/test.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/sys\_default.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/sys\_windows.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/vfp\_arm.s
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/buildtool.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/util\_gccgo.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/vfp\_default.s

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Found in path(s):

- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/buildruntime.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/buildgo.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/main.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/util.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/imports.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/build.go

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Found in path(s):

- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/buildtag.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/exec.go
- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/buildtag\_test.go

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Found in path(s):

- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/test\_linux.go

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Found in path(s):

- \* /opt/cola/permits/1662035355\_1692956443.2305462/0/dist-zip/dist/doc.go

## 1.475 cmd/trace (devel)

### 1.475.1 Available under license :

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Found in path(s):

- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/trace\_test.go

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Found in path(s):

- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/trace\_unix\_test.go
- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/mmu.go
- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/doc.go

No license file was found, but licenses were detected in source scan.

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Found in path(s):

- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/goroutines.go
- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/main.go
- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/trace.go
- \* /opt/cola/permits/1662035304\_1692956480.096531/0/trace-180-zip/trace/pprof.go

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/\*\*

```
* @license
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* Code distributed by Google as part of the polymer project is also
* subject to an additional IP rights grant found at http://polymer.github.io/PATENTS.txt
*/
```

Found in path(s):

```
* /opt/cola/permits/1662035304_1692956480.096531/0/trace-180-zip/trace/static/webcomponents.min.js
```

No license file was found, but licenses were detected in source scan.

```
// Copyright 2018 The Go Authors. All rights reserved.
```

Found in path(s):

```
* /opt/cola/permits/1662035304_1692956480.096531/0/trace-180-zip/trace/annotations.go
```

```
* /opt/cola/permits/1662035304_1692956480.096531/0/trace-180-zip/trace/annotations_test.go
```

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```
// Copyright 2015 The Chromium Authors. All rights reserved.
```

Found in path(s):

```
* /opt/cola/permits/1662035304_1692956480.096531/0/trace-180-zip/trace/static/trace_viewer_full.html
```

No license file was found, but licenses were detected in source scan.

```
## Resources for Go's trace viewer
```

Go execution trace UI (`go tool trace``) embeds

Chrome's trace viewer (Catapult) following the

[instructions](

<https://chromium.googlesource.com/catapult/+/refs/heads/master/tracing/docs/embedding-trace-viewer.md>). This directory contains

the helper files to embed Chrome's trace viewer.

The current resources were generated/copied from

[`Catapult@9508452e18f130c98499cb4c4f1e1efaedee8962``](

<https://chromium.googlesource.com/catapult/+/9508452e18f130c98499cb4c4f1e1efaedee8962>).

```
### Updating `trace_viewer_full.html`
```

The file was generated by catapult's `vulcanize_trace_viewer`` command.

```
...
```

```
$ git clone https://chromium.googlesource.com/catapult
```

```
$ cd catapult
```

```
$ ./tracing/bin/vulcanize_trace_viewer --config=full
```

```
$ cp tracing/bin/trace_viewer_full.html $GOROOT/src/cmd/trace/static/trace_viewer_full.html
```



...

We are supposed to use --config=lean (produces smaller html),  
but it is broken  
at the moment:  
<https://github.com/catapult-project/catapult/issues/2247>

### Updating `webcomponents.min.js`

`webcomponents.min.js` is necessary to let the trace viewer page  
to import the `trace\_viewer\_full.html`.  
This is copied from the catapult repo.

...

```
$ cp third_party/polymer/components/webcomponentsjs/webcomponents.min.js  
$GOROOT/src/cmd/trace/static/webcomponents.min.js
```

...

## Licenses

The license for trace-viewer is as follows:

```
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```

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The

license for webcomponents.min.js is as follows:

```
/**
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 * The complete set of contributors may be found at http://polymer.github.io/CONTRIBUTORS.txt
 * Code distributed by Google as part of the polymer project is also
 * subject to an additional IP rights grant found at http://polymer.github.io/PATENTS.txt
 */
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//
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```

Found in path(s):

```
* /opt/cola/permits/1662035304_1692956480.096531/0/trace-180-zip/trace/static/README.md
```

# 1.476 cmd/asm (devel)

## 1.476.1 Available under license :

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Found in path(s):

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/riscv64.go

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/buildtagerror.s

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Found in path(s):

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/main.go

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/asm.go

No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/arm64error.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/386enc.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/line\_test.go

No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/s390x.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/amd64error.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/s390x.go

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/mips.s

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Found in path(s):

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/loong64enc1.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/loong64enc3.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/loong64.go

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/loong64enc2.s

\* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/loong64.s

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Found in path(s):

- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/amd64dynlinkerror.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/riscv64error.s

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Found in path(s):

- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/mips64.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/ppc64.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/parse.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/lex.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/flags/flags.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/stack.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/slice.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/endoend\_test.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/doc.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/expr\_test.go
- \*
- /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/lex\_test.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/ppc64.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/arm.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/amd64.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/tokenizer.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/operand\_test.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/lex/input.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/arch.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/arm.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/arm64.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/pseudo\_test.go
- \*
- /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/mips.go
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/arch/arm64.go

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Found in path(s):

- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/armv6.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/amd64enc\_extra.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/arm64enc.s
- \* /opt/cola/permits/1662035325\_1692956307.8639967/0/asm-zip/asm/internal/asm/testdata/armerror.s

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- \* /opt/cola/permits/1662035309\_1692956362.2105646/0/cover-zip/cover/cover\_test.go
- \* /opt/cola/permits/1662035309\_1692956362.2105646/0/cover-zip/cover/testdata/main.go
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- \* /opt/cola/permits/1662035305\_1692956322.6419218/0/buildid-zip/buildid/buildid.go

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## 1.480 cmd/go (devel)

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## 1.481 cmd/cgo (devel)

### 1.481.1 Available under license :

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- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/out.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/util.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/ast.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/main.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/doc.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/gcc.go

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- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/godefs.go

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Found in path(s):

- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/ast\_go118.go
- \* /opt/cola/permits/1662035350\_1692956352.3659744/0/cgo-zip/cgo/ast\_go1.go

# 1.482 cmd/nm (devel)

## 1.482.1 Available under license :

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035288_1692956396.3571904/0/nm-zip/nm/nm_cgo_test.go
```

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035288_1692956396.3571904/0/nm-zip/nm/nm_test.go
```

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```
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```

Found in path(s):

```
* /opt/cola/permits/1662035288_1692956396.3571904/0/nm-zip/nm/doc.go
```

```
* /opt/cola/permits/1662035288_1692956396.3571904/0/nm-zip/nm/nm.go
```

# 1.483 cmd/compile (devel)

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```
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```

```
// Use of this source code is governed by a BSD-style
```

```
// license that can be found in the LICENSE file.
```

```
// Optimizations TODO:
```

```
// * Use SLTI and SLTIU for comparisons to constants, instead of SLT/SLTU with constants in registers
```

```
// * Use the zero register instead of moving 0 into a register.
```

```
// * Add rules to avoid generating a temp bool value for (If (SLT[U] ...) ...).
```

```
// * Arrange for non-trivial Zero and Move lowerings to use aligned loads and stores.
```

```
// * Avoid using Neq32 for writeBarrier.enabled checks.
```

```
// Lowering arithmetic
```

```
(Add64 ...) => (ADD ...)
```

```
(AddPtr ...) => (ADD ...)
```

```
(Add32 ...) => (ADD ...)
```

```
(Add16 ...) => (ADD ...)
```

```
(Add8 ...) => (ADD ...)
```

(Add32F ...) => (FADDS ...)

(Add64F ...) => (FADDD ...)

(Sub64 ...) => (SUB ...)

(SubPtr ...) => (SUB ...)

(Sub32 ...) => (SUB ...)

(Sub16 ...) => (SUB ...)

(Sub8 ...) => (SUB ...)

(Sub32F ...) => (FSUBS ...)

(Sub64F  
...) => (FSUBD ...)

(Mul64 ...) => (MUL ...)

(Mul64uhilo ...) => (LoweredMuluhilo ...)

(Mul64uover ...) => (LoweredMuluover ...)

(Mul32 ...) => (MULW ...)

(Mul16 x y) => (MULW (SignExt16to32 x) (SignExt16to32 y))

(Mul8 x y) => (MULW (SignExt8to32 x) (SignExt8to32 y))

(Mul32F ...) => (FMULS ...)

(Mul64F ...) => (FMULD ...)

(Div32F ...) => (FDIVS ...)

(Div64F ...) => (FDIVD ...)

(Div64 x y [false]) => (DIV x y)

(Div64u ...) => (DIVU ...)

(Div32 x y [false]) => (DIVW x y)

(Div32u ...) => (DIVUW ...)

(Div16 x y [false]) => (DIVW (SignExt16to32 x) (SignExt16to32 y))

(Div16u x y) => (DIVUW (ZeroExt16to32 x) (ZeroExt16to32 y))

(Div8 x y) => (DIVW (SignExt8to32 x) (SignExt8to32 y))

(Div8u x y) => (DIVUW (ZeroExt8to32 x) (ZeroExt8to32 y))

(Hmul64 ...) => (MULH ...)

(Hmul64u ...) => (MULHU ...)

(Hmul32 x y) => (SRAI [32] (MUL (SignExt32to64 x) (SignExt32to64 y)))

(Hmul32u x y) => (SRLI [32] (MUL (ZeroExt32to64 x) (ZeroExt32to64 y)))

// (x + y) / 2 => (x / 2) + (y /

2) + (x & y & 1)

(Avg64u <t> x y) => (ADD (ADD <t> (SRLI <t> [1] x) (SRLI <t> [1] y)) (ANDI <t> [1] (AND <t> x y)))

(Mod64 x y [false]) => (REM x y)

(Mod64u ...) => (REMU ...)

(Mod32 x y [false]) => (REMW x y)

(Mod32u ...) => (REMUW ...)

(Mod16 x y [false]) => (REMW (SignExt16to32 x) (SignExt16to32 y))

(Mod16u x y) => (REMUW (ZeroExt16to32 x) (ZeroExt16to32 y))



(Mod8 x y) => (REMW (SignExt8to32 x) (SignExt8to32 y))  
(Mod8u x y) => (REMUW (ZeroExt8to32 x) (ZeroExt8to32 y))

(And64 ...) => (AND ...)  
(And32 ...) => (AND ...)  
(And16 ...) => (AND ...)  
(And8 ...) => (AND ...)

(Or64 ...) => (OR ...)  
(Or32 ...) => (OR ...)  
(Or16 ...) => (OR ...)  
(Or8 ...) => (OR ...)

(Xor64 ...) => (XOR ...)  
(Xor32 ...) => (XOR ...)  
(Xor16 ...) => (XOR ...)  
(Xor8 ...) => (XOR ...)

(Neg64 ...) => (NEG ...)  
(Neg32 ...) => (NEG ...)  
(Neg16 ...) => (NEG ...)  
(Neg8 ...) => (NEG ...)  
(Neg32F ...) => (FNEGS ...)  
(Neg64F ...) => (FNEGD ...)

(Com64 ...) => (NOT ...)  
(Com32 ...) => (NOT ...)  
(Com16  
...) => (NOT ...)  
(Com8 ...) => (NOT ...)

(Sqrt ...) => (FSQRTD ...)  
(Sqrt32 ...) => (FSQRTS ...)

(Copysign ...) => (FSGNJD ...)

(Abs ...) => (FABSD ...)

(FMA ...) => (FMADDD ...)

// Sign and zero extension.

(SignExt8to16 ...) => (MOVBreg ...)  
(SignExt8to32 ...) => (MOVBreg ...)  
(SignExt8to64 ...) => (MOVBreg ...)  
(SignExt16to32 ...) => (MOVHreg ...)  
(SignExt16to64 ...) => (MOVHreg ...)  
(SignExt32to64 ...) => (MOVWreg ...)

```

(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt8to64 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)
(ZeroExt16to64 ...) => (MOVHUreg ...)
(ZeroExt32to64 ...) => (MOVWUreg ...)

(Cvt32to32F ...) => (FCVTSW ...)
(Cvt32to64F ...) => (FCVTDW ...)
(Cvt64to32F ...) => (FCVTSL ...)
(Cvt64to64F ...) => (FCVTDL ...)

(Cvt32Fto32 ...) => (FCVTWS ...)
(Cvt32Fto64 ...) => (FCVTLS ...)
(Cvt64Fto32 ...) => (FCVTWD ...)
(Cvt64Fto64 ...) => (FCVTLD ...)

(Cvt32Fto64F ...) => (FCVTDS ...)
(Cvt64Fto32F ...) => (FCVTSD
...)

(CvtBoolToUint8 ...) => (Copy ...)

(Round32F ...) => (Copy ...)
(Round64F ...) => (Copy ...)

// From genericOps.go:
// "0 if arg0 == 0, -1 if arg0 > 0, undef if arg0 < 0"
//
// Like other arches, we compute  $\sim((x-1) \gg 63)$ , with arithmetic right shift.
// For positive x, bit 63 of x-1 is always 0, so the result is -1.
// For zero x, bit 63 of x-1 is 1, so the result is 0.
//
(Slicemask <t> x) => (NOT (SRAI <t> [63] (ADDI <t> [-1] x)))

// Truncations
// We ignore the unused high parts of registers, so truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8 ...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)
(Trunc64to8 ...) => (Copy ...)
(Trunc64to16 ...) => (Copy ...)
(Trunc64to32 ...) => (Copy ...)

// Shifts

// SLL only considers the bottom 6 bits of y. If y > 64, the result should

```

```

// always be 0.
//
// Breaking down the operation:
//
// (SLL x y) generates x << (y & 63).
//
// If y < 64, this is the value we want. Otherwise, we want zero.
//
// So, we AND with
-1 * uint64(y < 64), which is 0xffff... if y < 64 and 0 otherwise.
(Lsh8x8 <t> x y) => (AND (SLL <t> x y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Lsh8x16 <t> x y) => (AND (SLL <t> x y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Lsh8x32 <t> x y) => (AND (SLL <t> x y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Lsh8x64 <t> x y) => (AND (SLL <t> x y) (Neg8 <t> (SLTIU <t> [64] y)))
(Lsh16x8 <t> x y) => (AND (SLL <t> x y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Lsh16x16 <t> x y) => (AND (SLL <t> x y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Lsh16x32 <t> x y) => (AND (SLL <t> x y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Lsh16x64 <t> x y) => (AND (SLL <t> x y) (Neg16 <t> (SLTIU <t> [64] y)))
(Lsh32x8 <t> x y) => (AND (SLL <t> x y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Lsh32x16 <t> x y) => (AND (SLL <t> x y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Lsh32x32 <t> x y) => (AND (SLL <t> x y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt32to64
y))))
(Lsh32x64 <t> x y) => (AND (SLL <t> x y) (Neg32 <t> (SLTIU <t> [64] y)))
(Lsh64x8 <t> x y) => (AND (SLL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Lsh64x16 <t> x y) => (AND (SLL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Lsh64x32 <t> x y) => (AND (SLL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Lsh64x64 <t> x y) => (AND (SLL <t> x y) (Neg64 <t> (SLTIU <t> [64] y)))

// SRL only considers the bottom 6 bits of y. If y > 64, the result should
// always be 0. See Lsh above for a detailed description.
(Rsh8Ux8 <t> x y) => (AND (SRL <t> (ZeroExt8to64 x) y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Rsh8Ux16 <t> x y) => (AND (SRL <t> (ZeroExt8to64 x) y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Rsh8Ux32 <t> x y) => (AND (SRL <t> (ZeroExt8to64 x) y) (Neg8 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Rsh8Ux64 <t> x y) => (AND (SRL <t> (ZeroExt8to64 x) y) (Neg8 <t> (SLTIU <t> [64] y)))
(Rsh16Ux8 <t> x y) => (AND
(SRL <t> (ZeroExt16to64 x) y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Rsh16Ux16 <t> x y) => (AND (SRL <t> (ZeroExt16to64 x) y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Rsh16Ux32 <t> x y) => (AND (SRL <t> (ZeroExt16to64 x) y) (Neg16 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Rsh16Ux64 <t> x y) => (AND (SRL <t> (ZeroExt16to64 x) y) (Neg16 <t> (SLTIU <t> [64] y)))
(Rsh32Ux8 <t> x y) => (AND (SRL <t> (ZeroExt32to64 x) y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Rsh32Ux16 <t> x y) => (AND (SRL <t> (ZeroExt32to64 x) y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Rsh32Ux32 <t> x y) => (AND (SRL <t> (ZeroExt32to64 x) y) (Neg32 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Rsh32Ux64 <t> x y) => (AND (SRL <t> (ZeroExt32to64 x) y) (Neg32 <t> (SLTIU <t> [64] y)))
(Rsh64Ux8 <t> x y) => (AND (SRL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt8to64 y))))
(Rsh64Ux16 <t> x y) => (AND (SRL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt16to64 y))))
(Rsh64Ux32
<t> x y) => (AND (SRL <t> x y) (Neg64 <t> (SLTIU <t> [64] (ZeroExt32to64 y))))
(Rsh64Ux64 <t> x y) => (AND (SRL <t> x y) (Neg64 <t> (SLTIU <t> [64] y)))

```

```

// SRA only considers the bottom 6 bits of y. If y > 64, the result should
// be either 0 or -1 based on the sign bit.
//
// We implement this by performing the max shift (-1) if y >= 64.
//
// We OR (uint64(y < 64) - 1) into y before passing it to SRA. This leaves
// us with -1 (0xffff...) if y >= 64.
//
// We don't need to sign-extend the OR result, as it will be at minimum 8 bits,
// more than the 6 bits SRA cares about.
(Rsh8x8 <t> x y) => (SRA <t> (SignExt8to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt8to64 y))))))
(Rsh8x16 <t> x y) => (SRA <t> (SignExt8to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt16to64 y))))))
(Rsh8x32 <t> x y) => (SRA <t> (SignExt8to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt32to64 y))))))
(Rsh8x64
  <t> x y) => (SRA <t> (SignExt8to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64] y))))
(Rsh16x8 <t> x y) => (SRA <t> (SignExt16to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt8to64 y))))))
(Rsh16x16 <t> x y) => (SRA <t> (SignExt16to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt16to64 y))))))
(Rsh16x32 <t> x y) => (SRA <t> (SignExt16to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt32to64 y))))))
(Rsh16x64 <t> x y) => (SRA <t> (SignExt16to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
y))))
(Rsh32x8 <t> x y) => (SRA <t> (SignExt32to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt8to64 y))))))
(Rsh32x16 <t> x y) => (SRA <t> (SignExt32to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt16to64 y))))))
(Rsh32x32 <t> x y) => (SRA <t> (SignExt32to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt32to64 y))))))
(Rsh32x64
  <t> x y) => (SRA <t> (SignExt32to64 x) (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64] y))))
(Rsh64x8 <t> x y) => (SRA <t> x (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt8to64 y))))))
(Rsh64x16 <t> x y) => (SRA <t> x (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt16to64 y))))))
(Rsh64x32 <t> x y) => (SRA <t> x (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64]
(ZeroExt32to64 y))))))
(Rsh64x64 <t> x y) => (SRA <t> x (OR <y.Type> y (ADDI <y.Type> [-1] (SLTIU <y.Type> [64] y))))

// Rotates.
(RotateLeft8 <t> x (MOVDconst [c])) => (Or8 (Lsh8x64 <t> x (MOVDconst [c&7])) (Rsh8Ux64 <t> x
(MOVDconst [-c&7])))
(RotateLeft16 <t> x (MOVDconst [c])) => (Or16 (Lsh16x64 <t> x (MOVDconst [c&15])) (Rsh16Ux64 <t> x
(MOVDconst [-c&15])))

```

```

(RotateLeft32 <t> x (MOVDconst [c])) => (Or32 (Lsh32x64 <t> x (MOVDconst [c&31])) (Rsh32Ux64 <t> x
(MOVDconst [-c&31])))
(RotateLeft64 <t> x (MOVDconst [c]))
=> (Or64 (Lsh64x64 <t> x (MOVDconst [c&63])) (Rsh64Ux64 <t> x (MOVDconst [-c&63])))

(Less64 ...) => (SLT ...)
(Less32 x y) => (SLT (SignExt32to64 x) (SignExt32to64 y))
(Less16 x y) => (SLT (SignExt16to64 x) (SignExt16to64 y))
(Less8 x y) => (SLT (SignExt8to64 x) (SignExt8to64 y))
(Less64U ...) => (SLTU ...)
(Less32U x y) => (SLTU (ZeroExt32to64 x) (ZeroExt32to64 y))
(Less16U x y) => (SLTU (ZeroExt16to64 x) (ZeroExt16to64 y))
(Less8U x y) => (SLTU (ZeroExt8to64 x) (ZeroExt8to64 y))
(Less64F ...) => (FLTD ...)
(Less32F ...) => (FLTS ...)

// Convert x <= y to !(y > x).
(Leq64 x y) => (Not (Less64 y x))
(Leq32 x y) => (Not (Less32 y x))
(Leq16 x y) => (Not (Less16 y x))
(Leq8 x y) => (Not (Less8 y x))
(Leq64U x y) => (Not (Less64U y x))
(Leq32U x y) => (Not (Less32U y x))
(Leq16U x y) => (Not (Less16U y x))
(Leq8U x y) => (Not (Less8U y x))
(Leq64F ...) => (FLED ...)
(Leq32F ...) => (FLES ...)

(EqPtr x y) => (SEQZ (SUB <typ.Uintptr> x y))
(Eq64 x y) => (SEQZ
(SUB <x.Type> x y))
(Eq32 x y) => (SEQZ (SUB <x.Type> (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Eq16 x y) => (SEQZ (SUB <x.Type> (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Eq8 x y) => (SEQZ (SUB <x.Type> (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Eq64F ...) => (FEQD ...)
(Eq32F ...) => (FEQS ...)

(NeqPtr x y) => (SNEZ (SUB <typ.Uintptr> x y))
(Neq64 x y) => (SNEZ (SUB <x.Type> x y))
(Neq32 x y) => (SNEZ (SUB <x.Type> (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Neq16 x y) => (SNEZ (SUB <x.Type> (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Neq8 x y) => (SNEZ (SUB <x.Type> (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Neq64F ...) => (FNED ...)
(Neq32F ...) => (FNES ...)

// Loads
(Load <t> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)
(Load <t> ptr mem) && ( is8BitInt(t) && isSigned(t) ) => (MOVBlload ptr mem)

```

```

(Load <t> ptr mem) && ( is8BitInt(t) && !isSigned(t) ) => (MOVBUnload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && isSigned(t) ) => (MOVHload ptr mem)
(Load <t> ptr mem) &&
(is16BitInt(t) && !isSigned(t) ) => (MOVHUnload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && isSigned(t) ) => (MOVWload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && !isSigned(t) ) => (MOVWUnload ptr mem)
(Load <t> ptr mem) && (is64BitInt(t) || isPtr(t) ) => (MOVDload ptr mem)
(Load <t> ptr mem) && is32BitFloat(t) => (FMOVWload ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (FMOVDload ptr mem)

// Stores
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && !is64BitFloat(val.Type) => (MOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (FMOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (FMOVDstore ptr val mem)

// We need to fold MOVaddr into
the LD/MOVDstore ops so that the live variable analysis
// knows what variables are being read/written by the ops.
(MOVBUnload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVBUnload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVBload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVBload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVHUnload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVHUnload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVHload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVHload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVWUnload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVWUnload [off1+off2] {mergeSym(sym1,sym2)}
base mem)
(MOVWload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVWload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVDload [off1] {sym1} (MOVaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVDload [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOVBstore [off1] {sym1} (MOVaddr [off2] {sym2} base) val mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVBstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)
(MOVHstore [off1] {sym1} (MOVaddr [off2] {sym2} base) val mem) && is32Bit(int64(off1)+int64(off2)) &&

```

```

canMergeSym(sym1, sym2) =>
(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)
(MOVWstore [off1] {sym1} (MOVaddr [off2] {sym2} base) val mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVWstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)
(MOVDstore [off1] {sym1} (MOVaddr [off2] {sym2}
base) val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
(MOVDstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)
(MOVBstorezero [off1] {sym1} (MOVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVBstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHstorezero [off1] {sym1} (MOVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVHstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWstorezero [off1] {sym1} (MOVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVWstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDstorezero [off1] {sym1} (MOVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVDstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

(MOVBUload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVBUload [off1+int32(off2)] {sym}
base mem)
(MOVBload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVBload [off1+int32(off2)] {sym} base mem)
(MOVHUload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVHUload [off1+int32(off2)] {sym} base mem)
(MOVHload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVHload [off1+int32(off2)] {sym} base mem)
(MOVWUload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVWUload [off1+int32(off2)] {sym} base mem)
(MOVWload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVWload [off1+int32(off2)] {sym} base mem)
(MOVDload [off1] {sym} (ADDI [off2] base) mem) && is32Bit(int64(off1)+off2) =>
(MOVDload [off1+int32(off2)] {sym} base mem)

(MOVBstore [off1] {sym} (ADDI [off2] base) val mem) && is32Bit(int64(off1)+off2) =>
(MOVBstore [off1+int32(off2)] {sym} base val mem)
(MOVHstore [off1] {sym} (ADDI [off2] base) val mem) && is32Bit(int64(off1)+off2) =>
(MOVHstore
[off1+int32(off2)] {sym} base val mem)
(MOVWstore [off1] {sym} (ADDI [off2] base) val mem) && is32Bit(int64(off1)+off2) =>
(MOVWstore [off1+int32(off2)] {sym} base val mem)
(MOVDstore [off1] {sym} (ADDI [off2] base) val mem) && is32Bit(int64(off1)+off2) =>
(MOVDstore [off1+int32(off2)] {sym} base val mem)
(MOVBstorezero [off1] {sym} (ADDI [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBstorezero
[off1+int32(off2)] {sym} ptr mem)

```

```
(MOVHstorezero [off1] {sym} (ADDI [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVHstorezero
[off1+int32(off2)] {sym} ptr mem)
(MOVWstorezero [off1] {sym} (ADDI [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVWstorezero
[off1+int32(off2)] {sym} ptr mem)
(MOVDstorezero [off1] {sym} (ADDI [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVDstorezero
[off1+int32(off2)] {sym} ptr mem)
```

```
// Similarly, fold ADDI into MOVaddr to avoid confusing live variable analysis
```

```
// with OffPtr -> ADDI.
```

```
(ADDI [c] (MOVaddr [d] {s} x)) && is32Bit(c+int64(d))
=> (MOVaddr [int32(c)+d] {s} x)
```

```
// Small zeroing
```

```
(Zero [0] _ mem) => mem
```

```
(Zero [1] ptr mem) => (MOVBstore ptr (MOVDconst [0]) mem)
```

```
(Zero [2] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore ptr (MOVDconst [0]) mem)
```

```
(Zero [2] ptr mem) =>
```

```
(MOVBstore [1] ptr (MOVDconst [0])
```

```
(MOVBstore ptr (MOVDconst [0]) mem))
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore ptr (MOVDconst [0]) mem)
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [2] ptr (MOVDconst [0])
```

```
(MOVHstore ptr (MOVDconst [0]) mem))
```

```
(Zero [4] ptr mem) =>
```

```
(MOVBstore [3] ptr (MOVDconst [0])
```

```
(MOVBstore [2] ptr (MOVDconst [0])
```

```
(MOVBstore [1] ptr (MOVDconst [0])
```

```
(MOVBstore ptr (MOVDconst [0]) mem))))
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%8 == 0 =>
```

```
(MOVDstore ptr (MOVDconst [0]) mem)
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore [4] ptr (MOVDconst [0])
```

```
(MOVWstore ptr (MOVDconst [0]) mem))
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [6] ptr (MOVDconst
```

```
[0])
```

```
(MOVHstore [4] ptr (MOVDconst [0])
```

```
(MOVHstore [2] ptr (MOVDconst [0])
```

```
(MOVHstore ptr (MOVDconst [0]) mem))))
```

```
(Zero [3] ptr mem) =>
```

```
(MOVBstore [2] ptr (MOVDconst [0])
```

```
(MOVBstore [1] ptr (MOVDconst [0])
```

```
(MOVBstore ptr (MOVDconst [0]) mem))))
```

```
(Zero [6] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [4] ptr (MOVDconst [0])
```



```

(MOVHstore [2] ptr (MOVDconst [0])
 (MOVHstore ptr (MOVDconst [0] mem)))
(Zero [12] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8] ptr (MOVDconst [0])
 (MOVWstore [4] ptr (MOVDconst [0])
 (MOVWstore ptr (MOVDconst [0] mem)))
(Zero [16] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVDstore [8] ptr (MOVDconst [0])
 (MOVDstore ptr (MOVDconst [0] mem))
(Zero [24] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVDstore [16] ptr (MOVDconst [0])
 (MOVDstore [8] ptr (MOVDconst [0])
 (MOVDstore ptr (MOVDconst [0] mem)))
(Zero [32] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVDstore [24] ptr (MOVDconst [0])
 (MOVDstore [16] ptr (MOVDconst
 [0])
 (MOVDstore [8] ptr (MOVDconst [0])
 (MOVDstore ptr (MOVDconst [0] mem))))

// Medium 8-aligned zeroing uses a Duff's device
// 8 and 128 are magic constants, see runtime/mkduff.go
(Zero [s] {t} ptr mem)
&& s%8 == 0 && s <= 8*128
&& t.Alignment()%8 == 0 && !config.noDuffDevice =>
(DUFFZERO [8 * (128 - s/8)] ptr mem)

// Generic zeroing uses a loop
(Zero [s] {t} ptr mem) =>
(LoweredZero [t.Alignment()]
 ptr
 (ADD <ptr.Type> ptr (MOVDconst [s-moveSize(t.Alignment(), config)]))
 mem)

(Convert ...) => (MOVconvert ...)

// Checks
(IsNotNil ...) => (SNEZ ...)
(IsInBounds ...) => (Less64U ...)
(IsSliceInBounds ...) => (Leq64U ...)

// Trivial lowering
(NilCheck ...) => (LoweredNilCheck ...)
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

// Write barrier.

```

(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)  
(PanicBounds  
[kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)  
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// Small moves

(Move [0] \_ \_ mem) => mem  
(Move [1] dst src mem) => (MOVBstore dst (MOVBload src mem) mem)  
(Move [2] {t} dst src mem) && t.Alignment()%2 == 0 =>  
(MOVHstore dst (MOVHload src mem) mem)  
(Move [2] dst src mem) =>  
(MOVBstore [1] dst (MOVBload [1] src mem)  
(MOVBstore dst (MOVBload src mem) mem))  
(Move [4] {t} dst src mem) && t.Alignment()%4 == 0 =>  
(MOVWstore dst (MOVWload src mem) mem)  
(Move [4] {t} dst src mem) && t.Alignment()%2 == 0 =>  
(MOVHstore [2] dst (MOVHload [2] src mem)  
(MOVHstore dst (MOVHload src mem) mem))  
(Move [4] dst src mem) =>  
(MOVBstore [3] dst (MOVBload [3] src mem)  
(MOVBstore [2] dst (MOVBload [2] src mem)  
(MOVBstore [1] dst (MOVBload [1] src mem)  
(MOVBstore dst (MOVBload src mem) mem))))  
(Move [8] {t} dst src mem) && t.Alignment()%8 == 0 =>  
(MOVDstore dst  
(MOVDload src mem) mem)  
(Move [8] {t} dst src mem) && t.Alignment()%4 == 0 =>  
(MOVWstore [4] dst (MOVWload [4] src mem)  
(MOVWstore dst (MOVWload src mem) mem))  
(Move [8] {t} dst src mem) && t.Alignment()%2 == 0 =>  
(MOVHstore [6] dst (MOVHload [6] src mem)  
(MOVHstore [4] dst (MOVHload [4] src mem)  
(MOVHstore [2] dst (MOVHload [2] src mem)  
(MOVHstore dst (MOVHload src mem) mem))))  
(Move [3] dst src mem) =>  
(MOVBstore [2] dst (MOVBload [2] src mem)  
(MOVBstore [1] dst (MOVBload [1] src mem)  
(MOVBstore dst (MOVBload src mem) mem)))  
(Move [6] {t} dst src mem) && t.Alignment()%2 == 0 =>  
(MOVHstore [4] dst (MOVHload [4] src mem)  
(MOVHstore [2] dst (MOVHload [2] src mem)  
(MOVHstore dst (MOVHload src mem) mem)))  
(Move [12] {t} dst src mem) && t.Alignment()%4 == 0 =>  
(MOVWstore [8] dst (MOVWload [8] src mem)  
(MOVWstore [4] dst (MOVWload [4] src mem)

```

(MOVWstore dst (MOVWload src mem) mem)))
(Move [16] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVDstore [8] dst
(MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem))
(Move [24] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVDstore [16] dst (MOVDload [16] src mem)
(MOVDstore [8] dst (MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem)))
(Move [32] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVDstore [24] dst (MOVDload [24] src mem)
(MOVDstore [16] dst (MOVDload [16] src mem)
(MOVDstore [8] dst (MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem))))

// Medium 8-aligned move uses a Duff's device
// 16 and 128 are magic constants, see runtime/mkduff.go
(Move [s] {t} dst src mem)
&& s%8 == 0 && s <= 8*128 && t.Alignment()%8 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [16 * (128 - s/8)] dst src mem)

// Generic move uses a loop
(Move [s] {t} dst src mem) && (s <= 16 || logLargeCopy(v, s)) =>
(LoweredMove [t.Alignment()]
dst
src
(ADDI <src.Type> [s-moveSize(t.Alignment(), config)] src)
mem)

// Boolean ops; 0=false, 1=true
(AndB
...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (SEQZ (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not ...) => (SEQZ ...)

// Lowering pointer arithmetic
// TODO: Special handling for SP offsets, like ARM
(OffPtr [off] ptr:(SP)) && is32Bit(off) => (MOVaddr [int32(off)] ptr)
(OffPtr [off] ptr) && is32Bit(off) => (ADDI [off] ptr)
(OffPtr [off] ptr) => (ADD (MOVDconst [off]) ptr)

(Const8 [val]) => (MOVDconst [int64(val)])
(Const16 [val]) => (MOVDconst [int64(val)])
(Const32 [val]) => (MOVDconst [int64(val)])
(Const64 [val]) => (MOVDconst [int64(val)])

```

```

(Const32F [val]) => (FMVSX (MOVDconst [int64(math.Float32bits(val))]))
(Const64F [val]) => (FMVDX (MOVDconst [int64(math.Float64bits(val))]))
(ConstNil) => (MOVDconst [0])
(ConstBool [val]) => (MOVDconst [int64(b2i(val))])

(Addr {sym} base) => (MOVaddr {sym} [0] base)
(LocalAddr {sym} base _) => (MOVaddr {sym} base)

// Calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...)
=> (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// Atomic Ininsics
(AtomicLoad8 ...) => (LoweredAtomicLoad8 ...)
(AtomicLoad32 ...) => (LoweredAtomicLoad32 ...)
(AtomicLoad64 ...) => (LoweredAtomicLoad64 ...)
(AtomicLoadPtr ...) => (LoweredAtomicLoad64 ...)

(AtomicStore8 ...) => (LoweredAtomicStore8 ...)
(AtomicStore32 ...) => (LoweredAtomicStore32 ...)
(AtomicStore64 ...) => (LoweredAtomicStore64 ...)
(AtomicStorePtrNoWB ...) => (LoweredAtomicStore64 ...)

(AtomicAdd32 ...) => (LoweredAtomicAdd32 ...)
(AtomicAdd64 ...) => (LoweredAtomicAdd64 ...)

// AtomicAnd8(ptr,val) => LoweredAtomicAnd32(ptr&^3, ^(uint8(val) ^ 0xff) << ((ptr & 3) * 8))
(AtomicAnd8 ptr val mem) =>
(LoweredAtomicAnd32 (ANDI <typ.Uintptr> [^3] ptr)
(NOT <typ.UInt32> (SLL <typ.UInt32> (XORI <typ.UInt32> [0xff] (ZeroExt8to32 val))
(SLLI <typ.UInt64> [3] (ANDI <typ.UInt64> [3] ptr)))) mem)

(AtomicAnd32 ...) => (LoweredAtomicAnd32 ...)

(AtomicCompareAndSwap32 ptr old new mem) =>
(LoweredAtomicCas32 ptr (SignExt32to64 old) new mem)
(AtomicCompareAndSwap64 ...) => (LoweredAtomicCas64 ...)

(AtomicExchange32 ...) => (LoweredAtomicExchange32 ...)
(AtomicExchange64 ...) => (LoweredAtomicExchange64 ...)

// AtomicOr8(ptr,val) => LoweredAtomicOr32(ptr&^3, uint32(val)<<((ptr&3)*8))
(AtomicOr8 ptr val mem) =>
(LoweredAtomicOr32 (ANDI <typ.Uintptr> [^3] ptr)
(SLL <typ.UInt32> (ZeroExt8to32 val)

```

```

(SLLI <typ.UInt64> [3] (ANDI <typ.UInt64> [3] ptr))) mem)

(AtomicOr32 ...) => (LoweredAtomicOr32 ...)

// Conditional branches
(If cond yes no) => (BNEZ (MOVBUreg <typ.UInt64> cond) yes no)

// Optimizations

// Absorb SEQZ/SNEZ into branch.
(BEQZ (SEQZ x) yes no) => (BNEZ x yes no)
(BEQZ (SNEZ x) yes no) => (BEQZ x yes no)
(BNEZ (SEQZ x) yes no) => (BEQZ x yes no)
(BNEZ (SNEZ x) yes no) => (BNEZ x yes no)

// Absorb NEG into branch when possible.
(BEQZ x:(NEG y) yes no) && x.Uses == 1 => (BEQZ y yes no)
(BNEZ x:(NEG y) yes no) && x.Uses == 1 => (BNEZ y yes no)

// Convert
BEQZ/BNEZ into more optimal branch conditions.
(BEQZ (SUB x y) yes no) => (BEQ x y yes no)
(BNEZ (SUB x y) yes no) => (BNE x y yes no)
(BEQZ (SLT x y) yes no) => (BGE x y yes no)
(BNEZ (SLT x y) yes no) => (BLT x y yes no)
(BEQZ (SLTU x y) yes no) => (BGEU x y yes no)
(BNEZ (SLTU x y) yes no) => (BLTU x y yes no)

// Convert branch with zero to more optimal branch zero.
(BEQ (MOVDconst [0]) cond yes no) => (BEQZ cond yes no)
(BEQ cond (MOVDconst [0]) yes no) => (BEQZ cond yes no)
(BNE (MOVDconst [0]) cond yes no) => (BNEZ cond yes no)
(BNE cond (MOVDconst [0]) yes no) => (BNEZ cond yes no)
(BLT (MOVDconst [0]) cond yes no) => (BGTZ cond yes no)
(BLT cond (MOVDconst [0]) yes no) => (BLTZ cond yes no)
(BGE (MOVDconst [0]) cond yes no) => (BLEZ cond yes no)
(BGE cond (MOVDconst [0]) yes no) => (BGEZ cond yes no)

// Store zero
(MOVBstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVBstorezero [off] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVHstorezero [off]
{sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVWstorezero [off] {sym} ptr mem)
(MOVDstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVDstorezero [off] {sym} ptr mem)

// Boolean ops are already extended.
(MOVBUreg x:((SEQZ|SNEZ) _)) => x
(MOVBUreg x:((SLT|SLTU) _ _)) => x

```

```
// Avoid sign/zero extension for consts.
(MOVBreg (MOVDconst [c])) => (MOVDconst [int64(int8(c))])
(MOVHreg (MOVDconst [c])) => (MOVDconst [int64(int16(c))])
(MOVWreg (MOVDconst [c])) => (MOVDconst [int64(int32(c))])
(MOVBUreg (MOVDconst [c])) => (MOVDconst [int64(uint8(c))])
(MOVHUreg (MOVDconst [c])) => (MOVDconst [int64(uint16(c))])
(MOVWUreg (MOVDconst [c])) => (MOVDconst [int64(uint32(c))])
```

```
// Avoid sign/zero extension after properly typed load.
```

```
(MOVBreg x:(MOVBload __)) => (MOVDreg x)
(MOVHreg x:(MOVBload __)) => (MOVDreg x)
(MOVHreg x:(MOVBload __)) => (MOVDreg x)
(MOVHreg x:(MOVBUload __)) => (MOVDreg x)
(MOVHreg x:(MOVHload __)) => (MOVDreg x)
(MOVWreg x:(MOVBload __)) => (MOVDreg x)
(MOVWreg x:(MOVBUload __
__)) => (MOVDreg x)
(MOVWreg x:(MOVHload __)) => (MOVDreg x)
(MOVWreg x:(MOVHload __)) => (MOVDreg x)
(MOVWreg x:(MOVHload __)) => (MOVDreg x)
(MOVBUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVBUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVHUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVHUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVWUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVWUreg x:(MOVBUload __)) => (MOVDreg x)
(MOVWUreg x:(MOVHUload __)) => (MOVDreg x)
(MOVWUreg x:(MOVHUload __)) => (MOVDreg x)
```

```
// Fold double extensions.
```

```
(MOVBreg x:(MOVBreg __)) => (MOVDreg x)
(MOVHreg x:(MOVBreg __)) => (MOVDreg x)
(MOVHreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVHreg x:(MOVHreg __)) => (MOVDreg x)
(MOVWreg x:(MOVBreg __)) => (MOVDreg x)
(MOVWreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVWreg x:(MOVHreg __)) => (MOVDreg x)
(MOVWreg x:(MOVWreg __)) => (MOVDreg x)
(MOVBUreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVBUreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVHUreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVHUreg x:(MOVHUreg __)) => (MOVDreg x)
(MOVWUreg x:(MOVBUreg __)) => (MOVDreg x)
(MOVWUreg x:(MOVHUreg __)) => (MOVDreg x)
(MOVWUreg x:(MOVWUreg __))
=> (MOVDreg x)
```

```
// Do not extend before store.
```

```
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
```

```

(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWUreg x) mem) =>
(MOVWstore [off] {sym} ptr x mem)

// Replace extend after load with alternate load where possible.
(MOVBreg <t> x:(MOVBUload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBUload
<t> [off] {sym} ptr mem)
(MOVHreg <t> x:(MOVHULoad [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVHload <t> [off] {sym} ptr mem)
(MOVWreg <t> x:(MOVWUload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVWload <t> [off] {sym} ptr mem)
(MOVBUreg <t> x:(MOVBUload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVBUload <t> [off] {sym} ptr mem)
(MOVHUreg <t> x:(MOVHload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVHULoad <t> [off] {sym} ptr mem)
(MOVWUreg <t> x:(MOVWload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVWUload <t> [off] {sym} ptr mem)

// If a register move has only 1 use, just use the same register without emitting instruction
// MOVnop does not emit an instruction, only for
ensuring the type.
(MOVDreg x) && x.Uses == 1 => (MOVDnop x)

// TODO: we should be able to get rid of MOVDnop all together.
// But for now, this is enough to get rid of lots of them.
(MOVDnop (MOVDconst [c])) => (MOVDconst [c])

// Fold constant into immediate instructions where possible.
(ADD (MOVDconst [val]) x) && is32Bit(val) => (ADDI [val] x)
(AND (MOVDconst [val]) x) && is32Bit(val) => (ANDI [val] x)
(OR (MOVDconst [val]) x) && is32Bit(val) => (ORI [val] x)
(XOR (MOVDconst [val]) x) && is32Bit(val) => (XORI [val] x)
(SLL x (MOVDconst [val])) => (SLLI [int64(val&63)] x)
(SRL x (MOVDconst [val])) => (SRLI [int64(val&63)] x)
(SRA x (MOVDconst [val])) => (SRAI [int64(val&63)] x)

// Convert subtraction of a const into ADDI with negative immediate, where possible.
(SUB x (MOVDconst [val])) && is32Bit(-val) => (ADDI [-val] x)

// Subtraction of zero.
(SUB x (MOVDconst [0])) => x

```

```

(SUBW x (MOVDconst [0])) => (ADDIW [0] x)

// Subtraction from zero.
(SUB (MOVDconst [0]) x) => (NEG x)
(SUBW
(MOVDconst [0]) x) => (NEGW x)

// Addition of zero or two constants.
(ADDI [0] x) => x
(ADDI [x] (MOVDconst [y])) && is32Bit(x + y) => (MOVDconst [x + y])

// ANDI with all zeros, all ones or two constants.
(ANDI [0] x) => (MOVDconst [0])
(ANDI [-1] x) => x
(ANDI [x] (MOVDconst [y])) => (MOVDconst [x & y])

// ORI with all zeroes, all ones or two constants.
(ORI [0] x) => x
(ORI [-1] x) => (MOVDconst [-1])
(ORI [x] (MOVDconst [y])) => (MOVDconst [x | y])

// Negation of a constant.
(NEG (MOVDconst [x])) => (MOVDconst [-x])
(NEGW (MOVDconst [x])) => (MOVDconst [int64(int32(-x))])

// Shift of a constant.
(SLLI [x] (MOVDconst [y])) && is32Bit(y << uint32(x)) => (MOVDconst [y << uint32(x)])
(SRLI [x] (MOVDconst [y])) => (MOVDconst [int64(uint64(y) >> uint32(x))])
(SRAI [x] (MOVDconst [y])) => (MOVDconst [int64(y) >> uint32(x)])

// SLTI/SLTIU with constants.
(SLTI [x] (MOVDconst [y])) => (MOVDconst [b2i(int64(y) < int64(x))])
(SLTIU [x] (MOVDconst [y])) => (MOVDconst [b2i(uint64(y)
< uint64(x))])

// Merge negation into fused multiply-add and multiply-subtract.
//
// Key:
//
// [+ -](x * y) [+ -] z.
//   _N   A S
//       D U
//       D B
//
// Note: multiplication commutativity handled by rule generator.
(F(MADD|NMADD|MSUB|NMSUB)D neg:(FNEGD x) y z) && neg.Uses == 1 =>
(F(NMADD|MADD|NMSUB|MSUB)D x y z)
(F(MADD|NMADD|MSUB|NMSUB)D x y neg:(FNEGD z)) && neg.Uses == 1 =>

```



(F(MSUB|NMSUB|MADD|NMADD)D x y z)

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/RISCV64.rules  
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Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/export.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/func.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/staticinit/sched.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ir/type.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/base/base.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/sort.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssagen/nowb.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ir/node.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/walk/walk.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/doc.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssagen/abi.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/walk/convert.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/universe.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/objw/objw.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/walk/select.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/goversion.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/universe.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/x86/ggen.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/mips64/galign.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/noder/import.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/subr.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/dcl.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/x86/galign.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/walk/stmt.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/target.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/amd64/ggen.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/arm/ggen.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/typecheck.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/walk/builtin.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ppc64/ggen.go

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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/builtin/runtime.go
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/walk/switch.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/staticdata/data.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/mips64/ggen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/export.go
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/pkginit/init.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssagen/arch.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/expr.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/const.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/base/flag.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ppc64/galign.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/fmt.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/walk/complit.go
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/ir.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/walk/assign.go
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Found in path(s):

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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixedbugs/issue50755.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/named_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue49541.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue50912.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue50929.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue45114.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue51048.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue43109.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/abt/avlint32.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/test/race.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue51145.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/syntax/testdata/chans.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/manual.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue52915.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue50779.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue51509.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/fixebugs/issue51578.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/pkginit/initAsanGlobals.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/abt/avlint32\_test.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue51232.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/LOONG64Ops.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/loong64/galign.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue51437.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue43056.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/structuraltypes\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue50965.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue42881.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue50833.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue50450.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/spec/comparisons.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixebugs/issue50281.go  
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Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/expr0.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/decls2/decls2b.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/expr3.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/predicates.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/expr2.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/decls2/decls2a.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/conversions.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/const1.go  
*  
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/walk/race.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/compliterals.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/typestring_test.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/builtins.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/expr.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/expr1.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/errors.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/stmt.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/syntax/walk.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/const0.go  
*  
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/operand.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/decls1.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/conversions0.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/decls3.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/api.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/stmt0.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/walk/order.go  
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/builtins0.go  
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```

<!--

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-->
```

## ## Introduction to the Go compiler's SSA backend

This package contains the compiler's Static Single Assignment form component. If you're not familiar with SSA, its [Wikipedia article]([https://en.wikipedia.org/wiki/Static\\_single\\_assignment\\_form](https://en.wikipedia.org/wiki/Static_single_assignment_form)) is a good starting point.

It is recommended that you first read [cmd/compile/README.md]([./../README.md](#)) if you are not familiar with the Go compiler already. That document gives an overview of the compiler, and explains what is SSA's part and purpose in it.

### ### Key concepts

The names described below may be loosely related to their Go counterparts, but note that they are not equivalent. For example, a Go block statement has a variable scope, yet SSA has no notion of variables nor variable scopes.

It may also

be surprising that values and blocks are named after their unique sequential IDs. They rarely correspond to named entities in the original code, such as variables or function parameters. The sequential IDs also allow the compiler to avoid maps, and it is always possible to track back the values to Go code using debug and position information.

### #### Values

Values are the basic building blocks of SSA. Per SSA's very definition, a value is defined exactly once, but it may be used any number of times. A value mainly consists of a unique identifier, an operator, a type, and some arguments.

An operator or `Op` describes the operation that computes the value. The semantics of each operator can be found in `gen/\*Ops.go`. For example, `OpAdd8` takes two value arguments holding 8-bit integers and results in their addition. Here is a possible SSA representation of the addition of two `uint8` values:

```
// var c uint8 = a + b
v4 = Add8 <uint8> v2 v3
```

A value's type will usually be a Go type.

For example, the value in the example above has a `uint8` type, and a constant boolean value will have a `bool` type. However, certain types don't come from Go and are special; below we will cover `memory`, the most common of them.

See [\[value.go\]\(value.go\)](#) for more information.

#### #### Memory types

``memory`` represents the global memory state. An ``Op`` that takes a memory argument depends on that memory state, and an ``Op`` which has the memory type impacts the state of memory. This ensures that memory operations are kept in the right order. For example:

```
// *a = 3
// *b = *a
v10 = Store <mem> {int} v6 v8 v1
v14 = Store <mem> {int} v7 v8 v10
```

Here, ``Store`` stores its second argument (of type ``int``) into the first argument (of type ``*int``). The last argument is the memory state; since the second store depends on the memory value defined by the first store, the two stores cannot be reordered.

See [\[cmd/compile/internal/types/type.go\]\(../types/type.go\)](#) for more information.

#### #### Blocks

A

block represents a basic block in the control flow graph of a function. It is, essentially, a list of values that define the operation of this block. Besides the list of values, blocks mainly consist of a unique identifier, a kind, and a list of successor blocks.

The simplest kind is a ``plain`` block; it simply hands the control flow to another block, thus its successors list contains one block.

Another common block kind is the ``exit`` block. These have a final value, called control value, which must return a memory state. This is necessary for functions to return some values, for example - the caller needs some memory state to depend on, to ensure that it receives those return values correctly.

The last important block kind we will mention is the ``if`` block. It has a single control value that must be a boolean value, and it has exactly two successor blocks. The control flow is handed to the first successor if the bool is true, and to the second otherwise.

Here is a sample if-else control flow represented with basic blocks:

```
// func(b bool) int {
//   if b {
//     return 2
```



```

// }
// return 3
// }
b1:
  v1 = InitMem <mem>
  v2 = SP <uintptr>
  v5 = Addr <*int> {~r1} v2
  v6 = Arg <bool> {b}
  v8 = Const64 <int> [2]
  v12 = Const64 <int> [3]
  If v6 -> b2 b3
b2: <- b1
  v10 = VarDef <mem> {~r1} v1
  v11 = Store <mem> {int} v5 v8 v10
  Ret v11
b3: <- b1
  v14 = VarDef <mem> {~r1} v1
  v15 = Store <mem> {int} v5 v12 v14
  Ret v15

```

<!--

TODO: can we come up with a shorter example that still shows the control flow?

-->

See [block.go](block.go) for more information.

#### #### Functions

A function represents a function declaration along with its body. It mainly consists of a name, a type (its signature), a list of blocks that form its body, and the entry block within said list.

When a function is called, the control flow is handed to its entry block. If the function terminates, the control flow will eventually reach an exit block, thus ending the function call.

Note that a function may have zero or multiple exit blocks, just like a Go function can have any number of return points, but it must have exactly one entry point block.

Also note that some SSA functions are autogenerated, such as the hash functions for each type used as a map key.

For example, this is what an empty function can look like in SSA, with a single exit block that returns an uninteresting memory state:

```
foo func()
```

```
b1:
  v1 = InitMem <mem>
  Ret v1
```

See [\[func.go\]\(func.go\)](#) for more information.

### ### Compiler passes

Having a program in SSA form is not very useful on its own. Its advantage lies in how easy it is to write optimizations that modify the program to make it better. The way the Go compiler accomplishes this is via a list of passes.

Each pass transforms a SSA function in some way. For example, a dead code elimination pass will remove blocks and values that it can prove will never be executed, and a nil check elimination pass will remove nil checks which it can prove to be redundant.

Compiler passes work on one function at a time, and by default run sequentially and exactly once.

The `lower` pass is special; it converts the SSA representation from being machine-independent to being machine-dependent. That is, some abstract operators are replaced with their non-generic counterparts, potentially reducing or increasing the final number of values.

<!--

TODO: Probably explain here why the ordering of the passes matters, and why some passes like deadstore have multiple variants at different stages.

-->

See the `passes` list defined in [\[compile.go\]\(compile.go\)](#) for more information.

### ### Playing with SSA

A good way to see and get used to the compiler's SSA in action is via `GOSSAFUNC`. For example, to see func `Foo`'s initial SSA form and final generated assembly, one can run:

```
GOSSAFUNC=Foo go build
```

The generated `ssa.html` file will also contain the SSA func at each of the compile passes, making it easy to see what each pass does to a particular program. You can also click on values and blocks to highlight them, to help follow the control flow and values.

The value specified in GOSSAFUNC can also be a package-qualified function

name, e.g.

```
GOSSAFUNC=blah.Foo go build
```

This will match any function named "Foo" within a package whose final suffix is "blah" (e.g. something/blah.Foo, anotherthing/extra/blah.Foo).

If non-HTML dumps are needed, append a "+" to the GOSSAFUNC value and dumps will be written to stdout:

```
GOSSAFUNC=Bar+ go build
```

<!--

TODO: need more ideas for this section

-->

### ### Hacking on SSA

While most compiler passes are implemented directly in Go code, some others are code generated. This is currently done via rewrite rules, which have their own syntax and are maintained in ``gen/*.rules``. Simpler optimizations can be written easily and quickly this way, but rewrite rules are not suitable for more complex optimizations.

To read more on rewrite rules, have a look at the top comments in `[gen/generic.rules](gen/generic.rules)` and `[gen/rulegen.go](gen/rulegen.go)`.

Similarly, the code to manage operators is also code generated from ``gen/*Ops.go``, as it is easier to maintain a few tables than a lot of code. After changing the rules or operators, see `[gen/README](gen/README)` for instructions on how to generate the Go code again.

<!--

TODO: more tips and info could likely go here

-->

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/README.md
```

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```
// Copyright 2018 The Go Authors. All rights reserved.
```

```
// Use of this source code is governed by a BSD-style
```

```
// license that can be found in the LICENSE file.
```

```
// Lowering arithmetic
```

```
(Add(64|32|16|8|Ptr) ...) => (I64Add ...)
```

```
(Add(64|32)F ...) => (F(64|32)Add ...)
```

```

(Sub(64|32|16|8|Ptr) ...) => (I64Sub ...)
(Sub(64|32)F ...) => (F(64|32)Sub ...)

(Mul(64|32|16|8) ...) => (I64Mul ...)
(Mul(64|32)F ...) => (F(64|32)Mul ...)

(Div64 [false] x y) => (I64DivS x y)
(Div32 [false] x y) => (I64DivS (SignExt32to64 x) (SignExt32to64 y))
(Div16 [false] x y) => (I64DivS (SignExt16to64 x) (SignExt16to64 y))
(Div8      x y) => (I64DivS (SignExt8to64 x) (SignExt8to64 y))
(Div64u ...) => (I64DivU ...)
(Div32u x y) => (I64DivU (ZeroExt32to64 x) (ZeroExt32to64 y))
(Div16u x y) => (I64DivU (ZeroExt16to64 x) (ZeroExt16to64 y))
(Div8u  x y) => (I64DivU (ZeroExt8to64 x) (ZeroExt8to64 y))
(Div(64|32)F ...) => (F(64|32)Div ...)

(Mod64 [false]
 x y) => (I64RemS x y)
(Mod32 [false] x y) => (I64RemS (SignExt32to64 x) (SignExt32to64 y))
(Mod16 [false] x y) => (I64RemS (SignExt16to64 x) (SignExt16to64 y))
(Mod8   x y) => (I64RemS (SignExt8to64 x) (SignExt8to64 y))
(Mod64u ...) => (I64RemU ...)
(Mod32u x y) => (I64RemU (ZeroExt32to64 x) (ZeroExt32to64 y))
(Mod16u x y) => (I64RemU (ZeroExt16to64 x) (ZeroExt16to64 y))
(Mod8u  x y) => (I64RemU (ZeroExt8to64 x) (ZeroExt8to64 y))

(And(64|32|16|8|B) ...) => (I64And ...)

(Or(64|32|16|8|B) ...) => (I64Or ...)

(Xor(64|32|16|8) ...) => (I64Xor ...)

(Neg(64|32|16|8) x) => (I64Sub (I64Const [0]) x)
(Neg(64|32)F ...) => (F(64|32)Neg ...)

(Com(64|32|16|8) x) => (I64Xor x (I64Const [-1]))

(Not ...) => (I64Eqz ...)

// Lowering pointer arithmetic
(OffPtr ...) => (I64AddConst ...)

// Lowering extension
// It is unnecessary to extend loads
(SignExt32to64  x:(I64Load32S _ _)) => x
(SignExt16to(64|32) x:(I64Load16S _ _)) => x
(SignExt8to(64|32|16) x:(I64Load8S _ _)) =>

```

x

```
(ZeroExt32to64 x:(I64Load32U _ _)) => x
(ZeroExt16to(64|32) x:(I64Load16U _ _)) => x
(ZeroExt8to(64|32|16) x:(I64Load8U _ _)) => x
(SignExt32to64 x) && buildcfg.GOWASM.SignExt => (I64Extend32S x)
(SignExt8to(64|32|16) x) && buildcfg.GOWASM.SignExt => (I64Extend8S x)
(SignExt16to(64|32) x) && buildcfg.GOWASM.SignExt => (I64Extend16S x)
(SignExt32to64 x) => (I64ShrS (I64Shl x (I64Const [32])) (I64Const [32]))
(SignExt16to(64|32) x) => (I64ShrS (I64Shl x (I64Const [48])) (I64Const [48]))
(SignExt8to(64|32|16) x) => (I64ShrS (I64Shl x (I64Const [56])) (I64Const [56]))
(ZeroExt32to64 x) => (I64And x (I64Const [0xffffffff]))
(ZeroExt16to(64|32) x) => (I64And x (I64Const [0xffff]))
(ZeroExt8to(64|32|16) x) => (I64And x (I64Const [0xff]))
```

```
(Slicemask x) => (I64ShrS (I64Sub (I64Const [0]) x) (I64Const [63]))
```

```
// Lowering truncation
```

```
// Because we ignore the high parts, truncates are just copies.
```

```
(Trunc64to(32|16|8) ...) => (Copy ...)
```

```
(Trunc32to(16|8) ...)
```

```
=> (Copy ...)
```

```
(Trunc16to8 ...) => (Copy ...)
```

```
// Lowering float <=> int
```

```
(Cvt32to(64|32)F x) => (F(64|32)ConvertI64S (SignExt32to64 x))
```

```
(Cvt64to(64|32)F ...) => (F(64|32)ConvertI64S ...)
```

```
(Cvt32Uto(64|32)F x) => (F(64|32)ConvertI64U (ZeroExt32to64 x))
```

```
(Cvt64Uto(64|32)F ...) => (F(64|32)ConvertI64U ...)
```

```
(Cvt32Fto32 ...) => (I64TruncSatF32S ...)
```

```
(Cvt32Fto64 ...) => (I64TruncSatF32S ...)
```

```
(Cvt64Fto32 ...) => (I64TruncSatF64S ...)
```

```
(Cvt64Fto64 ...) => (I64TruncSatF64S ...)
```

```
(Cvt32Fto32U ...) => (I64TruncSatF32U ...)
```

```
(Cvt32Fto64U ...) => (I64TruncSatF32U ...)
```

```
(Cvt64Fto32U ...) => (I64TruncSatF64U ...)
```

```
(Cvt64Fto64U ...) => (I64TruncSatF64U ...)
```

```
(Cvt32Fto64F ...) => (F64PromoteF32 ...)
```

```
(Cvt64Fto32F ...) => (F32DemoteF64 ...)
```

```
(CvtBoolToUint8 ...) => (Copy ...)
```

```
(Round32F ...) => (Copy ...)
```

```
(Round64F ...) => (Copy ...)
```

```
// Lowering shifts
```

```
// Unsigned shifts need to return 0 if shift amount is >= width of shifted value.
```

```

(Lsh64x64 x y) && shiftIsBounded(v) => (I64Shl x y)
(Lsh64x64 x (I64Const
 [c])) && uint64(c) < 64 => (I64Shl x (I64Const [c]))
(Lsh64x64 x (I64Const [c])) && uint64(c) >= 64 => (I64Const [0])
(Lsh64x64 x y) => (Select (I64Shl x y) (I64Const [0]) (I64LtU y (I64Const [64])))
(Lsh64x(32|16|8) [c] x y) => (Lsh64x64 [c] x (ZeroExt(32|16|8)to64 y))

(Lsh32x64 ...) => (Lsh64x64 ...)
(Lsh32x(32|16|8) [c] x y) => (Lsh64x64 [c] x (ZeroExt(32|16|8)to64 y))

(Lsh16x64 ...) => (Lsh64x64 ...)
(Lsh16x(32|16|8) [c] x y) => (Lsh64x64 [c] x (ZeroExt(32|16|8)to64 y))

(Lsh8x64 ...) => (Lsh64x64 ...)
(Lsh8x(32|16|8) [c] x y) => (Lsh64x64 [c] x (ZeroExt(32|16|8)to64 y))

(Rsh64Ux64 x y) && shiftIsBounded(v) => (I64ShrU x y)
(Rsh64Ux64 x (I64Const [c])) && uint64(c) < 64 => (I64ShrU x (I64Const [c]))
(Rsh64Ux64 x (I64Const [c])) && uint64(c) >= 64 => (I64Const [0])
(Rsh64Ux64 x y) => (Select (I64ShrU x y) (I64Const [0]) (I64LtU y (I64Const [64])))
(Rsh64Ux(32|16|8) [c] x y) => (Rsh64Ux64 [c] x (ZeroExt(32|16|8)to64 y))

(Rsh32Ux64 [c] x y) => (Rsh64Ux64 [c] (ZeroExt32to64
 x) y)
(Rsh32Ux(32|16|8) [c] x y) => (Rsh64Ux64 [c] (ZeroExt32to64 x) (ZeroExt(32|16|8)to64 y))

(Rsh16Ux64 [c] x y) => (Rsh64Ux64 [c] (ZeroExt16to64 x) y)
(Rsh16Ux(32|16|8) [c] x y) => (Rsh64Ux64 [c] (ZeroExt16to64 x) (ZeroExt(32|16|8)to64 y))

(Rsh8Ux64 [c] x y) => (Rsh64Ux64 [c] (ZeroExt8to64 x) y)
(Rsh8Ux(32|16|8) [c] x y) => (Rsh64Ux64 [c] (ZeroExt8to64 x) (ZeroExt(32|16|8)to64 y))

// Signed right shift needs to return 0/-1 if shift amount is >= width of shifted value.
// We implement this by setting the shift value to (width - 1) if the shift value is >= width.

(Rsh64x64 x y) && shiftIsBounded(v) => (I64ShrS x y)
(Rsh64x64 x (I64Const [c])) && uint64(c) < 64 => (I64ShrS x (I64Const [c]))
(Rsh64x64 x (I64Const [c])) && uint64(c) >= 64 => (I64ShrS x (I64Const [63]))
(Rsh64x64 x y) => (I64ShrS x (Select <typ.Int64> y (I64Const [63]) (I64LtU y (I64Const [64])))
(Rsh64x(32|16|8) [c] x y) => (Rsh64x64 [c] x (ZeroExt(32|16|8)to64 y))

(Rsh32x64 [c] x y) => (Rsh64x64 [c] (SignExt32to64
 x) y)
(Rsh32x(32|16|8) [c] x y) => (Rsh64x64 [c] (SignExt32to64 x) (ZeroExt(32|16|8)to64 y))

(Rsh16x64 [c] x y) => (Rsh64x64 [c] (SignExt16to64 x) y)
(Rsh16x(32|16|8) [c] x y) => (Rsh64x64 [c] (SignExt16to64 x) (ZeroExt(32|16|8)to64 y))

```

```

(Rsh8x64 [c] x y) => (Rsh64x64 [c] (SignExt8to64 x) y)
(Rsh8x(32|16|8) [c] x y) => (Rsh64x64 [c] (SignExt8to64 x) (ZeroExt(32|16|8)to64 y))

// Lowering rotates
(RotateLeft8 <t> x (I64Const [c])) => (Or8 (Lsh8x64 <t> x (I64Const [c&7])) (Rsh8Ux64 <t> x (I64Const [-c&7])))
(RotateLeft16 <t> x (I64Const [c])) => (Or16 (Lsh16x64 <t> x (I64Const [c&15])) (Rsh16Ux64 <t> x (I64Const [-c&15])))
(RotateLeft32 ...) => (I32Rotl ...)
(RotateLeft64 ...) => (I64Rotl ...)

// Lowering comparisons
(Less64 ...) => (I64LtS ...)
(Less32 x y) => (I64LtS (SignExt32to64 x) (SignExt32to64 y))
(Less16 x y) => (I64LtS (SignExt16to64 x) (SignExt16to64 y))
(Less8 x y) => (I64LtS (SignExt8to64 x) (SignExt8to64 y))
(Less64U ...) => (I64LtU ...)
(Less32U x y) => (I64LtU
(ZeroExt32to64 x) (ZeroExt32to64 y))
(Less16U x y) => (I64LtU (ZeroExt16to64 x) (ZeroExt16to64 y))
(Less8U x y) => (I64LtU (ZeroExt8to64 x) (ZeroExt8to64 y))
(Less(64|32)F ...) => (F(64|32)Lt ...)

(Leq64 ...) => (I64LeS ...)
(Leq32 x y) => (I64LeS (SignExt32to64 x) (SignExt32to64 y))
(Leq16 x y) => (I64LeS (SignExt16to64 x) (SignExt16to64 y))
(Leq8 x y) => (I64LeS (SignExt8to64 x) (SignExt8to64 y))
(Leq64U ...) => (I64LeU ...)
(Leq32U x y) => (I64LeU (ZeroExt32to64 x) (ZeroExt32to64 y))
(Leq16U x y) => (I64LeU (ZeroExt16to64 x) (ZeroExt16to64 y))
(Leq8U x y) => (I64LeU (ZeroExt8to64 x) (ZeroExt8to64 y))
(Leq(64|32)F ...) => (F(64|32)Le ...)

(Eq64 ...) => (I64Eq ...)
(Eq32 x y) => (I64Eq (ZeroExt32to64 x) (ZeroExt32to64 y))
(Eq16 x y) => (I64Eq (ZeroExt16to64 x) (ZeroExt16to64 y))
(Eq8 x y) => (I64Eq (ZeroExt8to64 x) (ZeroExt8to64 y))
(EqB ...) => (I64Eq ...)
(EqPtr ...) => (I64Eq ...)
(Eq(64|32)F ...) => (F(64|32)Eq ...)

(Neq64 ...) => (I64Ne ...)
(Neq32 x
y) => (I64Ne (ZeroExt32to64 x) (ZeroExt32to64 y))
(Neq16 x y) => (I64Ne (ZeroExt16to64 x) (ZeroExt16to64 y))
(Neq8 x y) => (I64Ne (ZeroExt8to64 x) (ZeroExt8to64 y))
(NeqB ...) => (I64Ne ...)

```

(NeqPtr ...) => (I64Ne ...)

(Neq(64|32)F ...) => (F(64|32)Ne ...)

// Lowering loads

(Load <↳ ptr mem) && is32BitFloat(t) => (F32Load ptr mem)

(Load <↳ ptr mem) && is64BitFloat(t) => (F64Load ptr mem)

(Load <↳ ptr mem) && t.Size() == 8 => (I64Load ptr mem)

(Load <↳ ptr mem) && t.Size() == 4 && !t.IsSigned() => (I64Load32U ptr mem)

(Load <↳ ptr mem) && t.Size() == 4 && t.IsSigned() => (I64Load32S ptr mem)

(Load <↳ ptr mem) && t.Size() == 2 && !t.IsSigned() => (I64Load16U ptr mem)

(Load <↳ ptr mem) && t.Size() == 2 && t.IsSigned() => (I64Load16S ptr mem)

(Load <↳ ptr mem) && t.Size() == 1 && !t.IsSigned() => (I64Load8U ptr mem)

(Load <↳ ptr mem) && t.Size() == 1 && t.IsSigned() => (I64Load8S ptr mem)

// Lowering stores

(Store {t} ptr val mem) && is64BitFloat(t) => (F64Store ptr val mem)

(Store {t} ptr val mem) && is32BitFloat(t) => (F32Store ptr val mem)

(Store {t} ptr val mem) && t.Size() == 8 => (I64Store ptr val mem)

(Store {t} ptr val mem) && t.Size() == 4 => (I64Store32 ptr val mem)

(Store {t} ptr val mem) && t.Size() == 2 => (I64Store16 ptr val mem)

(Store {t} ptr val mem) && t.Size() == 1 => (I64Store8 ptr val mem)

// Lowering moves

(Move [0] \_ \_ mem) => mem

(Move [1] dst src mem) => (I64Store8 dst (I64Load8U src mem) mem)

(Move [2] dst src mem) => (I64Store16 dst (I64Load16U src mem) mem)

(Move [4] dst src mem) => (I64Store32 dst (I64Load32U src mem) mem)

(Move [8] dst src mem) => (I64Store dst (I64Load src mem) mem)

(Move [16] dst src mem) =>

(I64Store [8] dst (I64Load [8] src mem)

(I64Store dst (I64Load src mem) mem))

(Move [3] dst src mem) =>

(I64Store8 [2] dst (I64Load8U [2] src mem)

(I64Store16 dst (I64Load16U src mem) mem))

(Move [5] dst src mem) =>

(I64Store8 [4] dst (I64Load8U [4] src mem)

(I64Store32 dst (I64Load32U src mem) mem))

(Move

[6] dst src mem) =>

(I64Store16 [4] dst (I64Load16U [4] src mem)

(I64Store32 dst (I64Load32U src mem) mem))

(Move [7] dst src mem) =>

(I64Store32 [3] dst (I64Load32U [3] src mem)

(I64Store32 dst (I64Load32U src mem) mem))

(Move [s] dst src mem) && s > 8 && s < 16 =>

(I64Store [s-8] dst (I64Load [s-8] src mem)

(I64Store dst (I64Load src mem) mem))



```

// Adjust moves to be a multiple of 16 bytes.
(Move [s] dst src mem)
&& s > 16 && s%16 != 0 && s%16 <= 8 =>
(Move [s-s%16]
 (OffPtr <dst.Type> dst [s%16])
 (OffPtr <src.Type> src [s%16])
 (I64Store dst (I64Load src mem) mem))
(Move [s] dst src mem)
&& s > 16 && s%16 != 0 && s%16 > 8 =>
(Move [s-s%16]
 (OffPtr <dst.Type> dst [s%16])
 (OffPtr <src.Type> src [s%16])
 (I64Store [8] dst (I64Load [8] src mem)
 (I64Store dst (I64Load src mem) mem)))

// Large copying uses helper.
(Move [s] dst src mem) && s%8 == 0 && logLargeCopy(v, s) =>
(LoweredMove [s/8] dst src mem)

// Lowering Zero instructions
(Zero [0] _ mem) => mem
(Zero
 [1] destptr mem) => (I64Store8 destptr (I64Const [0]) mem)
(Zero [2] destptr mem) => (I64Store16 destptr (I64Const [0]) mem)
(Zero [4] destptr mem) => (I64Store32 destptr (I64Const [0]) mem)
(Zero [8] destptr mem) => (I64Store destptr (I64Const [0]) mem)

(Zero [3] destptr mem) =>
(I64Store8 [2] destptr (I64Const [0])
 (I64Store16 destptr (I64Const [0]) mem))
(Zero [5] destptr mem) =>
(I64Store8 [4] destptr (I64Const [0])
 (I64Store32 destptr (I64Const [0]) mem))
(Zero [6] destptr mem) =>
(I64Store16 [4] destptr (I64Const [0])
 (I64Store32 destptr (I64Const [0]) mem))
(Zero [7] destptr mem) =>
(I64Store32 [3] destptr (I64Const [0])
 (I64Store32 destptr (I64Const [0]) mem))

// Strip off any fractional word zeroing.
(Zero [s] destptr mem) && s%8 != 0 && s > 8 =>
(Zero [s-s%8] (OffPtr <destptr.Type> destptr [s%8])
 (I64Store destptr (I64Const [0]) mem))

// Zero small numbers of words directly.
(Zero [16] destptr mem) =>

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(I64Store [8] destptr (I64Const [0])
 (I64Store
 destptr (I64Const [0]) mem))
(Zero [24] destptr mem) =>
(I64Store [16] destptr (I64Const [0])
 (I64Store [8] destptr (I64Const [0])
 (I64Store destptr (I64Const [0]) mem)))
(Zero [32] destptr mem) =>
(I64Store [24] destptr (I64Const [0])
 (I64Store [16] destptr (I64Const [0])
 (I64Store [8] destptr (I64Const [0])
 (I64Store destptr (I64Const [0]) mem))))

// Large zeroing uses helper.
(Zero [s] destptr mem) && s%8 == 0 && s > 32 =>
(LoweredZero [s/8] destptr mem)

// Lowering constants
(Const64 ...) => (I64Const ...)
(Const(32|16|8) [c]) => (I64Const [int64(c)])
(Const(64|32)F ...) => (F(64|32)Const ...)
(ConstNil) => (I64Const [0])
(ConstBool [c]) => (I64Const [b2i(c)])

// Lowering calls
(StaticCall ...) => (LoweredStaticCall ...)
(ClosureCall ...) => (LoweredClosureCall ...)
(InterCall ...) => (LoweredInterCall ...)
(TailCall ...) => (LoweredTailCall ...)

// Miscellaneous
(Convert ...) => (LoweredConvert ...)
(IsNotNil p) => (I64Eqz (I64Eqz p))
(IsInBounds ...) => (I64LtU
 ...)
(IsSliceInBounds ...) => (I64LeU ...)
(NilCheck ...) => (LoweredNilCheck ...)
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(Addr {sym} base) => (LoweredAddr {sym} [0] base)
(LocalAddr {sym} base _) => (LoweredAddr {sym} base)

// Write barrier.
(WB ...) => (LoweredWB ...)

// --- Intrinsic ---
(Sqrt ...) => (F64Sqrt ...)

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(Trunc ...) => (F64Trunc ...)
(Ceil ...) => (F64Ceil ...)
(Floor ...) => (F64Floor ...)
(RoundToEven ...) => (F64Nearest ...)
(Abs ...) => (F64Abs ...)
(Copysign ...) => (F64Copysign ...)

(Sqrt32 ...) => (F32Sqrt ...)

(Ctz64 ...) => (I64Ctz ...)
(Ctz32 x) => (I64Ctz (I64Or x (I64Const [0x100000000])))
(Ctz16 x) => (I64Ctz (I64Or x (I64Const [0x10000])))
(Ctz8 x) => (I64Ctz (I64Or x (I64Const [0x100])))

(Ctz(64|32|16|8)NonZero ...) => (I64Ctz ...)

(BitLen64 x) => (I64Sub (I64Const [64]) (I64Clz x))

(PopCount64 ...) => (I64Popcnt ...)
(PopCount32 x) => (I64Popcnt
  (ZeroExt32to64 x))
(PopCount16 x) => (I64Popcnt (ZeroExt16to64 x))
(PopCount8 x) => (I64Popcnt (ZeroExt8to64 x))

(CondSelect ...) => (Select ...)

// --- Optimizations ---
(I64Add (I64Const [x]) (I64Const [y])) => (I64Const [x + y])
(I64Mul (I64Const [x]) (I64Const [y])) => (I64Const [x * y])
(I64And (I64Const [x]) (I64Const [y])) => (I64Const [x & y])
(I64Or (I64Const [x]) (I64Const [y])) => (I64Const [x | y])
(I64Xor (I64Const [x]) (I64Const [y])) => (I64Const [x ^ y])
(F64Add (F64Const [x]) (F64Const [y])) => (F64Const [x + y])
(F64Mul (F64Const [x]) (F64Const [y])) && !math.IsNaN(x * y) => (F64Const [x * y])
(I64Eq (I64Const [x]) (I64Const [y])) && x == y => (I64Const [1])
(I64Eq (I64Const [x]) (I64Const [y])) && x != y => (I64Const [0])
(I64Ne (I64Const [x]) (I64Const [y])) && x == y => (I64Const [0])
(I64Ne (I64Const [x]) (I64Const [y])) && x != y => (I64Const [1])

(I64Shl (I64Const [x]) (I64Const [y])) => (I64Const [x << uint64(y)])
(I64ShrU (I64Const [x]) (I64Const
  [y])) => (I64Const [int64(uint64(x) >> uint64(y))])
(I64ShrS (I64Const [x]) (I64Const [y])) => (I64Const [x >> uint64(y)])

// TODO: declare these operations as commutative and get rid of these rules?
(I64Add (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Add y (I64Const [x]))
(I64Mul (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Mul y (I64Const [x]))
(I64And (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64And y (I64Const [x]))

```

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(I64Or (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Or y (I64Const [x]))
(I64Xor (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Xor y (I64Const [x]))
(F64Add (F64Const [x]) y) && y.Op != OpWasmF64Const => (F64Add y (F64Const [x]))
(F64Mul (F64Const [x]) y) && y.Op != OpWasmF64Const => (F64Mul y (F64Const [x]))
(I64Eq (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Eq y (I64Const [x]))
(I64Ne (I64Const [x]) y) && y.Op != OpWasmI64Const => (I64Ne y (I64Const [x]))

(I64Eq x (I64Const [0])) => (I64Eqz x)
(I64LtU (I64Const [0]) x) => (I64Eqz
  (I64Eqz x))
(I64LeU x (I64Const [0])) => (I64Eqz x)
(I64LtU x (I64Const [1])) => (I64Eqz x)
(I64LeU (I64Const [1]) x) => (I64Eqz (I64Eqz x))
(I64Ne x (I64Const [0])) => (I64Eqz (I64Eqz x))

(I64Add x (I64Const [y])) => (I64AddConst [y] x)
(I64AddConst [0] x) => x
(I64Eqz (I64Eqz (I64Eqz x))) => (I64Eqz x)

// folding offset into load/store
((I64Load|I64Load32U|I64Load32S|I64Load16U|I64Load16S|I64Load8U|I64Load8S) [off] (I64AddConst [off2]
ptr) mem)
&& isU32Bit(off+off2) =>
((I64Load|I64Load32U|I64Load32S|I64Load16U|I64Load16S|I64Load8U|I64Load8S) [off+off2] ptr mem)

((I64Store|I64Store32|I64Store16|I64Store8) [off] (I64AddConst [off2] ptr) val mem)
&& isU32Bit(off+off2) =>
((I64Store|I64Store32|I64Store16|I64Store8) [off+off2] ptr val mem)

// folding offset into address
(I64AddConst [off] (LoweredAddr {sym} [off2] base)) && isU32Bit(off+int64(off2)) =>
(LoweredAddr {sym} [int32(off)+off2] base)
(I64AddConst [off] x:(SP)) && isU32Bit(off) => (LoweredAddr [int32(off)] x) //
so it is rematerializeable

// transforming readonly globals into constants
(I64Load [off] (LoweredAddr {sym} [off2] (SB)) _) && symIsRO(sym) && isU32Bit(off+int64(off2)) =>
(I64Const [int64(read64(sym, off+int64(off2), config.ctx.Arch.ByteOrder))])
(I64Load32U [off] (LoweredAddr {sym} [off2] (SB)) _) && symIsRO(sym) && isU32Bit(off+int64(off2)) =>
(I64Const [int64(read32(sym, off+int64(off2), config.ctx.Arch.ByteOrder))])
(I64Load16U [off] (LoweredAddr {sym} [off2] (SB)) _) && symIsRO(sym) && isU32Bit(off+int64(off2)) =>
(I64Const [int64(read16(sym, off+int64(off2), config.ctx.Arch.ByteOrder))])
(I64Load8U [off] (LoweredAddr {sym} [off2] (SB)) _) && symIsRO(sym) && isU32Bit(off+int64(off2)) =>
(I64Const [int64(read8(sym, off+int64(off2)))]))

```

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/Wasm.rules

No license file was found, but licenses were detected in source scan.

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Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/scope.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles1.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/call.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/objset.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixbugs/issue51877.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typebits/typebits.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/self_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/constdecl.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/builtins_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/stmt1.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/shifts.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/resolver.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/sizes.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/selection.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles3.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/importdecl0/importdecl0b.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/object.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/vardecl.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/liveness/bvset.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/stdlib_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/bitvec/bv.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/errors.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/typexpr.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/return.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/lookup.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles4.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/assignments.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/init0.go
*
```

```

/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/package.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/hilbert_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/labels.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/init1.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles2.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/issues_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/typestring.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/methodsets.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/api_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/liveness/plive.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles0.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/importdecl0/importdecl0a.go
No license file was found, but licenses were detected in source scan.

```

```

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// Use of this source code is governed by a BSD-style
// license that can be found in the LICENSE file.

```

```

(Add(Ptr|64|32|16|8) ...) => (ADD ...)
(Add(32F|64F) ...) => (FADD(S|D) ...)

```

```

(Sub(Ptr|64|32|16|8) ...) => (SUB ...)
(Sub(32F|64F) ...) => (FSUB(S|D) ...)

```

```

(Mul64 ...) => (MUL ...)
(Mul(32|16|8) ...) => (MULW ...)
(Mul(32F|64F) ...) => (FMUL(S|D) ...)

```

```

(Hmul64 ...) => (MULH ...)
(Hmul64u ...) => (UMULH ...)
(Hmul32 x y) => (SRAconst (MULL <typ.Int64> x y) [32])
(Hmul32u x y) => (SRAconst (UMULL <typ.UInt64> x y) [32])
(Mul64uhilo ...) => (LoweredMuluhilo ...)

```

```

(Div64 [false] x y) => (DIV x y)
(Div64u ...) => (UDIV ...)
(Div32 [false] x y) => (DIVW x y)
(Div32u ...) => (UDIVW ...)
(Div16 [false] x y) => (DIVW (SignExt16to32 x) (SignExt16to32 y))
(Div16u x y) => (UDIVW (ZeroExt16to32 x) (ZeroExt16to32 y))
(Div8 x y) => (DIVW (SignExt8to32 x) (SignExt8to32 y))
(Div8u

```

```

x y => (UDIVW (ZeroExt8to32 x) (ZeroExt8to32 y))
(Div32F ...) => (FDIVS ...)
(Div64F ...) => (FDIVD ...)

(Mod64 x y) => (MOD x y)
(Mod64u ...) => (UMOD ...)
(Mod32 x y) => (MODW x y)
(Mod32u ...) => (UMODW ...)
(Mod16 x y) => (MODW (SignExt16to32 x) (SignExt16to32 y))
(Mod16u x y) => (UMODW (ZeroExt16to32 x) (ZeroExt16to32 y))
(Mod8 x y) => (MODW (SignExt8to32 x) (SignExt8to32 y))
(Mod8u x y) => (UMODW (ZeroExt8to32 x) (ZeroExt8to32 y))

// (x + y) / 2 with x>=y => (x - y) / 2 + y
(Avg64u <t> x y) => (ADD (SRLconst <t> (SUB <t> x y) [1]) y)

(And(64|32|16|8) ...) => (AND ...)
(Or(64|32|16|8) ...) => (OR ...)
(Xor(64|32|16|8) ...) => (XOR ...)

// unary ops
(Neg(64|32|16|8) ...) => (NEG ...)
(Neg(32F|64F) ...) => (FNEG(S|D) ...)
(Com(64|32|16|8) ...) => (MVN ...)

// math package intrinsics
(Abs ...) => (FABSD ...)
(Sqrt ...) => (FSQRTD ...)
(Ceil ...) => (FRINTPD ...)
(Floor ...) => (FRINTMD ...)
(Round ...) => (FRINTAD ...)
(RoundToEven ...) => (FRINTND ...)
(Trunc ...) =>
(FRINTZD ...)
(FMA x y z) => (FMADDD z x y)

(Sqrt32 ...) => (FSQRTS ...)

// lowering rotates
(RotateLeft8 <t> x (MOVDconst [c])) => (Or8 (Lsh8x64 <t> x (MOVDconst [c&7])) (Rsh8Ux64 <t> x
(MOVDconst [-c&7])))
(RotateLeft16 <t> x (MOVDconst [c])) => (Or16 (Lsh16x64 <t> x (MOVDconst [c&15])) (Rsh16Ux64 <t> x
(MOVDconst [-c&15])))
(RotateLeft32 x y) => (RORW x (NEG <y.Type> y))
(RotateLeft64 x y) => (ROR x (NEG <y.Type> y))

(Ctz(64|32|16|8)NonZero ...) => (Ctz(64|32|32|32) ...)

```

```

(Ctz64 <t> x) => (CLZ (RBIT <t> x))
(Ctz32 <t> x) => (CLZW (RBITW <t> x))
(Ctz16 <t> x) => (CLZW <t> (RBITW <typ.UInt32> (ORconst <typ.UInt32> [0x10000] x)))
(Ctz8 <t> x) => (CLZW <t> (RBITW <typ.UInt32> (ORconst <typ.UInt32> [0x100] x)))

(PopCount64 <t> x) => (FMOVDfpgp <t> (VUADDLV <typ.Float64> (VCNT <typ.Float64> (FMOVDgfpf
<typ.Float64> x))))
(PopCount32 <t> x) => (FMOVDfpgp <t> (VUADDLV <typ.Float64> (VCNT <typ.Float64> (FMOVDgfpf
<typ.Float64> (ZeroExt32to64 x))))))
(PopCount16 <t> x) => (FMOVDfpgp <t>
(VUADDLV <typ.Float64> (VCNT <typ.Float64> (FMOVDgfpf <typ.Float64> (ZeroExt16to64 x))))))

// Load args directly into the register class where it will be used.
(FMOVDgfpf <t> (Arg [off] {sym})) => @b.Func.Entry (Arg <t> [off] {sym})
(FMOVDfpgp <t> (Arg [off] {sym})) => @b.Func.Entry (Arg <t> [off] {sym})

// Similarly for stores, if we see a store after FPR <=> GPR move, then redirect store to use the other register set.
(MOVDstore [off] {sym} ptr (FMOVDfpgp val) mem) => (FMOVDstore [off] {sym} ptr val mem)
(FMOVDstore [off] {sym} ptr (FMOVDgfpf val) mem) => (MOVDstore [off] {sym} ptr val mem)
(MOVWstore [off] {sym} ptr (FMOVSfpgp val) mem) => (FMOVSstore [off] {sym} ptr val mem)
(FMOVSstore [off] {sym} ptr (FMOVSpfp val) mem) => (MOVWstore [off] {sym} ptr val mem)

// float <=> int register moves, with no conversion.
// These come up when compiling math.{Float64bits, Float64frombits, Float32bits, Float32frombits}.
(MOVDload [off] {sym} ptr (FMOVDstore [off] {sym} ptr val _)) => (FMOVDfpgp
val)
(FMOVDload [off] {sym} ptr (MOVDstore [off] {sym} ptr val _)) => (FMOVDgfpf val)
(MOVWUload [off] {sym} ptr (FMOVSstore [off] {sym} ptr val _)) => (FMOVSfpgp val)
(FMOVSload [off] {sym} ptr (MOVWstore [off] {sym} ptr val _)) => (FMOVSpfp val)

(BitLen64 x) => (SUB (MOVDconst [64]) (CLZ <typ.Int> x))
(BitLen32 x) => (SUB (MOVDconst [32]) (CLZW <typ.Int> x))

(Bswap64 ...) => (REV ...)
(Bswap32 ...) => (RE VW ...)

(BitRev64 ...) => (RBIT ...)
(BitRev32 ...) => (RBITW ...)
(BitRev16 x) => (SRLconst [48] (RBIT <typ.UInt64> x))
(BitRev8 x) => (SRLconst [56] (RBIT <typ.UInt64> x))

// In fact, UMOD will be translated into UREM instruction, and UREM is originally translated into
// UDIV and MSUB instructions. But if there is already an identical UDIV instruction just before or
// after UREM (case like quo, rem := z/y, z%y), then the second UDIV instruction becomes redundant.
// The purpose of this rule is to have this extra UDIV instruction removed in CSE pass.
(UMOD <typ.UInt64>
x y) => (MSUB <typ.UInt64> x y (UDIV <typ.UInt64> x y))
(UMODW <typ.UInt32> x y) => (MSUBW <typ.UInt32> x y (UDIVW <typ.UInt32> x y))

```



```

// 64-bit addition with carry.
(Select0 (Add64carry x y c) => (Select0 <typ.UInt64> (ADCSflags x y (Select1 <types.TypeFlags>
(ADDSconstflags [-1] c))))
(Select1 (Add64carry x y c) => (ADCzerocarry <typ.UInt64> (Select1 <types.TypeFlags> (ADCSflags x y (Select1
<types.TypeFlags> (ADDSconstflags [-1] c))))))

// 64-bit subtraction with borrowing.
(Select0 (Sub64borrow x y bo) => (Select0 <typ.UInt64> (SBCSflags x y (Select1 <types.TypeFlags> (NEGSflags
bo))))
(Select1 (Sub64borrow x y bo) => (NEG <typ.UInt64> (NGCzerocarry <typ.UInt64> (Select1 <types.TypeFlags>
(SBCSflags x y (Select1 <types.TypeFlags> (NEGSflags bo))))))

// boolean ops -- booleans are represented with 0=false, 1=true
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (XOR (MOVDconst [1]) (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not x) => (XOR (MOVDconst [1]) x)

// shifts
//
// hardware instruction uses only the low 6 bits of the shift
// we compare to 64 to ensure Go semantics for large shifts
// Rules about rotates with non-const shift are based on the following rules,
// if the following rules change, please also modify the rules based on them.
(Lsh64x64 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x y) (Const64 <t> [0]) (CMPconst [64] y))
(Lsh64x32 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt32to64 y)) (Const64 <t> [0])
(CMPconst [64] (ZeroExt32to64 y)))
(Lsh64x16 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt16to64 y)) (Const64 <t> [0])
(CMPconst [64] (ZeroExt16to64 y)))
(Lsh64x8 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst
[64] (ZeroExt8to64 y)))

(Lsh32x64 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x y) (Const64 <t> [0]) (CMPconst [64] y))
(Lsh32x32 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt32to64 y)) (Const64 <t> [0])
(CMPconst [64] (ZeroExt32to64 y)))
(Lsh32x16
<t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt16to64 y)) (Const64 <t> [0]) (CMPconst [64]
(ZeroExt16to64 y)))
(Lsh32x8 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst
[64] (ZeroExt8to64 y)))

(Lsh16x64 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x y) (Const64 <t> [0]) (CMPconst [64] y))
(Lsh16x32 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt32to64 y)) (Const64 <t> [0])
(CMPconst [64] (ZeroExt32to64 y)))
(Lsh16x16 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt16to64 y)) (Const64 <t> [0])
(CMPconst [64] (ZeroExt16to64 y)))

```

(Lsh16x8 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Lsh8x64 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x y) (Const64 <t> [0]) (CMPconst [64] y))

(Lsh8x32 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt32to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt32to64 y)))

(Lsh8x16 <t> x y) => (CSEL

[OpARM64LessThanU] (SLL <t> x (ZeroExt16to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt16to64 y)))

(Lsh8x8 <t> x y) => (CSEL [OpARM64LessThanU] (SLL <t> x (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Rsh64Ux64 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> x y) (Const64 <t> [0]) (CMPconst [64] y))

(Rsh64Ux32 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> x (ZeroExt32to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt32to64 y)))

(Rsh64Ux16 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> x (ZeroExt16to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt16to64 y)))

(Rsh64Ux8 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> x (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Rsh32Ux64 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt32to64 x) y) (Const64 <t> [0]) (CMPconst [64] y))

(Rsh32Ux32 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt32to64 x) (ZeroExt32to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt32to64 y)))

(Rsh32Ux16

<t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt32to64 x) (ZeroExt16to64 y)) (Const64 <t> [0])

(CMPconst [64] (ZeroExt16to64 y)))

(Rsh32Ux8 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt32to64 x) (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Rsh16Ux64 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt16to64 x) y) (Const64 <t> [0]) (CMPconst [64] y))

(Rsh16Ux32 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt16to64 x) (ZeroExt32to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt32to64 y)))

(Rsh16Ux16 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt16to64 x) (ZeroExt16to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt16to64 y)))

(Rsh16Ux8 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt16to64 x) (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Rsh8Ux64 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt8to64 x) y) (Const64 <t> [0]) (CMPconst [64] y))

(Rsh8Ux32 <t> x y) => (CSEL [OpARM64LessThanU]

(SRL <t> (ZeroExt8to64 x) (ZeroExt32to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt32to64 y)))

(Rsh8Ux16 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt8to64 x) (ZeroExt16to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt16to64 y)))

(Rsh8Ux8 <t> x y) => (CSEL [OpARM64LessThanU] (SRL <t> (ZeroExt8to64 x) (ZeroExt8to64 y)) (Const64 <t> [0]) (CMPconst [64] (ZeroExt8to64 y)))

(Rsh64x64 x y) => (SRA x (CSEL [OpARM64LessThanU] <y.Type> y) (Const64 <y.Type> [63]) (CMPconst [64]

```

y)))
(Rsh64x32 x y) => (SRA x (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt32to64 y) (Const64 <y.Type> [63])
(CMPconst [64] (ZeroExt32to64 y))))
(Rsh64x16 x y) => (SRA x (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt16to64 y) (Const64 <y.Type> [63])
(CMPconst [64] (ZeroExt16to64 y))))
(Rsh64x8 x y) => (SRA x (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt8to64 y) (Const64 <y.Type> [63])
(CMPconst [64] (ZeroExt8to64 y))))

(Rsh32x64 x y) => (SRA (SignExt32to64 x) (CSEL [OpARM64LessThanU] <y.Type> y (Const64 <y.Type>
[63]) (CMPconst [64] y)))
(Rsh32x32 x y) => (SRA (SignExt32to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt32to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt32to64 y))))
(Rsh32x16 x y) => (SRA (SignExt32to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt16to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt16to64 y))))
(Rsh32x8 x y) => (SRA (SignExt32to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt8to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt8to64 y))))

(Rsh16x64 x y) => (SRA (SignExt16to64 x) (CSEL [OpARM64LessThanU] <y.Type> y (Const64 <y.Type> [63])
(CMPconst [64] y)))
(Rsh16x32 x y) => (SRA (SignExt16to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt32to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt32to64 y))))
(Rsh16x16 x y) => (SRA (SignExt16to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt16to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt16to64 y))))
(Rsh16x8 x y) => (SRA (SignExt16to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt8to64
y) (Const64 <y.Type> [63]) (CMPconst [64] (ZeroExt8to64 y))))

(Rsh8x64 x y) => (SRA (SignExt8to64 x) (CSEL [OpARM64LessThanU] <y.Type> y (Const64 <y.Type> [63])
(CMPconst [64] y)))
(Rsh8x32 x y) => (SRA (SignExt8to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt32to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt32to64 y))))
(Rsh8x16 x y) => (SRA (SignExt8to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt16to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt16to64 y))))
(Rsh8x8 x y) => (SRA (SignExt8to64 x) (CSEL [OpARM64LessThanU] <y.Type> (ZeroExt8to64 y) (Const64
<y.Type> [63]) (CMPconst [64] (ZeroExt8to64 y))))

// constants
(Const(64|32|16|8) [val]) => (MOVDconst [int64(val)])
(Const(32F|64F) [val]) => (FMOV(S|D)const [float64(val)])
(ConstNil) => (MOVDconst [0])
(ConstBool [t]) => (MOVDconst [b2i(t)])

(Slicemask <t> x) => (SRAconst (NEG <t> x) [63])

// truncations
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy
...)
(Trunc32to8 ...) => (Copy ...)

```

```

(Trunc32to16 ...) => (Copy ...)
(Trunc64to8 ...) => (Copy ...)
(Trunc64to16 ...) => (Copy ...)
(Trunc64to32 ...) => (Copy ...)

// Zero-/Sign-extensions
(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)
(ZeroExt8to64 ...) => (MOVBUreg ...)
(ZeroExt16to64 ...) => (MOVHUreg ...)
(ZeroExt32to64 ...) => (MOVWUreg ...)

(SignExt8to16 ...) => (MOVBreg ...)
(SignExt8to32 ...) => (MOVBreg ...)
(SignExt16to32 ...) => (MOVHreg ...)
(SignExt8to64 ...) => (MOVBreg ...)
(SignExt16to64 ...) => (MOVHreg ...)
(SignExt32to64 ...) => (MOVWreg ...)

// float <=> int conversion
(Cvt32to32F ...) => (SCVTFWS ...)
(Cvt32to64F ...) => (SCVTFWD ...)
(Cvt64to32F ...) => (SCVTFS ...)
(Cvt64to64F ...) => (SCVTFD ...)
(Cvt32Uto32F ...) => (UCVTFWS ...)
(Cvt32Uto64F ...) => (UCVTFWD ...)
(Cvt64Uto32F ...) => (UCVTFS ...)
(Cvt64Uto64F ...) => (UCVTFD ...)
(Cvt32Fto32 ...) => (FCVTZSSW ...)
(Cvt64Fto32 ...) => (FCVTZSDW
...)
(Cvt32Fto64 ...) => (FCVTZSS ...)
(Cvt64Fto64 ...) => (FCVTZSD ...)
(Cvt32Fto32U ...) => (FCVTZUSW ...)
(Cvt64Fto32U ...) => (FCVTZUDW ...)
(Cvt32Fto64U ...) => (FCVTZUS ...)
(Cvt64Fto64U ...) => (FCVTZUD ...)
(Cvt32Fto64F ...) => (FCVTSD ...)
(Cvt64Fto32F ...) => (FCVTDS ...)

(CvtBoolToUInt8 ...) => (Copy ...)

(Round32F ...) => (LoweredRound32F ...)
(Round64F ...) => (LoweredRound64F ...)

// comparisons
(Eq8 x y) => (Equal (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))

```

```

(Eq16 x y) => (Equal (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Eq32 x y) => (Equal (CMPW x y))
(Eq64 x y) => (Equal (CMP x y))
(EqPtr x y) => (Equal (CMP x y))
(Eq32F x y) => (Equal (FCMPS x y))
(Eq64F x y) => (Equal (FCMPD x y))

```

```

(Neq8 x y) => (NotEqual (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Neq16 x y) => (NotEqual (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Neq32 x y) => (NotEqual (CMPW x y))
(Neq64 x y) => (NotEqual (CMP x y))
(NeqPtr x y) => (NotEqual (CMP x y))
(Neq32F x y) => (NotEqual (FCMPS x y))
(Neq64F
x y) => (NotEqual (FCMPD x y))

```

```

(Less8 x y) => (LessThan (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Less16 x y) => (LessThan (CMPW (SignExt16to32 x) (SignExt16to32 y)))
(Less32 x y) => (LessThan (CMPW x y))
(Less64 x y) => (LessThan (CMP x y))

```

```

// Set condition flags for floating-point comparisons "x < y"
// and "x <= y". Because if either or both of the operands are
// NaNs, all three of (x < y), (x == y) and (x > y) are false,
// and ARM Manual says FCMP instruction sets PSTATE.<N,Z,C,V>
// of this case to (0, 0, 1, 1).
(Less32F x y) => (LessThanF (FCMPS x y))
(Less64F x y) => (LessThanF (FCMPD x y))

```

```

// For an unsigned integer x, the following rules are useful when combining branch
// 0 < x => x != 0
// x <= 0 => x == 0
// x < 1 => x == 0
// 1 <= x => x != 0
(Less(8U|16U|32U|64U) zero:(MOVDconst [0]) x) => (Neq(8|16|32|64) zero x)
(Leq(8U|16U|32U|64U) x zero:(MOVDconst [0])) => (Eq(8|16|32|64) x zero)
(Less(8U|16U|32U|64U) x (MOVDconst [1])) => (Eq(8|16|32|64) x
(MOVDconst [0]))
(Leq(8U|16U|32U|64U) (MOVDconst [1]) x) => (Neq(8|16|32|64) (MOVDconst [0]) x)

```

```

(Less8U x y) => (LessThanU (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Less16U x y) => (LessThanU (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Less32U x y) => (LessThanU (CMPW x y))
(Less64U x y) => (LessThanU (CMP x y))

```

```

(Leq8 x y) => (LessEqual (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Leq16 x y) => (LessEqual (CMPW (SignExt16to32 x) (SignExt16to32 y)))
(Leq32 x y) => (LessEqual (CMPW x y))

```

```

(Leq64 x y) => (LessEqual (CMP x y))

// Refer to the comments for op Less64F above.
(Leq32F x y) => (LessEqualF (FCMPS x y))
(Leq64F x y) => (LessEqualF (FCMPD x y))

(Leq8U x y) => (LessEqualU (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Leq16U x y) => (LessEqualU (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Leq32U x y) => (LessEqualU (CMPW x y))
(Leq64U x y) => (LessEqualU (CMP x y))

// Optimize comparison between a floating-point value and 0.0 with "FCMP $(0.0), Fn"
(FCMPS x (FMOVSconst [0])) =>
  (FCMPS0 x)
(FCMPS (FMOVSconst [0]) x) => (InvertFlags (FCMPS0 x))
(FCMPD x (FMOVDconst [0])) => (FCMPD0 x)
(FCMPD (FMOVDconst [0]) x) => (InvertFlags (FCMPD0 x))

// CSEL needs a flag-generating argument. Synthesize a TSTW if necessary.
(CondSelect x y boolval) && flagArg(boolval) != nil => (CSEL [boolval.Op] x y flagArg(boolval))
(CondSelect x y boolval) && flagArg(boolval) == nil => (CSEL [OpARM64NotEqual] x y (TSTWconst [1]
boolval))

(OffPtr [off] ptr:(SP)) && is32Bit(off) => (MOVDaddr [int32(off)] ptr)
(OffPtr [off] ptr) => (ADDconst [off] ptr)

(Addr {sym} base) => (MOVDaddr {sym} base)
(LocalAddr {sym} base _) => (MOVDaddr {sym} base)

// loads
(Load <t> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && isSigned(t)) => (MOVBlload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && !isSigned(t)) => (MOVBUload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && isSigned(t)) => (MOVHload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && !isSigned(t))
=> (MOVHUload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && isSigned(t)) => (MOVWload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && !isSigned(t)) => (MOVWUload ptr mem)
(Load <t> ptr mem) && (is64BitInt(t) || isPtr(t)) => (MOVDload ptr mem)
(Load <t> ptr mem) && is32BitFloat(t) => (FMOVSload ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (FMOVDload ptr mem)

// stores
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && !is64BitFloat(val.Type) => (MOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (FMOVSstore ptr val mem)

```

(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (FMOVDstore ptr val mem)

// zeroing

(Zero [0] \_ mem) => mem

(Zero [1] ptr mem) => (MOVBstore ptr (MOVDconst [0]) mem)

(Zero

[2] ptr mem) => (MOVHstore ptr (MOVDconst [0]) mem)

(Zero [4] ptr mem) => (MOVWstore ptr (MOVDconst [0]) mem)

(Zero [8] ptr mem) => (MOVDstore ptr (MOVDconst [0]) mem)

(Zero [3] ptr mem) =>

(MOVBstore [2] ptr (MOVDconst [0])

(MOVHstore ptr (MOVDconst [0]) mem))

(Zero [5] ptr mem) =>

(MOVBstore [4] ptr (MOVDconst [0])

(MOVWstore ptr (MOVDconst [0]) mem))

(Zero [6] ptr mem) =>

(MOVHstore [4] ptr (MOVDconst [0])

(MOVWstore ptr (MOVDconst [0]) mem))

(Zero [7] ptr mem) =>

(MOVBstore [6] ptr (MOVDconst [0])

(MOVHstore [4] ptr (MOVDconst [0])

(MOVWstore ptr (MOVDconst [0]) mem)))

(Zero [9] ptr mem) =>

(MOVBstore [8] ptr (MOVDconst [0])

(MOVDstore ptr (MOVDconst [0]) mem))

(Zero [10] ptr mem) =>

(MOVHstore [8] ptr (MOVDconst [0])

(MOVDstore ptr (MOVDconst [0]) mem))

(Zero [11] ptr mem) =>

(MOVBstore [10] ptr (MOVDconst [0])

(MOVHstore [8] ptr (MOVDconst [0])

(MOVDstore ptr (MOVDconst [0]) mem)))

(Zero [12] ptr mem) =>

(MOVWstore [8] ptr (MOVDconst [0])

(MOVDstore

ptr (MOVDconst [0]) mem))

(Zero [13] ptr mem) =>

(MOVBstore [12] ptr (MOVDconst [0])

(MOVWstore [8] ptr (MOVDconst [0])

(MOVDstore ptr (MOVDconst [0]) mem)))

(Zero [14] ptr mem) =>

(MOVHstore [12] ptr (MOVDconst [0])

(MOVWstore [8] ptr (MOVDconst [0])

(MOVDstore ptr (MOVDconst [0]) mem)))

(Zero [15] ptr mem) =>

(MOVBstore [14] ptr (MOVDconst [0])

(MOVHstore [12] ptr (MOVDconst [0])

```

(MOVWstore [8] ptr (MOVDconst [0])
(MOVDstore ptr (MOVDconst [0] mem))))
(Zero [16] ptr mem) =>
(STP [0] ptr (MOVDconst [0]) (MOVDconst [0] mem)

(Zero [32] ptr mem) =>
(STP [16] ptr (MOVDconst [0]) (MOVDconst [0])
(STP [0] ptr (MOVDconst [0]) (MOVDconst [0] mem))

(Zero [48] ptr mem) =>
(STP [32] ptr (MOVDconst [0]) (MOVDconst [0])
(STP [16] ptr (MOVDconst [0]) (MOVDconst [0])
(STP [0] ptr (MOVDconst [0]) (MOVDconst [0] mem)))

(Zero [64] ptr mem) =>
(STP [48] ptr (MOVDconst [0]) (MOVDconst [0])
(STP [32] ptr (MOVDconst [0]) (MOVDconst [0])
(STP [16] ptr (MOVDconst
[0]) (MOVDconst [0])
(STP [0] ptr (MOVDconst [0]) (MOVDconst [0] mem))))

// strip off fractional word zeroing
(Zero [s] ptr mem) && s%16 != 0 && s%16 <= 8 && s > 16 =>
(Zero [8]
(OffPtr <ptr.Type> ptr [s-8])
(Zero [s-s%16] ptr mem))
(Zero [s] ptr mem) && s%16 != 0 && s%16 > 8 && s > 16 =>
(Zero [16]
(OffPtr <ptr.Type> ptr [s-16])
(Zero [s-s%16] ptr mem))

// medium zeroing uses a duff device
// 4, 16, and 64 are magic constants, see runtime/mkduff.go
(Zero [s] ptr mem)
&& s%16 == 0 && s > 64 && s <= 16*64
&& !config.noDuffDevice =>
(DUFFZERO [4 * (64 - s/16)] ptr mem)

// large zeroing uses a loop
(Zero [s] ptr mem)
&& s%16 == 0 && (s > 16*64 || config.noDuffDevice) =>
(LoweredZero
ptr
(ADDconst <ptr.Type> [s-16] ptr)
mem)

// moves
(Move [0] _ _ mem) => mem

```



```

(Move [1] dst src mem) => (MOVBstore dst (MOVBUnload src mem) mem)
(Move [2] dst src mem) => (MOVHstore dst (MOVHUnload src mem) mem)
(Move [4] dst src mem) => (MOVWstore dst (MOVWUnload src mem) mem)
(Move
[8] dst src mem) => (MOVDstore dst (MOVDload src mem) mem)

```

```

(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBUnload [2] src mem)
(MOVHstore dst (MOVHUnload src mem) mem))
(Move [5] dst src mem) =>
(MOVBstore [4] dst (MOVBUnload [4] src mem)
(MOVWstore dst (MOVWUnload src mem) mem))
(Move [6] dst src mem) =>
(MOVHstore [4] dst (MOVHUnload [4] src mem)
(MOVWstore dst (MOVWUnload src mem) mem))
(Move [7] dst src mem) =>
(MOVBstore [6] dst (MOVBUnload [6] src mem)
(MOVHstore [4] dst (MOVHUnload [4] src mem)
(MOVWstore dst (MOVWUnload src mem) mem)))
(Move [12] dst src mem) =>
(MOVWstore [8] dst (MOVWUnload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem))
(Move [16] dst src mem) =>
(MOVDstore [8] dst (MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem))
(Move [24] dst src mem) =>
(MOVDstore [16] dst (MOVDload [16] src mem)
(MOVDstore [8] dst (MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem)))

```

```
// strip off fractional word move
```

```

(Move [s] dst src mem)
&& s%8 != 0 && s > 8 =>
(Move [s%8]
(OffPtr <dst.Type> dst [s-s%8])
(OffPtr <src.Type> src [s-s%8])
(Move [s-s%8] dst src mem))

```

```
// medium move uses a duff device
```

```

(Move [s] dst src mem)
&& s > 32 && s <= 16*64 && s%16 == 8
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(MOVDstore [int32(s-8)] dst (MOVDload [int32(s-8)] src mem)
(DUFFCOPY <types.TypeMem> [8*(64-(s-8)/16)] dst src mem))
(Move [s] dst src mem)
&& s > 32 && s <= 16*64 && s%16 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [8 * (64 - s/16)] dst src mem)

```

```

// 8 is the number of bytes to encode:
//
// LDP.P 16(R16), (R26, R27)
// STP.P (R26, R27), 16(R17)
//
// 64 is number of these blocks. See runtime/duff_arm64.s:duffcopy

// large move uses a loop
(Move [s] dst src mem)
&& s > 24 && s%8 == 0 && logLargeCopy(v, s) =>
(LoweredMove
 dst
 src
 (ADDconst <src.Type> src [s-8])
 mem)

// calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...)
=> (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// checks
(NilCheck ...) => (LoweredNilCheck ...)
(IsNotNil ptr) => (NotEqual (CMPconst [0] ptr))
(IsInBounds idx len) => (LessThanU (CMP idx len))
(IsSliceInBounds idx len) => (LessEqualU (CMP idx len))

// pseudo-ops
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

// Absorb pseudo-ops into blocks.
(If (Equal cc) yes no) => (EQ cc yes no)
(If (NotEqual cc) yes no) => (NE cc yes no)
(If (LessThan cc) yes no) => (LT cc yes no)
(If (LessThanU cc) yes no) => (ULT cc yes no)
(If (LessEqual cc) yes no) => (LE cc yes no)
(If (LessEqualU cc) yes no) => (ULE cc yes no)
(If (GreaterThan cc) yes no) => (GT cc yes no)
(If (GreaterThanU cc) yes no) => (UGT cc yes no)
(If (GreaterEqual cc) yes no) => (GE cc yes no)
(If (GreaterEqualU cc) yes no) => (UGE cc yes no)
(If (LessThanF cc) yes no) => (FLT cc yes no)
(If (LessEqualF cc) yes no) => (FLE cc yes no)
(If

```

```

(GreaterThanOrEq cc) yes no => (FGT cc yes no)
(If (GreaterThanOrEq cc) yes no) => (FGE cc yes no)

(If cond yes no) => (TBNZ [0] cond yes no)

(JumpTable idx) => (JUMPTABLE {makeJumpTableSym(b)} idx (MOVDaddr <typ.Uintptr>
{makeJumpTableSym(b)} (SB)))

// atomic intrinsics
// Note: these ops do not accept offset.
(AtomicLoad8 ...) => (LDARB ...)
(AtomicLoad32 ...) => (LDARW ...)
(AtomicLoad64 ...) => (LDAR ...)
(AtomicLoadPtr ...) => (LDAR ...)

(AtomicStore8 ...) => (STLRB ...)
(AtomicStore32 ...) => (STLRW ...)
(AtomicStore64 ...) => (STLR ...)
(AtomicStorePtrNoWB ...) => (STLR ...)

(AtomicExchange(32|64) ...) => (LoweredAtomicExchange(32|64) ...)
(AtomicAdd(32|64) ...) => (LoweredAtomicAdd(32|64) ...)
(AtomicCompareAndSwap(32|64) ...) => (LoweredAtomicCas(32|64) ...)

(AtomicAdd(32|64)Variant ...) => (LoweredAtomicAdd(32|64)Variant ...)
(AtomicExchange(32|64)Variant ...) => (LoweredAtomicExchange(32|64)Variant ...)
(AtomicCompareAndSwap(32|64)Variant ...) => (LoweredAtomicCas(32|64)Variant ...)

// Currently the updated value is not used, but we need a register to temporarily hold it.
(AtomicAnd8 ptr val mem) => (Select1 (LoweredAtomicAnd8 ptr val mem))
(AtomicAnd32 ptr val mem) => (Select1 (LoweredAtomicAnd32 ptr val mem))
(AtomicOr8 ptr val mem) => (Select1 (LoweredAtomicOr8 ptr val mem))
(AtomicOr32 ptr val mem) => (Select1 (LoweredAtomicOr32 ptr val mem))

(AtomicAnd8Variant ptr val mem) => (Select1 (LoweredAtomicAnd8Variant ptr val mem))
(AtomicAnd32Variant ptr val mem) => (Select1 (LoweredAtomicAnd32Variant ptr val mem))
(AtomicOr8Variant ptr val mem) => (Select1 (LoweredAtomicOr8Variant ptr val mem))
(AtomicOr32Variant ptr val mem) => (Select1 (LoweredAtomicOr32Variant ptr val mem))

// Write barrier.
(WB ...) => (LoweredWB ...)

// Publication barrier (0xe is ST option)
(PubBarrier mem) => (DMB [0xe] mem)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA

```

```

[kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// Optimizations

// Absorb boolean tests into block
(NZ (Equal cc) yes no) => (EQ cc yes no)
(NZ (NotEqual cc) yes no) => (NE cc yes no)
(NZ (LessThan cc) yes no) => (LT cc yes no)
(NZ (LessThanU cc) yes no) => (ULT cc yes no)
(NZ (LessEqual cc) yes no) => (LE cc yes no)
(NZ (LessEqualU cc) yes no) => (ULE cc yes no)
(NZ (GreaterThan cc) yes no) => (GT cc yes no)
(NZ (GreaterThanU cc) yes no) => (UGT cc yes no)
(NZ (GreaterEqual cc) yes no) => (GE cc yes no)
(NZ (GreaterEqualU cc) yes no) => (UGE cc yes no)
(NZ (LessThanF cc) yes no) => (FLT cc yes no)
(NZ (LessEqualF cc) yes no) => (FLE cc yes no)
(NZ (GreaterThanF cc) yes no) => (FGT cc yes no)
(NZ (GreaterEqualF cc) yes no) => (FGE cc yes no)

(TBNZ [0] (Equal cc) yes no) => (EQ cc yes no)
(TBNZ [0] (NotEqual cc) yes
no) => (NE cc yes no)
(TBNZ [0] (LessThan cc) yes no) => (LT cc yes no)
(TBNZ [0] (LessThanU cc) yes no) => (ULT cc yes no)
(TBNZ [0] (LessEqual cc) yes no) => (LE cc yes no)
(TBNZ [0] (LessEqualU cc) yes no) => (ULE cc yes no)
(TBNZ [0] (GreaterThan cc) yes no) => (GT cc yes no)
(TBNZ [0] (GreaterThanU cc) yes no) => (UGT cc yes no)
(TBNZ [0] (GreaterEqual cc) yes no) => (GE cc yes no)
(TBNZ [0] (GreaterEqualU cc) yes no) => (UGE cc yes no)
(TBNZ [0] (LessThanF cc) yes no) => (FLT cc yes no)
(TBNZ [0] (LessEqualF cc) yes no) => (FLE cc yes no)
(TBNZ [0] (GreaterThanF cc) yes no) => (FGT cc yes no)
(TBNZ [0] (GreaterEqualF cc) yes no) => (FGE cc yes no)

(EQ (CMPWconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (EQ (TSTWconst [int32(c)] y) yes no)
(NE (CMPWconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (NE (TSTWconst [int32(c)] y) yes no)
(LT (CMPWconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (LT (TSTWconst [int32(c)] y) yes no)
(LE (CMPWconst [0] x:(ANDconst
[c] y)) yes no) && x.Uses == 1 => (LE (TSTWconst [int32(c)] y) yes no)
(GT (CMPWconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (GT (TSTWconst [int32(c)] y) yes no)
(GE (CMPWconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (GE (TSTWconst [int32(c)] y) yes no)

(EQ (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (EQ (TST x y) yes no)
(NE (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (NE (TST x y) yes no)

```

(LT (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (LT (TST x y) yes no)  
(LE (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (LE (TST x y) yes no)  
(GT (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (GT (TST x y) yes no)  
(GE (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (GE (TST x y) yes no)

(EQ (CMPWconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (EQ (TSTW x y) yes no)  
(NE (CMPWconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (NE (TSTW x y) yes no)  
(LT (CMPWconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (LT (TSTW x y) yes no)  
(LE (CMPWconst  
[0] z:(AND x y)) yes no) && z.Uses == 1 => (LE (TSTW x y) yes no)  
(GT (CMPWconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (GT (TSTW x y) yes no)  
(GE (CMPWconst [0] z:(AND x y)) yes no) && z.Uses == 1 => (GE (TSTW x y) yes no)

(EQ (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (EQ (TSTconst [c] y) yes no)  
(NE (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (NE (TSTconst [c] y) yes no)  
(LT (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (LT (TSTconst [c] y) yes no)  
(LE (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (LE (TSTconst [c] y) yes no)  
(GT (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (GT (TSTconst [c] y) yes no)  
(GE (CMPconst [0] x:(ANDconst [c] y)) yes no) && x.Uses == 1 => (GE (TSTconst [c] y) yes no)

(EQ (CMPconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (EQ (CMNconst [c] y) yes no)  
(NE (CMPconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (NE (CMNconst [c] y) yes no)  
(LT (CMPconst [0]  
x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (LTnoov (CMNconst [c] y) yes no)  
(LE (CMPconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (LEnoov (CMNconst [c] y) yes no)  
(GT (CMPconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (GTnoov (CMNconst [c] y) yes no)  
(GE (CMPconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (GENoov (CMNconst [c] y) yes no)

(EQ (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (EQ (CMNWconst [int32(c)] y) yes no)  
(NE (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (NE (CMNWconst [int32(c)] y) yes no)  
(LT (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (LTnoov (CMNWconst [int32(c)] y) yes no)  
(LE (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (LEnoov (CMNWconst [int32(c)] y) yes no)  
(GT (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (GTnoov (CMNWconst [int32(c)] y) yes  
no)  
(GE (CMPWconst [0] x:(ADDconst [c] y)) yes no) && x.Uses == 1 => (GENoov (CMNWconst [int32(c)] y) yes  
no)

(EQ  
(CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (EQ (CMN x y) yes no)  
(NE (CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (NE (CMN x y) yes no)  
(LT (CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (LTnoov (CMN x y) yes no)  
(LE (CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (LEnoov (CMN x y) yes no)  
(GT (CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (GTnoov (CMN x y) yes no)  
(GE (CMPconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (GENoov (CMN x y) yes no)

(EQ (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (EQ (CMNW x y) yes no)  
(NE (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (NE (CMNW x y) yes no)  
(LT (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (LTnoov (CMNW x y) yes no)

(LE (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (LEnoov (CMNW x y) yes no)  
(GT (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (GTnoov (CMNW x y) yes no)  
(GE (CMPWconst [0] z:(ADD x y)) yes no) && z.Uses == 1 => (GEnoov (CMNW x y) yes no)

// CMP(x,-y)

-> CMN(x,y) is only valid for unordered comparison, if y can be -1<<63

(EQ (CMP x z:(NEG y)) yes no) && z.Uses == 1 => (EQ (CMN x y) yes no)

(NE (CMP x z:(NEG y)) yes no) && z.Uses == 1 => (NE (CMN x y) yes no)

// CMPW(x,-y) -> CMNW(x,y) is only valid for unordered comparison, if y can be -1<<31

(EQ (CMPW x z:(NEG y)) yes no) && z.Uses == 1 => (EQ (CMNW x y) yes no)

(NE (CMPW x z:(NEG y)) yes no) && z.Uses == 1 => (NE (CMNW x y) yes no)

(EQ (CMPconst [0] x) yes no) => (Z x yes no)

(NE (CMPconst [0] x) yes no) => (NZ x yes no)

(EQ (CMPWconst [0] x) yes no) => (ZW x yes no)

(NE (CMPWconst [0] x) yes no) => (NZW x yes no)

(EQ (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (EQ (CMN a (MUL <x.Type> x y)) yes no)

(NE (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (NE (CMN a (MUL <x.Type> x y)) yes no)

(LT (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (LTnoov (CMN a (MUL <x.Type> x y)) yes no)

(LE (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (LEnoov

(CMN a (MUL <x.Type> x y)) yes no)

(GT (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (GTnoov (CMN a (MUL <x.Type> x y)) yes no)

(GE (CMPconst [0] z:(MADD a x y)) yes no) && z.Uses==1 => (GEnoov (CMN a (MUL <x.Type> x y)) yes no)

(EQ (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (EQ (CMP a (MUL <x.Type> x y)) yes no)

(NE (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (NE (CMP a (MUL <x.Type> x y)) yes no)

(LE (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (LEnoov (CMP a (MUL <x.Type> x y)) yes no)

(LT (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (LTnoov (CMP a (MUL <x.Type> x y)) yes no)

(GE (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (GEnoov (CMP a (MUL <x.Type> x y)) yes no)

(GT (CMPconst [0] z:(MSUB a x y)) yes no) && z.Uses==1 => (GTnoov (CMP a (MUL <x.Type> x y)) yes no)

(EQ (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1 => (EQ (CMNW a (MULW <x.Type> x y)) yes no)

(NE (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1

=> (NE (CMNW a (MULW <x.Type> x y)) yes no)

(LE (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1 => (LEnoov (CMNW a (MULW <x.Type> x y)) yes no)

(LT (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1 => (LTnoov (CMNW a (MULW <x.Type> x y)) yes no)

(GE (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1 => (GEnoov (CMNW a (MULW <x.Type> x y)) yes no)

(GT (CMPWconst [0] z:(MADDW a x y)) yes no) && z.Uses==1 => (GTnoov (CMNW a (MULW <x.Type> x y)) yes no)

(EQ (CMPWconst [0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (EQ (CMPW a (MULW <x.Type> x y)) yes no)

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(NE (CMPWconst [0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (NE (CMPW a (MULW <x.Type> x y)) yes
no)
(LE (CMPWconst [0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (LEnoov (CMPW a (MULW <x.Type> x y))
yes no)
(LT (CMPWconst [0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (LTnoov (CMPW a (MULW <x.Type> x y))
yes no)
(GE (CMPWconst [0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (GENoov (CMPW a (MULW <x.Type> x y))
yes no)
(GT (CMPWconst
[0] z:(MSUBW a x y)) yes no) && z.Uses==1 => (GTnoov (CMPW a (MULW <x.Type> x y)) yes no)

// Absorb bit-tests into block
(Z (ANDconst [c] x) yes no) && oneBit(c) => (TBZ [int64(ntz64(c))] x yes no)
(NZ (ANDconst [c] x) yes no) && oneBit(c) => (TBNZ [int64(ntz64(c))] x yes no)
(ZW (ANDconst [c] x) yes no) && oneBit(int64(uint32(c))) => (TBZ [int64(ntz64(int64(uint32(c))))] x yes no)
(NZW (ANDconst [c] x) yes no) && oneBit(int64(uint32(c))) => (TBNZ [int64(ntz64(int64(uint32(c))))] x yes no)
(EQ (TSTconst [c] x) yes no) && oneBit(c) => (TBZ [int64(ntz64(c))] x yes no)
(NE (TSTconst [c] x) yes no) && oneBit(c) => (TBNZ [int64(ntz64(c))] x yes no)
(EQ (TSTWconst [c] x) yes no) && oneBit(int64(uint32(c))) => (TBZ [int64(ntz64(int64(uint32(c))))] x yes no)
(NE (TSTWconst [c] x) yes no) && oneBit(int64(uint32(c))) => (TBNZ [int64(ntz64(int64(uint32(c))))] x yes no)

// Test sign-bit for signed comparisons against zero
(GE (CMPWconst [0] x) yes no) => (TBZ [31] x yes no)
(GE (CMPconst
[0] x) yes no) => (TBZ [63] x yes no)
(LT (CMPWconst [0] x) yes no) => (TBNZ [31] x yes no)
(LT (CMPconst [0] x) yes no) => (TBNZ [63] x yes no)

// fold offset into address
(ADDconst [off1] (MOVDaddr [off2] {sym} ptr)) && is32Bit(off1+int64(off2)) =>
(MOVDaddr [int32(off1)+off2] {sym} ptr)

// fold address into load/store
(MOVBload [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBload [off1+int32(off2)] {sym} ptr mem)
(MOVBUload [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBUload [off1+int32(off2)] {sym} ptr mem)
(MOVHload [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHload [off1+int32(off2)] {sym} ptr mem)
(MOVHUload [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHUload
[off1+int32(off2)] {sym} ptr mem)
(MOVWload [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>

```

```

(MOVWload [off1+int32(off2)] {sym} ptr mem)
(MOVWUload [off1] {sym} (ADDconst [off2] ptr mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctx.Flag_shared) =>
(MOVWUload [off1+int32(off2)] {sym} ptr mem)
(MOVDload [off1] {sym} (ADDconst [off2] ptr mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctx.Flag_shared) =>
(MOVDload [off1+int32(off2)] {sym} ptr mem)
(FMOVSload [off1] {sym} (ADDconst [off2] ptr mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctx.Flag_shared) =>
(FMOVSload [off1+int32(off2)] {sym} ptr mem)
(FMOVDload [off1] {sym} (ADDconst [off2] ptr mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctx.Flag_shared) =>
(FMOVDload [off1+int32(off2)] {sym} ptr mem)

// register indexed load
(MOVDload [off] {sym} (ADD ptr idx) mem) && off
== 0 && sym == nil => (MOVDloadidx ptr idx mem)
(MOVWUload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVWUloadidx ptr idx mem)
(MOVWload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVWloadidx ptr idx mem)
(MOVHUload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVHUloadidx ptr idx mem)
(MOVHload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVHloadidx ptr idx mem)
(MOVBload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVBloadidx ptr idx mem)
(FMOVSload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (FMOVSloadidx ptr idx mem)
(FMOVDload [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (FMOVDloadidx ptr idx mem)
(MOVDloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVDload [int32(c)] ptr mem)
(MOVDloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (MOVDload [int32(c)] ptr
mem)
(MOVWUloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVWUload [int32(c)] ptr mem)
(MOVWUloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (MOVWUload [int32(c)] ptr mem)
(MOVWloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVWload [int32(c)] ptr mem)
(MOVWloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (MOVWload [int32(c)] ptr mem)
(MOVHUloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVHUload [int32(c)] ptr mem)
(MOVHUloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (MOVHUload [int32(c)] ptr mem)
(MOVHloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVHload [int32(c)] ptr mem)
(MOVHloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (MOVHload [int32(c)] ptr mem)
(MOVBloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVBload [int32(c)] ptr mem)
(MOVBloadidx (MOVDconst [c]) ptr mem)
&& is32Bit(c) => (MOVBload [int32(c)] ptr mem)
(FMOVSloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (FMOVSload [int32(c)] ptr mem)
(FMOVSloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (FMOVSload [int32(c)] ptr mem)
(FMOVDloadidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (FMOVDload [int32(c)] ptr mem)
(FMOVDloadidx (MOVDconst [c]) ptr mem) && is32Bit(c) => (FMOVDload [int32(c)] ptr mem)

// shifted register indexed load
(MOVDload [off] {sym} (ADDshiftLL [3] ptr idx) mem) && off == 0 && sym == nil => (MOVDloadidx8 ptr idx

```



mem)

(MOVWUload [off] {sym} (ADDshiftLL [2] ptr idx) mem) && off == 0 && sym == nil => (MOVWUloadidx4 ptr idx mem)

(MOVWload [off] {sym} (ADDshiftLL [2] ptr idx) mem) && off == 0 && sym == nil => (MOVWloadidx4 ptr idx mem)

(MOVHUload [off] {sym} (ADDshiftLL [1] ptr idx) mem) && off == 0 && sym == nil => (MOVHUloadidx2 ptr idx mem)

(MOVHload [off] {sym} (ADDshiftLL [1] ptr idx) mem) && off == 0 && sym == nil => (MOVHloadidx2 ptr idx mem)

(MOVDloadidx ptr (SLLconst [3] idx) mem) => (MOVDloadidx8 ptr idx mem)

(MOVWloadidx ptr (SLLconst [2] idx) mem) => (MOVWloadidx4 ptr idx mem)

(MOVWUloadidx ptr (SLLconst [2] idx) mem) => (MOVWUloadidx4 ptr idx mem)

(MOVHloadidx ptr (SLLconst [1] idx) mem) => (MOVHloadidx2 ptr idx mem)

(MOVHUloadidx ptr (SLLconst [1] idx) mem) => (MOVHUloadidx2 ptr idx mem)

(MOVHloadidx ptr (ADD idx idx) mem) => (MOVHloadidx2 ptr idx mem)

(MOVHUloadidx ptr (ADD idx idx) mem) => (MOVHUloadidx2 ptr idx mem)

(MOVDloadidx (SLLconst [3] idx) ptr mem) => (MOVDloadidx8 ptr idx mem)

(MOVWloadidx (SLLconst [2] idx) ptr mem) => (MOVWloadidx4 ptr idx mem)

(MOVWUloadidx (SLLconst [2] idx) ptr mem) => (MOVWUloadidx4 ptr idx mem)

(MOVHloadidx (ADD idx idx) ptr mem) => (MOVHloadidx2 ptr idx mem)

(MOVHUloadidx (ADD idx idx) ptr mem) => (MOVHUloadidx2 ptr idx mem)

(MOVDloadidx8 ptr (MOVDconst [c] mem) && is32Bit(c<<3) => (MOVDload [int32(c)<<3] ptr mem)

(MOVWUloadidx4 ptr (MOVDconst [c] mem) && is32Bit(c<<2) => (MOVWUload [int32(c)<<2] ptr mem)

(MOVWloadidx4 ptr (MOVDconst [c] mem) && is32Bit(c<<2) => (MOVWload [int32(c)<<2] ptr mem)

(MOVHUloadidx2 ptr (MOVDconst [c] mem) && is32Bit(c<<1) => (MOVHUload [int32(c)<<1] ptr mem)

(MOVHloadidx2 ptr (MOVDconst [c] mem) && is32Bit(c<<1) => (MOVHload [int32(c)<<1] ptr mem)

(FMOVDload [off] {sym} (ADDshiftLL [3] ptr idx) mem) && off == 0 && sym == nil => (FMOVDloadidx8 ptr idx mem)

(FMOVSlod [off] {sym} (ADDshiftLL [2] ptr idx) mem) && off == 0 && sym == nil => (FMOVSlodidx4 ptr idx mem)

(FMOVDloadidx ptr (SLLconst [3] idx) mem) => (FMOVDloadidx8 ptr idx mem)

(FMOVSlodidx ptr (SLLconst [2] idx) mem) => (FMOVSlodidx4 ptr idx mem)

(FMOVDloadidx (SLLconst [3] idx) ptr mem) => (FMOVDloadidx8 ptr idx mem)

(FMOVSlodidx (SLLconst [2] idx) ptr mem) => (FMOVSlodidx4 ptr idx mem)

(FMOVDloadidx8 ptr (MOVDconst [c] mem) && is32Bit(c<<3) => (FMOVDload ptr [int32(c)<<3] mem)

(FMOVSlodidx4 ptr (MOVDconst [c] mem) && is32Bit(c<<2) => (FMOVSlod ptr [int32(c)<<2] mem)

(MOVBstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) && (ptr.Op != OpSB || !config.ctx.Flag\_shared) =>

(MOVBstore [off1+int32(off2)] {sym} ptr val mem)

(MOVHstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) && (ptr.Op != OpSB || !config.ctx.Flag\_shared) =>

(MOVHstore [off1+int32(off2)] {sym} ptr val mem)

(MOVWstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2)

```

&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWstore [off1+int32(off2)] {sym} ptr val mem)
(MOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVDstore [off1+int32(off2)] {sym} ptr val mem)
(STP [off1] {sym} (ADDconst [off2] ptr) val1 val2 mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(STP [off1+int32(off2)] {sym} ptr val1 val2 mem)
(FMOVStore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2)
&&
(ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVStore [off1+int32(off2)] {sym} ptr val mem)
(FMOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVDstore [off1+int32(off2)] {sym} ptr val mem)
(MOVBstorezero [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBstorezero [off1+int32(off2)] {sym} ptr mem)
(MOVHstorezero [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHstorezero [off1+int32(off2)] {sym} ptr mem)
(MOVWstorezero [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWstorezero [off1+int32(off2)] {sym} ptr mem)
(MOVDstorezero [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVDstorezero
[off1+int32(off2)] {sym} ptr mem)
(MOVQstorezero [off1] {sym} (ADDconst [off2] ptr) mem) && is32Bit(int64(off1)+off2)
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVQstorezero [off1+int32(off2)] {sym} ptr mem)

// register indexed store
(MOVDstore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (MOVDstoreidx ptr idx val
mem)
(MOVWstore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (MOVWstoreidx ptr idx val
mem)
(MOVHstore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (MOVHstoreidx ptr idx val
mem)
(MOVBstore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (MOVBstoreidx ptr idx val
mem)
(FMOVDstore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (FMOVDstoreidx ptr idx val
mem)
(FMOVStore [off] {sym} (ADD ptr idx) val mem) && off == 0 && sym == nil => (FMOVStoreidx ptr idx val
mem)
(MOVDstoreidx ptr (MOVDconst [c]) val mem) && is32Bit(c) => (MOVDstore [int32(c)] ptr val mem)
(MOVDstoreidx

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(MOVDconst [c] idx val mem) && is32Bit(c) => (MOVDstore [int32(c)] idx val mem)
(MOVWstoreidx ptr (MOVDconst [c] val mem) && is32Bit(c) => (MOVWstore [int32(c)] ptr val mem)
(MOVWstoreidx (MOVDconst [c] idx val mem) && is32Bit(c) => (MOVWstore [int32(c)] idx val mem)
(MOVHstoreidx ptr (MOVDconst [c] val mem) && is32Bit(c) => (MOVHstore [int32(c)] ptr val mem)
(MOVHstoreidx (MOVDconst [c] idx val mem) && is32Bit(c) => (MOVHstore [int32(c)] idx val mem)
(MOVBstoreidx ptr (MOVDconst [c] val mem) && is32Bit(c) => (MOVBstore [int32(c)] ptr val mem)
(MOVBstoreidx (MOVDconst [c] idx val mem) && is32Bit(c) => (MOVBstore [int32(c)] idx val mem)
(FMOVDstoreidx ptr (MOVDconst [c] val mem) && is32Bit(c) => (FMOVDstore [int32(c)] ptr val mem)
(FMOVDstoreidx (MOVDconst [c] idx val mem) && is32Bit(c) => (FMOVDstore [int32(c)] idx val mem)
(FMOVSstoreidx ptr (MOVDconst [c] val mem) && is32Bit(c) => (FMOVSstore [int32(c)] ptr val mem)
(FMOVSstoreidx (MOVDconst [c] idx val mem) &&
is32Bit(c) => (FMOVSstore [int32(c)] idx val mem)

// shifted register indexed store
(MOVDstore [off] {sym} (ADDshiftLL [3] ptr idx) val mem) && off == 0 && sym == nil => (MOVDstoreidx8 ptr
idx val mem)
(MOVWstore [off] {sym} (ADDshiftLL [2] ptr idx) val mem) && off == 0 && sym == nil => (MOVWstoreidx4
ptr idx val mem)
(MOVHstore [off] {sym} (ADDshiftLL [1] ptr idx) val mem) && off == 0 && sym == nil => (MOVHstoreidx2 ptr
idx val mem)
(MOVDstoreidx ptr (SLLconst [3] idx) val mem) => (MOVDstoreidx8 ptr idx val mem)
(MOVWstoreidx ptr (SLLconst [2] idx) val mem) => (MOVWstoreidx4 ptr idx val mem)
(MOVHstoreidx ptr (SLLconst [1] idx) val mem) => (MOVHstoreidx2 ptr idx val mem)
(MOVHstoreidx ptr (ADD idx idx) val mem) => (MOVHstoreidx2 ptr idx val mem)
(MOVDstoreidx (SLLconst [3] idx) ptr val mem) => (MOVDstoreidx8 ptr idx val mem)
(MOVWstoreidx (SLLconst [2] idx) ptr val mem) => (MOVWstoreidx4 ptr idx val mem)
(MOVHstoreidx (SLLconst [1] idx) ptr val mem) => (MOVHstoreidx2 ptr idx val mem)
(MOVHstoreidx
(ADD idx idx) ptr val mem) => (MOVHstoreidx2 ptr idx val mem)
(MOVDstoreidx8 ptr (MOVDconst [c] val mem) && is32Bit(c<<3) => (MOVDstore [int32(c)<<3] ptr val mem)
(MOVWstoreidx4 ptr (MOVDconst [c] val mem) && is32Bit(c<<2) => (MOVWstore [int32(c)<<2] ptr val mem)
(MOVHstoreidx2 ptr (MOVDconst [c] val mem) && is32Bit(c<<1) => (MOVHstore [int32(c)<<1] ptr val mem)

(FMOVDstore [off] {sym} (ADDshiftLL [3] ptr idx) val mem) && off == 0 && sym == nil => (FMOVDstoreidx8
ptr idx val mem)
(FMOVSstore [off] {sym} (ADDshiftLL [2] ptr idx) val mem) && off == 0 && sym == nil => (FMOVSstoreidx4
ptr idx val mem)
(FMOVDstoreidx ptr (SLLconst [3] idx) val mem) => (FMOVDstoreidx8 ptr idx val mem)
(FMOVSstoreidx ptr (SLLconst [2] idx) val mem) => (FMOVSstoreidx4 ptr idx val mem)
(FMOVDstoreidx (SLLconst [3] idx) ptr val mem) => (FMOVDstoreidx8 ptr idx val mem)
(FMOVSstoreidx (SLLconst [2] idx) ptr val mem) => (FMOVSstoreidx4 ptr idx val mem)
(FMOVDstoreidx8 ptr (MOVDconst [c] val mem)
&& is32Bit(c<<3) => (FMOVDstore [int32(c)<<3] ptr val mem)
(FMOVSstoreidx4 ptr (MOVDconst [c] val mem) && is32Bit(c<<2) => (FMOVSstore [int32(c)<<2] ptr val mem)

(MOVBload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxxt.Flag_shared) =>

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(MOVBload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVBUnload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBUnload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHUnload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared)
=>
(MOVHUnload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWUnload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWUnload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVDload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(FMOVSload [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVSload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(FMOVDload
[off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVDload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

(MOVBstore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVHstore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVWstore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)

```

```

(MOVDstore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2)
&& is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVDstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(STP [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val1 val2 mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(STP [off1+off2] {mergeSym(sym1,sym2)} ptr val1 val2 mem)
(FMOVStore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVStore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(FMOVDstore [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) val mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(FMOVDstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVBstorezero [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&&
(ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVBstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHstorezero [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVHstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWstorezero [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVWstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDstorezero [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared) =>
(MOVDstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVQstorezero [off1] {sym1} (MOVDaddr [off2] {sym2} ptr) mem)
&& canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2))
&& (ptr.Op != OpSB || !config.ctxst.Flag_shared)
=>
(MOVQstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

// store zero
(MOVBstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVBstorezero [off] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVHstorezero [off] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVWstorezero [off] {sym} ptr mem)
(MOVDstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVDstorezero [off] {sym} ptr mem)
(STP [off] {sym} ptr (MOVDconst [0]) (MOVDconst [0]) mem) => (MOVQstorezero [off] {sym} ptr mem)

// register indexed store zero

```

```

(MOVDstorezero [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVDstorezeroidx ptr idx
mem)
(MOVWstorezero [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVWstorezeroidx ptr idx
mem)
(MOVHstorezero [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVHstorezeroidx ptr idx
mem)
(MOVBstorezero [off] {sym} (ADD ptr idx) mem) && off == 0 && sym == nil => (MOVBstorezeroidx ptr idx
mem)
(MOVDstoreidx ptr
idx (MOVDconst [0]) mem) => (MOVDstorezeroidx ptr idx mem)
(MOVWstoreidx ptr idx (MOVDconst [0]) mem) => (MOVWstorezeroidx ptr idx mem)
(MOVHstoreidx ptr idx (MOVDconst [0]) mem) => (MOVHstorezeroidx ptr idx mem)
(MOVBstoreidx ptr idx (MOVDconst [0]) mem) => (MOVBstorezeroidx ptr idx mem)
(MOVDstorezeroidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVDstorezero [int32(c)] ptr mem)
(MOVDstorezeroidx (MOVDconst [c]) idx mem) && is32Bit(c) => (MOVDstorezero [int32(c)] idx mem)
(MOVWstorezeroidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVWstorezero [int32(c)] ptr mem)
(MOVWstorezeroidx (MOVDconst [c]) idx mem) && is32Bit(c) => (MOVWstorezero [int32(c)] idx mem)
(MOVHstorezeroidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVHstorezero [int32(c)] ptr mem)
(MOVHstorezeroidx (MOVDconst [c]) idx mem) && is32Bit(c) => (MOVHstorezero [int32(c)] idx mem)
(MOVBstorezeroidx ptr (MOVDconst [c]) mem) && is32Bit(c) => (MOVBstorezero [int32(c)] ptr mem)
(MOVBstorezeroidx (MOVDconst [c]) idx mem) &&
is32Bit(c) => (MOVBstorezero [int32(c)] idx mem)

// shifted register indexed store zero
(MOVDstorezero [off] {sym} (ADDshiftLL [3] ptr idx) mem) && off == 0 && sym == nil =>
(MOVDstorezeroidx8 ptr idx mem)
(MOVWstorezero [off] {sym} (ADDshiftLL [2] ptr idx) mem) && off == 0 && sym == nil =>
(MOVWstorezeroidx4 ptr idx mem)
(MOVHstorezero [off] {sym} (ADDshiftLL [1] ptr idx) mem) && off == 0 && sym == nil =>
(MOVHstorezeroidx2 ptr idx mem)
(MOVDstorezeroidx ptr (SLLconst [3] idx) mem) => (MOVDstorezeroidx8 ptr idx mem)
(MOVWstorezeroidx ptr (SLLconst [2] idx) mem) => (MOVWstorezeroidx4 ptr idx mem)
(MOVHstorezeroidx ptr (SLLconst [1] idx) mem) => (MOVHstorezeroidx2 ptr idx mem)
(MOVHstorezeroidx ptr (ADD idx idx) mem) => (MOVHstorezeroidx2 ptr idx mem)
(MOVDstorezeroidx (SLLconst [3] idx) ptr mem) => (MOVDstorezeroidx8 ptr idx mem)
(MOVWstorezeroidx (SLLconst [2] idx) ptr mem) => (MOVWstorezeroidx4 ptr idx mem)
(MOVHstorezeroidx (SLLconst [1] idx) ptr mem) => (MOVHstorezeroidx2 ptr idx
mem)
(MOVHstorezeroidx (ADD idx idx) ptr mem) => (MOVHstorezeroidx2 ptr idx mem)
(MOVDstoreidx8 ptr idx (MOVDconst [0]) mem) => (MOVDstorezeroidx8 ptr idx mem)
(MOVWstoreidx4 ptr idx (MOVDconst [0]) mem) => (MOVWstorezeroidx4 ptr idx mem)
(MOVHstoreidx2 ptr idx (MOVDconst [0]) mem) => (MOVHstorezeroidx2 ptr idx mem)
(MOVDstorezeroidx8 ptr (MOVDconst [c]) mem) && is32Bit(c<<<3) => (MOVDstorezero [int32(c<<<3)] ptr mem)
(MOVWstorezeroidx4 ptr (MOVDconst [c]) mem) && is32Bit(c<<<2) => (MOVWstorezero [int32(c<<<2)] ptr mem)
(MOVHstorezeroidx2 ptr (MOVDconst [c]) mem) && is32Bit(c<<<1) => (MOVHstorezero [int32(c<<<1)] ptr mem)

// replace load from same location as preceding store with zero/sign extension (or copy in case of full width)
// these seem to have bad interaction with other rules, resulting in slower code

```

```

//(MOVBload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> (MOVBreg x)
//(MOVBUload [off] {sym} ptr (MOVBstore [off2] {sym2}
ptr2 x _)) && sym == sym2 && off == off2 && isSamePtr(ptr, ptr2) -> (MOVBUreg x)
//(MOVHload [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> (MOVHreg x)
//(MOVHUload [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> (MOVHUreg x)
//(MOVWload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> (MOVWreg x)
//(MOVWUload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> (MOVWUreg x)
//(MOVDload [off] {sym} ptr (MOVDstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> x
//(FMOVSload [off] {sym} ptr (FMOVSstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> x
//(FMOVDload [off] {sym} ptr (FMOVDstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) -> x

```

(MOVBload

```

[off] {sym} ptr (MOVBstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 && isSamePtr(ptr,
ptr2) => (MOVDconst [0])
(MOVBUload [off] {sym} ptr (MOVBstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])
(MOVHload [off] {sym} ptr (MOVHstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])
(MOVHUload [off] {sym} ptr (MOVHstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])
(MOVWload [off] {sym} ptr (MOVWstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])
(MOVWUload [off] {sym} ptr (MOVWstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])
(MOVDload [off] {sym} ptr (MOVDstorezero [off2] {sym2} ptr2 _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVDconst [0])

```

(MOVBloadidx ptr idx (MOVBstorezeroidx ptr2

```

idx2 _))
&& (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])
(MOVBUloadidx ptr idx (MOVBstorezeroidx ptr2 idx2 _))
&& (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])
(MOVHloadidx ptr idx (MOVHstorezeroidx ptr2 idx2 _))
&& (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])
(MOVHUloadidx ptr idx (MOVHstorezeroidx ptr2 idx2 _))
&& (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])

```

```

(MOVWloadidx ptr idx (MOVWstorezeroidx ptr2 idx2 _))
  && (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])
(MOVWUloadidx ptr idx (MOVWstorezeroidx ptr2 idx2 _))
  && (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])
(MOVDloadidx
 ptr idx (MOVDstorezeroidx ptr2 idx2 _))
  && (isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) || isSamePtr(ptr, idx2) && isSamePtr(idx, ptr2)) =>
(MOVDconst [0])

(MOVHloadidx2 ptr idx (MOVHstorezeroidx2 ptr2 idx2 _)) && isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) =>
(MOVDconst [0])
(MOVHUloadidx2 ptr idx (MOVHstorezeroidx2 ptr2 idx2 _)) && isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) =>
(MOVDconst [0])
(MOVWloadidx4 ptr idx (MOVWstorezeroidx4 ptr2 idx2 _)) && isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) =>
(MOVDconst [0])
(MOVWUloadidx4 ptr idx (MOVWstorezeroidx4 ptr2 idx2 _)) && isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2)
=> (MOVDconst [0])
(MOVDloadidx8 ptr idx (MOVDstorezeroidx8 ptr2 idx2 _)) && isSamePtr(ptr, ptr2) && isSamePtr(idx, idx2) =>
(MOVDconst [0])

// don't extend after proper load
(MOVBreg x:(MOVBload _ _)) => (MOVDreg x)
(MOVBUreg x:(MOVBUload _ _)) => (MOVDreg x)
(MOVHreg x:(MOVBload _ _)) => (MOVDreg x)
(MOVHreg x:(MOVBUload _ _)) => (MOVDreg x)
(MOVHreg x:(MOVHload
 _ _)) => (MOVDreg x)
(MOVHUreg x:(MOVBUload _ _)) => (MOVDreg x)
(MOVHUreg x:(MOVHUload _ _)) => (MOVDreg x)
(MOVWreg x:(MOVBload _ _)) => (MOVDreg x)
(MOVWreg x:(MOVBUload _ _)) => (MOVDreg x)
(MOVWreg x:(MOVHload _ _)) => (MOVDreg x)
(MOVWreg x:(MOVHUload _ _)) => (MOVDreg x)
(MOVWreg x:(MOVWload _ _)) => (MOVDreg x)
(MOVWUreg x:(MOVBUload _ _)) => (MOVDreg x)
(MOVWUreg x:(MOVHUload _ _)) => (MOVDreg x)
(MOVWUreg x:(MOVWUload _ _)) => (MOVDreg x)
(MOVBreg x:(MOVBloadidx _ _ _)) => (MOVDreg x)
(MOVBUreg x:(MOVBUloadidx _ _ _)) => (MOVDreg x)
(MOVHreg x:(MOVBloadidx _ _ _)) => (MOVDreg x)
(MOVHreg x:(MOVBUloadidx _ _ _)) => (MOVDreg x)
(MOVHreg x:(MOVHloadidx _ _ _)) => (MOVDreg x)
(MOVHUreg x:(MOVBUloadidx _ _ _)) => (MOVDreg x)
(MOVHUreg x:(MOVHUloadidx _ _ _)) => (MOVDreg x)
(MOVWreg x:(MOVBloadidx _ _ _)) => (MOVDreg x)
(MOVWreg x:(MOVBUloadidx _ _ _)) => (MOVDreg x)

```



```

(MOVWreg x:(MOVHloadidx __ _)) => (MOVDreg x)
(MOVWreg x:(MOVHUloadidx __ _)) => (MOVDreg x)
(MOVWreg x:(MOVWloadidx
__ _)) => (MOVDreg x)
(MOVWUreg x:(MOVBUloadidx __ _)) => (MOVDreg x)
(MOVWUreg x:(MOVHUloadidx __ _)) => (MOVDreg x)
(MOVWUreg x:(MOVWUloadidx __ _)) => (MOVDreg x)
(MOVHreg x:(MOVHloadidx2 __ _)) => (MOVDreg x)
(MOVHreg x:(MOVHUloadidx2 __ _)) => (MOVDreg x)
(MOVWreg x:(MOVHloadidx2 __ _)) => (MOVDreg x)
(MOVWreg x:(MOVHUloadidx2 __ _)) => (MOVDreg x)
(MOVWreg x:(MOVWloadidx4 __ _)) => (MOVDreg x)
(MOVWUreg x:(MOVHUloadidx2 __ _)) => (MOVDreg x)
(MOVWUreg x:(MOVWUloadidx4 __ _)) => (MOVDreg x)

```

// fold double extensions

```

(MOVBreg x:(MOVBreg _)) => (MOVDreg x)
(MOVBUreg x:(MOVBUreg _)) => (MOVDreg x)
(MOVHreg x:(MOVBreg _)) => (MOVDreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVDreg x)
(MOVHreg x:(MOVHreg _)) => (MOVDreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVDreg x)
(MOVHreg x:(MOVHreg _)) => (MOVDreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVDreg x)
(MOVWreg x:(MOVBreg _)) => (MOVDreg x)
(MOVWreg x:(MOVBUreg _)) => (MOVDreg x)
(MOVWreg x:(MOVHreg _)) => (MOVDreg x)
(MOVWreg x:(MOVWreg _)) => (MOVDreg x)
(MOVWUreg x:(MOVBUreg
_)) => (MOVDreg x)
(MOVWUreg x:(MOVHreg _)) => (MOVDreg x)
(MOVWUreg x:(MOVWreg _)) => (MOVDreg x)

```

// don't extend before store

```

(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore
[off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVBstoreidx ptr idx (MOVBreg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVBstoreidx ptr idx (MOVBUreg x) mem) => (MOVBstoreidx ptr idx x mem)

```

```

(MOVBstoreidx ptr idx (MOVHreg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVBstoreidx ptr idx (MOVHureg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVBstoreidx ptr idx (MOVWreg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVBstoreidx ptr idx (MOVWureg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVHstoreidx ptr idx (MOVHreg x) mem) => (MOVHstoreidx ptr idx x mem)
(MOVHstoreidx ptr idx (MOVHureg x) mem) => (MOVHstoreidx ptr idx x mem)
(MOVHstoreidx ptr idx (MOVWreg x) mem) => (MOVHstoreidx ptr idx x mem)
(MOVHstoreidx ptr idx (MOVWureg x) mem) => (MOVHstoreidx ptr idx x mem)
(MOVWstoreidx ptr idx (MOVWreg x) mem) => (MOVWstoreidx ptr idx x mem)
(MOVWstoreidx ptr idx (MOVWureg x) mem) => (MOVWstoreidx ptr idx x mem)
(MOVHstoreidx2 ptr idx (MOVHreg
x) mem) => (MOVHstoreidx2 ptr idx x mem)
(MOVHstoreidx2 ptr idx (MOVHureg x) mem) => (MOVHstoreidx2 ptr idx x mem)
(MOVHstoreidx2 ptr idx (MOVWreg x) mem) => (MOVHstoreidx2 ptr idx x mem)
(MOVHstoreidx2 ptr idx (MOVWureg x) mem) => (MOVHstoreidx2 ptr idx x mem)
(MOVWstoreidx4 ptr idx (MOVWreg x) mem) => (MOVWstoreidx4 ptr idx x mem)
(MOVWstoreidx4 ptr idx (MOVWureg x) mem) => (MOVWstoreidx4 ptr idx x mem)

// if a register move has only 1 use, just use the same register without emitting instruction
// MOVDnop doesn't emit instruction, only for ensuring the type.
(MOVDreg x) && x.Uses == 1 => (MOVDnop x)

// TODO: we should be able to get rid of MOVDnop all together.
// But for now, this is enough to get rid of lots of them.
(MOVDnop (MOVDconst [c])) => (MOVDconst [c])

// fold constant into arithmetic ops
(ADD x (MOVDconst [c])) => (ADDconst [c] x)
(SUB x (MOVDconst [c])) => (SUBconst [c] x)
(AND x (MOVDconst [c])) => (ANDconst [c] x)
(OR x (MOVDconst [c])) => (ORconst [c] x)
(XOR
x (MOVDconst [c])) => (XORconst [c] x)
(TST x (MOVDconst [c])) => (TSTconst [c] x)
(TSTW x (MOVDconst [c])) => (TSTWconst [int32(c)] x)
(CMN x (MOVDconst [c])) => (CMNconst [c] x)
(CMNW x (MOVDconst [c])) => (CMNWconst [int32(c)] x)
(BIC x (MOVDconst [c])) => (ANDconst [^c] x)
(EON x (MOVDconst [c])) => (XORconst [^c] x)
(ORN x (MOVDconst [c])) => (ORconst [^c] x)

(SLL x (MOVDconst [c])) => (SLLconst x [c&63]) // Note: I don't think we ever generate bad constant shifts (i.e.
c>=64)
(SRL x (MOVDconst [c])) => (SRLconst x [c&63])
(SRA x (MOVDconst [c])) => (SRAconst x [c&63])

(CMP x (MOVDconst [c])) => (CMPconst [c] x)
(CMP (MOVDconst [c]) x) => (InvertFlags (CMPconst [c] x))

```

```

(CMPW x (MOVDconst [c])) => (CMPWconst [int32(c)] x)
(CMPW (MOVDconst [c]) x) => (InvertFlags (CMPWconst [int32(c)] x))

(ROR x (MOVDconst [c])) => (RORconst x [c&63])
(RORW x (MOVDconst [c])) => (RORWconst x [c&31])

// Canonicalize the order of arguments to comparisons - helps with CSE.
((CMP|CMPW) x y) && canonLessThan(x,y)
=> (InvertFlags ((CMP|CMPW) y x))

// mul-neg => mneg
(NEG (MUL x y)) => (MNEG x y)
(NEG (MULW x y)) => (MNEGW x y)
(MUL (NEG x) y) => (MNEG x y)
(MULW (NEG x) y) => (MNEGW x y)

// madd/msub
(ADD a l:(MUL x y)) && l.Uses==1 && clobber(l) => (MADD a x y)
(SUB a l:(MUL x y)) && l.Uses==1 && clobber(l) => (MSUB a x y)
(ADD a l:(MNEG x y)) && l.Uses==1 && clobber(l) => (MSUB a x y)
(SUB a l:(MNEG x y)) && l.Uses==1 && clobber(l) => (MADD a x y)

(ADD a l:(MULW x y)) && a.Type.Size() != 8 && l.Uses==1 && clobber(l) => (MADDW a x y)
(SUB a l:(MULW x y)) && a.Type.Size() != 8 && l.Uses==1 && clobber(l) => (MSUBW a x y)
(ADD a l:(MNEGW x y)) && a.Type.Size() != 8 && l.Uses==1 && clobber(l) => (MSUBW a x y)
(SUB a l:(MNEGW x y)) && a.Type.Size() != 8 && l.Uses==1 && clobber(l) => (MADDW a x y)

// optimize ADCSflags, SBCSflags and friends
(ADCSflags x y (Select1 <types.TypeFlags> (ADDSconstflags [-1] (ADCzerocarry <typ.UInt64> c)))) =>
(ADCSflags x y c)
(ADCSflags x y (Select1
<types.TypeFlags> (ADDSconstflags [-1] (MOVDconst [0]))) => (ADDSflags x y)
(SBCSflags x y (Select1 <types.TypeFlags> (NEGSflags (NEG <typ.UInt64> (NGCzerocarry <typ.UInt64> bo)))) =>
=> (SBCSflags x y bo)
(SBCSflags x y (Select1 <types.TypeFlags> (NEGSflags (MOVDconst [0]))) => (SUBSflags x y)

// mul by constant
(MUL x (MOVDconst [-1])) => (NEG x)
(MUL _ (MOVDconst [0])) => (MOVDconst [0])
(MUL x (MOVDconst [1])) => x
(MUL x (MOVDconst [c])) && isPowerOfTwo64(c) => (SLLconst [log64(c)] x)
(MUL x (MOVDconst [c])) && isPowerOfTwo64(c-1) && c >= 3 => (ADDshiftLL x x [log64(c-1)])
(MUL x (MOVDconst [c])) && isPowerOfTwo64(c+1) && c >= 7 => (ADDshiftLL (NEG <x.Type> x) x
[log64(c+1)])
(MUL x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) => (SLLconst [log64(c/3)] (ADDshiftLL
<x.Type> x x [1]))
(MUL x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) => (SLLconst [log64(c/5)] (ADDshiftLL
<x.Type> x x [2]))

```

```

(MUL x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) => (SLLconst [log64(c/7)]
(ADDshiftLL <x.Type> (NEG <x.Type> x) x [3]))
(MUL x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) => (SLLconst [log64(c/9)] (ADDshiftLL
<x.Type> x x [3]))

(MULW x (MOVDconst [c])) && int32(c)==-1 => (NEG x)
(MULW _ (MOVDconst [c])) && int32(c)==0 => (MOVDconst [0])
(MULW x (MOVDconst [c])) && int32(c)==1 => x
(MULW x (MOVDconst [c])) && isPowerOfTwo64(c) => (SLLconst [log64(c)] x)
(MULW x (MOVDconst [c])) && isPowerOfTwo64(c-1) && int32(c) >= 3 => (ADDshiftLL x x [log64(c-1)])
(MULW x (MOVDconst [c])) && isPowerOfTwo64(c+1) && int32(c) >= 7 => (ADDshiftLL (NEG <x.Type> x) x
[log64(c+1)])
(MULW x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (SLLconst [log64(c/3)]
(ADDshiftLL <x.Type> x x [1]))
(MULW x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (SLLconst [log64(c/5)]
(ADDshiftLL <x.Type> x x [2]))
(MULW x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (SLLconst [log64(c/7)]
(ADDshiftLL <x.Type> (NEG
<x.Type> x) x [3]))
(MULW x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (SLLconst [log64(c/9)]
(ADDshiftLL <x.Type> x x [3]))

// mneg by constant
(MNEG x (MOVDconst [-1])) => x
(MNEG _ (MOVDconst [0])) => (MOVDconst [0])
(MNEG x (MOVDconst [1])) => (NEG x)
(MNEG x (MOVDconst [c])) && isPowerOfTwo64(c) => (NEG (SLLconst <x.Type> [log64(c)] x))
(MNEG x (MOVDconst [c])) && isPowerOfTwo64(c-1) && c >= 3 => (NEG (ADDshiftLL <x.Type> x x
[log64(c-1)]))
(MNEG x (MOVDconst [c])) && isPowerOfTwo64(c+1) && c >= 7 => (NEG (ADDshiftLL <x.Type> (NEG
<x.Type> x) x [log64(c+1)]))
(MNEG x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) => (SLLconst <x.Type> [log64(c/3)]
(SUBshiftLL <x.Type> x x [2]))
(MNEG x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) => (NEG (SLLconst <x.Type> [log64(c/5)]
(ADDshiftLL <x.Type> x x [2])))
(MNEG x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) => (SLLconst <x.Type> [log64(c/7)]
(SUBshiftLL <x.Type> x x [3]))
(MNEG x (MOVDconst
[c])) && c%9 == 0 && isPowerOfTwo64(c/9) => (NEG (SLLconst <x.Type> [log64(c/9)] (ADDshiftLL <x.Type>
x x [3])))

(MNEGW x (MOVDconst [c])) && int32(c)==-1 => x
(MNEGW _ (MOVDconst [c])) && int32(c)==0 => (MOVDconst [0])
(MNEGW x (MOVDconst [c])) && int32(c)==1 => (NEG x)
(MNEGW x (MOVDconst [c])) && isPowerOfTwo64(c) => (NEG (SLLconst <x.Type> [log64(c)] x))
(MNEGW x (MOVDconst [c])) && isPowerOfTwo64(c-1) && int32(c) >= 3 => (NEG (ADDshiftLL <x.Type> x x
[log64(c-1)]))

```

```

(MNEGW x (MOVDconst [c])) && isPowerOfTwo64(c+1) && int32(c) >= 7 => (NEG (ADDshiftLL <x.Type>
(NEG <x.Type> x) x [log64(c+1)]))
(MNEGW x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (SLLconst <x.Type>
[log64(c/3)] (SUBshiftLL <x.Type> x x [2]))
(MNEGW x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (NEG (SLLconst
<x.Type> [log64(c/5)] (ADDshiftLL <x.Type> x x [2])))
(MNEGW x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (SLLconst <x.Type>
[log64(c/7)]
(SUBshiftLL <x.Type> x x [3]))
(MNEGW x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (NEG (SLLconst
<x.Type> [log64(c/9)] (ADDshiftLL <x.Type> x x [3])))

```

```

(MADD a x (MOVDconst [-1])) => (SUB a x)
(MADD a _ (MOVDconst [0])) => a
(MADD a x (MOVDconst [1])) => (ADD a x)
(MADD a x (MOVDconst [c])) && isPowerOfTwo64(c) => (ADDshiftLL a x [log64(c)])
(MADD a x (MOVDconst [c])) && isPowerOfTwo64(c-1) && c>=3 => (ADD a (ADDshiftLL <x.Type> x x
[log64(c-1)]))
(MADD a x (MOVDconst [c])) && isPowerOfTwo64(c+1) && c>=7 => (SUB a (SUBshiftLL <x.Type> x x
[log64(c+1)]))
(MADD a x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) => (SUBshiftLL a (SUBshiftLL
<x.Type> x x [2]) [log64(c/3)])
(MADD a x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) => (ADDshiftLL a (ADDshiftLL
<x.Type> x x [2]) [log64(c/5)])
(MADD a x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) => (SUBshiftLL a (SUBshiftLL
<x.Type> x x [3]) [log64(c/7)])
(MADD a x (MOVDconst [c])) && c%9 ==
0 && isPowerOfTwo64(c/9) => (ADDshiftLL a (ADDshiftLL <x.Type> x x [3]) [log64(c/9)])

```

```

(MADD a (MOVDconst [-1]) x) => (SUB a x)
(MADD a (MOVDconst [0]) _) => a
(MADD a (MOVDconst [1]) x) => (ADD a x)
(MADD a (MOVDconst [c]) x) && isPowerOfTwo64(c) => (ADDshiftLL a x [log64(c)])
(MADD a (MOVDconst [c]) x) && isPowerOfTwo64(c-1) && c>=3 => (ADD a (ADDshiftLL <x.Type> x x
[log64(c-1)]))
(MADD a (MOVDconst [c]) x) && isPowerOfTwo64(c+1) && c>=7 => (SUB a (SUBshiftLL <x.Type> x x
[log64(c+1)]))
(MADD a (MOVDconst [c]) x) && c%3 == 0 && isPowerOfTwo64(c/3) => (SUBshiftLL a (SUBshiftLL
<x.Type> x x [2]) [log64(c/3)])
(MADD a (MOVDconst [c]) x) && c%5 == 0 && isPowerOfTwo64(c/5) => (ADDshiftLL a (ADDshiftLL
<x.Type> x x [2]) [log64(c/5)])
(MADD a (MOVDconst [c]) x) && c%7 == 0 && isPowerOfTwo64(c/7) => (SUBshiftLL a (SUBshiftLL
<x.Type> x x [3]) [log64(c/7)])
(MADD a (MOVDconst [c]) x) && c%9 == 0 && isPowerOfTwo64(c/9) => (ADDshiftLL a (ADDshiftLL
<x.Type> x x [3]) [log64(c/9)])

```

```

(MADDW a x

```

```

(MOVDconst [c])) && int32(c)===-1 => (SUB a x)
(MADDW a _ (MOVDconst [c])) && int32(c)===0 => a
(MADDW a x (MOVDconst [c])) && int32(c)===1 => (ADD a x)
(MADDW a x (MOVDconst [c])) && isPowerOfTwo64(c) => (ADDshiftLL a x [log64(c)])
(MADDW a x (MOVDconst [c])) && isPowerOfTwo64(c-1) && int32(c)>=3 => (ADD a (ADDshiftLL <x.Type>
x x [log64(c-1)]))
(MADDW a x (MOVDconst [c])) && isPowerOfTwo64(c+1) && int32(c)>=7 => (SUB a (SUBshiftLL <x.Type>
x x [log64(c+1)]))
(MADDW a x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (SUBshiftLL a
(SUBshiftLL <x.Type> x x [2]) [log64(c/3)])
(MADDW a x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (ADDshiftLL a
(ADDshiftLL <x.Type> x x [2]) [log64(c/5)])
(MADDW a x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (SUBshiftLL a
(SUBshiftLL <x.Type> x x [3]) [log64(c/7)])
(MADDW a x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (ADDshiftLL a
(ADDshiftLL <x.Type> x x [3])
[log64(c/9)])

```

```

(MADDW a (MOVDconst [c] x) && int32(c)===-1 => (SUB a x)
(MADDW a (MOVDconst [c] _) && int32(c)===0 => a
(MADDW a (MOVDconst [c] x) && int32(c)===1 => (ADD a x)
(MADDW a (MOVDconst [c] x) && isPowerOfTwo64(c) => (ADDshiftLL a x [log64(c)])
(MADDW a (MOVDconst [c] x) && isPowerOfTwo64(c-1) && int32(c)>=3 => (ADD a (ADDshiftLL <x.Type>
x x [log64(c-1)]))
(MADDW a (MOVDconst [c] x) && isPowerOfTwo64(c+1) && int32(c)>=7 => (SUB a (SUBshiftLL <x.Type>
x x [log64(c+1)]))
(MADDW a (MOVDconst [c] x) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (SUBshiftLL a
(SUBshiftLL <x.Type> x x [2]) [log64(c/3)])
(MADDW a (MOVDconst [c] x) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (ADDshiftLL a
(ADDshiftLL <x.Type> x x [2]) [log64(c/5)])
(MADDW a (MOVDconst [c] x) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (SUBshiftLL a
(SUBshiftLL <x.Type> x x [3]) [log64(c/7)])
(MADDW a (MOVDconst [c] x) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (ADDshiftLL a
(ADDshiftLL
<x.Type> x x [3]) [log64(c/9)])

```

```

(MSUB a x (MOVDconst [-1])) => (ADD a x)
(MSUB a _ (MOVDconst [0])) => a
(MSUB a x (MOVDconst [1])) => (SUB a x)
(MSUB a x (MOVDconst [c])) && isPowerOfTwo64(c) => (SUBshiftLL a x [log64(c)])
(MSUB a x (MOVDconst [c])) && isPowerOfTwo64(c-1) && c>=3 => (SUB a (ADDshiftLL <x.Type> x x
[log64(c-1)]))
(MSUB a x (MOVDconst [c])) && isPowerOfTwo64(c+1) && c>=7 => (ADD a (SUBshiftLL <x.Type> x x
[log64(c+1)]))
(MSUB a x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) => (ADDshiftLL a (SUBshiftLL
<x.Type> x x [2]) [log64(c/3)])
(MSUB a x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) => (SUBshiftLL a (ADDshiftLL
<x.Type> x x [2]) [log64(c/5)])

```

(MSUB a x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) => (ADDshiftLL a (SUBshiftLL <x.Type> x x [3]) [log64(c/7)])

(MSUB a x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) => (SUBshiftLL a (ADDshiftLL <x.Type> x x [3]) [log64(c/9)])

(MSUB a (MOVDconst [-1]) x) => (ADD a x)

(MSUB a (MOVDconst [0]) \_) => a

(MSUB a (MOVDconst [1]) x) => (SUB a x)

(MSUB a (MOVDconst [c]) x) && isPowerOfTwo64(c) => (SUBshiftLL a x [log64(c)])

(MSUB a (MOVDconst [c]) x) && isPowerOfTwo64(c-1) && c>=3 => (SUB a (ADDshiftLL <x.Type> x x [log64(c-1)]))

(MSUB a (MOVDconst [c]) x) && isPowerOfTwo64(c+1) && c>=7 => (ADD a (SUBshiftLL <x.Type> x x [log64(c+1)]))

(MSUB a (MOVDconst [c]) x) && c%3 == 0 && isPowerOfTwo64(c/3) => (ADDshiftLL a (SUBshiftLL <x.Type> x x [2]) [log64(c/3)])

(MSUB a (MOVDconst [c]) x) && c%5 == 0 && isPowerOfTwo64(c/5) => (SUBshiftLL a (ADDshiftLL <x.Type> x x [2]) [log64(c/5)])

(MSUB a (MOVDconst [c]) x) && c%7 == 0 && isPowerOfTwo64(c/7) => (ADDshiftLL a (SUBshiftLL <x.Type> x x [3]) [log64(c/7)])

(MSUB a (MOVDconst [c]) x) && c%9 == 0 && isPowerOfTwo64(c/9) => (SUBshiftLL a (ADDshiftLL <x.Type> x x [3]) [log64(c/9)])

(MSUBW a x (MOVDconst [c])) && int32(c)==-1 => (ADD a x)

(MSUBW a \_ (MOVDconst [c])) && int32(c)==0 => a

(MSUBW a x (MOVDconst [c])) && int32(c)==1 => (SUB a x)

(MSUBW a x (MOVDconst [c])) && isPowerOfTwo64(c) => (SUBshiftLL a x [log64(c)])

(MSUBW a x (MOVDconst [c])) && isPowerOfTwo64(c-1) && int32(c)>=3 => (SUB a (ADDshiftLL <x.Type> x x [log64(c-1)]))

(MSUBW a x (MOVDconst [c])) && isPowerOfTwo64(c+1) && int32(c)>=7 => (ADD a (SUBshiftLL <x.Type> x x [log64(c+1)]))

(MSUBW a x (MOVDconst [c])) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (ADDshiftLL a (SUBshiftLL <x.Type> x x [2]) [log64(c/3)])

(MSUBW a x (MOVDconst [c])) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (SUBshiftLL a (ADDshiftLL <x.Type> x x [2]) [log64(c/5)])

(MSUBW a x (MOVDconst [c])) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (ADDshiftLL a (SUBshiftLL <x.Type> x x [3]) [log64(c/7)])

(MSUBW a x (MOVDconst [c])) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (SUBshiftLL a (ADDshiftLL <x.Type> x x [3]) [log64(c/9)])

(MSUBW a (MOVDconst [c]) x) && int32(c)==-1 => (ADD a x)

(MSUBW a (MOVDconst [c]) \_) && int32(c)==0 => a

(MSUBW a (MOVDconst [c]) x) && int32(c)==1 => (SUB a x)

(MSUBW a (MOVDconst [c]) x) && isPowerOfTwo64(c) => (SUBshiftLL a x [log64(c)])

(MSUBW a (MOVDconst [c]) x) && isPowerOfTwo64(c-1) && int32(c)>=3 => (SUB a (ADDshiftLL <x.Type> x x [log64(c-1)]))

```

(MSUBW a (MOVDconst [c] x) && isPowerOfTwo64(c+1) && int32(c)>=7 => (ADD a (SUBshiftLL <x.Type>
x x [log64(c+1)]))
(MSUBW a (MOVDconst [c] x) && c%3 == 0 && isPowerOfTwo64(c/3) && is32Bit(c) => (ADDshiftLL a
(SUBshiftLL <x.Type> x x [2]) [log64(c/3)])
(MSUBW a (MOVDconst [c] x) && c%5 == 0 && isPowerOfTwo64(c/5) && is32Bit(c) => (SUBshiftLL a
(ADDshiftLL <x.Type> x x [2]) [log64(c/5)])
(MSUBW a (MOVDconst [c] x) && c%7 == 0 && isPowerOfTwo64(c/7) && is32Bit(c) => (ADDshiftLL a
(SUBshiftLL <x.Type> x x [3]) [log64(c/7)])
(MSUBW a (MOVDconst [c] x) && c%9 == 0 && isPowerOfTwo64(c/9) && is32Bit(c) => (SUBshiftLL a
(ADDshiftLL <x.Type> x x [3]) [log64(c/9)])

// div by constant
(UDIV x (MOVDconst [1])) => x
(UDIV x (MOVDconst [c])) && isPowerOfTwo64(c) => (SRLconst
[log64(c)] x)
(UDIVW x (MOVDconst [c])) && uint32(c)==1 => x
(UDIVW x (MOVDconst [c])) && isPowerOfTwo64(c) && is32Bit(c) => (SRLconst [log64(c)] x)
(UMOD _ (MOVDconst [1])) => (MOVDconst [0])
(UMOD x (MOVDconst [c])) && isPowerOfTwo64(c) => (ANDconst [c-1] x)
(UMODW _ (MOVDconst [c])) && uint32(c)==1 => (MOVDconst [0])
(UMODW x (MOVDconst [c])) && isPowerOfTwo64(c) && is32Bit(c) => (ANDconst [c-1] x)

// generic simplifications
(ADD x (NEG y)) => (SUB x y)
(SUB x x) => (MOVDconst [0])
(AND x x) => x
(OR x x) => x
(XOR x x) => (MOVDconst [0])
(BIC x x) => (MOVDconst [0])
(EON x x) => (MOVDconst [-1])
(ORN x x) => (MOVDconst [-1])
(AND x (MVN y)) => (BIC x y)
(XOR x (MVN y)) => (EON x y)
(OR x (MVN y)) => (ORN x y)
(MVN (XOR x y)) => (EON x y)
(NEG (NEG x)) => x

(CSEL [cc] (MOVDconst [-1]) (MOVDconst [0]) flag) => (CSETM [cc] flag)
(CSEL [cc] (MOVDconst [0]) (MOVDconst [-1]) flag) => (CSETM [arm64Negate(cc)] flag)
(CSEL [cc] x (MOVDconst [0]) flag) => (CSEL0 [cc] x flag)
(CSEL [cc]
(MOVDconst [0]) y flag) => (CSEL0 [arm64Negate(cc)] y flag)
(CSEL [cc] x (ADDconst [1] a) flag) => (CSINC [cc] x a flag)
(CSEL [cc] (ADDconst [1] a) x flag) => (CSINC [arm64Negate(cc)] x a flag)
(CSEL [cc] x (MVN a) flag) => (CSINV [cc] x a flag)
(CSEL [cc] (MVN a) x flag) => (CSINV [arm64Negate(cc)] x a flag)
(CSEL [cc] x (NEG a) flag) => (CSNEG [cc] x a flag)
(CSEL [cc] (NEG a) x flag) => (CSNEG [arm64Negate(cc)] x a flag)

```



```
(SUB x (SUB y z)) => (SUB (ADD <v.Type> x z) y)
(SUB (SUB x y) z) => (SUB x (ADD <y.Type> y z))
```

```
// remove redundant *const ops
```

```
(ADDconst [0] x) => x
(SUBconst [0] x) => x
(ANDconst [0] _) => (MOVDconst [0])
(ANDconst [-1] x) => x
(ORconst [0] x) => x
(ORconst [-1] _) => (MOVDconst [-1])
(XORconst [0] x) => x
(XORconst [-1] x) => (MVN x)
```

```
// generic constant folding
```

```
(ADDconst [c] (MOVDconst [d])) => (MOVDconst [c+d])
(ADDconst [c] (ADDconst [d] x)) => (ADDconst [c+d] x)
(ADDconst [c] (SUBconst [d] x)) => (ADDconst [c-d] x)
(SUBconst [c] (MOVDconst [d]))
=> (MOVDconst [d-c])
(SUBconst [c] (SUBconst [d] x)) => (ADDconst [-c-d] x)
(SUBconst [c] (ADDconst [d] x)) => (ADDconst [-c+d] x)
(SLLconst [c] (MOVDconst [d])) => (MOVDconst [d<<uint64(c)])
(SRLconst [c] (MOVDconst [d])) => (MOVDconst [int64(uint64(d)>>uint64(c))])
(SRAconst [c] (MOVDconst [d])) => (MOVDconst [d>>uint64(c)])
(MUL (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c*d])
(MULW (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [int64(int32(c)*int32(d))])
(MNEG (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [-c*d])
(MNEGW (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [-int64(int32(c)*int32(d))])
(MADD (MOVDconst [c] x y) => (ADDconst [c] (MUL <x.Type> x y))
(MADDW (MOVDconst [c] x y) => (ADDconst [c] (MULW <x.Type> x y))
(MSUB (MOVDconst [c] x y) => (ADDconst [c] (MNEG <x.Type> x y))
(MSUBW (MOVDconst [c] x y) => (ADDconst [c] (MNEGW <x.Type> x y))
(MADD a (MOVDconst [c]) (MOVDconst [d])) => (ADDconst [c*d] a)
(MADDW a (MOVDconst [c]) (MOVDconst [d])) => (ADDconst
[int64(int32(c)*int32(d))] a)
(MSUB a (MOVDconst [c]) (MOVDconst [d])) => (SUBconst [c*d] a)
(MSUBW a (MOVDconst [c]) (MOVDconst [d])) => (SUBconst [int64(int32(c)*int32(d))] a)
(DIV (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [c/d])
(UDIV (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(uint64(c)/uint64(d))])
(DIVW (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(int32(c)/int32(d))])
(UDIVW (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(uint32(c)/uint32(d))])
(MOD (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [c%d])
(UMOD (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(uint64(c)%uint64(d))])
(MODW (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(int32(c)%int32(d))])
(UMODW (MOVDconst [c]) (MOVDconst [d])) && d != 0 => (MOVDconst [int64(uint32(c)%uint32(d))])
(ANDconst [c] (MOVDconst [d])) => (MOVDconst [c&d])
(ANDconst [c] (ANDconst [d] x)) => (ANDconst [c&d] x)
```

```

(ANDconst
 [c] (MOVWUreg x)) => (ANDconst [c&(1<<32-1)] x)
(ANDconst [c] (MOVHUreg x)) => (ANDconst [c&(1<<16-1)] x)
(ANDconst [c] (MOVBUreg x)) => (ANDconst [c&(1<<8-1)] x)
(MOVWUreg (ANDconst [c] x)) => (ANDconst [c&(1<<32-1)] x)
(MOVHUreg (ANDconst [c] x)) => (ANDconst [c&(1<<16-1)] x)
(MOVBUreg (ANDconst [c] x)) => (ANDconst [c&(1<<8-1)] x)
(ORconst [c] (MOVDconst [d])) => (MOVDconst [c|d])
(ORconst [c] (ORconst [d] x)) => (ORconst [c|d] x)
(XORconst [c] (MOVDconst [d])) => (MOVDconst [c^d])
(XORconst [c] (XORconst [d] x)) => (XORconst [c^d] x)
(MVN (MOVDconst [c])) => (MOVDconst [^c])
(NEG (MOVDconst [c])) => (MOVDconst [-c])
(MOVBreg (MOVDconst [c])) => (MOVDconst [int64(int8(c))])
(MOVBUreg (MOVDconst [c])) => (MOVDconst [int64(uint8(c))])
(MOVHreg (MOVDconst [c])) => (MOVDconst [int64(int16(c))])
(MOVHUreg (MOVDconst [c])) => (MOVDconst [int64(uint16(c))])
(MOVWreg (MOVDconst [c])) => (MOVDconst [int64(int32(c))])
(MOVWUreg (MOVDconst [c])) => (MOVDconst [int64(uint32(c))])
(MOVDreg
 (MOVDconst [c])) => (MOVDconst [c])

// constant comparisons
(CMPconst (MOVDconst [x] [y]) => (FlagConstant [subFlags64(x,y)])
(CMPWconst (MOVDconst [x] [y]) => (FlagConstant [subFlags32(int32(x),y)])
(TSTconst (MOVDconst [x] [y]) => (FlagConstant [logicFlags64(x&y)])
(TSTWconst (MOVDconst [x] [y]) => (FlagConstant [logicFlags32(int32(x)&y)])
(CMNconst (MOVDconst [x] [y]) => (FlagConstant [addFlags64(x,y)])
(CMNWconst (MOVDconst [x] [y]) => (FlagConstant [addFlags32(int32(x),y)])

// other known comparisons
(CMPconst (MOVBUreg _) [c] && 0xff < c => (FlagConstant [subFlags64(0,1)])
(CMPconst (MOVHUreg _) [c] && 0xffff < c => (FlagConstant [subFlags64(0,1)])
(CMPconst (MOVWUreg _) [c] && 0xffffffff < c => (FlagConstant [subFlags64(0,1)])
(CMPconst (ANDconst _ [m] [n] && 0 <= m && m < n => (FlagConstant [subFlags64(0,1)])
(CMPconst (SRLconst _ [c] [n] && 0 <= n && 0 < c && c <= 63 && (1<<uint64(64-c)) <= uint64(n) =>
(FlagConstant [subFlags64(0,1)])
(CMPWconst (MOVBUreg
 _) [c] && 0xff < c => (FlagConstant [subFlags64(0,1)])
(CMPWconst (MOVHUreg _) [c] && 0xffff < c => (FlagConstant [subFlags64(0,1)])

// absorb flag constants into branches
(EQ (FlagConstant [fc]) yes no) && fc.eq() => (First yes no)
(EQ (FlagConstant [fc]) yes no) && !fc.eq() => (First no yes)

(NE (FlagConstant [fc]) yes no) && fc.ne() => (First yes no)
(NE (FlagConstant [fc]) yes no) && !fc.ne() => (First no yes)

```

(LT (FlagConstant [fc]) yes no) && fc.lt() => (First yes no)  
 (LT (FlagConstant [fc]) yes no) && !fc.lt() => (First no yes)

(LE (FlagConstant [fc]) yes no) && fc.le() => (First yes no)  
 (LE (FlagConstant [fc]) yes no) && !fc.le() => (First no yes)

(GT (FlagConstant [fc]) yes no) && fc.gt() => (First yes no)  
 (GT (FlagConstant [fc]) yes no) && !fc.gt() => (First no yes)

(GE (FlagConstant [fc]) yes no) && fc.ge() => (First yes no)  
 (GE (FlagConstant [fc]) yes no) && !fc.ge() => (First no yes)

(ULT (FlagConstant [fc]) yes no) && fc.ult() => (First yes no)  
 (ULT  
 (FlagConstant [fc]) yes no) && !fc.ult() => (First no yes)

(ULE (FlagConstant [fc]) yes no) && fc.ule() => (First yes no)  
 (ULE (FlagConstant [fc]) yes no) && !fc.ule() => (First no yes)

(UGT (FlagConstant [fc]) yes no) && fc.ugt() => (First yes no)  
 (UGT (FlagConstant [fc]) yes no) && !fc.ugt() => (First no yes)

(UGE (FlagConstant [fc]) yes no) && fc.uge() => (First yes no)  
 (UGE (FlagConstant [fc]) yes no) && !fc.uge() => (First no yes)

(LTnoov (FlagConstant [fc]) yes no) && fc.ltNoov() => (First yes no)  
 (LTnoov (FlagConstant [fc]) yes no) && !fc.ltNoov() => (First no yes)

(LEnoov (FlagConstant [fc]) yes no) && fc.leNoov() => (First yes no)  
 (LEnoov (FlagConstant [fc]) yes no) && !fc.leNoov() => (First no yes)

(GTnoov (FlagConstant [fc]) yes no) && fc.gtNoov() => (First yes no)  
 (GTnoov (FlagConstant [fc]) yes no) && !fc.gtNoov() => (First no yes)

(GEnoov (FlagConstant [fc]) yes no) && fc.geNoov() => (First yes no)  
 (GEnoov (FlagConstant [fc]) yes no) && !fc.geNoov() => (First  
 no yes)

(Z (MOVDconst [0]) yes no) => (First yes no)  
 (Z (MOVDconst [c]) yes no) && c != 0 => (First no yes)  
 (NZ (MOVDconst [0]) yes no) => (First no yes)  
 (NZ (MOVDconst [c]) yes no) && c != 0 => (First yes no)  
 (ZW (MOVDconst [c]) yes no) && int32(c) == 0 => (First yes no)  
 (ZW (MOVDconst [c]) yes no) && int32(c) != 0 => (First no yes)  
 (NZW (MOVDconst [c]) yes no) && int32(c) == 0 => (First no yes)  
 (NZW (MOVDconst [c]) yes no) && int32(c) != 0 => (First yes no)

// absorb InvertFlags into branches

```

(LT (InvertFlags cmp) yes no) => (GT cmp yes no)
(GT (InvertFlags cmp) yes no) => (LT cmp yes no)
(LE (InvertFlags cmp) yes no) => (GE cmp yes no)
(GE (InvertFlags cmp) yes no) => (LE cmp yes no)
(ULT (InvertFlags cmp) yes no) => (UGT cmp yes no)
(UGT (InvertFlags cmp) yes no) => (ULT cmp yes no)
(ULE (InvertFlags cmp) yes no) => (UGE cmp yes no)
(UGE (InvertFlags cmp) yes no) => (ULE cmp yes no)
(EQ (InvertFlags cmp) yes no) => (EQ cmp yes no)
(NE (InvertFlags cmp) yes no) => (NE cmp yes
no)
(FLT (InvertFlags cmp) yes no) => (FGT cmp yes no)
(FGT (InvertFlags cmp) yes no) => (FLT cmp yes no)
(FLE (InvertFlags cmp) yes no) => (FGE cmp yes no)
(FGE (InvertFlags cmp) yes no) => (FLE cmp yes no)
(LTnoov (InvertFlags cmp) yes no) => (GTnoov cmp yes no)
(GEnoov (InvertFlags cmp) yes no) => (LEnoov cmp yes no)
(LEnoov (InvertFlags cmp) yes no) => (GEnoov cmp yes no)
(GTnoov (InvertFlags cmp) yes no) => (LTnoov cmp yes no)

// absorb InvertFlags into conditional instructions
(CSEL [cc] x y (InvertFlags cmp)) => (CSEL [arm64Invert(cc)] x y cmp)
(CSEL0 [cc] x (InvertFlags cmp)) => (CSEL0 [arm64Invert(cc)] x cmp)
(CSETM [cc] (InvertFlags cmp)) => (CSETM [arm64Invert(cc)] cmp)
(CSINC [cc] x y (InvertFlags cmp)) => (CSINC [arm64Invert(cc)] x y cmp)
(CSINV [cc] x y (InvertFlags cmp)) => (CSINV [arm64Invert(cc)] x y cmp)
(CSNEG [cc] x y (InvertFlags cmp)) => (CSNEG [arm64Invert(cc)] x y cmp)

// absorb flag constants into boolean values
(Equal (FlagConstant [fc])) => (MOVDconst [b2i(fc.eq())])
(NotEqual
(FlagConstant [fc])) => (MOVDconst [b2i(fc.ne())])
(LessThan (FlagConstant [fc])) => (MOVDconst [b2i(fc.lt())])
(LessThanU (FlagConstant [fc])) => (MOVDconst [b2i(fc.ult())])
(LessEqual (FlagConstant [fc])) => (MOVDconst [b2i(fc.le())])
(LessEqualU (FlagConstant [fc])) => (MOVDconst [b2i(fc.ule())])
(GreaterThan (FlagConstant [fc])) => (MOVDconst [b2i(fc.gt())])
(GreaterThanU (FlagConstant [fc])) => (MOVDconst [b2i(fc.ugt())])
(GreaterEqual (FlagConstant [fc])) => (MOVDconst [b2i(fc.ge())])
(GreaterEqualU (FlagConstant [fc])) => (MOVDconst [b2i(fc.uge())])

// absorb InvertFlags into boolean values
(Equal (InvertFlags x)) => (Equal x)
(NotEqual (InvertFlags x)) => (NotEqual x)
(LessThan (InvertFlags x)) => (GreaterThan x)
(LessThanU (InvertFlags x)) => (GreaterThanU x)
(GreaterThan (InvertFlags x)) => (LessThan x)
(GreaterThanU (InvertFlags x)) => (LessThanU x)

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(LessEqual (InvertFlags x)) => (GreaterEqual x)
(LessEqualU (InvertFlags x)) => (GreaterEqualU x)
(GreaterEqual
 (InvertFlags x)) => (LessEqual x)
(GreaterEqualU (InvertFlags x)) => (LessEqualU x)
(LessThanF (InvertFlags x)) => (GreaterThanF x)
(LessEqualF (InvertFlags x)) => (GreaterEqualF x)
(GreaterThanF (InvertFlags x)) => (LessThanF x)
(GreaterEqualF (InvertFlags x)) => (LessEqualF x)

// Boolean-generating instructions (NOTE: NOT all boolean Values) always
// zero upper bit of the register; no need to zero-extend
(MOVBUreg
x:(Equal|NotEqual|LessThan|LessThanU|LessThanF|LessEqual|LessEqualU|LessEqualF|GreaterThan|GreaterThan
U|GreaterThanF|GreaterEqual|GreaterEqualU|GreaterEqualF) _) => (MOVDreg x)

// absorb flag constants into conditional instructions
(CSEL [cc] x _ flag) && ccARM64Eval(cc, flag) > 0 => x
(CSEL [cc] _ y flag) && ccARM64Eval(cc, flag) < 0 => y
(CSEL0 [cc] x flag) && ccARM64Eval(cc, flag) > 0 => x
(CSEL0 [cc] _ y flag) && ccARM64Eval(cc, flag) < 0 => (MOVDconst [0])
(CSNEG [cc] x _ flag) && ccARM64Eval(cc, flag) > 0 => x
(CSNEG [cc] _ y flag) && ccARM64Eval(cc, flag) <
0 => (NEG y)
(CSINV [cc] x _ flag) && ccARM64Eval(cc, flag) > 0 => x
(CSINV [cc] _ y flag) && ccARM64Eval(cc, flag) < 0 => (Not y)
(CSINC [cc] x _ flag) && ccARM64Eval(cc, flag) > 0 => x
(CSINC [cc] _ y flag) && ccARM64Eval(cc, flag) < 0 => (ADDconst [1] y)
(CSETM [cc] flag) && ccARM64Eval(cc, flag) > 0 => (MOVDconst [-1])
(CSETM [cc] flag) && ccARM64Eval(cc, flag) < 0 => (MOVDconst [0])

// absorb flags back into boolean CSEL
(CSEL [cc] x y (CMPWconst [0] boolval)) && cc == OpARM64NotEqual && flagArg(boolval) != nil =>
 (CSEL [boolval.Op] x y flagArg(boolval))
(CSEL [cc] x y (CMPWconst [0] boolval)) && cc == OpARM64Equal && flagArg(boolval) != nil =>
 (CSEL [arm64Negate(boolval.Op)] x y flagArg(boolval))
(CSEL0 [cc] x (CMPWconst [0] boolval)) && cc == OpARM64NotEqual && flagArg(boolval) != nil =>
 (CSEL0 [boolval.Op] x flagArg(boolval))
(CSEL0 [cc] x (CMPWconst [0] boolval)) && cc == OpARM64Equal && flagArg(boolval) != nil =>
 (CSEL0 [arm64Negate(boolval.Op)] x flagArg(boolval))

//
absorb shifts into ops
(NEG x:(SLLconst [c] y)) && clobberIfDead(x) => (NEGshiftLL [c] y)
(NEG x:(SRLconst [c] y)) && clobberIfDead(x) => (NEGshiftRL [c] y)
(NEG x:(SRAconst [c] y)) && clobberIfDead(x) => (NEGshiftRA [c] y)
(MVN x:(SLLconst [c] y)) && clobberIfDead(x) => (MVNshiftLL [c] y)
(MVN x:(SRLconst [c] y)) && clobberIfDead(x) => (MVNshiftRL [c] y)

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(MVN x:(SRAconst [c] y)) && clobberIfDead(x) => (MVNshiftRA [c] y)
(MVN x:(RORconst [c] y)) && clobberIfDead(x) => (MVNshiftRO [c] y)
(ADD x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (ADDshiftLL x0 y [c])
(ADD x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (ADDshiftRL x0 y [c])
(ADD x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (ADDshiftRA x0 y [c])
(SUB x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (SUBshiftLL x0 y [c])
(SUB x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (SUBshiftRL x0 y [c])
(SUB x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (SUBshiftRA x0 y [c])
(AND x0 x1:(SLLconst [c] y)) && clobberIfDead(x1)
=> (ANDshiftLL x0 y [c])
(AND x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (ANDshiftRL x0 y [c])
(AND x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (ANDshiftRA x0 y [c])
(AND x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (ANDshiftRO x0 y [c])
(OR x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (ORshiftLL x0 y [c]) // useful for combined load
(OR x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (ORshiftRL x0 y [c])
(OR x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (ORshiftRA x0 y [c])
(OR x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (ORshiftRO x0 y [c])
(XOR x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (XORshiftLL x0 y [c])
(XOR x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (XORshiftRL x0 y [c])
(XOR x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (XORshiftRA x0 y [c])
(XOR x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (XORshiftRO x0 y [c])
(BIC x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (BICshiftLL x0 y [c])
(BIC x0 x1:(SRLconst [c] y)) && clobberIfDead(x1)
=> (BICshiftRL x0 y [c])
(BIC x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (BICshiftRA x0 y [c])
(BIC x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (BICshiftRO x0 y [c])
(ORN x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (ORNshiftLL x0 y [c])
(ORN x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (ORNshiftRL x0 y [c])
(ORN x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (ORNshiftRA x0 y [c])
(ORN x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (ORNshiftRO x0 y [c])
(EON x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (EONshiftLL x0 y [c])
(EON x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (EONshiftRL x0 y [c])
(EON x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (EONshiftRA x0 y [c])
(EON x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (EONshiftRO x0 y [c])
(CMP x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (CMPshiftLL x0 y [c])
(CMP x0:(SLLconst [c] y) x1) && clobberIfDead(x0) => (InvertFlags (CMPshiftLL x1 y [c]))
(CMP x0 x1:(SRLconst [c] y)) && clobberIfDead(x1)
=> (CMPshiftRL x0 y [c])
(CMP x0:(SRLconst [c] y) x1) && clobberIfDead(x0) => (InvertFlags (CMPshiftRL x1 y [c]))
(CMP x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (CMPshiftRA x0 y [c])
(CMP x0:(SRAconst [c] y) x1) && clobberIfDead(x0) => (InvertFlags (CMPshiftRA x1 y [c]))
(CMN x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (CMNshiftLL x0 y [c])
(CMN x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (CMNshiftRL x0 y [c])
(CMN x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (CMNshiftRA x0 y [c])
(TST x0 x1:(SLLconst [c] y)) && clobberIfDead(x1) => (TSTshiftLL x0 y [c])
(TST x0 x1:(SRLconst [c] y)) && clobberIfDead(x1) => (TSTshiftRL x0 y [c])
(TST x0 x1:(SRAconst [c] y)) && clobberIfDead(x1) => (TSTshiftRA x0 y [c])
(TST x0 x1:(RORconst [c] y)) && clobberIfDead(x1) => (TSTshiftRO x0 y [c])

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// prefer *const ops to *shift ops
(ADDshiftLL (MOVDconst [c] x [d]) => (ADDconst [c] (SLLconst <x.Type> x [d]))
(ADDshiftRL (MOVDconst [c] x [d]) => (ADDconst [c] (SRLconst <x.Type> x [d]))
(ADDshiftRA
(MOVDconst [c] x [d]) => (ADDconst [c] (SRAconst <x.Type> x [d]))
(ANDshiftLL (MOVDconst [c] x [d]) => (ANDconst [c] (SLLconst <x.Type> x [d]))
(ANDshiftRL (MOVDconst [c] x [d]) => (ANDconst [c] (SRLconst <x.Type> x [d]))
(ANDshiftRA (MOVDconst [c] x [d]) => (ANDconst [c] (SRAconst <x.Type> x [d]))
(ANDshiftRO (MOVDconst [c] x [d]) => (ANDconst [c] (RORconst <x.Type> x [d]))
(ORshiftLL (MOVDconst [c] x [d]) => (ORconst [c] (SLLconst <x.Type> x [d]))
(ORshiftRL (MOVDconst [c] x [d]) => (ORconst [c] (SRLconst <x.Type> x [d]))
(ORshiftRA (MOVDconst [c] x [d]) => (ORconst [c] (SRAconst <x.Type> x [d]))
(ORshiftRO (MOVDconst [c] x [d]) => (ORconst [c] (RORconst <x.Type> x [d]))
(XORshiftLL (MOVDconst [c] x [d]) => (XORconst [c] (SLLconst <x.Type> x [d]))
(XORshiftRL (MOVDconst [c] x [d]) => (XORconst [c] (SRLconst <x.Type> x [d]))
(XORshiftRA (MOVDconst [c] x [d]) => (XORconst [c] (SRAconst <x.Type> x [d]))
(XORshiftRO (MOVDconst [c] x [d]) => (XORconst [c]
(RORconst <x.Type> x [d]))
(CMPshiftLL (MOVDconst [c] x [d]) => (InvertFlags (CMPconst [c] (SLLconst <x.Type> x [d])))
(CMPshiftRL (MOVDconst [c] x [d]) => (InvertFlags (CMPconst [c] (SRLconst <x.Type> x [d])))
(CMPshiftRA (MOVDconst [c] x [d]) => (InvertFlags (CMPconst [c] (SRAconst <x.Type> x [d])))
(CMNshiftLL (MOVDconst [c] x [d]) => (CMNconst [c] (SLLconst <x.Type> x [d]))
(CMNshiftRL (MOVDconst [c] x [d]) => (CMNconst [c] (SRLconst <x.Type> x [d]))
(CMNshiftRA (MOVDconst [c] x [d]) => (CMNconst [c] (SRAconst <x.Type> x [d]))
(TSTshiftLL (MOVDconst [c] x [d]) => (TSTconst [c] (SLLconst <x.Type> x [d]))
(TSTshiftRL (MOVDconst [c] x [d]) => (TSTconst [c] (SRLconst <x.Type> x [d]))
(TSTshiftRA (MOVDconst [c] x [d]) => (TSTconst [c] (SRAconst <x.Type> x [d]))
(TSTshiftRO (MOVDconst [c] x [d]) => (TSTconst [c] (RORconst <x.Type> x [d]))

// constant folding in *shift ops
(MVNshiftLL (MOVDconst [c] [d]) => (MOVDconst [^int64(uint64(c)<<uint64(d))])
(MVNshiftRL (MOVDconst [c]
[d]) => (MOVDconst [^int64(uint64(c)>>uint64(d))])
(MVNshiftRA (MOVDconst [c] [d]) => (MOVDconst [^(c>>uint64(d))])
(MVNshiftRO (MOVDconst [c] [d]) => (MOVDconst [^rotateRight64(c, d)])
(NEGshiftLL (MOVDconst [c] [d]) => (MOVDconst [-int64(uint64(c)<<uint64(d))])
(NEGshiftRL (MOVDconst [c] [d]) => (MOVDconst [-int64(uint64(c)>>uint64(d))])
(NEGshiftRA (MOVDconst [c] [d]) => (MOVDconst [-<c>>uint64(d)])
(ADDshiftLL x (MOVDconst [c] [d]) => (ADDconst x [int64(uint64(c)<<uint64(d))])
(ADDshiftRL x (MOVDconst [c] [d]) => (ADDconst x [int64(uint64(c)>>uint64(d))])
(ADDshiftRA x (MOVDconst [c] [d]) => (ADDconst x [c>>uint64(d)])
(SUBshiftLL x (MOVDconst [c] [d]) => (SUBconst x [int64(uint64(c)<<uint64(d))])
(SUBshiftRL x (MOVDconst [c] [d]) => (SUBconst x [int64(uint64(c)>>uint64(d))])
(SUBshiftRA x (MOVDconst [c] [d]) => (SUBconst x [c>>uint64(d)])
(ANDshiftLL x (MOVDconst [c] [d]) => (ANDconst x [int64(uint64(c)<<uint64(d))])
(ANDshiftRL x (MOVDconst [c] [d]) => (ANDconst x

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[int64(uint64(c)>>uint64(d))]
(ANDshiftRA x (MOVDconst [c]) [d]) => (ANDconst x [c>>uint64(d)])
(ANDshiftRO x (MOVDconst [c]) [d]) => (ANDconst x [rotateRight64(c, d)])
(ORshiftLL x (MOVDconst [c]) [d]) => (ORconst x [int64(uint64(c)<<uint64(d))])
(ORshiftRL x (MOVDconst [c]) [d]) => (ORconst x [int64(uint64(c)>>uint64(d))])
(ORshiftRA x (MOVDconst [c]) [d]) => (ORconst x [c>>uint64(d)])
(ORshiftRO x (MOVDconst [c]) [d]) => (ORconst x [rotateRight64(c, d)])
(XORshiftLL x (MOVDconst [c]) [d]) => (XORconst x [int64(uint64(c)<<uint64(d))])
(XORshiftRL x (MOVDconst [c]) [d]) => (XORconst x [int64(uint64(c)>>uint64(d))])
(XORshiftRA x (MOVDconst [c]) [d]) => (XORconst x [c>>uint64(d)])
(XORshiftRO x (MOVDconst [c]) [d]) => (XORconst x [rotateRight64(c, d)])
(BICshiftLL x (MOVDconst [c]) [d]) => (ANDconst x [^int64(uint64(c)<<uint64(d))])
(BICshiftRL x (MOVDconst [c]) [d]) => (ANDconst x [^int64(uint64(c)>>uint64(d))])
(BICshiftRA x (MOVDconst [c]) [d]) => (ANDconst x [^(c>>uint64(d))])
(BICshiftRO
x (MOVDconst [c]) [d]) => (ANDconst x [^rotateRight64(c, d)])
(ORNshiftLL x (MOVDconst [c]) [d]) => (ORconst x [^int64(uint64(c)<<uint64(d))])
(ORNshiftRL x (MOVDconst [c]) [d]) => (ORconst x [^int64(uint64(c)>>uint64(d))])
(ORNshiftRA x (MOVDconst [c]) [d]) => (ORconst x [^(c>>uint64(d))])
(ORNshiftRO x (MOVDconst [c]) [d]) => (ORconst x [^rotateRight64(c, d)])
(EONshiftLL x (MOVDconst [c]) [d]) => (XORconst x [^int64(uint64(c)<<uint64(d))])
(EONshiftRL x (MOVDconst [c]) [d]) => (XORconst x [^int64(uint64(c)>>uint64(d))])
(EONshiftRA x (MOVDconst [c]) [d]) => (XORconst x [^(c>>uint64(d))])
(EONshiftRO x (MOVDconst [c]) [d]) => (XORconst x [^rotateRight64(c, d)])
(CMPshiftLL x (MOVDconst [c]) [d]) => (CMPconst x [int64(uint64(c)<<uint64(d))])
(CMPshiftRL x (MOVDconst [c]) [d]) => (CMPconst x [int64(uint64(c)>>uint64(d))])
(CMPshiftRA x (MOVDconst [c]) [d]) => (CMPconst x [c>>uint64(d)])
(CMNshiftLL x (MOVDconst [c]) [d]) => (CMNconst x [int64(uint64(c)<<uint64(d))])
(CMNshiftRL
x (MOVDconst [c]) [d]) => (CMNconst x [int64(uint64(c)>>uint64(d))])
(CMNshiftRA x (MOVDconst [c]) [d]) => (CMNconst x [c>>uint64(d)])
(TSTshiftLL x (MOVDconst [c]) [d]) => (TSTconst x [int64(uint64(c)<<uint64(d))])
(TSTshiftRL x (MOVDconst [c]) [d]) => (TSTconst x [int64(uint64(c)>>uint64(d))])
(TSTshiftRA x (MOVDconst [c]) [d]) => (TSTconst x [c>>uint64(d)])
(TSTshiftRO x (MOVDconst [c]) [d]) => (TSTconst x [rotateRight64(c, d)])

```

// simplification with \*shift ops

```

(SUBshiftLL (SLLconst x [c]) x [c]) => (MOVDconst [0])
(SUBshiftRL (SRLconst x [c]) x [c]) => (MOVDconst [0])
(SUBshiftRA (SRAconst x [c]) x [c]) => (MOVDconst [0])
(ANDshiftLL y:(SLLconst x [c]) x [c]) => y
(ANDshiftRL y:(SRLconst x [c]) x [c]) => y
(ANDshiftRA y:(SRAconst x [c]) x [c]) => y
(ANDshiftRO y:(RORconst x [c]) x [c]) => y
(ORshiftLL y:(SLLconst x [c]) x [c]) => y
(ORshiftRL y:(SRLconst x [c]) x [c]) => y
(ORshiftRA y:(SRAconst x [c]) x [c]) => y
(ORshiftRO y:(RORconst x [c]) x [c]) => y

```



```

(XORshiftLL
(SLLconst x [c]) x [c]) => (MOVDconst [0])
(XORshiftRL (SRLconst x [c]) x [c]) => (MOVDconst [0])
(XORshiftRA (SRAconst x [c]) x [c]) => (MOVDconst [0])
(XORshiftRO (RORconst x [c]) x [c]) => (MOVDconst [0])
(BICshiftLL (SLLconst x [c]) x [c]) => (MOVDconst [0])
(BICshiftRL (SRLconst x [c]) x [c]) => (MOVDconst [0])
(BICshiftRA (SRAconst x [c]) x [c]) => (MOVDconst [0])
(BICshiftRO (RORconst x [c]) x [c]) => (MOVDconst [0])
(EONshiftLL (SLLconst x [c]) x [c]) => (MOVDconst [-1])
(EONshiftRL (SRLconst x [c]) x [c]) => (MOVDconst [-1])
(EONshiftRA (SRAconst x [c]) x [c]) => (MOVDconst [-1])
(EONshiftRO (RORconst x [c]) x [c]) => (MOVDconst [-1])
(ORNshiftLL (SLLconst x [c]) x [c]) => (MOVDconst [-1])
(ORNshiftRL (SRLconst x [c]) x [c]) => (MOVDconst [-1])
(ORNshiftRA (SRAconst x [c]) x [c]) => (MOVDconst [-1])
(ORNshiftRO (RORconst x [c]) x [c]) => (MOVDconst [-1])

// Generate rotates with const shift
(ADDshiftLL [c] (SRLconst x [64-c]) x) => (RORconst [64-c] x)
(ORshiftLL [c] (SRLconst
x [64-c]) x) => (RORconst [64-c] x)
(XORshiftLL [c] (SRLconst x [64-c]) x) => (RORconst [64-c] x)
(ADDshiftRL [c] (SLLconst x [64-c]) x) => (RORconst [ c] x)
(ORshiftRL [c] (SLLconst x [64-c]) x) => (RORconst [ c] x)
(XORshiftRL [c] (SLLconst x [64-c]) x) => (RORconst [ c] x)

(ADDshiftLL <t> [c] (UBFX [bfc] x) x) && c < 32 && t.Size() == 4 && bfc == armBFAuxInt(32-c, c)
=> (RORWconst [32-c] x)
(ORshiftLL <t> [c] (UBFX [bfc] x) x) && c < 32 && t.Size() == 4 && bfc == armBFAuxInt(32-c, c)
=> (RORWconst [32-c] x)
(XORshiftLL <t> [c] (UBFX [bfc] x) x) && c < 32 && t.Size() == 4 && bfc == armBFAuxInt(32-c, c)
=> (RORWconst [32-c] x)
(ADDshiftRL <t> [c] (SLLconst x [32-c]) (MOVWUreg x)) && c < 32 && t.Size() == 4 => (RORWconst [c] x)
(ORshiftRL <t> [c] (SLLconst x [32-c]) (MOVWUreg x)) && c < 32 && t.Size() == 4 => (RORWconst [c] x)
(XORshiftRL <t> [c] (SLLconst x [32-c]) (MOVWUreg x)) && c < 32 && t.Size() == 4 => (RORWconst [c] x)

(RORconst [c] (RORconst [d] x)) => (RORconst
[(c+d)&63] x)
(RORWconst [c] (RORWconst [d] x)) => (RORWconst [(c+d)&31] x)

// Generate rotates with non-const shift.
// These rules match the Go source code like
// y &= 63
// x << y | x >> (64-y)
// "|" can also be "^" or "+".
// As arm64 does not have a ROL instruction, so ROL(x, y) is replaced by ROR(x, -y).
((ADD|OR|XOR) (SLL x (ANDconst <t> [63] y))

```

```

(CSEL0 <typ.UInt64> [cc] (SRL <typ.UInt64> x (SUB <t> (MOVDconst [64]) (ANDconst <t> [63] y)))
(CMPconst [64] (SUB <t> (MOVDconst [64]) (ANDconst <t> [63] y)))) && cc == OpARM64LessThanU
=> (ROR x (NEG <t> y))
((ADD|OR|XOR) (SRL <typ.UInt64> x (ANDconst <t> [63] y))
(CSEL0 <typ.UInt64> [cc] (SLL x (SUB <t> (MOVDconst [64]) (ANDconst <t> [63] y)))
(CMPconst [64] (SUB <t> (MOVDconst [64]) (ANDconst <t> [63] y)))) && cc == OpARM64LessThanU
=> (ROR x y)

// These rules match the Go source code like
// y &= 31
// x << y | x >> (32-y)
// "|" can also be "^" or "+".
// As arm64 does not have a ROLW instruction, so ROLW(x,
y) is replaced by RORW(x, -y).
((ADD|OR|XOR) (SLL x (ANDconst <t> [31] y))
(CSEL0 <typ.UInt32> [cc] (SRL <typ.UInt32> (MOVWUreg x) (SUB <t> (MOVDconst [32]) (ANDconst <t> [31]
y))))
(CMPconst [64] (SUB <t> (MOVDconst [32]) (ANDconst <t> [31] y)))) && cc == OpARM64LessThanU
=> (RORW x (NEG <t> y))
((ADD|OR|XOR) (SRL <typ.UInt32> (MOVWUreg x) (ANDconst <t> [31] y))
(CSEL0 <typ.UInt32> [cc] (SLL x (SUB <t> (MOVDconst [32]) (ANDconst <t> [31] y)))
(CMPconst [64] (SUB <t> (MOVDconst [32]) (ANDconst <t> [31] y)))) && cc == OpARM64LessThanU
=> (RORW x y)

// rev16w | rev16
// ((x>>8) | (x<<8)) => (REV16W x), the type of x is uint16, "|" can also be "^" or "+".
((ADDshiftLL|ORshiftLL|XORshiftLL) <typ.UInt16> [8] (UBFX <typ.UInt16> [armBFAuxInt(8, 8)] x) x) =>
(REV16W x)

// ((x & 0xff00ff00)>>8) | ((x & 0x00ff00ff)<<8), "|" can also be "^" or "+".
((ADDshiftLL|ORshiftLL|XORshiftLL) [8] (UBFX [armBFAuxInt(8, 24)] (ANDconst [c1] x)) (ANDconst [c2] x))
&& uint32(c1) == 0xff00ff00 &&
uint32(c2) == 0x00ff00ff
=> (REV16W x)

// ((x & 0xff00ff00ff00ff00)>>8) | ((x & 0x00ff00ff00ff00ff)<<8), "|" can also be "^" or "+".
((ADDshiftLL|ORshiftLL|XORshiftLL) [8] (SRLconst [8] (ANDconst [c1] x)) (ANDconst [c2] x))
&& (uint64(c1) == 0xff00ff00ff00ff00 && uint64(c2) == 0x00ff00ff00ff00ff)
=> (REV16 x)

// ((x & 0xff00ff00)>>8) | ((x & 0x00ff00ff)<<8), "|" can also be "^" or "+".
((ADDshiftLL|ORshiftLL|XORshiftLL) [8] (SRLconst [8] (ANDconst [c1] x)) (ANDconst [c2] x))
&& (uint64(c1) == 0xff00ff00 && uint64(c2) == 0x00ff00ff)
=> (REV16 (ANDconst <x.Type> [0xffffffff] x))

// Extract from reg pair
(ADDshiftLL [c] (SRLconst x [64-c] x2) => (EXTRconst [64-c] x2 x)
(ORshiftLL [c] (SRLconst x [64-c] x2) => (EXTRconst [64-c] x2 x)

```

```

(XORshiftLL [c] (SRLconst x [64-c] x2) => (EXTRconst [64-c] x2 x)

(ADDshiftLL <↳ [c] (UBFX [bfc] x) x2) && c < 32 && t.Size() == 4 && bfc == armBFAuxInt(32-c, c)
=> (EXTRWconst [32-c] x2 x)
(ORshiftLL <↳ [c] (UBFX [bfc] x) x2) && c < 32 && t.Size()
== 4 && bfc == armBFAuxInt(32-c, c)
=> (EXTRWconst [32-c] x2 x)
(XORshiftLL <↳ [c] (UBFX [bfc] x) x2) && c < 32 && t.Size() == 4 && bfc == armBFAuxInt(32-c, c)
=> (EXTRWconst [32-c] x2 x)

// Rewrite special pairs of shifts to AND.
// On ARM64 the bitmask can fit into an instruction.
(SRLconst [c] (SLLconst [c] x)) && 0 < c && c < 64 => (ANDconst [1<<uint(64-c)-1] x) // mask out high bits
(SLLconst [c] (SRLconst [c] x)) && 0 < c && c < 64 => (ANDconst [^(1<<uint(c)-1)] x) // mask out low bits

// Special case setting bit as 1. An example is math.Copysign(c,-1)
(ORconst [c1] (ANDconst [c2] x)) && c2|c1 == ^0 => (ORconst [c1] x)

// If the shift amount is larger than the datasize(32, 16, 8), we can optimize to constant 0.
(MOVWUreg (SLLconst [lc] x)) && lc >= 32 => (MOVDconst [0])
(MOVHUreg (SLLconst [lc] x)) && lc >= 16 => (MOVDconst [0])
(MOVBUreg (SLLconst [lc] x)) && lc >= 8 => (MOVDconst [0])

// After zero extension, the upper (64-datasize(32|16|8)) bits are zero, we can
optimiza to constant 0.
(SRLconst [rc] (MOVWUreg x)) && rc >= 32 => (MOVDconst [0])
(SRLconst [rc] (MOVHUreg x)) && rc >= 16 => (MOVDconst [0])
(SRLconst [rc] (MOVBUreg x)) && rc >= 8 => (MOVDconst [0])

// bitfield ops

// sbfiz
// (x << lc) >> rc
(SRAconst [rc] (SLLconst [lc] x)) && lc > rc => (SBFIZ [armBFAuxInt(lc-rc, 64-lc)] x)
// int64(x << lc)
(MOVWreg (SLLconst [lc] x)) && lc < 32 => (SBFIZ [armBFAuxInt(lc, 32-lc)] x)
(MOVHreg (SLLconst [lc] x)) && lc < 16 => (SBFIZ [armBFAuxInt(lc, 16-lc)] x)
(MOVBreg (SLLconst [lc] x)) && lc < 8 => (SBFIZ [armBFAuxInt(lc, 8-lc)] x)
// int64(x) << lc
(SLLconst [lc] (MOVWreg x)) => (SBFIZ [armBFAuxInt(lc, min(32, 64-lc))] x)
(SLLconst [lc] (MOVHreg x)) => (SBFIZ [armBFAuxInt(lc, min(16, 64-lc))] x)
(SLLconst [lc] (MOVBreg x)) => (SBFIZ [armBFAuxInt(lc, min(8, 64-lc))] x)

// sbfx
// (x << lc) >> rc
(SRAconst [rc] (SLLconst [lc] x)) && lc <= rc => (SBFX [armBFAuxInt(rc-lc, 64-rc)] x)
// int64(x) >> rc
(SRAconst [rc] (MOVWreg x)) && rc < 32 =>

```

```

(SBFX [armBFAuxInt(rc, 32-rc)] x)
(SRAconst [rc] (MOVHreg x)) && rc < 16 => (SBFX [armBFAuxInt(rc, 16-rc)] x)
(SRAconst [rc] (MOVBreg x)) && rc < 8 => (SBFX [armBFAuxInt(rc, 8-rc)] x)
// merge sbfx and sign-extension into sbfx
(MOVWreg (SBFX [bfc] x)) && bfc.getARM64BFwidth() <= 32 => (SBFX [bfc] x)
(MOVHreg (SBFX [bfc] x)) && bfc.getARM64BFwidth() <= 16 => (SBFX [bfc] x)
(MOVBreg (SBFX [bfc] x)) && bfc.getARM64BFwidth() <= 8 => (SBFX [bfc] x)

// sbfiz/sbfx combinations: merge shifts into bitfield ops
(SRAconst [sc] (SBFIZ [bfc] x)) && sc < bfc.getARM64BFlsb()
=> (SBFIZ [armBFAuxInt(bfc.getARM64BFlsb()-sc, bfc.getARM64BFwidth())] x)
(SRAconst [sc] (SBFIZ [bfc] x)) && sc >= bfc.getARM64BFlsb()
&& sc < bfc.getARM64BFlsb()+bfc.getARM64BFwidth()
=> (SBFX [armBFAuxInt(sc-bfc.getARM64BFlsb(), bfc.getARM64BFlsb()+bfc.getARM64BFwidth()-sc)] x)

// ubfiz
// (x << lc) >> rc
(SRLconst [rc] (SLLconst [lc] x)) && lc > rc => (UBFIZ [armBFAuxInt(lc-rc, 64-lc)] x)
// uint64(x) << lc
(SLLconst [lc]
(MOVWUreg x)) => (UBFIZ [armBFAuxInt(lc, min(32, 64-lc))] x)
(SLLconst [lc] (MOVHUreg x)) => (UBFIZ [armBFAuxInt(lc, min(16, 64-lc))] x)
(SLLconst [lc] (MOVBUreg x)) => (UBFIZ [armBFAuxInt(lc, min(8, 64-lc))] x)
// uint64(x << lc)
(MOVWUreg (SLLconst [lc] x)) && lc < 32 => (UBFIZ [armBFAuxInt(lc, 32-lc)] x)
(MOVHUreg (SLLconst [lc] x)) && lc < 16 => (UBFIZ [armBFAuxInt(lc, 16-lc)] x)
(MOVBUreg (SLLconst [lc] x)) && lc < 8 => (UBFIZ [armBFAuxInt(lc, 8-lc)] x)

// merge ANDconst into ubfiz
// (x & ac) << sc
(SLLconst [sc] (ANDconst [ac] x)) && isARM64BFMask(sc, ac, 0)
=> (UBFIZ [armBFAuxInt(sc, arm64BFWidth(ac, 0))] x)
// (x << sc) & ac
(ANDconst [ac] (SLLconst [sc] x)) && isARM64BFMask(sc, ac, sc)
=> (UBFIZ [armBFAuxInt(sc, arm64BFWidth(ac, sc))] x)

// ubfx
// (x << lc) >> rc
(SRLconst [rc] (SLLconst [lc] x)) && lc < rc => (UBFX [armBFAuxInt(rc-lc, 64-rc)] x)
// uint64(x) >> rc
(SRLconst [rc] (MOVWUreg x)) && rc < 32 => (UBFX [armBFAuxInt(rc, 32-rc)] x)
(SRLconst [rc] (MOVHUreg
x)) && rc < 16 => (UBFX [armBFAuxInt(rc, 16-rc)] x)
(SRLconst [rc] (MOVBUreg x)) && rc < 8 => (UBFX [armBFAuxInt(rc, 8-rc)] x)
// uint64(x >> rc)
(MOVWUreg (SRLconst [rc] x)) && rc < 32 => (UBFX [armBFAuxInt(rc, 32)] x)
(MOVHUreg (SRLconst [rc] x)) && rc < 16 => (UBFX [armBFAuxInt(rc, 16)] x)
(MOVBUreg (SRLconst [rc] x)) && rc < 8 => (UBFX [armBFAuxInt(rc, 8)] x)

```

```

// merge ANDconst into ubfx
// (x >> sc) & ac
(ANDconst [ac] (SRLconst [sc] x)) && isARM64BFMask(sc, ac, 0)
=> (UBFX [armBFAuxInt(sc, arm64BFWidth(ac, 0))] x)
// (x & ac) >> sc
(SRLconst [sc] (ANDconst [ac] x)) && isARM64BFMask(sc, ac, sc)
=> (UBFX [armBFAuxInt(sc, arm64BFWidth(ac, sc))] x)
// merge ANDconst and ubfx into ubfx
(ANDconst [c] (UBFX [bfc] x)) && isARM64BFMask(0, c, 0) =>
(UBFX [armBFAuxInt(bfc.getARM64BFwidth(), min(bfc.getARM64BFwidth(), arm64BFWidth(c, 0)))] x)
(UBFX [bfc] (ANDconst [c] x)) && isARM64BFMask(0, c, 0) && bfc.getARM64BFwidth() +
bfc.getARM64BFwidth() <= arm64BFWidth(c, 0) =>
(UBFX [bfc] x)
// merge
ubfx and zero-extension into ubfx
(MOVWUreg (UBFX [bfc] x)) && bfc.getARM64BFwidth() <= 32 => (UBFX [bfc] x)
(MOVHUreg (UBFX [bfc] x)) && bfc.getARM64BFwidth() <= 16 => (UBFX [bfc] x)
(MOVBUreg (UBFX [bfc] x)) && bfc.getARM64BFwidth() <= 8 => (UBFX [bfc] x)

// ubfiz/ubfx combinations: merge shifts into bitfield ops
(SRLconst [sc] (UBFX [bfc] x)) && sc < bfc.getARM64BFwidth()
=> (UBFX [armBFAuxInt(bfc.getARM64BFwidth()-sc, bfc.getARM64BFwidth()-sc)] x)
(UBFX [bfc] (SRLconst [sc] x)) && sc+bfc.getARM64BFwidth()+bfc.getARM64BFwidth() < 64
=> (UBFX [armBFAuxInt(bfc.getARM64BFwidth()+sc, bfc.getARM64BFwidth()+sc)] x)
(SLLconst [sc] (UBFIZ [bfc] x)) && sc+bfc.getARM64BFwidth()+bfc.getARM64BFwidth() < 64
=> (UBFIZ [armBFAuxInt(bfc.getARM64BFwidth()+sc, bfc.getARM64BFwidth()+sc)] x)
(UBFIZ [bfc] (SLLconst [sc] x)) && sc < bfc.getARM64BFwidth()
=> (UBFIZ [armBFAuxInt(bfc.getARM64BFwidth()-sc, bfc.getARM64BFwidth()-sc)] x)
// ((x << c1) >> c2) >> c3
(SRLconst [sc] (UBFIZ [bfc] x)) && sc == bfc.getARM64BFwidth()
=>
(ANDconst [1<<uint(bfc.getARM64BFwidth()-1)] x)
(SRLconst [sc] (UBFIZ [bfc] x)) && sc < bfc.getARM64BFwidth()
=> (UBFIZ [armBFAuxInt(bfc.getARM64BFwidth()-sc, bfc.getARM64BFwidth()-sc)] x)
(SRLconst [sc] (UBFIZ [bfc] x)) && sc > bfc.getARM64BFwidth()
&& sc < bfc.getARM64BFwidth()+bfc.getARM64BFwidth()
=> (UBFX [armBFAuxInt(sc-bfc.getARM64BFwidth(), bfc.getARM64BFwidth()+bfc.getARM64BFwidth()-sc)] x)
// ((x << c1) << c2) >> c3
(UBFX [bfc] (SLLconst [sc] x)) && sc == bfc.getARM64BFwidth()
=> (ANDconst [1<<uint(bfc.getARM64BFwidth()-1)] x)
(UBFX [bfc] (SLLconst [sc] x)) && sc < bfc.getARM64BFwidth()
=> (UBFX [armBFAuxInt(bfc.getARM64BFwidth()-sc, bfc.getARM64BFwidth()-sc)] x)
(UBFX [bfc] (SLLconst [sc] x)) && sc > bfc.getARM64BFwidth()
&& sc < bfc.getARM64BFwidth()+bfc.getARM64BFwidth()
=> (UBFIZ [armBFAuxInt(sc-bfc.getARM64BFwidth(), bfc.getARM64BFwidth()+bfc.getARM64BFwidth()-sc)] x)

// bfi
(OR (UBFIZ [bfc] x) (ANDconst [ac] y))

```

```

&& ac == ^((1<<uint(bfc.getARM64BFwidth()-1) << uint(bfc.getARM64BFIsb()))
=>
(BFI [bfc] y x)
(ORshiftRL [rc] (ANDconst [ac] x) (SLLconst [lc] y))
&& lc > rc && ac == ^((1<<uint(64-lc)-1) << uint64(lc-rc))
=> (BFI [armBFAuxInt(lc-rc, 64-lc)] x y)
// bfxil
(OR (UBFX [bfc] x) (ANDconst [ac] y)) && ac == ^((1<<uint(bfc.getARM64BFwidth()-1)
=> (BFXIL [bfc] y x)
(ORshiftLL [sc] (UBFX [bfc] x) (SRLconst [sc] y)) && sc == bfc.getARM64BFwidth()
=> (BFXIL [bfc] y x)
(ORshiftRL [rc] (ANDconst [ac] y) (SLLconst [lc] x)) && lc < rc && ac == ^((1<<uint(64-rc)-1))
=> (BFXIL [armBFAuxInt(rc-lc, 64-rc)] y x)

// do combined loads
// little endian loads
// b[0] | b[1]<<8 => load 16-bit
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUload [i0] {s} p mem))
y1:(MOVDnop x1:(MOVBUload [i1] {s} p mem)))
&& i1 == i0+1
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, y0, y1)
=> @mergePoint(b,x0,x1) (MOVHUload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem)
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUloadidx ptr0 idx0
mem))
y1:(MOVDnop x1:(MOVBUload [1] {s} p1:(ADD ptr1 idx1 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x0, x1, y0, y1)
=> @mergePoint(b,x0,x1) (MOVHUloadidx <t> ptr0 idx0 mem)
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUloadidx ptr idx mem))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, y0, y1)
=> @mergePoint(b,x0,x1) (MOVHUloadidx <t> ptr idx mem)

// b[0] | b[1]<<8 | b[2]<<16 | b[3]<<24 => load 32-bit
(ORshiftLL <t> [24] o0:(ORshiftLL [16]

```

```

    x0:(MOVHULoad [i0] {s} p mem)
y1:(MOVDnop x1:(MOVBUload [i2] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i3] {s} p mem)))
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y1.Uses == 1 &&
y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWUload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem)
(ORshiftLL <t> [24] o0:(ORshiftLL [16]
    x0:(MOVHULoadidx ptr0 idx0 mem)
y1:(MOVDnop x1:(MOVBUload [2] {s} p1:(ADD ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [3] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWUloadidx <t> ptr0 idx0 mem)
(ORshiftLL <t> [24] o0:(ORshiftLL [16]
    x0:(MOVHULoadidx ptr idx mem)
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [2] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [3] idx) mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y1.Uses
== 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWUloadidx <t> ptr idx mem)
(ORshiftLL <t> [24] o0:(ORshiftLL [16]
    x0:(MOVHULoadidx2 ptr0 idx0 mem)
y1:(MOVDnop x1:(MOVBUload [2] {s} p1:(ADDshiftLL [1] ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [3] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, y1, y2, o0)

```

```

=> @mergePoint(b,x0,x1,x2) (MOVWUloadidx <t> ptr0 (SLLconst <idx0.Type> [1] idx0) mem)

// b[0] | b[1]<<8 | b[2]<<16 | b[3]<<24 | b[4]<<32 | b[5]<<40 | b[6]<<48 | b[7]<<56 => load 64-bit
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
    x0:(MOVWUload [i0] {s} p mem)
y1:(MOVDnop x1:(MOVBUload [i4] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload
[i5] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i6] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [i7] {s} p mem)))
&& i4 == i0+4
&& i5 == i0+5
&& i6 == i0+6
&& i7 == i0+7
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& clobber(x0, x1, x2, x3, x4, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (MOVDload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem)
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
    x0:(MOVWUloadidx ptr0 idx0 mem)
y1:(MOVDnop x1:(MOVBUload [4] {s} p1:(ADD ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [5] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [6] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [7] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1 &&
y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (MOVDloadidx <t> ptr0 idx0 mem)
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
    x0:(MOVWUloadidx4 ptr0 idx0 mem)
y1:(MOVDnop x1:(MOVBUload [4] {s} p1:(ADDshiftLL [2] ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [5] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [6] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [7] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)

```



```

&&
isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (MOVDloadidx <t> ptr0 (SLLconst <idx0.Type> [2] idx0) mem)
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
    x0:(MOVWUloadidx ptr idx mem)
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [4] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [5] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr (ADDconst [6] idx) mem)))
y4:(MOVDnop x4:(MOVBUloadidx ptr (ADDconst [7] idx) mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& clobber(x0, x1, x2, x3, x4, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (MOVDloadidx <t> ptr idx mem)

// b[3]<<24 | b[2]<<16 | b[1]<<8 | b[0] => load 32-bit
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst
[24]
y0:(MOVDnop x0:(MOVBUload [i3] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [i2] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i1] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i0] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3) (MOVWUload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem)
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst [24]
y0:(MOVDnop x0:(MOVBUload [3] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [2] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr0 idx0 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& o0.Uses
== 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3) (MOVWUloadidx <t> ptr0 idx0 mem)

```

```

(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst [24]
y0:(MOVDnop x0:(MOVBUloadidx ptr (ADDconst [3] idx) mem)))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [2] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr idx mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3) (MOVWUloadidx <t> ptr idx mem)

// b[7]<<56 | b[6]<<48 | b[5]<<40 | b[4]<<32 | b[3]<<24
| b[2]<<16 | b[1]<<8 | b[0] => load 64-bit
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUload [i7] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [i6] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i5] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i4] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [i3] {s} p mem)))
y5:(MOVDnop x5:(MOVBUload [i2] {s} p mem)))
y6:(MOVDnop x6:(MOVBUload [i1] {s} p mem)))
y7:(MOVDnop x7:(MOVBUload [i0] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& i4 == i0+4
&& i5 == i0+5
&& i6 == i0+6
&& i7 == i0+7
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses == 1 && y5.Uses == 1 && y6.Uses == 1 && y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses
== 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (MOVDload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem)
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUload [7] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [6] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [5] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [4] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [3] {s} p mem)))

```

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y5:(MOVDnop x5:(MOVBUload [2] {s} p mem)))
y6:(MOVDnop x6:(MOVBUload [1] {s} p1:(ADD ptr1 idx1 mem)))
y7:(MOVDnop x7:(MOVBUloadidx ptr0 idx0 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses
== 1 && y5.Uses == 1 && y6.Uses == 1 && y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (MOVDloadidx <t> ptr0 idx0 mem)
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUloadidx ptr (ADDconst [7] idx) mem)))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [6] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [5] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr (ADDconst [4] idx) mem)))
y4:(MOVDnop x4:(MOVBUloadidx ptr (ADDconst [3] idx) mem)))
y5:(MOVDnop x5:(MOVBUloadidx ptr (ADDconst
[2] idx) mem)))
y6:(MOVDnop x6:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y7:(MOVDnop x7:(MOVBUloadidx ptr idx mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses == 1 && y5.Uses == 1 && y6.Uses == 1 && y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (MOVDloadidx <t> ptr idx mem)

// big endian loads
// b[1] | b[0]<<8 => load 16-bit, reverse
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUload [i1] {s} p mem))
y1:(MOVDnop x1:(MOVBUload [i0] {s} p mem)))
&& i1 == i0+1
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1)
!= nil
&& clobber(x0, x1, y0, y1)

```

```

=> @mergePoint(b,x0,x1) (REV16W <t> (MOVHULoad <t> [i0] {s} p mem))
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem))
y1:(MOVDnop x1:(MOVBUloadidx ptr0 idx0 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x0, x1, y0, y1)
=> @mergePoint(b,x0,x1) (REV16W <t> (MOVHULoadidx <t> ptr0 idx0 mem))
(ORshiftLL <t> [8]
y0:(MOVDnop x0:(MOVBUloadidx ptr (ADDconst [1] idx) mem))
y1:(MOVDnop x1:(MOVBUloadidx ptr idx mem)))
&& x0.Uses == 1 && x1.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, y0, y1)
=> @mergePoint(b,x0,x1) (REV16W <t> (MOVHULoadidx <t> ptr idx mem))

// b[3] | b[2]<<8 | b[1]<<16 | b[0]<<24 => load 32-bit, reverse
(ORshiftLL <t> [24] o0:(ORshiftLL [16]
y0:(REV16W x0:(MOVHULoad [i2]
{s} p mem))
y1:(MOVDnop x1:(MOVBUload [i1] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i0] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, y0, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (REVW <t> (MOVWULoad <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem))
(ORshiftLL <t> [24] o0:(ORshiftLL [16]
y0:(REV16W x0:(MOVHULoad [2] {s} p mem))
y1:(MOVDnop x1:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr0 idx0 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, y0, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (REVW <t> (MOVWULoadidx <t> ptr0 idx0 mem))
(ORshiftLL

```

```

<t> [24] o0:(ORshiftLL [16]
y0:(REV16W x0:(MOVHULoadidx ptr (ADDconst [2] idx) mem))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr idx mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, y0, y1, y2, o0)
=> @mergePoint(b,x0,x1,x2) (REVW <t> (MOVWULoadidx <t> ptr idx mem))

// b[7] | b[6]<<8 | b[5]<<16 | b[4]<<24 | b[3]<<32 | b[2]<<40 | b[1]<<48 | b[0]<<56 => load 64-bit, reverse
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
y0:(REVW x0:(MOVWUload [i4] {s} p mem))
y1:(MOVDnop x1:(MOVBUload [i3] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i1] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [i0] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& i4 == i0+4
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& clobber(x0, x1, x2, x3, x4, y0, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (REV <t> (MOVDload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem))
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
y0:(REVW x0:(MOVWUload [4] {s} p mem))
y1:(MOVDnop x1:(MOVBUload [3] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem)))
y4:(MOVDnop x4:(MOVBUloadidx ptr0 idx0 mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0,
idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, y0, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (REV <t> (MOVDloadidx <t> ptr0 idx0 mem))
(ORshiftLL <t> [56] o0:(ORshiftLL [48] o1:(ORshiftLL [40] o2:(ORshiftLL [32]
y0:(REVW x0:(MOVWUloadidx ptr (ADDconst [4] idx) mem))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [3] idx) mem)))

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```

y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [2] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y4:(MOVDnop x4:(MOVBUloadidx ptr idx mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1 && y4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4) != nil
&& clobber(x0, x1, x2, x3, x4, y0, y1, y2, y3, y4, o0, o1, o2)
=> @mergePoint(b,x0,x1,x2,x3,x4) (REV <t> (MOVDloadidx <t> ptr idx mem))

// b[0]<<24 | b[1]<<16 | b[2]<<8 | b[3] => load 32-bit,
reverse
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst [24]
y0:(MOVDnop x0:(MOVBUload [i0] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [i1] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i3] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3) (RE VW <t> (MOVWUload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem))
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst [24]
y0:(MOVDnop x0:(MOVBUloadidx ptr0 idx0 mem)))
y1:(MOVDnop x1:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [3] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses ==
1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3) (RE VW <t> (MOVWUloadidx <t> ptr0 idx0 mem))
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] s0:(SLLconst [24]
y0:(MOVDnop x0:(MOVBUloadidx ptr idx mem)))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [2] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr (ADDconst [3] idx) mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1

```

```

&& o0.Uses == 1 && o1.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3) != nil
&& clobber(x0, x1, x2, x3, y0, y1, y2, y3, o0, o1, s0)
=> @mergePoint(b,x0,x1,x2,x3)
(REVW <t> (MOVWUloadidx <t> ptr idx mem))

// b[0]<<56 | b[1]<<48 | b[2]<<40 | b[3]<<32 | b[4]<<24 | b[5]<<16 | b[6]<<8 | b[7] => load 64-bit, reverse
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUload [i0] {s} p mem)))
y1:(MOVDnop x1:(MOVBUload [i1] {s} p mem)))
y2:(MOVDnop x2:(MOVBUload [i2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [i3] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [i4] {s} p mem)))
y5:(MOVDnop x5:(MOVBUload [i5] {s} p mem)))
y6:(MOVDnop x6:(MOVBUload [i6] {s} p mem)))
y7:(MOVDnop x7:(MOVBUload [i7] {s} p mem)))
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& i4 == i0+4
&& i5 == i0+5
&& i6 == i0+6
&& i7 == i0+7
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses == 1 && y5.Uses == 1 && y6.Uses == 1
&& y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (REV <t> (MOVDload <t> {s} (OffPtr <p.Type> [int64(i0)] p) mem))
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUloadidx ptr0 idx0 mem)))
y1:(MOVDnop x1:(MOVBUload [1] {s} p1:(ADD ptr1 idx1) mem)))
y2:(MOVDnop x2:(MOVBUload [2] {s} p mem)))
y3:(MOVDnop x3:(MOVBUload [3] {s} p mem)))
y4:(MOVDnop x4:(MOVBUload [4] {s} p mem)))
y5:(MOVDnop x5:(MOVBUload [5] {s} p mem)))
y6:(MOVDnop x6:(MOVBUload [6] {s} p mem)))
y7:(MOVDnop x7:(MOVBUload [7] {s} p mem)))
&& s == nil
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 &&

```

```

x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses == 1 && y5.Uses == 1 && y6.Uses == 1 && y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (REV <t> (MOVDloadidx <t> ptr0 idx0 mem))
(OR <t> o0:(ORshiftLL [8] o1:(ORshiftLL [16] o2:(ORshiftLL [24] o3:(ORshiftLL [32] o4:(ORshiftLL [40]
o5:(ORshiftLL [48] s0:(SLLconst [56]
y0:(MOVDnop x0:(MOVBUloadidx ptr idx mem)))
y1:(MOVDnop x1:(MOVBUloadidx ptr (ADDconst [1] idx) mem)))
y2:(MOVDnop x2:(MOVBUloadidx ptr (ADDconst [2] idx) mem)))
y3:(MOVDnop x3:(MOVBUloadidx ptr (ADDconst [3]
idx) mem)))
y4:(MOVDnop x4:(MOVBUloadidx ptr (ADDconst [4] idx) mem)))
y5:(MOVDnop x5:(MOVBUloadidx ptr (ADDconst [5] idx) mem)))
y6:(MOVDnop x6:(MOVBUloadidx ptr (ADDconst [6] idx) mem)))
y7:(MOVDnop x7:(MOVBUloadidx ptr (ADDconst [7] idx) mem)))
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& y0.Uses == 1 && y1.Uses == 1 && y2.Uses == 1 && y3.Uses == 1
&& y4.Uses == 1 && y5.Uses == 1 && y6.Uses == 1 && y7.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1 && o3.Uses == 1
&& o4.Uses == 1 && o5.Uses == 1 && s0.Uses == 1
&& mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) != nil
&& clobber(x0, x1, x2, x3, x4, x5, x6, x7, y0, y1, y2, y3, y4, y5, y6, y7, o0, o1, o2, o3, o4, o5, s0)
=> @mergePoint(b,x0,x1,x2,x3,x4,x5,x6,x7) (REV <t> (MOVDloadidx <t> ptr idx mem))

// Combine zero stores into larger (unaligned) stores.
(MOVBstorezero [i] {s} ptr0 x:(MOVBstorezero [j] {s} ptr1 mem))
&& x.Uses == 1
&&
areAdjacentOffsets(int64(i),int64(j),1)
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstorezero [int32(min(int64(i),int64(j)))] {s} ptr0 mem)
(MOVBstorezero [1] {s} (ADD ptr0 idx0) x:(MOVBstorezeroidx ptr1 idx1 mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstorezeroidx ptr1 idx1 mem)
(MOVBstorezeroidx ptr (ADDconst [1] idx) x:(MOVBstorezeroidx ptr idx mem))
&& x.Uses == 1
&& clobber(x)

```



```

=> (MOVHstorezeroidx ptr idx mem)
(MOVHstorezero [i] {s} ptr0 x:(MOVHstorezero [j] {s} ptr1 mem))
  && x.Uses == 1
  && areAdjacentOffsets(int64(i),int64(j),2)
  && isSamePtr(ptr0, ptr1)
  && clobber(x)
=> (MOVWstorezero [int32(min(int64(i),int64(j)))] {s} ptr0 mem)
(MOVHstorezero [2] {s} (ADD ptr0 idx0) x:(MOVHstorezeroidx ptr1 idx1 mem))
  && x.Uses == 1
  && s == nil
  && (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
  && clobber(x)
=>
(MOVWstorezeroidx ptr1 idx1 mem)
(MOVHstorezeroidx ptr (ADDconst [2] idx) x:(MOVHstorezeroidx ptr idx mem))
  && x.Uses == 1
  && clobber(x)
=> (MOVWstorezeroidx ptr idx mem)
(MOVHstorezero [2] {s} (ADDshiftLL [1] ptr0 idx0) x:(MOVHstorezeroidx2 ptr1 idx1 mem))
  && x.Uses == 1
  && s == nil
  && isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
  && clobber(x)
=> (MOVWstorezeroidx ptr1 (SLLconst <idx1.Type> [1] idx1) mem)
(MOVWstorezero [i] {s} ptr0 x:(MOVWstorezero [j] {s} ptr1 mem))
  && x.Uses == 1
  && areAdjacentOffsets(int64(i),int64(j),4)
  && isSamePtr(ptr0, ptr1)
  && clobber(x)
=> (MOVDstorezero [int32(min(int64(i),int64(j)))] {s} ptr0 mem)
(MOVWstorezero [4] {s} (ADD ptr0 idx0) x:(MOVWstorezeroidx ptr1 idx1 mem))
  && x.Uses == 1
  && s == nil
  && (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
  && clobber(x)
=> (MOVDstorezeroidx ptr1 idx1 mem)
(MOVWstorezeroidx ptr (ADDconst [4] idx) x:(MOVWstorezeroidx ptr idx mem))
  && x.Uses
  == 1
  && clobber(x)
=> (MOVDstorezeroidx ptr idx mem)
(MOVWstorezero [4] {s} (ADDshiftLL [2] ptr0 idx0) x:(MOVWstorezeroidx4 ptr1 idx1 mem))
  && x.Uses == 1
  && s == nil
  && isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
  && clobber(x)
=> (MOVDstorezeroidx ptr1 (SLLconst <idx1.Type> [2] idx1) mem)
(MOVDstorezero [i] {s} ptr0 x:(MOVDstorezero [j] {s} ptr1 mem))

```

```

&& x.Uses == 1
&& areAdjacentOffsets(int64(i),int64(j),8)
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVQstorezero [int32(min(int64(i),int64(j)))] {s} ptr0 mem)
(MOVDstorezero [8] {s} p0:(ADD ptr0 idx0) x:(MOVDstorezeroidx ptr1 idx1 mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVQstorezero [0] {s} p0 mem)
(MOVDstorezero [8] {s} p0:(ADDshiftLL [3] ptr0 idx0) x:(MOVDstorezeroidx8 ptr1 idx1 mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVQstorezero [0]
{s} p0 mem)

// Combine stores into larger (unaligned) stores.
(MOVBstore [i] {s} ptr0 (SRLconst [8] w) x:(MOVBstore [i-1] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (SRLconst [8] w) x:(MOVBstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w mem)
(MOVBstoreidx ptr (ADDconst [1] idx) (SRLconst [8] w) x:(MOVBstoreidx ptr idx w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstoreidx ptr idx w mem)
(MOVBstore [i] {s} ptr0 (UBFX [armBFAuxInt(8, 8)] w) x:(MOVBstore [i-1] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (UBFX [armBFAuxInt(8, 8)] w) x:(MOVBstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0,
idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w mem)
(MOVBstore [i] {s} ptr0 (UBFX [armBFAuxInt(8, 24)] w) x:(MOVBstore [i-1] {s} ptr1 w mem))

```

```

&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (UBFX [armBFAuxInt(8, 24)] w) x:(MOVBstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w mem)
(MOVBstore [i] {s} ptr0 (SRLconst [8] (MOVDreg w)) x:(MOVBstore [i-1] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (SRLconst [8] (MOVDreg w)) x:(MOVBstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=>
(MOVHstoreidx ptr1 idx1 w mem)
(MOVBstore [i] {s} ptr0 (SRLconst [j] w) x:(MOVBstore [i-1] {s} ptr1 w0:(SRLconst [j-8] w) mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w0 mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (SRLconst [j] w) x:(MOVBstoreidx ptr1 idx1 w0:(SRLconst [j-8] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w0 mem)
(MOVBstore [i] {s} ptr0 (UBFX [bfc] w) x:(MOVBstore [i-1] {s} ptr1 w0:(UBFX [bfc2] w) mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& bfc.getARM64BFwidth() == 32 - bfc.getARM64BFIsb()
&& bfc2.getARM64BFwidth() == 32 - bfc2.getARM64BFIsb()
&& bfc2.getARM64BFIsb() == bfc.getARM64BFIsb() - 8
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w0 mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (UBFX [bfc] w) x:(MOVBstoreidx ptr1 idx1 w0:(UBFX [bfc2] w) mem))
&& x.Uses == 1
&& s == nil
&&
(isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& bfc.getARM64BFwidth() == 32 - bfc.getARM64BFIsb()
&& bfc2.getARM64BFwidth() == 32 - bfc2.getARM64BFIsb()

```

```

&& bfc2.getARM64BFIsb() == bfc.getARM64BFIsb() - 8
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w0 mem)
(MOVBstore [i] {s} ptr0 (SRLconst [j] (MOVDreg w)) x:(MOVBstore [i-1] {s} ptr1 w0:(SRLconst [j-8]
(MOVDreg w)) mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr0 w0 mem)
(MOVBstore [1] {s} (ADD ptr0 idx0) (SRLconst [j] (MOVDreg w)) x:(MOVBstoreidx ptr1 idx1 w0:(SRLconst [j-
8] (MOVDreg w)) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr1 idx1 w0 mem)
(MOVHstore [i] {s} ptr0 (SRLconst [16] w) x:(MOVHstore [i-2] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVWstore [i-2] {s} ptr0
w mem)
(MOVHstore [2] {s} (ADD ptr0 idx0) (SRLconst [16] w) x:(MOVHstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVWstoreidx ptr1 idx1 w mem)
(MOVHstoreidx ptr (ADDconst [2] idx) (SRLconst [16] w) x:(MOVHstoreidx ptr idx w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWstoreidx ptr idx w mem)
(MOVHstore [2] {s} (ADDshiftLL [1] ptr0 idx0) (SRLconst [16] w) x:(MOVHstoreidx2 ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVWstoreidx ptr1 (SLLconst <idx1.Type> [1] idx1) w mem)
(MOVHstore [i] {s} ptr0 (UBFX [armBFAuxInt(16, 16)] w) x:(MOVHstore [i-2] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVWstore [i-2] {s} ptr0 w mem)
(MOVHstore [2] {s} (ADD ptr0 idx0) (UBFX [armBFAuxInt(16, 16)] w) x:(MOVHstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&&

```

```

(isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVWstoreidx ptr1 idx1 w mem)
(MOVHstore [2] {s} (ADDshiftLL [1] ptr0 idx0) (UBFX [armBFAuxInt(16, 16)] w) x:(MOVHstoreidx2 ptr1 idx1
w mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVWstoreidx ptr1 (SLLconst <idx1.Type> [1] idx1) w mem)
(MOVHstore [i] {s} ptr0 (SRLconst [16] (MOVDreg w)) x:(MOVHstore [i-2] {s} ptr1 w mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVWstore [i-2] {s} ptr0 w mem)
(MOVHstore [2] {s} (ADD ptr0 idx0) (SRLconst [16] (MOVDreg w)) x:(MOVHstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVWstoreidx ptr1 idx1 w mem)
(MOVHstore [2] {s} (ADDshiftLL [1] ptr0 idx0) (SRLconst [16] (MOVDreg w)) x:(MOVHstoreidx2 ptr1 idx1 w
mem))
&& x.Uses
== 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVWstoreidx ptr1 (SLLconst <idx1.Type> [1] idx1) w mem)
(MOVHstore [i] {s} ptr0 (SRLconst [j] w) x:(MOVHstore [i-2] {s} ptr1 w0:(SRLconst [j-16] w) mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVWstore [i-2] {s} ptr0 w0 mem)
(MOVHstore [2] {s} (ADD ptr0 idx0) (SRLconst [j] w) x:(MOVHstoreidx ptr1 idx1 w0:(SRLconst [j-16] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVWstoreidx ptr1 idx1 w0 mem)
(MOVHstore [2] {s} (ADDshiftLL [1] ptr0 idx0) (SRLconst [j] w) x:(MOVHstoreidx2 ptr1 idx1 w0:(SRLconst [j-
16] w) mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVWstoreidx ptr1 (SLLconst <idx1.Type> [1] idx1) w0 mem)
(MOVWstore [i] {s} ptr0 (SRLconst [32] w) x:(MOVWstore [i-4] {s} ptr1 w mem))

```

```

&& x.Uses ==
1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVDstore [i-4] {s} ptr0 w mem)
(MOVWstore [4] {s} (ADD ptr0 idx0) (SRLconst [32] w) x:(MOVWstoreidx ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVDstoreidx ptr1 idx1 w mem)
(MOVWstoreidx ptr (ADDconst [4] idx) (SRLconst [32] w) x:(MOVWstoreidx ptr idx w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVDstoreidx ptr idx w mem)
(MOVWstore [4] {s} (ADDshiftLL [2] ptr0 idx0) (SRLconst [32] w) x:(MOVWstoreidx4 ptr1 idx1 w mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVDstoreidx ptr1 (SLLconst <idx1.Type> [2] idx1) w mem)
(MOVWstore [i] {s} ptr0 (SRLconst [j] w) x:(MOVWstore [i-4] {s} ptr1 w0:(SRLconst [j-32] w) mem))
&& x.Uses == 1
&& isSamePtr(ptr0, ptr1)
&& clobber(x)
=> (MOVDstore [i-4] {s} ptr0 w0 mem)
(MOVWstore [4] {s} (ADD ptr0 idx0) (SRLconst [j] w)
x:(MOVWstoreidx ptr1 idx1 w0:(SRLconst [j-32] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVDstoreidx ptr1 idx1 w0 mem)
(MOVWstore [4] {s} (ADDshiftLL [2] ptr0 idx0) (SRLconst [j] w) x:(MOVWstoreidx4 ptr1 idx1 w0:(SRLconst [j-
32] w) mem))
&& x.Uses == 1
&& s == nil
&& isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1)
&& clobber(x)
=> (MOVDstoreidx ptr1 (SLLconst <idx1.Type> [2] idx1) w0 mem)
(MOVBstore [i] {s} ptr w
x0:(MOVBstore [i-1] {s} ptr (SRLconst [8] w)
x1:(MOVBstore [i-2] {s} ptr (SRLconst [16] w)
x2:(MOVBstore [i-3] {s} ptr (SRLconst [24] w)
x3:(MOVBstore [i-4] {s} ptr (SRLconst [32] w)
x4:(MOVBstore [i-5] {s} ptr (SRLconst [40] w)
x5:(MOVBstore [i-6] {s} ptr (SRLconst [48] w)
x6:(MOVBstore [i-7] {s} ptr (SRLconst [56] w) mem))))))

```

```

&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& x3.Uses == 1
&& x4.Uses == 1
&& x5.Uses == 1
&& x6.Uses == 1
&&
clobber(x0, x1, x2, x3, x4, x5, x6)
=> (MOVDstore [i-7] {s} ptr (REV <typ.UInt64> w) mem)
(MOVBstore [7] {s} p w
x0:(MOVBstore [6] {s} p (SRLconst [8] w)
x1:(MOVBstore [5] {s} p (SRLconst [16] w)
x2:(MOVBstore [4] {s} p (SRLconst [24] w)
x3:(MOVBstore [3] {s} p (SRLconst [32] w)
x4:(MOVBstore [2] {s} p (SRLconst [40] w)
x5:(MOVBstore [1] {s} p1:(ADD ptr1 idx1) (SRLconst [48] w)
x6:(MOVBstoreidx ptr0 idx0 (SRLconst [56] w) mem))))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& x3.Uses == 1
&& x4.Uses == 1
&& x5.Uses == 1
&& x6.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2, x3, x4, x5, x6)
=> (MOVDstoreidx ptr0 idx0 (REV <typ.UInt64> w) mem)
(MOVBstore [i] {s} ptr w
x0:(MOVBstore [i-1] {s} ptr (UBFX [armBFAuxInt(8, 24)] w)
x1:(MOVBstore [i-2] {s} ptr (UBFX [armBFAuxInt(16, 16)] w)
x2:(MOVBstore [i-3] {s} ptr (UBFX [armBFAuxInt(24, 8)]
w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVWstore [i-3] {s} ptr (REVV <typ.UInt32> w) mem)
(MOVBstore [3] {s} p w
x0:(MOVBstore [2] {s} p (UBFX [armBFAuxInt(8, 24)] w)
x1:(MOVBstore [1] {s} p1:(ADD ptr1 idx1) (UBFX [armBFAuxInt(16, 16)] w)
x2:(MOVBstoreidx ptr0 idx0 (UBFX [armBFAuxInt(24, 8)] w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& s == nil

```

```

&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2)
=> (MOVWstoreidx ptr0 idx0 (REVV <typ.UInt32> w) mem)
(MOVBstoreidx ptr (ADDconst [3] idx) w
x0:(MOVBstoreidx ptr (ADDconst [2] idx) (UBFX [armBFAuxInt(8, 24)] w)
x1:(MOVBstoreidx ptr (ADDconst [1] idx) (UBFX [armBFAuxInt(16, 16)] w)
x2:(MOVBstoreidx ptr idx (UBFX [armBFAuxInt(24, 8)] w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVWstoreidx ptr idx (REVV <typ.UInt32> w) mem)
(MOVBstoreidx
ptr idx w
x0:(MOVBstoreidx ptr (ADDconst [1] idx) (UBFX [armBFAuxInt(8, 24)] w)
x1:(MOVBstoreidx ptr (ADDconst [2] idx) (UBFX [armBFAuxInt(16, 16)] w)
x2:(MOVBstoreidx ptr (ADDconst [3] idx) (UBFX [armBFAuxInt(24, 8)] w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVWstoreidx ptr idx w mem)
(MOVBstore [i] {s} ptr w
x0:(MOVBstore [i-1] {s} ptr (SRLconst [8] (MOVDreg w))
x1:(MOVBstore [i-2] {s} ptr (SRLconst [16] (MOVDreg w))
x2:(MOVBstore [i-3] {s} ptr (SRLconst [24] (MOVDreg w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVWstore [i-3] {s} ptr (REVV <typ.UInt32> w) mem)
(MOVBstore [3] {s} p w
x0:(MOVBstore [2] {s} p (SRLconst [8] (MOVDreg w))
x1:(MOVBstore [1] {s} p1:(ADD ptr1 idx1) (SRLconst [16] (MOVDreg w))
x2:(MOVBstoreidx ptr0 idx0 (SRLconst [24] (MOVDreg w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0,
idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2)
=> (MOVWstoreidx ptr0 idx0 (REVV <typ.UInt32> w) mem)
(MOVBstore [i] {s} ptr w
x0:(MOVBstore [i-1] {s} ptr (SRLconst [8] w)
x1:(MOVBstore [i-2] {s} ptr (SRLconst [16] w)

```



```

x2:(MOVBstore [i-3] {s} ptr (SRLconst [24] w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVWstore [i-3] {s} ptr (REVV <typ.UInt32> w) mem)
(MOVBstore [3] {s} p w
x0:(MOVBstore [2] {s} p (SRLconst [8] w)
x1:(MOVBstore [1] {s} p1:(ADD ptr1 idx1) (SRLconst [16] w)
x2:(MOVBstoreidx ptr0 idx0 (SRLconst [24] w) mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& isSamePtr(p1, p)
&& clobber(x0, x1, x2)
=> (MOVWstoreidx ptr0 idx0 (REVV <typ.UInt32> w) mem)
(MOVBstore [i] {s} ptr w x:(MOVBstore [i-1] {s} ptr (SRLconst [8] w) mem))
&& x.Uses
== 1
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr (REV16W <typ.UInt16> w) mem)
(MOVBstore [1] {s} (ADD ptr1 idx1) w x:(MOVBstoreidx ptr0 idx0 (SRLconst [8] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr0 idx0 (REV16W <typ.UInt16> w) mem)
(MOVBstore [i] {s} ptr w x:(MOVBstore [i-1] {s} ptr (UBFX [armBFAuxInt(8, 8)] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr (REV16W <typ.UInt16> w) mem)
(MOVBstore [1] {s} (ADD ptr1 idx1) w x:(MOVBstoreidx ptr0 idx0 (UBFX [armBFAuxInt(8, 8)] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr0 idx0 (REV16W <typ.UInt16> w) mem)
(MOVBstoreidx ptr (ADDconst [1] idx) w x:(MOVBstoreidx ptr idx (UBFX [armBFAuxInt(8, 8)] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstoreidx ptr idx
(REV16W <typ.UInt16> w) mem)
(MOVBstoreidx ptr idx w x:(MOVBstoreidx ptr (ADDconst [1] idx) (UBFX [armBFAuxInt(8, 8)] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstoreidx ptr idx w mem)

```

```

(MOVBstore [i] {s} ptr w x:(MOVBstore [i-1] {s} ptr (SRLconst [8] (MOVDreg w)) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr (REV16W <typ.UInt16> w) mem)
(MOVBstore [1] {s} (ADD ptr1 idx1) w x:(MOVBstoreidx ptr0 idx0 (SRLconst [8] (MOVDreg w)) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) && isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr0 idx0 (REV16W <typ.UInt16> w) mem)
(MOVBstore [i] {s} ptr w x:(MOVBstore [i-1] {s} ptr (UBFX [armBFAuxInt(8, 24)] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} ptr (REV16W <typ.UInt16> w) mem)
(MOVBstore [1] {s} (ADD ptr1 idx1) w x:(MOVBstoreidx ptr0 idx0 (UBFX [armBFAuxInt(8, 24)] w) mem))
&& x.Uses == 1
&& s == nil
&& (isSamePtr(ptr0, ptr1) &&
isSamePtr(idx0, idx1) || isSamePtr(ptr0, idx1) && isSamePtr(idx0, ptr1))
&& clobber(x)
=> (MOVHstoreidx ptr0 idx0 (REV16W <typ.UInt16> w) mem)

// FP simplification
(FNEGS (FMULS x y)) => (FNMULS x y)
(FNEGD (FMULD x y)) => (FNMULD x y)
(FMULS (FNEGS x) y) => (FNMULS x y)
(FMULD (FNEGD x) y) => (FNMULD x y)
(FNEGS (FNMULS x y)) => (FMULS x y)
(FNEGD (FNMULD x y)) => (FMULD x y)
(FNMULS (FNEGS x) y) => (FMULS x y)
(FNMULD (FNEGD x) y) => (FMULD x y)
(FADDS a (FMULS x y)) => (FMADDS a x y)
(FADDD a (FMULD x y)) => (FMADDD a x y)
(FSUBS a (FMULS x y)) => (FMSUBS a x y)
(FSUBD a (FMULD x y)) => (FMSUBD a x y)
(FSUBS (FMULS x y) a) => (FNMSUBS a x y)
(FSUBD (FMULD x y) a) => (FNMSUBD a x y)
(FADDS a (FNMULS x y)) => (FMSUBS a x y)
(FADDD a (FNMULD x y)) => (FMSUBD a x y)
(FSUBS a (FNMULS x y)) => (FMADDS a x y)
(FSUBD a (FNMULD x y)) => (FMADDD a x y)
(FSUBS (FNMULS x y) a) => (FNMADDS a x y)
(FSUBD (FNMULD x y) a) => (FNMADDD a x y)

(MOVBUnload [off] {sym} (SB) _) && symIsRO(sym) => (MOVDconst
[int64(read8(sym, int64(off)))]])
(MOVHUnload [off] {sym} (SB) _) && symIsRO(sym) => (MOVDconst [int64(read16(sym, int64(off),
config.ctx.Arch.ByteOrder))])

```

```

(MOVWUload [off] {sym} (SB) _) && symIsRO(sym) => (MOVDconst [int64(read32(sym, int64(off),
config.ctx.Arch.ByteOrder)))
(MOVDload [off] {sym} (SB) _) && symIsRO(sym) => (MOVDconst [int64(read64(sym, int64(off),
config.ctx.Arch.ByteOrder)))

// Prefetch instructions (aux is option: 0 - PLDL1KEEP; 1 - PLDL1STRM)
(PrefetchCache addr mem) => (PRFM [0] addr mem)
(PrefetchCacheStreamed addr mem) => (PRFM [1] addr mem)

// Arch-specific inlining for small or disjoint runtime.memmove
(SelectN [0] call:(CALLstatic {sym} s1:(MOVDstore _ (MOVDconst [sz]) s2:(MOVDstore _ src s3:(MOVDstore
{t} _ dst mem))))
&& sz >= 0
&& isSameCall(sym, "runtime.memmove")
&& s1.Uses == 1 && s2.Uses == 1 && s3.Uses == 1
&& isInlinableMemmove(dst, src, sz, config)
&& clobber(s1, s2, s3, call)
=> (Move [sz] dst src mem)

// Match post-lowering
calls, register version.
(SelectN [0] call:(CALLstatic {sym} dst src (MOVDconst [sz]) mem))
&& sz >= 0
&& isSameCall(sym, "runtime.memmove")
&& call.Uses == 1
&& isInlinableMemmove(dst, src, sz, config)
&& clobber(call)
=> (Move [sz] dst src mem)

((REV|REVV) ((REV|REVV) p)) => p

```

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/ARM64.rules

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This package generates opcode tables, rewrite rules, etc. for the ssa compiler.

Run it with go-1.13 (or above):

```
go run *.go
```

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/README

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// See the top of AMD64splitload.rules for discussion of these rules.

(CMP(L|W|B)load {sym} [off] ptr x mem) => (CMP(L|W|B) (MOV(L|W|B)load {sym} [off] ptr mem) x)

(CMP(L|W|B)constload {sym} [vo] ptr mem) => (CMP(L|W|B)const (MOV(L|W|B)load {sym} [vo.Off()] ptr mem) [vo.Val()])

(CMP(L|W|B)Wconstload {sym} [vo] ptr mem) => (CMP(L|W|B)Wconst (MOV(L|W|B)load {sym} [vo.Off()] ptr mem) [vo.Val16()])

(CMP(L|W|B)Bconstload {sym} [vo] ptr mem) => (CMP(L|W|B)Bconst (MOV(L|W|B)load {sym} [vo.Off()] ptr mem) [vo.Val8()])

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/386splitload.rules

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Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/logopt/escape\_bootstrap.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/logopt/logopt\_test.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/gccgosizes.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/logopt/escape.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/testdata/slices.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/test/testdata/reproducible/issue30202.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/check/map1.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/fuse\_comparisons.go

\*

/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/logopt/log\_opts.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/check/map0.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/fixbugs/issue6977.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/zerorange\_test.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/testdata/map2.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/xposmap.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/check/literals.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/examples/functions.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/dep\_test.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/pkginit/initorder.go

\*

/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/check/slices.go

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

zip/compile/internal/types2/testdata/examples/types.go

```

* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/typeinst0.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/typeinst1.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/testdata/map.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/linalg.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/testdata/linalg.go
No license file was found, but licenses were detected in source scan.

```

```

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```

```

// This file contains rules used by flagalloc and addressingmodes to
// split a flag-generating merged load op into separate load and op.
// Unlike with the other rules files, not all of these
// rules will be applied to all values.
// Rather, flagalloc will request for rules to be applied
// to a particular problematic value.
// These are often the exact inverse of rules in AMD64.rules,
// only with the conditions removed.
//

```

```

// For addressingmodes, certain single instructions are slower than the two instruction
// split generated here (which is different from the inputs to addressingmodes).
// For example:
// (CMPBconstload c (ADDQ x y)) -> (CMPBconstloadidx1 c x y) -> (CMPB c (MOVBloadidx1 x y))

```

```

(CMP(Q|L|W|B)load {sym} [off] ptr x mem) => (CMP(Q|L|W|B) (MOV(Q|L|W|B)load
{sym} [off] ptr mem) x)

```

```

(CMP(Q|L|W|B)constload {sym} [vo] ptr mem) && vo.Val() == 0 => (TEST(Q|L|W|B) x:(MOV(Q|L|W|B)load
{sym} [vo.Off()] ptr mem) x)

```

```

(CMPQconstload {sym} [vo] ptr mem) && vo.Val() != 0 => (CMPQconst (MOVQload {sym} [vo.Off()] ptr mem)
[vo.Val()])

```

```

(CMPLconstload {sym} [vo] ptr mem) && vo.Val() != 0 => (CMPLconst (MOVLload {sym} [vo.Off()] ptr mem)
[vo.Val()])

```

```

(CMPWconstload {sym} [vo] ptr mem) && vo.Val() != 0 => (CMPWconst (MOVWload {sym} [vo.Off()] ptr
mem) [vo.Val16()])

```

```

(CMPBconstload {sym} [vo] ptr mem) && vo.Val() != 0 => (CMPBconst (MOVBload {sym} [vo.Off()] ptr mem)
[vo.Val8()])

```

```

(CMP(Q|L|W|B)loadidx1 {sym} [off] ptr idx x mem) => (CMP(Q|L|W|B) (MOV(Q|L|W|B)loadidx1 {sym} [off] ptr
idx mem) x)

```

```

(CMPQloadidx8 {sym} [off] ptr idx x mem) => (CMPQ (MOVQloadidx8 {sym} [off] ptr idx mem) x)

```

```

(CMPLloadidx4 {sym} [off] ptr idx x mem) => (CMPL (MOVLloadidx4 {sym} [off] ptr idx mem) x)

```

```

(CMPWloadidx2 {sym} [off] ptr idx x mem) => (CMPW (MOVWloadidx2 {sym} [off]

```

ptr idx mem) x)

(CMP(Q|L|W|B)constloadidx1 {sym} [vo] ptr idx mem) && vo.Val() == 0 => (TEST(Q|L|W|B)  
x:(MOV(Q|L|W|B)loadidx1 {sym} [vo.Off()]) ptr idx mem) x)

(CMPQconstloadidx8 {sym} [vo] ptr idx mem) && vo.Val() == 0 => (TESTQ x:(MOVQloadidx8  
{sym} [vo.Off()]) ptr idx mem) x)

(CMPLconstloadidx4 {sym} [vo] ptr idx mem) && vo.Val() == 0 => (TESTL x:(MOVLloadidx4  
{sym} [vo.Off()]) ptr idx mem) x)

(CMPWconstloadidx2 {sym} [vo] ptr idx mem) && vo.Val() == 0 => (TESTW x:(MOVWloadidx2  
{sym} [vo.Off()]) ptr idx mem) x)

(CMPQconstloadidx1 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPQconst (MOVQloadidx1 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val()])

(CMPLconstloadidx1 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPLconst (MOVLloadidx1 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val()])

(CMPWconstloadidx1 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPWconst (MOVWloadidx1 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val16()])

(CMPBconstloadidx1  
{sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPBconst (MOVBloadidx1 {sym} [vo.Off()]) ptr idx mem)  
[vo.Val8()])

(CMPQconstloadidx8 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPQconst (MOVQloadidx8 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val()])

(CMPLconstloadidx4 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPLconst (MOVLloadidx4 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val()])

(CMPWconstloadidx2 {sym} [vo] ptr idx mem) && vo.Val() != 0 => (CMPWconst (MOVWloadidx2 {sym}  
[vo.Off()]) ptr idx mem) [vo.Val16()])

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/gen/AMD64splitload.rules

No license file was found, but licenses were detected in source scan.

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// Lowering arithmetic

(Add(Ptr|32|16|8) ...) => (ADDL ...)

(Add(32|64)F ...) => (ADDS(S|D) ...)

(Add32carry ...) => (ADDLcarry ...)

(Add32withcarry ...) => (ADCL ...)

(Sub(Ptr|32|16|8) ...) => (SUBL ...)

(Sub(32|64)F ...) => (SUBS(S|D) ...)

(Sub32carry ...) => (SUBLcarry ...)

(Sub32withcarry ...) => (SBBL ...)

```

(Mul(32|16|8) ...) => (MULL ...)
(Mul(32|64)F ...) => (MULS(S|D) ...)
(Mul32uhilo ...) => (MULLQU ...)

(Select0 (Mul32uover x y)) => (Select0 <typ.UInt32> (MULLU x y))
(Select1 (Mul32uover x y)) => (SETO (Select1 <types.TypeFlags> (MULLU x y)))

(Avg32u ...) => (AVGLU ...)

(Div(32|64)F ...) => (DIVS(S|D) ...)
(Div(32|32u|16|16u) ...) => (DIV(L|LU|W|WU) ...)
(Div8 x y) => (DIVW (SignExt8to16 x) (SignExt8to16 y))
(Div8u x y) => (DIVWU (ZeroExt8to16
x) (ZeroExt8to16 y))

(Hmul(32|32u) ...) => (HMUL(L|LU) ...)

(Mod(32|32u|16|16u) ...) => (MOD(L|LU|W|WU) ...)
(Mod8 x y) => (MODW (SignExt8to16 x) (SignExt8to16 y))
(Mod8u x y) => (MODWU (ZeroExt8to16 x) (ZeroExt8to16 y))

(And(32|16|8) ...) => (ANDL ...)
(Or(32|16|8) ...) => (ORL ...)
(Xor(32|16|8) ...) => (XORL ...)

(Neg(32|16|8) ...) => (NEGL ...)
(Neg32F x) => (PXOR x (MOVSSconst <typ.Float32> [float32(math.Copysign(0, -1))]))
(Neg64F x) => (PXOR x (MOVSDconst <typ.Float64> [math.Copysign(0, -1)]))

(Com(32|16|8) ...) => (NOTL ...)

// Lowering boolean ops
(AndB ...) => (ANDL ...)
(OrB ...) => (ORL ...)
(Not x) => (XORLconst [1] x)

// Lowering pointer arithmetic
(OffPtr [off] ptr) => (ADDLconst [int32(off)] ptr)

(Bswap32 ...) => (BSWAPL ...)

(Sqrt ...) => (SQRTSD ...)
(Sqrt32 ...) => (SQRTSS ...)

(Ctz16 x) => (BSFL (ORLconst <typ.UInt32> [0x10000] x))
(Ctz16NonZero ...) => (BSFL ...)

// Lowering extension

```

```

(SignExt8to16 ...) => (MOVBLSX ...)
(SignExt8to32 ...) => (MOVBLSX
...)
(SignExt16to32 ...) => (MOVWLSX ...)

(ZeroExt8to16 ...) => (MOVBLZX ...)
(ZeroExt8to32 ...) => (MOVBLZX ...)
(ZeroExt16to32 ...) => (MOVWLZX ...)

(Signmask x) => (SARLconst x [31])
(Zeromask <t> x) => (XORLconst [-1] (SBBLcarrymask <t> (CMPLconst x [1])))
(Slicemask <t> x) => (SARLconst (NEGL <t> x) [31])

// Lowering truncation
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8 ...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)

// Lowering float-int conversions
(Cvt32to32F ...) => (CVTSL2SS ...)
(Cvt32to64F ...) => (CVTSL2SD ...)

(Cvt32Fto32 ...) => (CVTTSS2SL ...)
(Cvt64Fto32 ...) => (CVTTSD2SL ...)

(Cvt32Fto64F ...) => (CVTSS2SD ...)
(Cvt64Fto32F ...) => (CVTSD2SS ...)

(Round32F ...) => (Copy ...)
(Round64F ...) => (Copy ...)

(CvtBoolToUInt8 ...) => (Copy ...)

// Lowering shifts
// Unsigned shifts need to return 0 if shift amount is >= width of shifted value.
// result = (arg << shift) & (shift
// >= argbits ? 0 : 0xffffffffffff)
(Lsh32x(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [32])))
(Lsh16x(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [32])))
(Lsh8x(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [32])))

(Lsh32x(32|16|8) <t> x y) && shiftIsBounded(v) => (SHLL <t> x y)
(Lsh16x(32|16|8) <t> x y) && shiftIsBounded(v) => (SHLL <t> x y)
(Lsh8x(32|16|8) <t> x y) && shiftIsBounded(v) => (SHLL <t> x y)

```



```

(Rsh32Ux(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRL <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [32])))
(Rsh16Ux(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRW <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [16])))
(Rsh8Ux(32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRB <t> x y) (SBBLcarrymask <t>
(CMP(L|W|B)const y [8])))

```

```

(Rsh32Ux(32|16|8) <t> x y) && shiftIsBounded(v) => (SHRL
<t> x y)
(Rsh16Ux(32|16|8) <t> x y) && shiftIsBounded(v) => (SHRW <t> x y)
(Rsh8Ux(32|16|8) <t> x y) && shiftIsBounded(v) => (SHRB <t> x y)

```

```

// Signed right shift needs to return 0/-1 if shift amount is >= width of shifted value.
// We implement this by setting the shift value to -1 (all ones) if the shift value is >= width.

```

```

(Rsh32x(32|16|8) <t> x y) && !shiftIsBounded(v) => (SARL <t> x (ORL <y.Type> y (NOTL <y.Type>
(SBBLcarrymask <y.Type> (CMP(L|W|B)const y [32])))
(Rsh16x(32|16|8) <t> x y) && !shiftIsBounded(v) => (SARW <t> x (ORL <y.Type> y (NOTL <y.Type>
(SBBLcarrymask <y.Type> (CMP(L|W|B)const y [16])))
(Rsh8x(32|16|8) <t> x y) && !shiftIsBounded(v) => (SARB <t> x (ORL <y.Type> y (NOTL <y.Type>
(SBBLcarrymask <y.Type> (CMP(L|W|B)const y [8])))

```

```

(Rsh32x(32|16|8) <t> x y) && shiftIsBounded(v) => (SARL x y)
(Rsh16x(32|16|8) <t> x y) && shiftIsBounded(v) => (SARW x y)
(Rsh8x(32|16|8) <t> x y) && shiftIsBounded(v) => (SARB x y)

```

```

// constant shifts

```

```

// generic opt rewrites all

```

```

constant shifts to shift by Const64

```

```

(Lsh32x64 x (Const64 [c])) && uint64(c) < 32 => (SHLLconst x [int32(c)])
(Rsh32x64 x (Const64 [c])) && uint64(c) < 32 => (SARLconst x [int32(c)])
(Rsh32Ux64 x (Const64 [c])) && uint64(c) < 32 => (SHRLconst x [int32(c)])
(Lsh16x64 x (Const64 [c])) && uint64(c) < 16 => (SHLLconst x [int32(c)])
(Rsh16x64 x (Const64 [c])) && uint64(c) < 16 => (SARWconst x [int16(c)])
(Rsh16Ux64 x (Const64 [c])) && uint64(c) < 16 => (SHRWconst x [int16(c)])
(Lsh8x64 x (Const64 [c])) && uint64(c) < 8 => (SHLLconst x [int32(c)])
(Rsh8x64 x (Const64 [c])) && uint64(c) < 8 => (SARBconst x [int8(c)])
(Rsh8Ux64 x (Const64 [c])) && uint64(c) < 8 => (SHRBconst x [int8(c)])

```

```

// large constant shifts

```

```

(Lsh32x64 _ (Const64 [c])) && uint64(c) >= 32 => (Const32 [0])
(Rsh32Ux64 _ (Const64 [c])) && uint64(c) >= 32 => (Const32 [0])
(Lsh16x64 _ (Const64 [c])) && uint64(c) >= 16 => (Const16 [0])
(Rsh16Ux64 _ (Const64 [c])) && uint64(c) >= 16 => (Const16 [0])
(Lsh8x64 _ (Const64 [c])) &&
uint64(c) >= 8 => (Const8 [0])
(Rsh8Ux64 _ (Const64 [c])) && uint64(c) >= 8 => (Const8 [0])

```

```

// large constant signed right shift, we leave the sign bit
(Rsh32x64 x (Const64 [c])) && uint64(c) >= 32 => (SARLconst x [31])
(Rsh16x64 x (Const64 [c])) && uint64(c) >= 16 => (SARWconst x [15])
(Rsh8x64 x (Const64 [c])) && uint64(c) >= 8 => (SARBconst x [7])

// constant rotates
(RotateLeft32 x (MOVLconst [c])) => (ROLLconst [c&31] x)
(RotateLeft16 x (MOVLconst [c])) => (ROLWconst [int16(c&15)] x)
(RotateLeft8 x (MOVLconst [c])) => (ROLBconst [int8(c&7)] x)

// Lowering comparisons
(Less32 x y) => (SETL (CMPL x y))
(Less16 x y) => (SETL (CMPW x y))
(Less8 x y) => (SETL (CMPB x y))
(Less32U x y) => (SETB (CMPL x y))
(Less16U x y) => (SETB (CMPW x y))
(Less8U x y) => (SETB (CMPB x y))
// Use SETGF with reversed operands to dodge NaN case
(Less64F x y) => (SETGF (UCOMISD y x))
(Less32F x y) => (SETGF (UCOMISS y x))

(Leq32 x y) => (SETLE (CMPL x y))
(Leq16 x y) => (SETLE (CMPW x y))
(Leq8
 x y) => (SETLE (CMPB x y))
(Leq32U x y) => (SETBE (CMPL x y))
(Leq16U x y) => (SETBE (CMPW x y))
(Leq8U x y) => (SETBE (CMPB x y))
// Use SETGEF with reversed operands to dodge NaN case
(Leq64F x y) => (SETGEF (UCOMISD y x))
(Leq32F x y) => (SETGEF (UCOMISS y x))

(Eq32 x y) => (SETEQ (CMPL x y))
(Eq16 x y) => (SETEQ (CMPW x y))
(Eq8 x y) => (SETEQ (CMPB x y))
(EqB x y) => (SETEQ (CMPB x y))
(EqPtr x y) => (SETEQ (CMPL x y))
(Eq64F x y) => (SETEQF (UCOMISD x y))
(Eq32F x y) => (SETEQF (UCOMISS x y))

(Neq32 x y) => (SETNE (CMPL x y))
(Neq16 x y) => (SETNE (CMPW x y))
(Neq8 x y) => (SETNE (CMPB x y))
(NeqB x y) => (SETNE (CMPB x y))
(NeqPtr x y) => (SETNE (CMPL x y))
(Neq64F x y) => (SETNEF (UCOMISD x y))
(Neq32F x y) => (SETNEF (UCOMISS x y))

```

```

// Lowering loads
(Load <t> ptr mem) && (is32BitInt(t) || isPtr(t)) => (MOVLload ptr mem)
(Load <t> ptr mem) && is16BitInt(t) => (MOVWload ptr mem)
(Load <t> ptr mem) && (t.IsBoolean() || is8BitInt(t)) => (MOVBload ptr mem)
(Load
  <t> ptr mem) && is32BitFloat(t) => (MOVSSload ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (MOVSDload ptr mem)

// Lowering stores
// These more-specific FP versions of Store pattern should come first.
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVSDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (MOVSSstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 4 => (MOVLstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)

// Lowering moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBload src mem) mem)
(Move [2] dst src mem) => (MOVWstore dst (MOVWload src mem) mem)
(Move [4] dst src mem) => (MOVLstore dst (MOVLload src mem) mem)
(Move [3] dst src mem) =>
  (MOVBstore [2] dst (MOVBload [2] src mem)
  (MOVWstore dst (MOVWload src mem) mem))
(Move [5] dst src mem) =>
  (MOVBstore [4] dst
  (MOVBload [4] src mem)
  (MOVLstore dst (MOVLload src mem) mem))
(Move [6] dst src mem) =>
  (MOVWstore [4] dst (MOVWload [4] src mem)
  (MOVLstore dst (MOVLload src mem) mem))
(Move [7] dst src mem) =>
  (MOVLstore [3] dst (MOVLload [3] src mem)
  (MOVLstore dst (MOVLload src mem) mem))
(Move [8] dst src mem) =>
  (MOVLstore [4] dst (MOVLload [4] src mem)
  (MOVLstore dst (MOVLload src mem) mem))

// Adjust moves to be a multiple of 4 bytes.
(Move [s] dst src mem)
&& s > 8 && s%4 != 0 =>
(Move [s-s%4]
  (ADDLconst <dst.Type> dst [int32(s%4)])
  (ADDLconst <src.Type> src [int32(s%4)])
  (MOVLstore dst (MOVLload src mem) mem))

```

```

// Medium copying uses a duff device.
(Move [s] dst src mem)
&& s > 8 && s <= 4*128 && s%4 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [10*(128-s/4)] dst src mem)
// 10 and 128 are magic constants. 10 is the number of bytes to encode:
// MOVL (SI), CX
// ADDL $4, SI
// MOVL CX, (DI)
// ADDL $4, DI
// and 128 is the number of such blocks. See
src/runtime/duff_386.s:duffcopy.

// Large copying uses REP MOVSL.
(Move [s] dst src mem) && (s > 4*128 || config.noDuffDevice) && s%4 == 0 && logLargeCopy(v, s) =>
(REPMOVS dst src (MOVLconst [int32(s/4)] mem)

// Lowering Zero instructions
(Zero [0] _ mem) => mem
(Zero [1] destptr mem) => (MOVBstoreconst [0] destptr mem)
(Zero [2] destptr mem) => (MOVWstoreconst [0] destptr mem)
(Zero [4] destptr mem) => (MOVLstoreconst [0] destptr mem)

(Zero [3] destptr mem) =>
(MOVBstoreconst [makeValAndOff(0,2)] destptr
(MOVWstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [5] destptr mem) =>
(MOVBstoreconst [makeValAndOff(0,4)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [6] destptr mem) =>
(MOVWstoreconst [makeValAndOff(0,4)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [7] destptr mem) =>
(MOVLstoreconst [makeValAndOff(0,3)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))

// Strip off any fractional word zeroing.
(Zero [s]
destptr mem) && s%4 != 0 && s > 4 =>
(Zero [s-s%4] (ADDLconst destptr [int32(s%4)])
(MOVLstoreconst [0] destptr mem))

// Zero small numbers of words directly.
(Zero [8] destptr mem) =>
(MOVLstoreconst [makeValAndOff(0,4)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [12] destptr mem) =>
(MOVLstoreconst [makeValAndOff(0,8)] destptr

```

```

(MOVLstoreconst [makeValAndOff(0,4)] destptr
 (MOVLstoreconst [makeValAndOff(0,0)] destptr mem)))
(Zero [16] destptr mem) =>
(MOVLstoreconst [makeValAndOff(0,12)] destptr
 (MOVLstoreconst [makeValAndOff(0,8)] destptr
 (MOVLstoreconst [makeValAndOff(0,4)] destptr
 (MOVLstoreconst [makeValAndOff(0,0)] destptr mem))))))

// Medium zeroing uses a duff device.
(Zero [s] destptr mem)
&& s > 16 && s <= 4*128 && s%4 == 0
&& !config.noDuffDevice =>
(DUFFZERO [1*(128-s/4)] destptr (MOVLconst [0]) mem)
// 1 and 128 are magic constants. 1 is the number of bytes to encode STOSL.
// 128 is the number of STOSL instructions in duffzero.
//
See src/runtime/duff_386.s:duffzero.

// Large zeroing uses REP STOSQ.
(Zero [s] destptr mem)
&& (s > 4*128 || (config.noDuffDevice && s > 16))
&& s%4 == 0 =>
(REPSTOSL destptr (MOVLconst [int32(s/4)]) (MOVLconst [0]) mem)

// Lowering constants
(Const8 [c]) => (MOVLconst [int32(c)])
(Const16 [c]) => (MOVLconst [int32(c)])
(Const32 ...) => (MOVLconst ...)
(Const(32|64)F ...) => (MOVS(S|D)const ...)
(ConstNil) => (MOVLconst [0])
(ConstBool [c]) => (MOVLconst [b2i32(c)])

// Lowering calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// Miscellaneous
(IsNotNil p) => (SETNE (TESTL p p))
(IsInBounds idx len) => (SETB (CMPL idx len))
(IsSliceInBounds idx len) => (SETBE (CMPL idx len))
(NilCheck ...) => (LoweredNilCheck ...)
(GetG ...) => (LoweredGetG ...)
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)
(GetCallerSP ...) => (LoweredGetCallerSP

```

```

...
(Addr {sym} base) => (LEAL {sym} base)
(LocalAddr {sym} base _) => (LEAL {sym} base)

// block rewrites
(If (SETL cmp) yes no) => (LT cmp yes no)
(If (SETLE cmp) yes no) => (LE cmp yes no)
(If (SETG cmp) yes no) => (GT cmp yes no)
(If (SETGE cmp) yes no) => (GE cmp yes no)
(If (SETEQ cmp) yes no) => (EQ cmp yes no)
(If (SETNE cmp) yes no) => (NE cmp yes no)
(If (SETB cmp) yes no) => (ULT cmp yes no)
(If (SETBE cmp) yes no) => (ULE cmp yes no)
(If (SETA cmp) yes no) => (UGT cmp yes no)
(If (SETAE cmp) yes no) => (UGE cmp yes no)
(If (SETO cmp) yes no) => (OS cmp yes no)

// Special case for floating point - LF/LEF not generated
(If (SETGF cmp) yes no) => (UGT cmp yes no)
(If (SETGEF cmp) yes no) => (UGE cmp yes no)
(If (SETEQF cmp) yes no) => (EQF cmp yes no)
(If (SETNEF cmp) yes no) => (NEF cmp yes no)

(If cond yes no) => (NE (TESTB cond cond) yes no)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind)
== 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 0 => (LoweredPanicExtendA [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 1 => (LoweredPanicExtendB [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 2 => (LoweredPanicExtendC [kind] hi lo y mem)

// *****
// Above: lowering rules
// Below: optimizations
// *****
// TODO: Should the optimizations be a separate pass?

// Fold boolean tests into blocks
(NE (TESTB (SETL cmp) (SETL cmp)) yes no) => (LT cmp yes no)
(NE (TESTB (SETLE cmp) (SETLE cmp)) yes no) => (LE cmp yes no)
(NE (TESTB (SETG cmp) (SETG cmp)) yes no) => (GT cmp yes no)
(NE (TESTB (SETGE cmp) (SETGE cmp)) yes no) => (GE cmp yes no)

```

```

(NE (TESTB
  (SETEQ cmp) (SETEQ cmp)) yes no) => (EQ cmp yes no)
(NE (TESTB (SETNE cmp) (SETNE cmp)) yes no) => (NE cmp yes no)
(NE (TESTB (SETB cmp) (SETB cmp)) yes no) => (ULT cmp yes no)
(NE (TESTB (SETBE cmp) (SETBE cmp)) yes no) => (ULE cmp yes no)
(NE (TESTB (SETA cmp) (SETA cmp)) yes no) => (UGT cmp yes no)
(NE (TESTB (SETAE cmp) (SETAE cmp)) yes no) => (UGE cmp yes no)
(NE (TESTB (SETO cmp) (SETO cmp)) yes no) => (OS cmp yes no)

// Special case for floating point - LF/LEF not generated
(NE (TESTB (SETGF cmp) (SETGF cmp)) yes no) => (UGT cmp yes no)
(NE (TESTB (SETGEF cmp) (SETGEF cmp)) yes no) => (UGE cmp yes no)
(NE (TESTB (SETEQF cmp) (SETEQF cmp)) yes no) => (EQF cmp yes no)
(NE (TESTB (SETNEF cmp) (SETNEF cmp)) yes no) => (NEF cmp yes no)

// fold constants into instructions
(ADDL x (MOVLconst [c])) => (ADDLconst [c] x)
(ADDLcarry x (MOVLconst [c])) => (ADDLconstcarry [c] x)
(ADCL x (MOVLconst [c]) f) => (ADCLconst [c] x f)

(SUBL x (MOVLconst [c])) => (SUBLconst x [c])
(SUBL
  (MOVLconst [c] x) => (NEGL (SUBLconst <v.Type> x [c]))
  (SUBLcarry x (MOVLconst [c])) => (SUBLconstcarry [c] x)
  (SBBL x (MOVLconst [c]) f) => (SBBLconst [c] x f)

(MULL x (MOVLconst [c])) => (MULLconst [c] x)
(ANDL x (MOVLconst [c])) => (ANDLconst [c] x)

(ANDLconst [c] (ANDLconst [d] x)) => (ANDLconst [c & d] x)
(XORLconst [c] (XORLconst [d] x)) => (XORLconst [c ^ d] x)
(MULLconst [c] (MULLconst [d] x)) => (MULLconst [c * d] x)

(ORL x (MOVLconst [c])) => (ORLconst [c] x)
(XORL x (MOVLconst [c])) => (XORLconst [c] x)

(SHLL x (MOVLconst [c])) => (SHLLconst [c&31] x)
(SHRL x (MOVLconst [c])) => (SHRLconst [c&31] x)
(SHRW x (MOVLconst [c])) && c&31 < 16 => (SHRWconst [int16(c&31)] x)
(SHRW _ (MOVLconst [c])) && c&31 >= 16 => (MOVLconst [0])
(SHRB x (MOVLconst [c])) && c&31 < 8 => (SHRBconst [int8(c&31)] x)
(SHRB _ (MOVLconst [c])) && c&31 >= 8 => (MOVLconst [0])

(SARL x (MOVLconst [c])) => (SARLconst [c&31] x)
(SARW x (MOVLconst [c])) => (SARWconst [int16(min(int64(c&31),15))] x)
(SARB
  x (MOVLconst [c])) => (SARBconst [int8(min(int64(c&31),7))] x)

```

(SARL x (ANDLconst [31] y)) => (SARL x y)

(SHLL x (ANDLconst [31] y)) => (SHLL x y)

(SHRL x (ANDLconst [31] y)) => (SHRL x y)

// Rotate instructions

(ADDL (SHLLconst [c] x) (SHRLconst [d] x)) && d == 32-c => (ROLLconst [c] x)

( ORL (SHLLconst [c] x) (SHRLconst [d] x)) && d == 32-c => (ROLLconst [c] x)

(XORL (SHLLconst [c] x) (SHRLconst [d] x)) && d == 32-c => (ROLLconst [c] x)

(ADDL <t> (SHLLconst x [c]) (SHRWconst x [d])) && c < 16 && d == int16(16-c) && t.Size() == 2  
=> (ROLWconst x [int16(c)])

( ORL <t> (SHLLconst x [c]) (SHRWconst x [d])) && c < 16 && d == int16(16-c) && t.Size() == 2  
=> (ROLWconst x [int16(c)])

(XORL <t> (SHLLconst x [c]) (SHRWconst x [d])) && c < 16 && d == int16(16-c) && t.Size() == 2  
=> (ROLWconst x [int16(c)])

(ADDL <t> (SHLLconst x [c]) (SHRBconst x [d])) && c < 8 && d == int8(8-c) && t.Size() == 1  
=> (ROLBconst x [int8(c)])

( ORL <t> (SHLLconst x [c]) (SHRBconst x [d])) && c <  
8 && d == int8(8-c) && t.Size() == 1  
=> (ROLBconst x [int8(c)])

(XORL <t> (SHLLconst x [c]) (SHRBconst x [d])) && c < 8 && d == int8(8-c) && t.Size() == 1  
=> (ROLBconst x [int8(c)])

(ROLLconst [c] (ROLLconst [d] x)) => (ROLLconst [(c+d)&31] x)

(ROLWconst [c] (ROLWconst [d] x)) => (ROLWconst [(c+d)&15] x)

(ROLBconst [c] (ROLBconst [d] x)) => (ROLBconst [(c+d)& 7] x)

// Constant shift simplifications

(SHLLconst x [0]) => x

(SHRLconst x [0]) => x

(SARLconst x [0]) => x

(SHRWconst x [0]) => x

(SARWconst x [0]) => x

(SHRBconst x [0]) => x

(SARBconst x [0]) => x

(ROLLconst [0] x) => x

(ROLWconst [0] x) => x

(ROLBconst [0] x) => x

// Note: the word and byte shifts keep the low 5 bits (not the low 4 or 3 bits)

// because the x86 instructions are defined to use all 5 bits of the shift even



```

// for the small shifts. I don't think we'll ever generate a weird shift (e.g.
// (SHRW x (MOVLconst [24])), but just in case.

(CMPL x (MOVLconst [c])) => (CMPLconst x [c])
(CMPL (MOVLconst [c]
x) => (InvertFlags (CMPLconst x [c]))
(CMPW x (MOVLconst [c])) => (CMPWconst x [int16(c)])
(CMPW (MOVLconst [c] x) => (InvertFlags (CMPWconst x [int16(c)]))
(CMPB x (MOVLconst [c])) => (CMPBconst x [int8(c)])
(CMPB (MOVLconst [c] x) => (InvertFlags (CMPBconst x [int8(c)]))

// Canonicalize the order of arguments to comparisons - helps with CSE.
(CMP(L|W|B) x y) && canonLessThan(x,y) => (InvertFlags (CMP(L|W|B) y x))

// strength reduction
// Assumes that the following costs from https://gmlib.org/~tege/x86-timing.pdf:
// 1 - addl, shll, leal, negl, subl
// 3 - imull
// This limits the rewrites to two instructions.
// Note that negl always operates in-place,
// which can require a register-register move
// to preserve the original value,
// so it must be used with care.
(MULLconst [-9] x) => (NEGL (LEAL8 <v.Type> x x))
(MULLconst [-5] x) => (NEGL (LEAL4 <v.Type> x x))
(MULLconst [-3] x) => (NEGL (LEAL2 <v.Type> x x))
(MULLconst [-1] x) => (NEGL x)
(MULLconst [0] _) => (MOVLconst
[0])
(MULLconst [1] x) => x
(MULLconst [3] x) => (LEAL2 x x)
(MULLconst [5] x) => (LEAL4 x x)
(MULLconst [7] x) => (LEAL2 x (LEAL2 <v.Type> x x))
(MULLconst [9] x) => (LEAL8 x x)
(MULLconst [11] x) => (LEAL2 x (LEAL4 <v.Type> x x))
(MULLconst [13] x) => (LEAL4 x (LEAL2 <v.Type> x x))
(MULLconst [19] x) => (LEAL2 x (LEAL8 <v.Type> x x))
(MULLconst [21] x) => (LEAL4 x (LEAL4 <v.Type> x x))
(MULLconst [25] x) => (LEAL8 x (LEAL2 <v.Type> x x))
(MULLconst [27] x) => (LEAL8 (LEAL2 <v.Type> x x) (LEAL2 <v.Type> x x))
(MULLconst [37] x) => (LEAL4 x (LEAL8 <v.Type> x x))
(MULLconst [41] x) => (LEAL8 x (LEAL4 <v.Type> x x))
(MULLconst [45] x) => (LEAL8 (LEAL4 <v.Type> x x) (LEAL4 <v.Type> x x))
(MULLconst [73] x) => (LEAL8 x (LEAL8 <v.Type> x x))
(MULLconst [81] x) => (LEAL8 (LEAL8 <v.Type> x x) (LEAL8 <v.Type> x x))

(MULLconst [c] x) && isPowerOfTwo32(c+1) && c >= 15 => (SUBL (SHLLconst <v.Type> [int32(log32(c+1))])
x) x)

```

```

(MULLconst [c] x) && isPowerOfTwo32(c-1) && c >= 17 => (LEAL1 (SHLLconst
<v.Type> [int32(log32(c-1))] x) x)
(MULLconst [c] x) && isPowerOfTwo32(c-2) && c >= 34 => (LEAL2 (SHLLconst <v.Type> [int32(log32(c-2))]
x) x)
(MULLconst [c] x) && isPowerOfTwo32(c-4) && c >= 68 => (LEAL4 (SHLLconst <v.Type> [int32(log32(c-4))]
x) x)
(MULLconst [c] x) && isPowerOfTwo32(c-8) && c >= 136 => (LEAL8 (SHLLconst <v.Type> [int32(log32(c-8))]
x) x)
(MULLconst [c] x) && c%3 == 0 && isPowerOfTwo32(c/3) => (SHLLconst [int32(log32(c/3))] (LEAL2
<v.Type> x x))
(MULLconst [c] x) && c%5 == 0 && isPowerOfTwo32(c/5) => (SHLLconst [int32(log32(c/5))] (LEAL4
<v.Type> x x))
(MULLconst [c] x) && c%9 == 0 && isPowerOfTwo32(c/9) => (SHLLconst [int32(log32(c/9))] (LEAL8
<v.Type> x x))

// combine add/shift into LEAL
(ADDL x (SHLLconst [3] y)) => (LEAL8 x y)
(ADDL x (SHLLconst [2] y)) => (LEAL4 x y)
(ADDL x (SHLLconst [1] y)) => (LEAL2 x y)
(ADDL x (ADDL y)) => (LEAL2 x y)
(ADDL x (ADDL x y)) => (LEAL2 y x)

// combine ADDL/ADDLconst into LEAL1
(ADDLconst [c] (ADDL x y)) => (LEAL1 [c] x y)
(ADDL
(ADDLconst [c] x) y) => (LEAL1 [c] x y)

// fold ADDL into LEAL
(ADDLconst [c] (LEAL [d] {s} x)) && is32Bit(int64(c)+int64(d)) => (LEAL [c+d] {s} x)
(LEAL [c] {s} (ADDLconst [d] x)) && is32Bit(int64(c)+int64(d)) => (LEAL [c+d] {s} x)
(ADDLconst [c] x:(SP)) => (LEAL [c] x) // so it is rematerializeable
(LEAL [c] {s} (ADDL x y)) && x.Op != OpSB && y.Op != OpSB => (LEAL1 [c] {s} x y)
(ADDL x (LEAL [c] {s} y)) && x.Op != OpSB && y.Op != OpSB => (LEAL1 [c] {s} x y)

// fold ADDLconst into LEALx
(ADDLconst [c] (LEAL1 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEAL1 [c+d] {s} x y)
(ADDLconst [c] (LEAL2 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEAL2 [c+d] {s} x y)
(ADDLconst [c] (LEAL4 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEAL4 [c+d] {s} x y)
(ADDLconst [c] (LEAL8 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEAL8 [c+d] {s} x y)
(LEAL1 [c] {s} (ADDLconst [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEAL1 [c+d] {s} x
y)
(LEAL2 [c] {s} (ADDLconst
[d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEAL2 [c+d] {s} x y)
(LEAL2 [c] {s} x (ADDLconst [d] y)) && is32Bit(int64(c)+2*int64(d)) && y.Op != OpSB => (LEAL2 [c+2*d]
{s} x y)
(LEAL4 [c] {s} (ADDLconst [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEAL4 [c+d] {s} x
y)
(LEAL4 [c] {s} x (ADDLconst [d] y)) && is32Bit(int64(c)+4*int64(d)) && y.Op != OpSB => (LEAL4 [c+4*d]

```

```

{s} x y)
(LEAL8 [c] {s} (ADDLconst [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEAL8 [c+d] {s} x
y)
(LEAL8 [c] {s} x (ADDLconst [d] y)) && is32Bit(int64(c)+8*int64(d)) && y.Op != OpSB => (LEAL8 [c+8*d]
{s} x y)

// fold shifts into LEALx
(LEAL1 [c] {s} x (SHLLconst [1] y)) => (LEAL2 [c] {s} x y)
(LEAL1 [c] {s} x (SHLLconst [2] y)) => (LEAL4 [c] {s} x y)
(LEAL1 [c] {s} x (SHLLconst [3] y)) => (LEAL8 [c] {s} x y)
(LEAL2 [c] {s} x (SHLLconst [1] y)) => (LEAL4 [c] {s} x y)
(LEAL2 [c] {s} x (SHLLconst [2] y)) => (LEAL8 [c] {s} x y)
(LEAL4 [c] {s} x (SHLLconst [1] y)) => (LEAL8
[c] {s} x y)

// reverse ordering of compare instruction
(SETL (InvertFlags x)) => (SETG x)
(SETG (InvertFlags x)) => (SETL x)
(SETB (InvertFlags x)) => (SETA x)
(SETA (InvertFlags x)) => (SETB x)
(SETLE (InvertFlags x)) => (SETGE x)
(SETGE (InvertFlags x)) => (SETLE x)
(SETBE (InvertFlags x)) => (SETAE x)
(SETAE (InvertFlags x)) => (SETBE x)
(SETEQ (InvertFlags x)) => (SETEQ x)
(SETNE (InvertFlags x)) => (SETNE x)

// sign extended loads
// Note: The combined instruction must end up in the same block
// as the original load. If not, we end up making a value with
// memory type live in two different blocks, which can lead to
// multiple memory values alive simultaneously.
// Make sure we don't combine these ops if the load has another use.
// This prevents a single load from being split into multiple loads
// which then might return different values. See test/atomicload.go.
(MOVBSX x:(MOVBload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBSXload
<v.Type> [off]
{sym} ptr mem)
(MOVBZX x:(MOVBload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBload
<v.Type> [off] {sym} ptr mem)
(MOVWSX x:(MOVWload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVWSXload <v.Type> [off] {sym} ptr mem)
(MOVWZX x:(MOVWload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVWload
<v.Type> [off] {sym} ptr mem)

// replace load from same location as preceding store with zero/sign extension (or copy in case of full width)
(MOVBload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBZX x)

```

```

(MOVWload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVWLZX x)
(MOVLload [off] {sym} ptr (MOVLstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
(MOVBLSXload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr,
ptr2) => (MOVBLSX x)
(MOVWLSXload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVWLSX x)

// Fold extensions and ANDs together.
(MOVBLZX (ANDLconst [c] x)) => (ANDLconst [c & 0xff] x)
(MOVWLZX (ANDLconst [c] x)) => (ANDLconst [c & 0xffff] x)
(MOVBLSX (ANDLconst [c] x)) && c & 0x80 == 0 => (ANDLconst [c & 0x7f] x)
(MOVWLSX (ANDLconst [c] x)) && c & 0x8000 == 0 => (ANDLconst [c & 0x7fff] x)

// Don't extend before storing
(MOVWstore [off] {sym} ptr (MOVWL(S|Z)X x mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBL(S|Z)X x mem) => (MOVBstore [off] {sym} ptr x mem)

// fold constants into memory operations
// Note that this is not always a good idea because if not all the uses of
// the ADDLconst get eliminated, we still have to compute the ADDLconst and we now
// have potentially two live values (ptr and (ADDLconst [off] ptr)) instead of one.
// Nevertheless, let's do it!
(MOV(L|W|B|SS|SD)load [off1]
{sym} (ADDLconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(MOV(L|W|B|SS|SD)load [off1+off2] {sym} ptr mem)
(MOV(L|W|B|SS|SD)store [off1] {sym} (ADDLconst [off2] ptr val mem) && is32Bit(int64(off1)+int64(off2)) =>
(MOV(L|W|B|SS|SD)store [off1+off2] {sym} ptr val mem)

((ADD|SUB|MUL|AND|OR|XOR)Lload [off1] {sym} val (ADDLconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|MUL|AND|OR|XOR)Lload [off1+off2] {sym} val base mem)
((ADD|SUB|MUL|DIV)SSload [off1] {sym} val (ADDLconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|MUL|DIV)SSload [off1+off2] {sym} val base mem)
((ADD|SUB|MUL|DIV)SDload [off1] {sym} val (ADDLconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|MUL|DIV)SDload [off1+off2] {sym} val base mem)
((ADD|SUB|AND|OR|XOR)Lmodify [off1] {sym} (ADDLconst [off2] base) val mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|AND|OR|XOR)Lmodify [off1+off2] {sym} base val mem)
((ADD|AND|OR|XOR)Lconstmodify
[valoff1] {sym} (ADDLconst [off2] base) mem) && valoff1.canAdd32(off2) =>
((ADD|AND|OR|XOR)Lconstmodify [valoff1.addOffset32(off2)] {sym} base mem)

// Fold constants into stores.

```

```

(MOVLstore [off] {sym} ptr (MOVLconst [c] mem) =>
(MOVLstoreconst [makeValAndOff(c,off)] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVLconst [c] mem) =>
(MOVWstoreconst [makeValAndOff(c,off)] {sym} ptr mem)
(MOVBstore [off] {sym} ptr (MOVLconst [c] mem) =>
(MOVBstoreconst [makeValAndOff(c,off)] {sym} ptr mem)

// Fold address offsets into constant stores.
(MOV(L|W|B)storeconst [sc] {s} (ADDLconst [off] ptr mem) && sc.canAdd32(off) =>
(MOV(L|W|B)storeconst [sc.addOffset32(off)] {s} ptr mem)

// We need to fold LEAL into the MOVx ops so that the live variable analysis knows
// what variables are being read/written by the ops.
// Note: we turn off this merging for operations on globals when building
// position-independent code (when Flag_shared is set).
// PIC needs a spare register
to load the PC into. Having the LEAL be
// a separate instruction gives us that register. Having the LEAL be
// a separate instruction also allows it to be CSEd (which is good because
// it compiles to a thunk call).
(MOV(L|W|B|SS|SD|BLSX|WLSX)load [off1] {sym1} (LEAL [off2] {sym2} base) mem) &&
is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2)
&& (base.Op != OpSB || !config.ctx.Flag_shared) =>
(MOV(L|W|B|SS|SD|BLSX|WLSX)load [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOV(L|W|B|SS|SD)store [off1] {sym1} (LEAL [off2] {sym2} base) val mem) &&
is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2)
&& (base.Op != OpSB || !config.ctx.Flag_shared) =>
(MOV(L|W|B|SS|SD)store [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(MOV(L|W|B)storeconst [sc] {sym1} (LEAL [off] {sym2} ptr) mem) && canMergeSym(sym1, sym2) &&
sc.canAdd32(off)
&& (ptr.Op != OpSB || !config.ctx.Flag_shared) =>
(MOV(L|W|B)storeconst [sc.addOffset32(off)] {mergeSym(sym1, sym2)}
ptr mem)

((ADD|SUB|MUL|AND|OR|XOR)Load [off1] {sym1} val (LEAL [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB ||
!config.ctx.Flag_shared) =>
((ADD|SUB|MUL|AND|OR|XOR)Load [off1+off2] {mergeSym(sym1,sym2)} val base mem)
((ADD|SUB|MUL|DIV)SSload [off1] {sym1} val (LEAL [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB ||
!config.ctx.Flag_shared) =>
((ADD|SUB|MUL|DIV)SSload [off1+off2] {mergeSym(sym1,sym2)} val base mem)
((ADD|SUB|MUL|DIV)SDload [off1] {sym1} val (LEAL [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB ||
!config.ctx.Flag_shared) =>
((ADD|SUB|MUL|DIV)SDload [off1+off2] {mergeSym(sym1,sym2)} val base mem)

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```

((ADD|SUB|AND|OR|XOR)Lmodify [off1] {sym1} (LEAL [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB ||
!config.ctx.Flag_shared)
=>
((ADD|SUB|AND|OR|XOR)Lmodify [off1+off2] {mergeSym(sym1,sym2)} base val mem)
((ADD|AND|OR|XOR)Lconstmodify [valoff1] {sym1} (LEAL [off2] {sym2} base) mem)
&& valoff1.canAdd32(off2) && canMergeSym(sym1, sym2) && (base.Op != OpSB || !config.ctx.Flag_shared) =>
((ADD|AND|OR|XOR)Lconstmodify [valoff1.addOffset32(off2)] {mergeSym(sym1,sym2)} base mem)

// Merge load/store to op
((ADD|AND|OR|XOR|SUB|MUL)L x l:(MOVLload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|AND|OR|XOR|SUB|MUL)Lload x [off] {sym} ptr mem)
((ADD|SUB|MUL|DIV)SD x l:(MOVSDload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|SUB|MUL|DIV)SDload x [off] {sym} ptr mem)
((ADD|SUB|MUL|DIV)SS x l:(MOVSSload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|SUB|MUL|DIV)SSload x [off] {sym} ptr mem)
(MOVLstore {sym} [off] ptr y:((ADD|AND|OR|XOR)Lload x [off] {sym} ptr mem) mem) && y.Uses==1 &&
clobber(y) => ((ADD|AND|OR|XOR)Lmodify [off]
{sym} ptr x mem)
(MOVLstore {sym} [off] ptr y:((ADD|SUB|AND|OR|XOR)L l:(MOVLload [off] {sym} ptr mem) x) mem) &&
y.Uses==1 && l.Uses==1 && clobber(y, l) =>
((ADD|SUB|AND|OR|XOR)Lmodify [off] {sym} ptr x mem)
(MOVLstore {sym} [off] ptr y:((ADD|AND|OR|XOR)Lconst [c] l:(MOVLload [off] {sym} ptr mem)) mem)
&& y.Uses==1 && l.Uses==1 && clobber(y, l) =>
((ADD|AND|OR|XOR)Lconstmodify [makeValAndOff(c,off)] {sym} ptr mem)

// fold LEALs together
(LEAL [off1] {sym1} (LEAL [off2] {sym2} x)) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
(LEAL [off1+off2] {mergeSym(sym1,sym2)} x)

// LEAL into LEAL1
(LEAL1 [off1] {sym1} (LEAL [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
(LEAL1 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAL1 into LEAL
(LEAL [off1] {sym1} (LEAL1 [off2] {sym2} x y)) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
(LEAL1 [off1+off2] {mergeSym(sym1,sym2)} x y)

//
LEAL into LEAL[248]
(LEAL2 [off1] {sym1} (LEAL [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
(LEAL2 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAL4 [off1] {sym1} (LEAL [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>

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```

    (LEAL4 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAL8 [off1] {sym1} (LEAL [off2] {sym2} x y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
    (LEAL8 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAL[248] into LEAL
(LEAL [off1] {sym1} (LEAL2 [off2] {sym2} x y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
    (LEAL2 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAL [off1] {sym1} (LEAL4 [off2] {sym2} x y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
    (LEAL4 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAL [off1] {sym1} (LEAL8 [off2] {sym2} x y) && is32Bit(int64(off1)+int64(off2))
&& canMergeSym(sym1, sym2) =>
    (LEAL8 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAL[1248] into LEAL[1248]. Only some such merges are possible.
(LEAL1 [off1] {sym1} x (LEAL1 [off2] {sym2} y y) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
    (LEAL2 [off1+off2] {mergeSym(sym1, sym2)} x y)
(LEAL1 [off1] {sym1} x (LEAL1 [off2] {sym2} x y) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
    (LEAL2 [off1+off2] {mergeSym(sym1, sym2)} y x)
(LEAL2 [off1] {sym} x (LEAL1 [off2] {nil} y y) && is32Bit(int64(off1)+2*int64(off2)) =>
    (LEAL4 [off1+2*off2] {sym} x y)
(LEAL4 [off1] {sym} x (LEAL1 [off2] {nil} y y) && is32Bit(int64(off1)+4*int64(off2)) =>
    (LEAL8 [off1+4*off2] {sym} x y)

// Absorb InvertFlags into branches.
(LT (InvertFlags cmp) yes no) => (GT cmp yes no)
(GT (InvertFlags cmp) yes no) => (LT cmp yes no)
(LE (InvertFlags cmp) yes no) => (GE cmp yes no)
(GE (InvertFlags cmp) yes no) => (LE cmp yes no)
(ULT (InvertFlags cmp)
yes no) => (UGT cmp yes no)
(UGT (InvertFlags cmp) yes no) => (ULT cmp yes no)
(ULE (InvertFlags cmp) yes no) => (UGE cmp yes no)
(UGE (InvertFlags cmp) yes no) => (ULE cmp yes no)
(EQ (InvertFlags cmp) yes no) => (EQ cmp yes no)
(NE (InvertFlags cmp) yes no) => (NE cmp yes no)

// Constant comparisons.
(CMPLconst (MOVLconst [x] [y]) && x==y          => (FlagEQ)
(CMPLconst (MOVLconst [x] [y]) && x<y && uint32(x)<uint32(y) => (FlagLT_ULT)
(CMPLconst (MOVLconst [x] [y]) && x<y && uint32(x)>uint32(y) => (FlagLT_UGT)
(CMPLconst (MOVLconst [x] [y]) && x>y && uint32(x)<uint32(y) => (FlagGT_ULT)
(CMPLconst (MOVLconst [x] [y]) && x>y && uint32(x)>uint32(y) => (FlagGT_UGT)

```

```

(CMPWconst (MOVLconst [x] [y]) && int16(x)==y          => (FlagEQ)
(CMPWconst (MOVLconst [x] [y]) && int16(x)<y && uint16(x)<uint16(y) => (FlagLT_ULT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)<y && uint16(x)>uint16(y) => (FlagLT_UGT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)>y && uint16(x)<uint16(y)
=> (FlagGT_ULT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)>y && uint16(x)>uint16(y) => (FlagGT_UGT)

(CMPBconst (MOVLconst [x] [y]) && int8(x)==y          => (FlagEQ)
(CMPBconst (MOVLconst [x] [y]) && int8(x)<y && uint8(x)<uint8(y) => (FlagLT_ULT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)<y && uint8(x)>uint8(y) => (FlagLT_UGT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)>y && uint8(x)<uint8(y) => (FlagGT_ULT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)>y && uint8(x)>uint8(y) => (FlagGT_UGT)

// Other known comparisons.
(CMPLconst (SHRLconst _ [c] [n]) && 0 <= n && 0 < c && c <= 32 && (1<<uint64(32-c)) <= uint64(n) =>
(FlagLT_ULT)
(CMPLconst (ANDLconst _ [m] [n]) && 0 <= m && m < n => (FlagLT_ULT)
(CMPWconst (ANDLconst _ [m] [n]) && 0 <= int16(m) && int16(m) < n => (FlagLT_ULT)
(CMPBconst (ANDLconst _ [m] [n]) && 0 <= int8(m) && int8(m) < n => (FlagLT_ULT)
// TODO: DIVxU also.

// Absorb flag constants into SBB ops.
(SBBLcarrymask (FlagEQ)) => (MOVLconst
[0])
(SBBLcarrymask (FlagLT_ULT)) => (MOVLconst [-1])
(SBBLcarrymask (FlagLT_UGT)) => (MOVLconst [0])
(SBBLcarrymask (FlagGT_ULT)) => (MOVLconst [-1])
(SBBLcarrymask (FlagGT_UGT)) => (MOVLconst [0])

// Absorb flag constants into branches.
(EQ (FlagEQ) yes no) => (First yes no)
(EQ (FlagLT_ULT) yes no) => (First no yes)
(EQ (FlagLT_UGT) yes no) => (First no yes)
(EQ (FlagGT_ULT) yes no) => (First no yes)
(EQ (FlagGT_UGT) yes no) => (First no yes)

(NE (FlagEQ) yes no) => (First no yes)
(NE (FlagLT_ULT) yes no) => (First yes no)
(NE (FlagLT_UGT) yes no) => (First yes no)
(NE (FlagGT_ULT) yes no) => (First yes no)
(NE (FlagGT_UGT) yes no) => (First yes no)

(LT (FlagEQ) yes no) => (First no yes)
(LT (FlagLT_ULT) yes no) => (First yes no)
(LT (FlagLT_UGT) yes no) => (First yes no)
(LT (FlagGT_ULT) yes no) => (First no yes)
(LT (FlagGT_UGT) yes no) => (First no yes)

```



```

(LE (FlagEQ) yes no) => (First yes no)
(LE (FlagLT_ULT) yes no) => (First yes no)
(LE (FlagLT_UGT) yes no) => (First yes no)
(LE
  (FlagGT_ULT) yes no) => (First no yes)
(LE (FlagGT_UGT) yes no) => (First no yes)

(GT (FlagEQ) yes no) => (First no yes)
(GT (FlagLT_ULT) yes no) => (First no yes)
(GT (FlagLT_UGT) yes no) => (First no yes)
(GT (FlagGT_ULT) yes no) => (First yes no)
(GT (FlagGT_UGT) yes no) => (First yes no)

(GE (FlagEQ) yes no) => (First yes no)
(GE (FlagLT_ULT) yes no) => (First no yes)
(GE (FlagLT_UGT) yes no) => (First no yes)
(GE (FlagGT_ULT) yes no) => (First yes no)
(GE (FlagGT_UGT) yes no) => (First yes no)

(ULT (FlagEQ) yes no) => (First no yes)
(ULT (FlagLT_ULT) yes no) => (First yes no)
(ULT (FlagLT_UGT) yes no) => (First no yes)
(ULT (FlagGT_ULT) yes no) => (First yes no)
(ULT (FlagGT_UGT) yes no) => (First no yes)

(ULE (FlagEQ) yes no) => (First yes no)
(ULE (FlagLT_ULT) yes no) => (First yes no)
(ULE (FlagLT_UGT) yes no) => (First no yes)
(ULE (FlagGT_ULT) yes no) => (First yes no)
(ULE (FlagGT_UGT) yes no) => (First no yes)

(UGT (FlagEQ) yes no) => (First no yes)
(UGT (FlagLT_ULT)
  yes no) => (First no yes)
(UGT (FlagLT_UGT) yes no) => (First yes no)
(UGT (FlagGT_ULT) yes no) => (First no yes)
(UGT (FlagGT_UGT) yes no) => (First yes no)

(UGE (FlagEQ) yes no) => (First yes no)
(UGE (FlagLT_ULT) yes no) => (First no yes)
(UGE (FlagLT_UGT) yes no) => (First yes no)
(UGE (FlagGT_ULT) yes no) => (First no yes)
(UGE (FlagGT_UGT) yes no) => (First yes no)

// Absorb flag constants into SETxx ops.
(SETEQ (FlagEQ)) => (MOVLconst [1])
(SETEQ (FlagLT_ULT)) => (MOVLconst [0])
(SETEQ (FlagLT_UGT)) => (MOVLconst [0])

```

(SETEQ (FlagGT\_ULT)) => (MOVLconst [0])  
(SETEQ (FlagGT\_UGT)) => (MOVLconst [0])

(SETNE (FlagEQ)) => (MOVLconst [0])  
(SETNE (FlagLT\_ULT)) => (MOVLconst [1])  
(SETNE (FlagLT\_UGT)) => (MOVLconst [1])  
(SETNE (FlagGT\_ULT)) => (MOVLconst [1])  
(SETNE (FlagGT\_UGT)) => (MOVLconst [1])

(SETL (FlagEQ)) => (MOVLconst [0])  
(SETL (FlagLT\_ULT)) => (MOVLconst [1])  
(SETL (FlagLT\_UGT)) => (MOVLconst [1])  
(SETL (FlagGT\_ULT)) => (MOVLconst [0])  
(SETL (FlagGT\_UGT)) => (MOVLconst [0])

(SETLE (FlagEQ)) => (MOVLconst [1])  
(SETLE (FlagLT\_ULT)) => (MOVLconst [1])  
(SETLE (FlagLT\_UGT)) => (MOVLconst [1])  
(SETLE (FlagGT\_ULT)) => (MOVLconst [0])  
(SETLE (FlagGT\_UGT)) => (MOVLconst [0])

(SETG (FlagEQ)) => (MOVLconst [0])  
(SETG (FlagLT\_ULT)) => (MOVLconst [0])  
(SETG (FlagLT\_UGT)) => (MOVLconst [0])  
(SETG (FlagGT\_ULT)) => (MOVLconst [1])  
(SETG (FlagGT\_UGT)) => (MOVLconst [1])

(SETGE (FlagEQ)) => (MOVLconst [1])  
(SETGE (FlagLT\_ULT)) => (MOVLconst [0])  
(SETGE (FlagLT\_UGT)) => (MOVLconst [0])  
(SETGE (FlagGT\_ULT)) => (MOVLconst [1])  
(SETGE (FlagGT\_UGT)) => (MOVLconst [1])

(SETB (FlagEQ)) => (MOVLconst [0])  
(SETB (FlagLT\_ULT)) => (MOVLconst [1])  
(SETB (FlagLT\_UGT)) => (MOVLconst [0])  
(SETB (FlagGT\_ULT)) => (MOVLconst [1])  
(SETB (FlagGT\_UGT)) => (MOVLconst [0])

(SETBE (FlagEQ)) => (MOVLconst [1])  
(SETBE (FlagLT\_ULT)) => (MOVLconst [1])  
(SETBE (FlagLT\_UGT)) => (MOVLconst [0])  
(SETBE (FlagGT\_ULT)) => (MOVLconst [1])  
(SETBE (FlagGT\_UGT)) => (MOVLconst [0])

(SETA (FlagEQ)) =>

```

(MOVLconst [0])
(SETA (FlagLT_ULT)) => (MOVLconst [0])
(SETA (FlagLT_UGT)) => (MOVLconst [1])
(SETA (FlagGT_ULT)) => (MOVLconst [0])
(SETA (FlagGT_UGT)) => (MOVLconst [1])

(SETAE (FlagEQ)) => (MOVLconst [1])
(SETAE (FlagLT_ULT)) => (MOVLconst [0])
(SETAE (FlagLT_UGT)) => (MOVLconst [1])
(SETAE (FlagGT_ULT)) => (MOVLconst [0])
(SETAE (FlagGT_UGT)) => (MOVLconst [1])

// Remove redundant *const ops
(ADDLconst [c] x) && c==0 => x
(SUBLconst [c] x) && c==0 => x
(ANDLconst [c] _) && c==0 => (MOVLconst [0])
(ANDLconst [c] x) && c==-1 => x
(ORLconst [c] x) && c==0 => x
(ORLconst [c] _) && c==-1 => (MOVLconst [-1])
(XORLconst [c] x) && c==0 => x
// TODO: since we got rid of the W/B versions, we might miss
// things like (ANDLconst [0x100] x) which were formerly
// (ANDBconst [0] x). Probably doesn't happen very often.
// If we cared, we might do:
// (ANDLconst <t> [c] x) && t.Size()==1 && int8(x)==0 => (MOVLconst [0])

// Convert constant subtracts to constant adds
(SUBLconst [c] x)
=> (ADDLconst [-c] x)

// generic constant folding
// TODO: more of this
(ADDLconst [c] (MOVLconst [d])) => (MOVLconst [c+d])
(ADDLconst [c] (ADDLconst [d] x)) => (ADDLconst [c+d] x)
(SARLconst [c] (MOVLconst [d])) => (MOVLconst [d>>uint64(c)])
(SARWconst [c] (MOVLconst [d])) => (MOVLconst [d>>uint64(c)])
(SARBconst [c] (MOVLconst [d])) => (MOVLconst [d>>uint64(c)])
(NEGL (MOVLconst [c])) => (MOVLconst [-c])
(MULLconst [c] (MOVLconst [d])) => (MOVLconst [c*d])
(ANDLconst [c] (MOVLconst [d])) => (MOVLconst [c&d])
(ORLconst [c] (MOVLconst [d])) => (MOVLconst [c|d])
(XORLconst [c] (MOVLconst [d])) => (MOVLconst [c^d])
(NOTL (MOVLconst [c])) => (MOVLconst [^c])

// generic simplifications
// TODO: more of this
(ADDL x (NEGL y)) => (SUBL x y)
(SUBL x x) => (MOVLconst [0])

```

```

(ANDL x x) => x
(ORL x x) => x
(XORL x x) => (MOVLconst [0])

// checking AND against 0.
(CMP(L|W|B)const l:(ANDL x y) [0]) && l.Uses==1 => (TEST(L|W|B) x y)
(CMPLconst l:(ANDLconst [c] x) [0]) && l.Uses==1 => (TESTLconst
[c] x)
(CMPWconst l:(ANDLconst [c] x) [0]) && l.Uses==1 => (TESTWconst [int16(c)] x)
(CMPBconst l:(ANDLconst [c] x) [0]) && l.Uses==1 => (TESTBconst [int8(c)] x)

// TEST %reg,%reg is shorter than CMP
(CMP(L|W|B)const x [0]) => (TEST(L|W|B) x x)

// Convert LEAL1 back to ADDL if we can
(LEAL1 [0] {nil} x y) => (ADDL x y)

// Combining byte loads into larger (unaligned) loads.
// There are many ways these combinations could occur. This is
// designed to match the way encoding/binary.LittleEndian does it.
(ORL          x0:(MOVBload [i0] {s} p mem)
 s0:(SHLLconst [8] x1:(MOVBload [i1] {s} p mem)))
&& i1 == i0+1
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, s0)
=> @mergePoint(b,x0,x1) (MOVWload [i0] {s} p mem)

(ORL          x0:(MOVBload [i] {s} p0 mem)
 s0:(SHLLconst [8] x1:(MOVBload [i] {s} p1 mem)))
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& mergePoint(b,x0,x1)
!= nil
&& clobber(x0, x1, s0)
=> @mergePoint(b,x0,x1) (MOVWload [i] {s} p0 mem)

(ORL o0:(ORL
          x0:(MOVWload [i0] {s} p mem)
 s0:(SHLLconst [16] x1:(MOVBload [i2] {s} p mem)))
 s1:(SHLLconst [24] x2:(MOVBload [i3] {s} p mem)))
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1

```

```

&& x1.Uses == 1
&& x2.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& o0.Uses == 1
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, s0, s1, o0)
=> @mergePoint(b,x0,x1,x2) (MOVLload [i0] {s} p mem)

```

```

(ORL o0:(ORL
    x0:(MOVWload [i] {s} p0 mem)
    s0:(SHLLconst [16] x1:(MOVBload [i] {s} p1 mem)))
    s1:(SHLLconst [24] x2:(MOVBload [i] {s} p2 mem)))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& o0.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& sequentialAddresses(p1, p2, 1)
&& mergePoint(b,x0,x1,x2) != nil
&& clobber(x0, x1, x2, s0, s1, o0)
=> @mergePoint(b,x0,x1,x2) (MOVLload
[i] {s} p0 mem)

```

// Combine constant stores into larger (unaligned) stores.

```

(MOVBstoreconst [c] {s} p x:(MOVBstoreconst [a] {s} p mem))
&& x.Uses == 1
&& a.Off() + 1 == c.Off()
&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val()&0xff | c.Val()<<8, a.Off())] {s} p mem)
(MOVBstoreconst [a] {s} p x:(MOVBstoreconst [c] {s} p mem))
&& x.Uses == 1
&& a.Off() + 1 == c.Off()
&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val()&0xff | c.Val()<<8, a.Off())] {s} p mem)

```

```

(MOVBstoreconst [c] {s} p1 x:(MOVBstoreconst [a] {s} p0 mem))
&& x.Uses == 1
&& a.Off() == c.Off()
&& sequentialAddresses(p0, p1, 1)
&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val()&0xff | c.Val()<<8, a.Off())] {s} p0 mem)
(MOVBstoreconst [a] {s} p0 x:(MOVBstoreconst [c] {s} p1 mem))
&& x.Uses == 1
&& a.Off() == c.Off()
&& sequentialAddresses(p0, p1, 1)

```

```

&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val())&0xff | c.Val()<<8, a.Off()]) {s} p0 mem)

(MOVWstoreconst [c] {s} p x:(MOVWstoreconst
[a] {s} p mem))
&& x.Uses == 1
&& a.Off() + 2 == c.Off()
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val())&0xffff | c.Val()<<16, a.Off()]) {s} p mem)
(MOVWstoreconst [a] {s} p x:(MOVWstoreconst [c] {s} p mem))
&& x.Uses == 1
&& ValAndOff(a).Off() + 2 == ValAndOff(c).Off()
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val())&0xffff | c.Val()<<16, a.Off()]) {s} p mem)

(MOVWstoreconst [c] {s} p1 x:(MOVWstoreconst [a] {s} p0 mem))
&& x.Uses == 1
&& a.Off() == c.Off()
&& sequentialAddresses(p0, p1, 2)
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val())&0xffff | c.Val()<<16, a.Off()]) {s} p0 mem)
(MOVWstoreconst [a] {s} p0 x:(MOVWstoreconst [c] {s} p1 mem))
&& x.Uses == 1
&& a.Off() == c.Off()
&& sequentialAddresses(p0, p1, 2)
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val())&0xffff | c.Val()<<16, a.Off()]) {s} p0 mem)

// Combine stores into larger (unaligned) stores.
(MOVBstore [i] {s} p (SHR(W|L)const [8] w) x:(MOVBstore
[i-1] {s} p w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p w x:(MOVBstore {s} [i+1] p (SHR(W|L)const [8] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i] {s} p w mem)
(MOVBstore [i] {s} p (SHRLconst [j] w) x:(MOVBstore [i-1] {s} p w0:(SHRLconst [j-8] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-1] {s} p w0 mem)

(MOVBstore [i] {s} p1 (SHR(W|L)const [8] w) x:(MOVBstore [i] {s} p0 w mem))
&& x.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& clobber(x)
=> (MOVWstore [i] {s} p0 w mem)

```

```

(MOVBstore [i] {s} p0 w x:(MOVBstore {s} [i] p1 (SHR(W|L)const [8] w) mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 1)
  && clobber(x)
=> (MOVWstore [i] {s} p0 w mem)
(MOVBstore [i] {s} p1 (SHRLconst [j] w) x:(MOVBstore [i] {s} p0 w0:(SHRLconst [j-8] w) mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 1)
  && clobber(x)
=> (MOVWstore [i] {s} p0 w0 mem)

(MOVWstore [i] {s} p (SHRLconst [16] w) x:(MOVWstore
[i-2] {s} p w mem))
  && x.Uses == 1
  && clobber(x)
=> (MOVLstore [i-2] {s} p w mem)
(MOVWstore [i] {s} p (SHRLconst [j] w) x:(MOVWstore [i-2] {s} p w0:(SHRLconst [j-16] w) mem))
  && x.Uses == 1
  && clobber(x)
=> (MOVLstore [i-2] {s} p w0 mem)

(MOVWstore [i] {s} p1 (SHRLconst [16] w) x:(MOVWstore [i] {s} p0 w mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 2)
  && clobber(x)
=> (MOVLstore [i] {s} p0 w mem)
(MOVWstore [i] {s} p1 (SHRLconst [j] w) x:(MOVWstore [i] {s} p0 w0:(SHRLconst [j-16] w) mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 2)
  && clobber(x)
=> (MOVLstore [i] {s} p0 w0 mem)

// For PIC, break floating-point constant loading into two instructions so we have
// a register to use for holding the address of the constant pool entry.
(MOVSSconst [c]) && config.ctx.Flag_shared => (MOVSSconst2 (MOVSSconst1 [c]))
(MOVSDconst [c]) && config.ctx.Flag_shared => (MOVSDconst2 (MOVSDconst1 [c]))

(CMP(L|W|B) l:(MOV(L|W|B)load {sym} [off] ptr mem) x)
  && canMergeLoad(v, l) && clobber(l) => (CMP(L|W|B)load {sym} [off] ptr x mem)
(CMP(L|W|B) x l:(MOV(L|W|B)load {sym} [off] ptr mem)) && canMergeLoad(v, l) && clobber(l) => (InvertFlags
(CMP(L|W|B)load {sym} [off] ptr x mem))

(CMP(L|W|B)const l:(MOV(L|W|B)load {sym} [off] ptr mem) [c])
  && l.Uses == 1
  && clobber(l) =>
  @l.Block (CMP(L|W|B)constload {sym} [makeValAndOff(int32(c),off)] ptr mem)

(CMPLload {sym} [off] ptr (MOVLconst [c] mem) => (CMPLconstload {sym} [makeValAndOff(c,off)] ptr mem)

```

```
(CMPWload {sym} [off] ptr (MOVLconst [c] mem) => (CMPWconstload {sym}
[makeValAndOff(int32(int16(c)),off] ptr mem)
(CMPBload {sym} [off] ptr (MOVLconst [c] mem) => (CMPBconstload {sym}
[makeValAndOff(int32(int8(c)),off] ptr mem)
```

```
(MOVBload [off] {sym} (SB) _) && symIsRO(sym) => (MOVLconst [int32(read8(sym, int64(off)))]
(MOVWload [off] {sym} (SB) _) && symIsRO(sym) => (MOVLconst [int32(read16(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVLload [off] {sym} (SB) _) && symIsRO(sym) =>
(MOVLconst [int32(read32(sym, int64(off), config.ctx.Arch.ByteOrder))])
```

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/386.rules
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```

```
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```

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/decl.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ppc64/opt.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/issues0.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/importdecl1/importdecl1a.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/init2.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/initorder.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/blank.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/importdecl1/importdecl1b.go
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```

```
// Copyright 2016 The Go Authors. All rights reserved.
```

```
// Use of this source code is governed by a BSD-style
// license that can be found in the LICENSE file.
```

```
// This file contains rules to decompose builtin compound types
// (complex,string,slice,interface) into their constituent
// types. These rules work together with the decomposeBuiltIn
// pass which handles phis of these types.
```

```
// complex ops
```

```
(ComplexReal (ComplexMake real _ )) => real
(ComplexImag (ComplexMake _ imag )) => imag
```

```
(Load <t> ptr mem) && t.IsComplex() && t.Size() == 8 =>
(ComplexMake
```



```

(Load <typ.Float32> ptr mem)
(Load <typ.Float32>
  (OffPtr <typ.Float32Ptr> [4] ptr)
  mem)
)
(Store {t} dst (ComplexMake real imag) mem) && t.Size() == 8 =>
(Store {typ.Float32}
  (OffPtr <typ.Float32Ptr> [4] dst)
  imag
  (Store {typ.Float32} dst real mem))
(Load <t> ptr mem) && t.IsComplex() && t.Size() == 16 =>
(ComplexMake

(Load <typ.Float64> ptr mem)
(Load <typ.Float64>
  (OffPtr <typ.Float64Ptr> [8] ptr)
  mem)
)
(Store {t} dst (ComplexMake real imag) mem) && t.Size() == 16 =>
(Store {typ.Float64}
  (OffPtr <typ.Float64Ptr> [8] dst)
  imag
  (Store {typ.Float64} dst real mem))

// string ops
(StringPtr (StringMake ptr _)) => ptr
(StringLen (StringMake _ len)) => len

(Load <t> ptr mem) && t.IsString() =>
(StringMake
  (Load <typ.BytePtr> ptr mem)
  (Load <typ.Int>
    (OffPtr <typ.IntPtr> [config.PtrSize] ptr)
    mem))
(Store dst (StringMake ptr len) mem) =>
(Store {typ.Int}
  (OffPtr <typ.IntPtr> [config.PtrSize] dst)
  len
  (Store {typ.BytePtr} dst ptr mem))

// slice ops
(SlicePtr (SliceMake ptr _ _)) => ptr
(SliceLen (SliceMake _ len _)) => len
(SliceCap (SliceMake _ _ cap)) => cap
(SlicePtrUnchecked (SliceMake ptr _ _)) => ptr

(Load <t> ptr mem) && t.IsSlice() =>
(SliceMake

```

```

(Load <t.Elem().PtrTo()> ptr mem)
(Load <typ.Int>
  (OffPtr <typ.IntPtr>
[config.PtrSize] ptr)
  mem)
(Load <typ.Int>
  (OffPtr <typ.IntPtr> [2*config.PtrSize] ptr)
  mem))
(Store {t} dst (SliceMake ptr len cap) mem) =>
(Store {typ.Int}
  (OffPtr <typ.IntPtr> [2*config.PtrSize] dst)
  cap
  (Store {typ.Int}
    (OffPtr <typ.IntPtr> [config.PtrSize] dst)
    len
    (Store {t.Elem().PtrTo()} dst ptr mem)))

```

```
// interface ops
```

```
(ITab (IMake itab _) => itab
```

```
(IData (IMake _ data) => data
```

```
(Load <t> ptr mem) && t.IsInterface() =>
```

```
(IMake
```

```
(Load <typ.Uintptr> ptr mem)
```

```
(Load <typ.BytePtr>
```

```
(OffPtr <typ.BytePtrPtr> [config.PtrSize] ptr)
  mem))
```

```
(Store dst (IMake itab data) mem) =>
```

```
(Store {typ.BytePtr}
```

```
(OffPtr <typ.BytePtrPtr> [config.PtrSize] dst)
```

```
  data
```

```
(Store {typ.Uintptr} dst itab mem))
```

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/dec.rules
```

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```
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```

```
// Use of this source code is governed by a BSD-style
```

```
// license that can be found in the LICENSE file.
```

```
(Add(Ptr|64|32|16|8) ...) => (ADDV ...)
```

```
(Add(32|64)F ...) => (ADD(F|D) ...)
```

```
(Sub(Ptr|64|32|16|8) ...) => (SUBV ...)
```

```
(Sub(32|64)F ...) => (SUB(F|D) ...)
```

```
(Mul(64|32|16|8) x y) => (Select1 (MULVU x y))
```

```

(Mul(32|64)F ...) => (MUL(F|D) ...)
(Mul64uhilo ...) => (MULVU ...)
(Select0 (Mul64uover x y)) => (Select1 <typ.UInt64> (MULVU x y))
(Select1 (Mul64uover x y)) => (SGTU <typ.Bool> (Select0 <typ.UInt64> (MULVU x y)) (MOVVconst
<typ.UInt64> [0]))

(Hmul64 x y) => (Select0 (MULV x y))
(Hmul64u x y) => (Select0 (MULVU x y))
(Hmul32 x y) => (SRAVconst (Select1 <typ.Int64> (MULV (SignExt32to64 x) (SignExt32to64 y))) [32])
(Hmul32u x y) => (SRLVconst (Select1 <typ.UInt64> (MULVU (ZeroExt32to64 x) (ZeroExt32to64 y))) [32])

(Div64 x y) => (Select1 (DIVV x y))
(Div64u x y)
=> (Select1 (DIVVU x y))
(Div32 x y) => (Select1 (DIVV (SignExt32to64 x) (SignExt32to64 y)))
(Div32u x y) => (Select1 (DIVVU (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Div16 x y) => (Select1 (DIVV (SignExt16to64 x) (SignExt16to64 y)))
(Div16u x y) => (Select1 (DIVVU (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Div8 x y) => (Select1 (DIVV (SignExt8to64 x) (SignExt8to64 y)))
(Div8u x y) => (Select1 (DIVVU (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Div(32|64)F ...) => (DIV(F|D) ...)

(Mod64 x y) => (Select0 (DIVV x y))
(Mod64u x y) => (Select0 (DIVVU x y))
(Mod32 x y) => (Select0 (DIVV (SignExt32to64 x) (SignExt32to64 y)))
(Mod32u x y) => (Select0 (DIVVU (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Mod16 x y) => (Select0 (DIVV (SignExt16to64 x) (SignExt16to64 y)))
(Mod16u x y) => (Select0 (DIVVU (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Mod8 x y) => (Select0 (DIVV (SignExt8to64 x) (SignExt8to64 y)))
(Mod8u x y) => (Select0 (DIVVU (ZeroExt8to64 x) (ZeroExt8to64 y)))

// (x + y) / 2 with x>=y => (x - y) / 2 + y
(Avg64u
<t> x y) => (ADDV (SRLVconst <t> (SUBV <t> x y) [1]) y)

(And(64|32|16|8) ...) => (AND ...)
(Or(64|32|16|8) ...) => (OR ...)
(Xor(64|32|16|8) ...) => (XOR ...)

// shifts
// hardware instruction uses only the low 6 bits of the shift
// we compare to 64 to ensure Go semantics for large shifts
(Lsh64x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))
(Lsh64x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV
<t> x (ZeroExt32to64 y)))
(Lsh64x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV
<t> x (ZeroExt16to64 y)))
(Lsh64x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t>

```

x (ZeroExt8to64 y)))

(Lsh32x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))

(Lsh32x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV <t> x (ZeroExt32to64 y)))

(Lsh32x16 <t>

x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV <t> x (ZeroExt16to64 y)))

(Lsh32x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t> x (ZeroExt8to64 y)))

(Lsh16x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))

(Lsh16x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV <t> x (ZeroExt32to64 y)))

(Lsh16x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV <t> x (ZeroExt16to64 y)))

(Lsh16x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t> x (ZeroExt8to64 y)))

(Lsh8x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))

(Lsh8x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV <t> x (ZeroExt32to64 y)))

(Lsh8x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV <t> x (ZeroExt16to64 y)))

(Lsh8x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t> x (ZeroExt8to64 y)))

(Rsh64Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> x y))

(Rsh64Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> x (ZeroExt32to64 y)))

(Rsh64Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> x (ZeroExt16to64 y)))

(Rsh64Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> x (ZeroExt8to64 y)))

(Rsh32Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt32to64 x) y))

(Rsh32Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt32to64 y)))

(Rsh32Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt16to64 y)))

(Rsh32Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt8to64 y)))

(Rsh16Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt16to64 x) y))

(Rsh16Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV

<t> (ZeroExt16to64 x) (ZeroExt32to64 y)))  
 (Rsh16Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV  
 <t> (ZeroExt16to64 x) (ZeroExt16to64 y)))  
 (Rsh16Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV  
 <t> (ZeroExt16to64 x) (ZeroExt8to64 y)))

(Rsh8Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt8to64  
 x) y))  
 (Rsh8Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV  
 <t> (ZeroExt8to64 x) (ZeroExt32to64 y)))  
 (Rsh8Ux16 <t> x y) => (AND (NEGV  
 <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> (ZeroExt8to64 x) (ZeroExt16to64  
 y)))  
 (Rsh8Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV  
 <t> (ZeroExt8to64 x) (ZeroExt8to64 y)))

(Rsh64x64 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64> [63]))) y))  
 (Rsh64x32 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst <typ.UInt64>  
 [63]))) (ZeroExt32to64 y)))  
 (Rsh64x16 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst <typ.UInt64>  
 [63]))) (ZeroExt16to64 y)))  
 (Rsh64x8 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst <typ.UInt64> [63])))  
 (ZeroExt8to64 y)))

(Rsh32x64 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64>  
 [63]))) y))  
 (Rsh32x32 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt32to64 y)))  
 (Rsh32x16 <t> x y) => (SRAV (SignExt32to64  
 x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst <typ.UInt64> [63]))) (ZeroExt16to64 y)))  
 (Rsh32x8 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt8to64 y)))

(Rsh16x64 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64>  
 [63]))) y))  
 (Rsh16x32 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt32to64 y)))  
 (Rsh16x16 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt16to64 y)))  
 (Rsh16x8 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt8to64 y)))

(Rsh8x64 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64> [63])))  
 y))  
 (Rsh8x32 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst  
 <typ.UInt64> [63]))) (ZeroExt32to64  
 y)))  
 (Rsh8x16 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst

```

<typ.UInt64> [63])) (ZeroExt16to64 y)))
(Rsh8x8 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst
<typ.UInt64> [63])) (ZeroExt8to64 y)))

// rotates
(RotateLeft8 <t> x (MOVVconst [c])) => (Or8 (Lsh8x64 <t> x (MOVVconst [c&7])) (Rsh8Ux64 <t> x
(MOVVconst [-c&7])))
(RotateLeft16 <t> x (MOVVconst [c])) => (Or16 (Lsh16x64 <t> x (MOVVconst [c&15])) (Rsh16Ux64 <t> x
(MOVVconst [-c&15])))
(RotateLeft32 <t> x (MOVVconst [c])) => (Or32 (Lsh32x64 <t> x (MOVVconst [c&31])) (Rsh32Ux64 <t> x
(MOVVconst [-c&31])))
(RotateLeft64 <t> x (MOVVconst [c])) => (Or64 (Lsh64x64 <t> x (MOVVconst [c&63])) (Rsh64Ux64 <t> x
(MOVVconst [-c&63])))

// unary ops
(Neg(64|32|16|8) ...) => (NEGV ...)
(Neg(32|64)F ...) => (NEG(F)D ...)

(Com(64|32|16|8) x) => (NOR (MOVVconst [0]) x)

(Sqrt ...) => (SQRTD ...)
(Sqrt32 ...) => (SQRTF ...)

// boolean ops -- booleans are
represented with 0=false, 1=true
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (XOR (MOVVconst [1]) (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not x) => (XORconst [1] x)

// constants
(Const(64|32|16|8) [val]) => (MOVVconst [int64(val)])
(Const(32|64)F [val]) => (MOV(F)D)const [float64(val)])
(ConstNil) => (MOVVconst [0])
(ConstBool [t]) => (MOVVconst [int64(b2i(t))])

(Slicemask <t> x) => (SRAVconst (NEGV <t> x) [63])

// truncations
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8 ...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)
(Trunc64to8 ...) => (Copy ...)
(Trunc64to16 ...) => (Copy ...)
(Trunc64to32 ...) => (Copy ...)

```

```

// Zero-/Sign-extensions
(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)
(ZeroExt8to64 ...) => (MOVBUreg ...)
(ZeroExt16to64 ...) => (MOVHUreg ...)
(ZeroExt32to64 ...) => (MOVWUreg ...)

(SignExt8to16 ...) => (MOVBreg
...)
(SignExt8to32 ...) => (MOVBreg ...)
(SignExt16to32 ...) => (MOVHreg ...)
(SignExt8to64 ...) => (MOVBreg ...)
(SignExt16to64 ...) => (MOVHreg ...)
(SignExt32to64 ...) => (MOVWreg ...)

// float <=> int conversion
(Cvt32to32F ...) => (MOVWF ...)
(Cvt32to64F ...) => (MOVWD ...)
(Cvt64to32F ...) => (MOVVF ...)
(Cvt64to64F ...) => (MOVVD ...)
(Cvt32Fto32 ...) => (TRUNCFW ...)
(Cvt64Fto32 ...) => (TRUNCDW ...)
(Cvt32Fto64 ...) => (TRUNCFV ...)
(Cvt64Fto64 ...) => (TRUNCDV ...)
(Cvt32Fto64F ...) => (MOVFD ...)
(Cvt64Fto32F ...) => (MOVDF ...)

(CvtBoolToUInt8 ...) => (Copy ...)

(Round(32|64)F ...) => (Copy ...)

// comparisons
(Eq8 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Eq16 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Eq32 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Eq64 x y) => (SGTU (MOVVconst [1]) (XOR x y))
(EqPtr x y) => (SGTU (MOVVconst [1]) (XOR x y))
(Eq(32|64)F x y) => (FPFlagTrue (CMPEQ(F|D)
x y))

(Neq8 x y) => (SGTU (XOR (ZeroExt8to64 x) (ZeroExt8to64 y)) (MOVVconst [0]))
(Neq16 x y) => (SGTU (XOR (ZeroExt16to32 x) (ZeroExt16to64 y)) (MOVVconst [0]))
(Neq32 x y) => (SGTU (XOR (ZeroExt32to64 x) (ZeroExt32to64 y)) (MOVVconst [0]))
(Neq64 x y) => (SGTU (XOR x y) (MOVVconst [0]))
(NeqPtr x y) => (SGTU (XOR x y) (MOVVconst [0]))
(Neq(32|64)F x y) => (FPFlagFalse (CMPEQ(F|D) x y))

```

```

(Less8 x y) => (SGT (SignExt8to64 y) (SignExt8to64 x))
(Less16 x y) => (SGT (SignExt16to64 y) (SignExt16to64 x))
(Less32 x y) => (SGT (SignExt32to64 y) (SignExt32to64 x))
(Less64 x y) => (SGT y x)
(Less(32|64)F x y) => (FPFlagTrue (CMPGT(F|D) y x)) // reverse operands to work around NaN

```

```

(Less8U x y) => (SGTU (ZeroExt8to64 y) (ZeroExt8to64 x))
(Less16U x y) => (SGTU (ZeroExt16to64 y) (ZeroExt16to64 x))
(Less32U x y) => (SGTU (ZeroExt32to64 y) (ZeroExt32to64 x))
(Less64U x y) => (SGTU y x)

```

```

(Leq8 x y) => (XOR (MOVVconst [1]) (SGT (SignExt8to64 x) (SignExt8to64 y)))
(Leq16 x y) => (XOR
(MOVVconst [1]) (SGT (SignExt16to64 x) (SignExt16to64 y)))
(Leq32 x y) => (XOR (MOVVconst [1]) (SGT (SignExt32to64 x) (SignExt32to64 y)))
(Leq64 x y) => (XOR (MOVVconst [1]) (SGT x y))
(Leq(32|64)F x y) => (FPFlagTrue (CMPGE(F|D) y x)) // reverse operands to work around NaN

```

```

(Leq8U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Leq16U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Leq32U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Leq64U x y) => (XOR (MOVVconst [1]) (SGTU x y))

```

```

(OffPtr [off] ptr:(SP)) && is32Bit(off) => (MOVVaddr [int32(off)] ptr)
(OffPtr [off] ptr) => (ADDVconst [off] ptr)

```

```

(Addr {sym} base) => (MOVVaddr {sym} base)
(LocalAddr {sym} base _) => (MOVVaddr {sym} base)

```

// loads

```

(Load <t> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && isSigned(t)) => (MOVBlload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && !isSigned(t)) => (MOVBUload ptr mem)
(Load
<t> ptr mem) && (is16BitInt(t) && isSigned(t)) => (MOVHload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && !isSigned(t)) => (MOVHUload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && isSigned(t)) => (MOVWload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) && !isSigned(t)) => (MOVWUload ptr mem)
(Load <t> ptr mem) && (is64BitInt(t) || isPtr(t)) => (MOVVload ptr mem)
(Load <t> ptr mem) && is32BitFloat(t) => (MOVFlload ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (MOVDload ptr mem)

```

// stores

```

(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && !is64BitFloat(val.Type) => (MOVVstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (MOVFstore ptr val mem)

```



```
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVDstore  
ptr val mem)
```

```
// zeroing
```

```
(Zero [0] _ mem) => mem
```

```
(Zero [1] ptr mem) => (MOVBstore ptr (MOVVconst [0]) mem)
```

```
(Zero [2] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore ptr (MOVVconst [0]) mem)
```

```
(Zero [2] ptr mem) =>
```

```
(MOVBstore [1] ptr (MOVVconst [0])
```

```
(MOVBstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore ptr (MOVVconst [0]) mem)
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [2] ptr (MOVVconst [0])
```

```
(MOVHstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [4] ptr mem) =>
```

```
(MOVBstore [3] ptr (MOVVconst [0])
```

```
(MOVBstore [2] ptr (MOVVconst [0])
```

```
(MOVBstore [1] ptr (MOVVconst [0])
```

```
(MOVBstore [0] ptr (MOVVconst [0]) mem))))
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%8 == 0 =>
```

```
(MOVVstore ptr (MOVVconst [0]) mem)
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore [4] ptr (MOVVconst [0])
```

```
(MOVWstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [8] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [6] ptr (MOVVconst [0])
```

```
(MOVHstore
```

```
[4] ptr (MOVVconst [0])
```

```
(MOVHstore [2] ptr (MOVVconst [0])
```

```
(MOVHstore [0] ptr (MOVVconst [0]) mem))))
```

```
(Zero [3] ptr mem) =>
```

```
(MOVBstore [2] ptr (MOVVconst [0])
```

```
(MOVBstore [1] ptr (MOVVconst [0])
```

```
(MOVBstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [6] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [4] ptr (MOVVconst [0])
```

```
(MOVHstore [2] ptr (MOVVconst [0])
```

```
(MOVHstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [12] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore [8] ptr (MOVVconst [0])
```

```
(MOVWstore [4] ptr (MOVVconst [0])
```

```
(MOVWstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [16] {t} ptr mem) && t.Alignment()%8 == 0 =>
```

```
(MOVVstore [8] ptr (MOVVconst [0])
```

```
(MOVVstore [0] ptr (MOVVconst [0]) mem))
```

```

(Zero [24] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVVstore [16] ptr (MOVVconst [0])
 (MOVVstore [8] ptr (MOVVconst [0])
  (MOVVstore [0] ptr (MOVVconst [0]) mem)))

// medium zeroing uses a duff device
// 8, and 128 are magic constants, see runtime/mkduff.go
(Zero [s]
 {t} ptr mem)
&& s%8 == 0 && s > 24 && s <= 8*128
&& t.Alignment()%8 == 0 && !config.noDuffDevice =>
(DUFFZERO [8 * (128 - s/8)] ptr mem)

// large or unaligned zeroing uses a loop
(Zero [s] {t} ptr mem)
&& (s > 8*128 || config.noDuffDevice) || t.Alignment()%8 != 0 =>
(LoweredZero [t.Alignment()]
 ptr
 (ADDVconst <ptr.Type> ptr [s-moveSize(t.Alignment(), config)]
 mem)

// moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBload src mem) mem)
(Move [2] {t} dst src mem) && t.Alignment()%2 == 0 =>
 (MOVHstore dst (MOVHload src mem) mem)
(Move [2] dst src mem) =>
 (MOVBstore [1] dst (MOVBload [1] src mem)
  (MOVBstore dst (MOVBload src mem) mem))
(Move [4] {t} dst src mem) && t.Alignment()%4 == 0 =>
 (MOVWstore dst (MOVWload src mem) mem)
(Move [4] {t} dst src mem) && t.Alignment()%2 == 0 =>
 (MOVHstore [2] dst (MOVHload [2] src mem)
  (MOVHstore dst (MOVHload src mem) mem))
(Move [4] dst src mem) =>
 (MOVBstore [3] dst (MOVBload [3] src mem)
  (MOVBstore
 [2] dst (MOVBload [2] src mem)
  (MOVBstore [1] dst (MOVBload [1] src mem)
  (MOVBstore dst (MOVBload src mem) mem))))
(Move [8] {t} dst src mem) && t.Alignment()%8 == 0 =>
 (MOVVstore dst (MOVVload src mem) mem)
(Move [8] {t} dst src mem) && t.Alignment()%4 == 0 =>
 (MOVWstore [4] dst (MOVWload [4] src mem)
  (MOVWstore dst (MOVWload src mem) mem))
(Move [8] {t} dst src mem) && t.Alignment()%2 == 0 =>
 (MOVHstore [6] dst (MOVHload [6] src mem)
  (MOVHstore [4] dst (MOVHload [4] src mem)

```

```

(MOVHstore [2] dst (MOVHload [2] src mem)
 (MOVHstore dst (MOVHload src mem) mem))))

(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBload [2] src mem)
 (MOVBstore [1] dst (MOVBload [1] src mem)
 (MOVBstore dst (MOVBload src mem) mem))))
(Move [6] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [4] dst (MOVHload [4] src mem)
 (MOVHstore [2] dst (MOVHload [2] src mem)
 (MOVHstore dst (MOVHload src mem) mem))))
(Move [12] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8]
 dst (MOVWload [8] src mem)
 (MOVWstore [4] dst (MOVWload [4] src mem)
 (MOVWstore dst (MOVWload src mem) mem))))
(Move [16] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVVstore [8] dst (MOVVload [8] src mem)
 (MOVVstore dst (MOVVload src mem) mem))
(Move [24] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVVstore [16] dst (MOVVload [16] src mem)
 (MOVVstore [8] dst (MOVVload [8] src mem)
 (MOVVstore dst (MOVVload src mem) mem))))

// medium move uses a duff device
(Move [s] {t} dst src mem)
&& s%8 == 0 && s >= 24 && s <= 8*128 && t.Alignment()%8 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [16 * (128 - s/8)] dst src mem)
// 16 and 128 are magic constants. 16 is the number of bytes to encode:
// MOVV (R1), R23
// ADDV $8, R1
// MOVV R23, (R2)
// ADDV $8, R2
// and 128 is the number of such blocks. See runtime/duff_mips64.s:duffcopy.

// large or unaligned move uses a loop
(Move [s] {t} dst src mem)
&& s > 24 && logLargeCopy(v, s) || t.Alignment()%8 !=
0 =>
(LoweredMove [t.Alignment()]
 dst
 src
 (ADDVconst <src.Type> src [s-moveSize(t.Alignment(), config)])
 mem)

// calls
(StaticCall ...) => (CALLstatic ...)

```

```

(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// atomic intrinsics
(AtomicLoad(8|32|64) ...) => (LoweredAtomicLoad(8|32|64) ...)
(AtomicLoadPtr ...) => (LoweredAtomicLoad64 ...)

(AtomicStore(8|32|64) ...) => (LoweredAtomicStore(8|32|64) ...)
(AtomicStorePtrNoWB ...) => (LoweredAtomicStore64 ...)

(AtomicExchange(32|64) ...) => (LoweredAtomicExchange(32|64) ...)

(AtomicAdd(32|64) ...) => (LoweredAtomicAdd(32|64) ...)

(AtomicCompareAndSwap32 ptr old new mem) => (LoweredAtomicCas32 ptr (SignExt32to64 old) new mem)
(AtomicCompareAndSwap64 ...) => (LoweredAtomicCas64 ...)

// checks
(NilCheck ...) => (LoweredNilCheck ...)
(IsNonNil ptr) => (SGTU ptr (MOVVconst [0]))
(IsInBounds idx len) => (SGTU len idx)
(IsSliceInBounds idx len) => (XOR (MOVVconst [1]) (SGTU idx len))

// pseudo-ops
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

(If cond yes no) => (NE cond yes no)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// Optimizations

// Absorb boolean tests into block
(NE (FPFlagTrue cmp) yes no) => (FPT cmp yes no)
(NE (FPFlagFalse cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagTrue cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagFalse cmp) yes no) => (FPT cmp yes no)
(NE (XORconst [1] cmp:(SGT _ _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTU _ _)) yes no) => (EQ cmp yes no)

```

```

(NE (XORconst [1] cmp:(SGTconst _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTUconst _))
yes no) => (EQ cmp yes no)
(EQ (XORconst [1] cmp:(SGT _ _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTU _ _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTconst _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTUconst _)) yes no) => (NE cmp yes no)
(NE (SGTUconst [1] x) yes no) => (EQ x yes no)
(EQ (SGTUconst [1] x) yes no) => (NE x yes no)
(NE (SGTU x (MOVVconst [0])) yes no) => (NE x yes no)
(EQ (SGTU x (MOVVconst [0])) yes no) => (EQ x yes no)
(NE (SGTconst [0] x) yes no) => (LTZ x yes no)
(EQ (SGTconst [0] x) yes no) => (GEZ x yes no)
(NE (SGT x (MOVVconst [0])) yes no) => (GTZ x yes no)
(EQ (SGT x (MOVVconst [0])) yes no) => (LEZ x yes no)

// fold offset into address
(ADDVconst [off1] (MOVVaddr [off2] {sym} ptr) && is32Bit(off1+int64(off2)) => (MOVVaddr
[int32(off1)+int32(off2)] {sym} ptr)

// fold address into load/store
(MOVBlload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBlload
[off1+int32(off2)] {sym} ptr mem)
(MOVBUload
[off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBUload [off1+int32(off2)]
{sym} ptr mem)
(MOVHload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVHload
[off1+int32(off2)] {sym} ptr mem)
(MOVHUload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVHUload
[off1+int32(off2)] {sym} ptr mem)
(MOVWload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVWload
[off1+int32(off2)] {sym} ptr mem)
(MOVWUload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVWUload
[off1+int32(off2)] {sym} ptr mem)
(MOVVload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVVload
[off1+int32(off2)] {sym} ptr mem)
(MOVFlload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVFlload
[off1+int32(off2)] {sym} ptr mem)
(MOVDload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVDload
[off1+int32(off2)]
{sym} ptr mem)

(MOVBstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVBstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVHstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVHstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVWstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVWstore
[off1+int32(off2)] {sym} ptr val mem)

```

(MOVVstore [off1] {sym} (ADDVconst [off2] ptr val mem) && is32Bit(int64(off1)+off2) => (MOVVstore [off1+int32(off2)] {sym} ptr val mem)  
(MOVFstore [off1] {sym} (ADDVconst [off2] ptr val mem) && is32Bit(int64(off1)+off2) => (MOVFstore [off1+int32(off2)] {sym} ptr val mem)  
(MOVDstore [off1] {sym} (ADDVconst [off2] ptr val mem) && is32Bit(int64(off1)+off2) => (MOVDstore [off1+int32(off2)] {sym} ptr val mem)  
(MOVBstorezero [off1] {sym} (ADDVconst [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVBstorezero [off1+int32(off2)] {sym} ptr mem)  
(MOVHstorezero [off1] {sym} (ADDVconst [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVHstorezero [off1+int32(off2)] {sym} ptr mem)  
(MOVWstorezero [off1] {sym} (ADDVconst [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVWstorezero [off1+int32(off2)] {sym} ptr mem)  
(MOVVstorezero [off1] {sym} (ADDVconst [off2] ptr mem) && is32Bit(int64(off1)+off2) => (MOVVstorezero [off1+int32(off2)] {sym} ptr mem)

(MOVBload [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVBload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVBULoad [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVBULoad [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVHload [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVHload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVHULoad [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVHULoad [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVWload [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVWload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVWULoad [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVWULoad [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVVload [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVVload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVFlod [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVFlod [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)  
(MOVDload [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVDload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)

=> (MOVDload [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)

(MOVBstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) && is32Bit(int64(off1)+int64(off2)) => (MOVBstore [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr val mem)

```

(MOVHstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVHstore [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr val mem)
(MOVWstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVWstore [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr val mem)
(MOVVstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVVstore [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr val mem)
(MOVFstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVFstore [off1+int32(off2)]
{mergeSym(sym1,sym2)} ptr val mem)
(MOVDstore [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVDstore [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr val mem)
(MOVBstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVBstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVHstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVHstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVWstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVWstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVVstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVVstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr
mem)

```

```
// store zero
```

```

(MOVBstore [off] {sym} ptr (MOVVconst [0]) mem) => (MOVBstorezero [off] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVVconst [0]) mem) => (MOVHstorezero [off] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVVconst [0]) mem) => (MOVWstorezero [off] {sym} ptr mem)
(MOVVstore [off] {sym} ptr (MOVVconst [0]) mem) => (MOVVstorezero [off] {sym} ptr mem)

```

```
// don't extend after proper load
```

```

(MOVBreg x:(MOVBload _ _)) => (MOVVreg x)
(MOVBureg x:(MOVBUload _ _)) => (MOVVreg x)
(MOVHreg x:(MOVBload _ _)) => (MOVVreg x)
(MOVHreg x:(MOVBUload _ _)) => (MOVVreg x)
(MOVHreg x:(MOVHload _ _)) => (MOVVreg x)
(MOVHureg x:(MOVBUload _ _)) => (MOVVreg x)
(MOVHureg x:(MOVHload _ _)) => (MOVVreg x)
(MOVWreg x:(MOVBload _ _)) => (MOVVreg x)
(MOVWreg x:(MOVBUload _ _)) => (MOVVreg x)
(MOVWreg x:(MOVHload _ _)) => (MOVVreg x)
(MOVWreg x:(MOVHload _ _)) => (MOVVreg x)

```

```

(MOVWreg x:(MOVWload _ _)) => (MOVVreg x)
(MOVWUreg x:(MOVBUload _ _)) => (MOVVreg x)
(MOVWUreg x:(MOVHUload _ _)) => (MOVVreg
x)
(MOVWUreg x:(MOVWUload _ _)) => (MOVVreg x)

// fold double extensions
(MOVBreg x:(MOVBreg _)) => (MOVVreg x)
(MOVBUreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVHreg x:(MOVBreg _)) => (MOVVreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVHreg x:(MOVHreg _)) => (MOVVreg x)
(MOVHUreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVHUreg x:(MOVHUreg _)) => (MOVVreg x)
(MOVWreg x:(MOVBreg _)) => (MOVVreg x)
(MOVWreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVWreg x:(MOVHreg _)) => (MOVVreg x)
(MOVWreg x:(MOVWreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVHUreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVWUreg _)) => (MOVVreg x)

// don't extend before store
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore
[off] {sym} ptr (MOVWreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVWstore [off] {sym} ptr x mem)

// if a register move has only 1 use, just use the same register without emitting instruction
// MOVVnop doesn't emit instruction, only for ensuring the type.
(MOVVreg x) && x.Uses == 1 => (MOVVnop x)

// TODO: we should be able to get rid of MOVVnop all together.
// But for now, this is enough to get rid of lots of them.
(MOVVnop (MOVVconst [c])) => (MOVVconst
[c])

// fold constant into arithmetic ops
(ADDV x (MOVVconst [c])) && is32Bit(c) => (ADDVconst [c] x)

```



```

(SUBV x (MOVVconst [c])) && is32Bit(c) => (SUBVconst [c] x)
(AND x (MOVVconst [c])) && is32Bit(c) => (ANDconst [c] x)
(OR x (MOVVconst [c])) && is32Bit(c) => (ORconst [c] x)
(XOR x (MOVVconst [c])) && is32Bit(c) => (XORconst [c] x)
(NOR x (MOVVconst [c])) && is32Bit(c) => (NORconst [c] x)

(SLLV _ (MOVVconst [c])) && uint64(c)>=64 => (MOVVconst [0])
(SRLV _ (MOVVconst [c])) && uint64(c)>=64 => (MOVVconst [0])
(SRAV x (MOVVconst [c])) && uint64(c)>=64 => (SRAVconst x [63])
(SLLV x (MOVVconst [c])) => (SLLVconst x [c])
(SRLV x (MOVVconst [c])) => (SRLVconst x [c])
(SRAV x (MOVVconst [c])) => (SRAVconst x [c])

(SGT (MOVVconst [c] x) && is32Bit(c) => (SGTconst [c] x)
(SGTU (MOVVconst [c] x) && is32Bit(c) => (SGTUconst [c] x)

// mul by constant
(Select1 (MULVU x (MOVVconst [-1]))) => (NEGV x)
(Select1 (MULVU _ (MOVVconst [0]))) => (MOVVconst [0])
(Select1 (MULVU x (MOVVconst
[1]))) => x
(Select1 (MULVU x (MOVVconst [c]))) && isPowerOfTwo64(c) => (SLLVconst [log64(c)] x)

// div by constant
(Select1 (DIVVU x (MOVVconst [1]))) => x
(Select1 (DIVVU x (MOVVconst [c]))) && isPowerOfTwo64(c) => (SRLVconst [log64(c)] x)
(Select0 (DIVVU _ (MOVVconst [1]))) => (MOVVconst [0]) // mod
(Select0 (DIVVU x (MOVVconst [c]))) && isPowerOfTwo64(c) => (ANDconst [c-1] x) // mod

// generic simplifications
(ADDV x (NEGV y)) => (SUBV x y)
(SUBV x x) => (MOVVconst [0])
(SUBV (MOVVconst [0] x) => (NEGV x)
(AND x x) => x
(OR x x) => x
(XOR x x) => (MOVVconst [0])

// remove redundant *const ops
(ADDVconst [0] x) => x
(SUBVconst [0] x) => x
(ANDconst [0] _) => (MOVVconst [0])
(ANDconst [-1] x) => x
(ORconst [0] x) => x
(ORconst [-1] _) => (MOVVconst [-1])
(XORconst [0] x) => x
(XORconst [-1] x) => (NORconst [0] x)

// generic constant folding

```

```

(ADDVconst [c] (MOVVconst [d])) => (MOVVconst [c+d])
(ADDVconst [c] (ADDVconst [d] x)) && is32Bit(c+d) =>
  (ADDVconst [c+d] x)
(ADDVconst [c] (SUBVconst [d] x)) && is32Bit(c-d) => (ADDVconst [c-d] x)
(SUBVconst [c] (MOVVconst [d])) => (MOVVconst [d-c])
(SUBVconst [c] (SUBVconst [d] x)) && is32Bit(-c-d) => (ADDVconst [-c-d] x)
(SUBVconst [c] (ADDVconst [d] x)) && is32Bit(-c+d) => (ADDVconst [-c+d] x)
(SLLVconst [c] (MOVVconst [d])) => (MOVVconst [d<<uint64(c)])
(SRLVconst [c] (MOVVconst [d])) => (MOVVconst [int64(uint64(d)>>uint64(c))])
(SRAVconst [c] (MOVVconst [d])) => (MOVVconst [d>>uint64(c)])
(Select1 (MULVU (MOVVconst [c]) (MOVVconst [d]))) => (MOVVconst [c*d])
(Select1 (DIVV (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [c/d])
(Select1 (DIVVU (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [int64(uint64(c)/uint64(d))])
(Select0 (DIVV (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [c%d]) // mod
(Select0 (DIVVU (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [int64(uint64(c)%uint64(d))])
// mod
(ANDconst [c] (MOVVconst [d])) => (MOVVconst
  [c&d])
(ANDconst [c] (ANDconst [d] x)) => (ANDconst [c&d] x)
(ORconst [c] (MOVVconst [d])) => (MOVVconst [c|d])
(ORconst [c] (ORconst [d] x)) && is32Bit(c|d) => (ORconst [c|d] x)
(XORconst [c] (MOVVconst [d])) => (MOVVconst [c^d])
(XORconst [c] (XORconst [d] x)) && is32Bit(c^d) => (XORconst [c^d] x)
(NORconst [c] (MOVVconst [d])) => (MOVVconst [^(c|d)])
(NEGV (MOVVconst [c])) => (MOVVconst [-c])
(MOVBreg (MOVVconst [c])) => (MOVVconst [int64(int8(c))])
(MOVBUreg (MOVVconst [c])) => (MOVVconst [int64(uint8(c))])
(MOVHreg (MOVVconst [c])) => (MOVVconst [int64(int16(c))])
(MOVHUreg (MOVVconst [c])) => (MOVVconst [int64(uint16(c))])
(MOVWreg (MOVVconst [c])) => (MOVVconst [int64(int32(c))])
(MOVWUreg (MOVVconst [c])) => (MOVVconst [int64(uint32(c))])
(MOVVreg (MOVVconst [c])) => (MOVVconst [c])
(LoweredAtomicStore(32|64) ptr (MOVVconst [0]) mem) => (LoweredAtomicStorezero(32|64) ptr mem)
(LoweredAtomicAdd32 ptr (MOVVconst [c]) mem) && is32Bit(c) => (LoweredAtomicAddconst32 [int32(c)]
  ptr mem)
(LoweredAtomicAdd64 ptr (MOVVconst [c]) mem) && is32Bit(c) => (LoweredAtomicAddconst64 [c] ptr mem)

// constant comparisons
(SGTconst [c] (MOVVconst [d])) && c>d => (MOVVconst [1])
(SGTconst [c] (MOVVconst [d])) && c<=d => (MOVVconst [0])
(SGTUconst [c] (MOVVconst [d])) && uint64(c)>uint64(d) => (MOVVconst [1])
(SGTUconst [c] (MOVVconst [d])) && uint64(c)<=uint64(d) => (MOVVconst [0])

// other known comparisons
(SGTconst [c] (MOVBreg _)) && 0x7f < c => (MOVVconst [1])
(SGTconst [c] (MOVBreg _)) && c <= -0x80 => (MOVVconst [0])
(SGTconst [c] (MOVBUreg _)) && 0xff < c => (MOVVconst [1])
(SGTconst [c] (MOVBUreg _)) && c < 0 => (MOVVconst [0])

```

```

(SGTUconst [c] (MOVBUreg _) && 0xff < uint64(c) => (MOVVconst [1])
(SGTconst [c] (MOVHreg _) && 0x7fff < c => (MOVVconst [1])
(SGTconst [c] (MOVHreg _) && c <= -0x8000 => (MOVVconst [0])
(SGTconst [c] (MOVHUreg _) && 0xffff < c => (MOVVconst [1])
(SGTconst [c] (MOVHUreg _) && c < 0 => (MOVVconst [0])
(SGTUconst [c] (MOVHUreg _) &&
0xffff < uint64(c) => (MOVVconst [1])
(SGTconst [c] (MOVWUreg _) && c < 0 => (MOVVconst [0])
(SGTconst [c] (ANDconst [m] _) && 0 <= m && m < c => (MOVVconst [1])
(SGTUconst [c] (ANDconst [m] _) && uint64(m) < uint64(c) => (MOVVconst [1])
(SGTconst [c] (SRLVconst _ [d]) && 0 <= c && 0 < d && d <= 63 && 0xffffffffffffff>uint64(d) < uint64(c)
=> (MOVVconst [1])
(SGTUconst [c] (SRLVconst _ [d]) && 0 < d && d <= 63 && 0xffffffffffffff>uint64(d) < uint64(c) =>
(MOVVconst [1])

```

```
// absorb constants into branches
```

```

(EQ (MOVVconst [0]) yes no) => (First yes no)
(EQ (MOVVconst [c]) yes no) && c != 0 => (First no yes)
(NE (MOVVconst [0]) yes no) => (First no yes)
(NE (MOVVconst [c]) yes no) && c != 0 => (First yes no)
(LTZ (MOVVconst [c]) yes no) && c < 0 => (First yes no)
(LTZ (MOVVconst [c]) yes no) && c >= 0 => (First no yes)
(LEZ (MOVVconst [c]) yes no) && c <= 0 => (First yes no)
(LEZ (MOVVconst [c]) yes no) && c > 0 => (First no yes)
(GTZ (MOVVconst [c]) yes no) && c > 0 => (First
yes no)
(GTZ (MOVVconst [c]) yes no) && c <= 0 => (First no yes)
(GEZ (MOVVconst [c]) yes no) && c >= 0 => (First yes no)
(GEZ (MOVVconst [c]) yes no) && c < 0 => (First no yes)

```

```
// fold readonly sym load
```

```

(MOVBlload [off] {sym} (SB) _) && symIsRO(sym) => (MOVVconst [int64(read8(sym, int64(off)))]
(MOVHload [off] {sym} (SB) _) && symIsRO(sym) => (MOVVconst [int64(read16(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVWload [off] {sym} (SB) _) && symIsRO(sym) => (MOVVconst [int64(read32(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVVload [off] {sym} (SB) _) && symIsRO(sym) => (MOVVconst [int64(read64(sym, int64(off),
config.ctx.Arch.ByteOrder))])

```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/MIPS64.rules
```

```
No license file was found, but licenses were detected in source scan.
```

```
// Copyright 2021 The Go Authors. All rights reserved.
```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixbugs/issue48018.go
```

- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue47887.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue44688.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue40789.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/noder/codes.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue47747.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue49112.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/syntax/testdata/issue43674.go
- \*
- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/termlist\_test.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/noder/sizes.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue47968.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue49247.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/noder/linker.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue49579.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue48048.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/dwarfgen/marker.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/base/bootstrap\_true.go
- \*
- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/noder/transform.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/interface.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/typeterm.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixedbugs/issue48703.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/reflectdata/alg\_test.go
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zip/compile/internal/types2/testdata/check/typeinstcycles.go
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- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/examples/typesets.go
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- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/noder/reader.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/signature.go

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zip/compile/internal/test/switch\_test.go  
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zip/compile/internal/noder/expr.go  
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zip/compile/internal/noder/stmt.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/noder/export.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixbugs/issue48136.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/liveness/arg.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types2/testdata/fixbugs/issue48695.go  
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(Add(Ptr|32|16|8) ...) => (ADD ...)

(Add(32|64)F ...) => (ADD(F|D) ...)

(Select0 (Add32carry <t> x y)) => (ADD <t.FieldType(0)> x y)

(Select1 (Add32carry <t> x y)) => (SGTU <typ.Bool> x (ADD <t.FieldType(0)> x y))

(Add32withcarry <t> x y c) => (ADD c (ADD <t> x y))

(Sub(Ptr|32|16|8) ...) => (SUB ...)

(Sub(32|64)F ...) => (SUB(F|D) ...)

(Select0 (Sub32carry <t> x y)) => (SUB <t.FieldType(0)> x y)

(Select1 (Sub32carry <t> x y)) => (SGTU <typ.Bool> (SUB <t.FieldType(0)> x y) x)

(Sub32withcarry <t> x y c) => (SUB (SUB <t> x y) c)

(Mul(32|16|8) ...) => (MUL ...)

(Mul(32|64)F ...) => (MUL(F|D) ...)

(Hmul(32|32u) x y) => (Select0 (MUL(T|TU) x y))

(Mul32uhilo ...) => (MULTU ...)

(Div32 x y) => (Select1 (DIV x y))

(Div32u x y) => (Select1 (DIVU x y))

(Div16 x y)

=> (Select1 (DIV (SignExt16to32 x) (SignExt16to32 y)))

(Div16u x y) => (Select1 (DIVU (ZeroExt16to32 x) (ZeroExt16to32 y)))

(Div8 x y) => (Select1 (DIV (SignExt8to32 x) (SignExt8to32 y)))

(Div8u x y) => (Select1 (DIVU (ZeroExt8to32 x) (ZeroExt8to32 y)))

(Div(32|64)F ...) => (DIV(F|D) ...)

(Mod32 x y) => (Select0 (DIV x y))

(Mod32u x y) => (Select0 (DIVU x y))

(Mod16 x y) => (Select0 (DIV (SignExt16to32 x) (SignExt16to32 y)))

(Mod16u x y) => (Select0 (DIVU (ZeroExt16to32 x) (ZeroExt16to32 y)))

(Mod8 x y) => (Select0 (DIV (SignExt8to32 x) (SignExt8to32 y)))

(Mod8u x y) => (Select0 (DIVU (ZeroExt8to32 x) (ZeroExt8to32 y)))

// (x + y) / 2 with x>=y becomes (x - y) / 2 + y

(Avg32u <t> x y) => (ADD (SRLconst <t> (SUB <t> x y) [1]) y)

(And(32|16|8) ...) => (AND ...)

(Or(32|16|8) ...) => (OR ...)

(Xor(32|16|8) ...) => (XOR ...)

```

// constant shifts
// generic opt rewrites all constant shifts to shift by Const64
(Lsh32x64 x (Const64 [c])) && uint32(c) < 32 => (SLLconst x [int32(c)])
(Rsh32x64
  x (Const64 [c])) && uint32(c) < 32 => (SRAconst x [int32(c)])
(Rsh32Ux64 x (Const64 [c])) && uint32(c) < 32 => (SRLconst x [int32(c)])
(Lsh16x64 x (Const64 [c])) && uint32(c) < 16 => (SLLconst x [int32(c)])
(Rsh16x64 x (Const64 [c])) && uint32(c) < 16 => (SRAconst (SLLconst <typ.UInt32> x [16]) [int32(c+16)])
(Rsh16Ux64 x (Const64 [c])) && uint32(c) < 16 => (SRLconst (SLLconst <typ.UInt32> x [16]) [int32(c+16)])
(Lsh8x64 x (Const64 [c])) && uint32(c) < 8 => (SLLconst x [int32(c)])
(Rsh8x64 x (Const64 [c])) && uint32(c) < 8 => (SRAconst (SLLconst <typ.UInt32> x [24]) [int32(c+24)])
(Rsh8Ux64 x (Const64 [c])) && uint32(c) < 8 => (SRLconst (SLLconst <typ.UInt32> x [24]) [int32(c+24)])

// large constant shifts
(Lsh32x64 _ (Const64 [c])) && uint32(c) >= 32 => (MOVWconst [0])
(Rsh32Ux64 _ (Const64 [c])) && uint32(c) >= 32 => (MOVWconst [0])
(Lsh16x64 _ (Const64 [c])) && uint32(c) >= 16 => (MOVWconst [0])
(Rsh16Ux64 _ (Const64 [c])) && uint32(c) >= 16 => (MOVWconst [0])
(Lsh8x64
  _ (Const64 [c])) && uint32(c) >= 8 => (MOVWconst [0])
(Rsh8Ux64 _ (Const64 [c])) && uint32(c) >= 8 => (MOVWconst [0])

// large constant signed right shift, we leave the sign bit
(Rsh32x64 x (Const64 [c])) && uint32(c) >= 32 => (SRAconst x [31])
(Rsh16x64 x (Const64 [c])) && uint32(c) >= 16 => (SRAconst (SLLconst <typ.UInt32> x [16]) [31])
(Rsh8x64 x (Const64 [c])) && uint32(c) >= 8 => (SRAconst (SLLconst <typ.UInt32> x [24]) [31])

// shifts
// hardware instruction uses only the low 5 bits of the shift
// we compare to 32 to ensure Go semantics for large shifts
(Lsh32x32 <t> x y) => (CMOVZ (SLL <t> x y) (MOVWconst [0]) (SGTUconst [32] y))
(Lsh32x16 <t> x y) => (CMOVZ (SLL <t> x (ZeroExt16to32 y)) (MOVWconst [0]) (SGTUconst [32]
(ZeroExt16to32 y)))
(Lsh32x8 <t> x y) => (CMOVZ (SLL <t> x (ZeroExt8to32 y)) (MOVWconst [0]) (SGTUconst [32] (ZeroExt8to32
y)))

(Lsh16x32 <t> x y) => (CMOVZ (SLL <t> x y) (MOVWconst [0]) (SGTUconst [32] y))
(Lsh16x16 <t> x y) => (CMOVZ (SLL <t>
  x (ZeroExt16to32 y)) (MOVWconst [0]) (SGTUconst [32] (ZeroExt16to32 y)))
(Lsh16x8 <t> x y) => (CMOVZ (SLL <t> x (ZeroExt8to32 y)) (MOVWconst [0]) (SGTUconst [32] (ZeroExt8to32
y)))

(Lsh8x32 <t> x y) => (CMOVZ (SLL <t> x y) (MOVWconst [0]) (SGTUconst [32] y))
(Lsh8x16 <t> x y) => (CMOVZ (SLL <t> x (ZeroExt16to32 y)) (MOVWconst [0]) (SGTUconst [32]
(ZeroExt16to32 y)))
(Lsh8x8 <t> x y) => (CMOVZ (SLL <t> x (ZeroExt8to32 y)) (MOVWconst [0]) (SGTUconst [32] (ZeroExt8to32
y)))

```

```

(Rsh32Ux32 <t> x y) => (CMOVZ (SRL <t> x y) (MOVWconst [0]) (SGTUconst [32] y))
(Rsh32Ux16 <t> x y) => (CMOVZ (SRL <t> x (ZeroExt16to32 y) ) (MOVWconst [0]) (SGTUconst [32]
(ZeroExt16to32 y)))
(Rsh32Ux8 <t> x y) => (CMOVZ (SRL <t> x (ZeroExt8to32 y) ) (MOVWconst [0]) (SGTUconst [32]
(ZeroExt8to32 y)))

(Rsh16Ux32 <t> x y) => (CMOVZ (SRL <t> (ZeroExt16to32 x) y) (MOVWconst [0]) (SGTUconst [32] y))
(Rsh16Ux16 <t> x y) => (CMOVZ (SRL <t> (ZeroExt16to32 x) (ZeroExt16to32 y) ) (MOVWconst [0])
(SGTUconst [32] (ZeroExt16to32
y)))
(Rsh16Ux8 <t> x y) => (CMOVZ (SRL <t> (ZeroExt16to32 x) (ZeroExt8to32 y) ) (MOVWconst [0]) (SGTUconst
[32] (ZeroExt8to32 y)))

(Rsh8Ux32 <t> x y) => (CMOVZ (SRL <t> (ZeroExt8to32 x) y) (MOVWconst [0]) (SGTUconst [32] y))
(Rsh8Ux16 <t> x y) => (CMOVZ (SRL <t> (ZeroExt8to32 x) (ZeroExt16to32 y) ) (MOVWconst [0]) (SGTUconst
[32] (ZeroExt16to32 y)))
(Rsh8Ux8 <t> x y) => (CMOVZ (SRL <t> (ZeroExt8to32 x) (ZeroExt8to32 y) ) (MOVWconst [0]) (SGTUconst
[32] (ZeroExt8to32 y)))

(Rsh32x32 x y) => (SRA x ( CMOVZ <typ.UInt32> y (MOVWconst [31]) (SGTUconst [32] y)))
(Rsh32x16 x y) => (SRA x ( CMOVZ <typ.UInt32> (ZeroExt16to32 y) (MOVWconst [31]) (SGTUconst [32]
(ZeroExt16to32 y))))
(Rsh32x8 x y) => (SRA x ( CMOVZ <typ.UInt32> (ZeroExt8to32 y) (MOVWconst [31]) (SGTUconst [32]
(ZeroExt8to32 y))))

(Rsh16x32 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> y (MOVWconst [31]) (SGTUconst [32] y)))
(Rsh16x16 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> (ZeroExt16to32 y) (MOVWconst
[31]) (SGTUconst [32] (ZeroExt16to32 y))))
(Rsh16x8 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> (ZeroExt8to32 y) (MOVWconst [31])
(SGTUconst [32] (ZeroExt8to32 y))))

(Rsh8x32 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> y (MOVWconst [31]) (SGTUconst [32] y)))
(Rsh8x16 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> (ZeroExt16to32 y) (MOVWconst [31])
(SGTUconst [32] (ZeroExt16to32 y))))
(Rsh8x8 x y) => (SRA (SignExt16to32 x) ( CMOVZ <typ.UInt32> (ZeroExt8to32 y) (MOVWconst [31])
(SGTUconst [32] (ZeroExt8to32 y))))

// rotates
(RotateLeft8 <t> x (MOVWconst [c])) => (Or8 (Lsh8x32 <t> x (MOVWconst [c&7])) (Rsh8Ux32 <t> x
(MOVWconst [-c&7])))
(RotateLeft16 <t> x (MOVWconst [c])) => (Or16 (Lsh16x32 <t> x (MOVWconst [c&15])) (Rsh16Ux32 <t> x
(MOVWconst [-c&15])))
(RotateLeft32 <t> x (MOVWconst [c])) => (Or32 (Lsh32x32 <t> x (MOVWconst [c&31])) (Rsh32Ux32 <t> x
(MOVWconst [-c&31])))
(RotateLeft64 <t> x (MOVWconst [c])) => (Or64 (Lsh64x32 <t> x (MOVWconst [c&63])) (Rsh64Ux32
<t> x (MOVWconst [-c&63])))

```

```

// unary ops
(Neg(32|16|8) ...) => (NEG ...)
(Neg(32|64)F ...) => (NEG(F|D) ...)

(Com(32|16|8) x) => (NORconst [0] x)

(Sqrt ...) => (SQRTD ...)
(Sqrt32 ...) => (SQRTF ...)

// TODO: optimize this case?
(Ctz32NonZero ...) => (Ctz32 ...)

// count trailing zero
// 32 - CLZ(x&-x - 1)
(Ctz32 <t> x) => (SUB (MOVWconst [32]) (CLZ <t> (SUBconst <t> [1] (AND <t> x (NEG <t> x))))))

// bit length
(BitLen32 <t> x) => (SUB (MOVWconst [32]) (CLZ <t> x))

// boolean ops -- booleans are represented with 0=false, 1=true
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (XORconst [1] (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not x) => (XORconst [1] x)

// constants
(Const(32|16|8) [val]) => (MOVWconst [int32(val)])
(Const(32|64)F ...) => (MOV(F|D)const ...)
(ConstNil) => (MOVWconst [0])
(ConstBool [t]) => (MOVWconst [b2i32(t)])

// truncations
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8
...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)

// Zero-/Sign-extensions
(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)

(SignExt8to16 ...) => (MOVBreg ...)
(SignExt8to32 ...) => (MOVBreg ...)
(SignExt16to32 ...) => (MOVHreg ...)

```

```

(Signmask x) => (SRAconst x [31])
(Zeromask x) => (NEG (SGTU x (MOVWconst [0])))
(Slicemask <t> x) => (SRAconst (NEG <t> x) [31])

// float-int conversion
(Cvt32to(32|64)F ...) => (MOVW(F|D) ...)
(Cvt(32|64)Fto32 ...) => (TRUNC(F|D)W ...)
(Cvt32Fto64F ...) => (MOVFD ...)
(Cvt64Fto32F ...) => (MOVDF ...)

(CvtBoolToUint8 ...) => (Copy ...)

(Round(32|64)F ...) => (Copy ...)

// comparisons
(Eq8 x y) => (SGTUconst [1] (XOR (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Eq16 x y) => (SGTUconst [1] (XOR (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Eq32 x y) => (SGTUconst [1] (XOR x y))
(EqPtr x y) => (SGTUconst [1] (XOR x y))
(Eq(32|64)F x y) => (FPFlagTrue (CMPEQ(F|D) x y))

(Neq8 x y) => (SGTU
  (XOR (ZeroExt8to32 x) (ZeroExt8to32 y)) (MOVWconst [0]))
(Neq16 x y) => (SGTU (XOR (ZeroExt16to32 x) (ZeroExt16to32 y)) (MOVWconst [0]))
(Neq32 x y) => (SGTU (XOR x y) (MOVWconst [0]))
(NeqPtr x y) => (SGTU (XOR x y) (MOVWconst [0]))
(Neq(32|64)F x y) => (FPFlagFalse (CMPEQ(F|D) x y))

(Less8 x y) => (SGT (SignExt8to32 y) (SignExt8to32 x))
(Less16 x y) => (SGT (SignExt16to32 y) (SignExt16to32 x))
(Less32 x y) => (SGT y x)
(Less(32|64)F x y) => (FPFlagTrue (CMPGT(F|D) y x)) // reverse operands to work around NaN

(Less8U x y) => (SGTU (ZeroExt8to32 y) (ZeroExt8to32 x))
(Less16U x y) => (SGTU (ZeroExt16to32 y) (ZeroExt16to32 x))
(Less32U x y) => (SGTU y x)

(Leq8 x y) => (XORconst [1] (SGT (SignExt8to32 x) (SignExt8to32 y)))
(Leq16 x y) => (XORconst [1] (SGT (SignExt16to32 x) (SignExt16to32 y)))
(Leq32 x y) => (XORconst [1] (SGT x y))
(Leq(32|64)F x y) => (FPFlagTrue (CMPGE(F|D) y x)) // reverse operands to work around NaN

(Leq8U x y) => (XORconst [1] (SGTU (ZeroExt8to32 x) (ZeroExt8to32
  y)))
(Leq16U x y) => (XORconst [1] (SGTU (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Leq32U x y) => (XORconst [1] (SGTU x y))

(OffPtr [off] ptr:(SP)) => (MOVWaddr [int32(off)] ptr)

```

(OffPtr [off] ptr) => (ADDconst [int32(off)] ptr)

(Addr {sym} base) => (MOVWaddr {sym} base)

(LocalAddr {sym} base \_) => (MOVWaddr {sym} base)

// loads

(Load <T> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)

(Load <T> ptr mem) && (is8BitInt(t) && isSigned(t)) => (MOVBlload ptr mem)

(Load <T> ptr mem) && (is8BitInt(t) && !isSigned(t)) => (MOVBUload ptr mem)

(Load <T> ptr mem) && (is16BitInt(t) && isSigned(t)) => (MOVHload ptr mem)

(Load <T> ptr mem) && (is16BitInt(t) && !isSigned(t)) => (MOVHUload ptr mem)

(Load <T> ptr mem) && (is32BitInt(t) || isPtr(t)) => (MOVWload ptr mem)

(Load <T> ptr mem) && is32BitFloat(t) => (MOVFlload ptr mem)

(Load <T> ptr mem) && is64BitFloat(t) => (MOVDload ptr mem)

// stores

(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)

(Store {t} ptr val mem) && t.Size()

== 2 => (MOVHstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (MOVFstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVDstore ptr val mem)

// zero instructions

(Zero [0] \_ mem) => mem

(Zero [1] ptr mem) => (MOVBstore ptr (MOVWconst [0]) mem)

(Zero [2] {t} ptr mem) && t.Alignment()%2 == 0 =>

(MOVHstore ptr (MOVWconst [0]) mem)

(Zero [2] ptr mem) =>

(MOVBstore [1] ptr (MOVWconst [0])

(MOVBstore [0] ptr (MOVWconst [0]) mem))

(Zero [4] {t} ptr mem) && t.Alignment()%4 == 0 =>

(MOVWstore ptr (MOVWconst [0]) mem)

(Zero [4] {t} ptr mem) && t.Alignment()%2 == 0 =>

(MOVHstore [2] ptr (MOVWconst [0])

(MOVHstore [0] ptr (MOVWconst [0]) mem))

(Zero [4] ptr mem) =>

(MOVBstore [3] ptr (MOVWconst [0])

(MOVBstore [2] ptr (MOVWconst [0])

(MOVBstore [1] ptr (MOVWconst [0])

(MOVBstore [0] ptr (MOVWconst [0])

mem))))

(Zero [3] ptr mem) =>

(MOVBstore [2] ptr (MOVWconst [0])

(MOVBstore [1] ptr (MOVWconst [0])

(MOVBstore [0] ptr (MOVWconst [0]) mem))

(Zero [6] {t} ptr mem) && t.Alignment()%2 == 0 =>

(MOVHstore [4] ptr (MOVWconst [0])

```

(MOVHstore [2] ptr (MOVWconst [0]
(MOVHstore [0] ptr (MOVWconst [0] mem)))
(Zero [8] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [4] ptr (MOVWconst [0]
(MOVWstore [0] ptr (MOVWconst [0] mem))
(Zero [12] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8] ptr (MOVWconst [0]
(MOVWstore [4] ptr (MOVWconst [0]
(MOVWstore [0] ptr (MOVWconst [0] mem))))
(Zero [16] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [12] ptr (MOVWconst [0]
(MOVWstore [8] ptr (MOVWconst [0]
(MOVWstore [4] ptr (MOVWconst [0]
(MOVWstore [0] ptr (MOVWconst [0] mem))))))

// large or unaligned zeroing uses a loop
(Zero [s] {t} ptr mem)
&& (s > 16 || t.Alignment()%4 != 0) =>
(LoweredZero [int32(t.Alignment())]
ptr
(ADDconst <ptr.Type>
ptr [int32(s-moveSize(t.Alignment(), config))]
mem)

// moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBUload src mem) mem)
(Move [2] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore dst (MOVHUload src mem) mem)
(Move [2] dst src mem) =>
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem))
(Move [4] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore dst (MOVWload src mem) mem)
(Move [4] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [2] dst (MOVHUload [2] src mem)
(MOVHstore dst (MOVHUload src mem) mem))
(Move [4] dst src mem) =>
(MOVBstore [3] dst (MOVBUload [3] src mem)
(MOVBstore [2] dst (MOVBUload [2] src mem)
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem))))
(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBUload [2] src mem)
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem)))
(Move [8] {t} dst src mem) &&

```

```

t.Alignment()%4 == 0 =>
(MOVWstore [4] dst (MOVWload [4] src mem)
 (MOVWstore dst (MOVWload src mem) mem))
(Move [8] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [6] dst (MOVHload [6] src mem)
 (MOVHstore [4] dst (MOVHload [4] src mem)
 (MOVHstore [2] dst (MOVHload [2] src mem)
 (MOVHstore dst (MOVHload src mem) mem))))
(Move [6] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [4] dst (MOVHload [4] src mem)
 (MOVHstore [2] dst (MOVHload [2] src mem)
 (MOVHstore dst (MOVHload src mem) mem)))
(Move [12] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8] dst (MOVWload [8] src mem)
 (MOVWstore [4] dst (MOVWload [4] src mem)
 (MOVWstore dst (MOVWload src mem) mem)))
(Move [16] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore [12] dst (MOVWload [12] src mem)
 (MOVWstore [8] dst (MOVWload [8] src mem)
 (MOVWstore [4] dst (MOVWload [4] src mem)
 (MOVWstore dst (MOVWload src mem) mem))))

// large or unaligned move uses a loop
(Move [s] {t}
 dst src mem)
&& (s > 16 && logLargeCopy(v, s) || t.Alignment()%4 != 0) =>
(LoweredMove [int32(t.Alignment())]
 dst
 src
 (ADDconst <src.Type> src [int32(s-moveSize(t.Alignment()), config)])
 mem)

// calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// atomic intrinsics
(AtomicLoad(8|32) ...) => (LoweredAtomicLoad(8|32) ...)
(AtomicLoadPtr ...) => (LoweredAtomicLoad32 ...)

(AtomicStore(8|32) ...) => (LoweredAtomicStore(8|32) ...)
(AtomicStorePtrNoWB ...) => (LoweredAtomicStore32 ...)

(AtomicExchange32 ...) => (LoweredAtomicExchange ...)
(AtomicAdd32 ...) => (LoweredAtomicAdd ...)

```



```

(AtomicCompareAndSwap32 ...) => (LoweredAtomicCas ...)

// AtomicOr8(ptr,val) => LoweredAtomicOr(ptr&^3,uint32(val) << ((ptr & 3) * 8))
(AtomicOr8 ptr val mem) && !config.BigEndian =>
(LoweredAtomicOr (AND <typ.UInt32Ptr> (MOVWconst [^3]) ptr)
(SLL <typ.UInt32> (ZeroExt8to32 val)
(SLLconst
<typ.UInt32> [3]
(ANDconst <typ.UInt32> [3] ptr))) mem)

// AtomicAnd8(ptr,val) => LoweredAtomicAnd(ptr&^3,(uint32(val) << ((ptr & 3) * 8)) | ^(uint32(0xFF) << ((ptr
& 3) * 8)))
(AtomicAnd8 ptr val mem) && !config.BigEndian =>
(LoweredAtomicAnd (AND <typ.UInt32Ptr> (MOVWconst [^3]) ptr)
(OR <typ.UInt32> (SLL <typ.UInt32> (ZeroExt8to32 val)
(SLLconst <typ.UInt32> [3]
(ANDconst <typ.UInt32> [3] ptr)))
(NORconst [0] <typ.UInt32> (SLL <typ.UInt32>
(MOVWconst [0xff]) (SLLconst <typ.UInt32> [3]
(ANDconst <typ.UInt32> [3] ptr)))))) mem)

// AtomicOr8(ptr,val) => LoweredAtomicOr(ptr&^3,uint32(val) << (((ptr^3) & 3) * 8))
(AtomicOr8 ptr val mem) && config.BigEndian =>
(LoweredAtomicOr (AND <typ.UInt32Ptr> (MOVWconst [^3]) ptr)
(SLL <typ.UInt32> (ZeroExt8to32 val)
(SLLconst <typ.UInt32> [3]
(ANDconst <typ.UInt32> [3]
(XORconst <typ.UInt32> [3] ptr)))) mem)

// AtomicAnd8(ptr,val) => LoweredAtomicAnd(ptr&^3,(uint32(val) << (((ptr^3) & 3)
* 8)) | ^(uint32(0xFF) << (((ptr^3) & 3) * 8)))
(AtomicAnd8 ptr val mem) && config.BigEndian =>
(LoweredAtomicAnd (AND <typ.UInt32Ptr> (MOVWconst [^3]) ptr)
(OR <typ.UInt32> (SLL <typ.UInt32> (ZeroExt8to32 val)
(SLLconst <typ.UInt32> [3]
(ANDconst <typ.UInt32> [3]
(XORconst <typ.UInt32> [3] ptr))))
(NORconst [0] <typ.UInt32> (SLL <typ.UInt32>
(MOVWconst [0xff]) (SLLconst <typ.UInt32> [3]
(ANDconst <typ.UInt32> [3]
(XORconst <typ.UInt32> [3] ptr)))))) mem)

(AtomicAnd32 ...) => (LoweredAtomicAnd ...)
(AtomicOr32 ...) => (LoweredAtomicOr ...)

// checks

```

```

(NilCheck ...) => (LoweredNilCheck ...)
(IsNotNil ptr) => (SGTU ptr (MOVWconst [0]))
(IsInBounds idx len) => (SGTU len idx)
(IsSliceInBounds idx len) => (XORconst [1] (SGTU idx len))

// pseudo-ops
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

(If cond yes no) => (NE cond yes no)

// Write barrier.
(WB ...)
=> (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 0 => (LoweredPanicExtendA [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 1 => (LoweredPanicExtendB [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 2 => (LoweredPanicExtendC [kind] hi lo y mem)

// Optimizations

// Absorb boolean tests into block
(NE (FPFlagTrue cmp) yes no) => (FPT cmp yes no)
(NE (FPFlagFalse cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagTrue cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagFalse cmp) yes no) => (FPT cmp yes no)
(NE (XORconst [1] cmp:(SGT _ _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTU _ _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTconst _) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTUconst _) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTzero _) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTUzero _) yes no) => (EQ cmp yes no)
(EQ (XORconst [1] cmp:(SGT _ _) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTU _ _) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTconst _) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTUconst _) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTzero _) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTUzero _) yes no) => (NE cmp yes no)
(NE (SGTUconst [1] x) yes no) => (EQ x yes no)
(EQ (SGTUconst [1] x) yes no) => (NE x yes no)
(NE (SGTUzero x) yes no) => (NE x yes no)
(EQ (SGTUzero x) yes no) => (EQ x yes no)

```

(NE (SGTconst [0] x) yes no) => (LTZ x yes no)  
(EQ (SGTconst [0] x) yes no) => (GEZ x yes no)  
(NE (SGTzero x) yes no) => (GTZ x yes no)  
(EQ (SGTzero x) yes no) => (LEZ x yes no)

// fold offset into

address

(ADDconst [off1] (MOVWaddr [off2] {sym} ptr)) => (MOVWaddr [off1+off2] {sym} ptr)

// fold address into load/store

(MOVBload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVBload [off1+off2] {sym} ptr mem)

(MOVBUload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVBUload [off1+off2] {sym} ptr mem)

(MOVHload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVHload [off1+off2] {sym} ptr mem)

(MOVHUload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVHUload [off1+off2] {sym} ptr mem)

(MOVWload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVWload [off1+off2] {sym} ptr mem)

(MOVFlload [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVFlload [off1+off2] {sym} ptr mem)

(MOVDload [off1] {sym} x:(ADDconst

[off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) => (MOVDload [off1+off2] {sym} ptr mem)

(MOVBstore [off1] {sym} x:(ADDconst [off2] ptr val mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVBstore [off1+off2] {sym} ptr val mem)

(MOVHstore [off1] {sym} x:(ADDconst [off2] ptr val mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVHstore [off1+off2] {sym} ptr val mem)

(MOVWstore [off1] {sym} x:(ADDconst [off2] ptr val mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVWstore [off1+off2] {sym} ptr val mem)

(MOVFstore [off1] {sym} x:(ADDconst [off2] ptr val mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVFstore [off1+off2] {sym} ptr val mem)

(MOVDstore [off1] {sym} x:(ADDconst [off2] ptr val mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVDstore [off1+off2] {sym} ptr val mem)

(MOVBstorezero [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVBstorezero [off1+off2] {sym} ptr mem)

(MOVHstorezero

[off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) => (MOVHstorezero

[off1+off2] {sym} ptr mem)

(MOVWstorezero [off1] {sym} x:(ADDconst [off2] ptr mem) && (is16Bit(int64(off1+off2)) || x.Uses == 1) =>

(MOVWstorezero [off1+off2] {sym} ptr mem)

(MOVBload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>

(MOVBload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

(MOVBUload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>

(MOVBUload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

```

(MOVHload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVHload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHUload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVHUload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVWload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVFload
[off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVFload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVDload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

(MOVBstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) =>
(MOVBstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVHstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) =>
(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVWstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) =>
(MOVWstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVFstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) =>
(MOVFstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVDstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr val mem) && canMergeSym(sym1,sym2) =>
(MOVDstore [off1+off2]
{mergeSym(sym1,sym2)} ptr val mem)
(MOVBstorezero [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVBstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHstorezero [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVHstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWstorezero [off1] {sym1} (MOVWaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) =>
(MOVWstorezero [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

// replace load from same location as preceding store with zero/sign extension (or copy in case of full width)
(MOVBload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBreg x)
(MOVBUload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBUreg x)
(MOVHload [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVHreg
x)
(MOVHUload [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVHUreg x)
(MOVWload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
(MOVFload [off] {sym} ptr (MOVFstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
(MOVDload [off] {sym} ptr (MOVDstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x

// store zero

```

```

(MOVBstore [off] {sym} ptr (MOVWconst [0]) mem) => (MOVBstorezero [off] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVWconst [0]) mem) => (MOVHstorezero [off] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVWconst [0]) mem) => (MOVWstorezero [off] {sym} ptr mem)

// don't extend after proper load
(MOVBreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVBUreg x:(MOVBUload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVBUload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVHload
_ _)) => (MOVWreg x)
(MOVHUreg x:(MOVBUload _ _)) => (MOVWreg x)
(MOVHUreg x:(MOVHload _ _)) => (MOVWreg x)

// fold double extensions
(MOVBreg x:(MOVBreg _)) => (MOVWreg x)
(MOVBUreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHreg x:(MOVBreg _)) => (MOVWreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHreg x:(MOVHreg _)) => (MOVWreg x)
(MOVHUreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHUreg x:(MOVHreg _)) => (MOVWreg x)

// sign extended loads
// Note: The combined instruction must end up in the same block
// as the original load. If not, we end up making a value with
// memory type live in two different blocks, which can lead to
// multiple memory values alive simultaneously.
// Make sure we don't combine these ops if the load has another use.
// This prevents a single load from being split into multiple loads
// which then might return different values. See test/atomicload.go.
(MOVBreg <t> x:(MOVBload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBload
<t> [off] {sym} ptr mem)
(MOVBUreg <t> x:(MOVBload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVBload <t> [off] {sym} ptr mem)
(MOVHreg <t> x:(MOVHload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVHload
<t> [off] {sym} ptr mem)
(MOVHUreg <t> x:(MOVHload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVHload <t> [off] {sym} ptr mem)

// fold extensions and ANDs together
(MOVBUreg (ANDconst [c] x)) => (ANDconst [c&0xff] x)
(MOVHUreg (ANDconst [c] x)) => (ANDconst [c&0xffff] x)
(MOVBreg (ANDconst [c] x)) && c & 0x80 == 0 => (ANDconst [c&0x7f] x)
(MOVHreg (ANDconst [c] x)) && c & 0x8000 == 0 => (ANDconst [c&0x7fff] x)

// don't extend before store
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)

```

```

(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHUreg
x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore [off] {sym} ptr x mem)

// if a register move has only 1 use, just use the same register without emitting instruction
// MOVWnop doesn't emit instruction, only for ensuring the type.
(MOVWreg x) && x.Uses == 1 => (MOVWnop x)

// TODO: we should be able to get rid of MOVWnop all together.
// But for now, this is enough to get rid of lots of them.
(MOVWnop (MOVWconst [c])) => (MOVWconst [c])

// fold constant into arithmetic ops
(ADD x (MOVWconst [c])) => (ADDconst [c] x)
(SUB x (MOVWconst [c])) => (SUBconst [c] x)
(AND x (MOVWconst [c])) => (ANDconst [c] x)
(OR
x (MOVWconst [c])) => (ORconst [c] x)
(XOR x (MOVWconst [c])) => (XORconst [c] x)
(NOR x (MOVWconst [c])) => (NORconst [c] x)

(SLL x (MOVWconst [c])) => (SLLconst x [c&31])
(SRL x (MOVWconst [c])) => (SRLconst x [c&31])
(SRA x (MOVWconst [c])) => (SRAconst x [c&31])

(SGT (MOVWconst [c]) x) => (SGTconst [c] x)
(SGTU (MOVWconst [c]) x) => (SGTUconst [c] x)
(SGT x (MOVWconst [0])) => (SGTzero x)
(SGTU x (MOVWconst [0])) => (SGTUzero x)

// mul with constant
(Select1 (MULTU (MOVWconst [0]) _)) => (MOVWconst [0])
(Select0 (MULTU (MOVWconst [0]) _)) => (MOVWconst [0])
(Select1 (MULTU (MOVWconst [1]) x)) => x
(Select0 (MULTU (MOVWconst [1]) _)) => (MOVWconst [0])
(Select1 (MULTU (MOVWconst [-1]) x)) => (NEG <x.Type> x)
(Select0 (MULTU (MOVWconst [-1]) x)) => (CMOVZ (ADDconst <x.Type> [-1] x) (MOVWconst [0]) x)
(Select1 (MULTU (MOVWconst [c]) x)) && isPowerOfTwo64(int64(uint32(c))) => (SLLconst
[int32(log2uint32(int64(c)))] x)
(Select0 (MULTU (MOVWconst [c]) x)) && isPowerOfTwo64(int64(uint32(c)))
=> (SRLconst [int32(32-log2uint32(int64(c)))] x)

```

```

(MUL (MOVWconst [0]) _) => (MOVWconst [0])
(MUL (MOVWconst [1]) x) => x
(MUL (MOVWconst [-1]) x) => (NEG x)
(MUL (MOVWconst [c]) x) && isPowerOfTwo64(int64(uint32(c))) => (SLLconst [int32(log2uint32(int64(c)))] x)

// generic simplifications
(ADD x (NEG y)) => (SUB x y)
(SUB x x) => (MOVWconst [0])
(SUB (MOVWconst [0]) x) => (NEG x)
(AND x x) => x
(OR x x) => x
(XOR x x) => (MOVWconst [0])

// miscellaneous patterns generated by dec64
(AND (SGTUconst [1] x) (SGTUconst [1] y)) => (SGTUconst [1] (OR <x.Type> x y))
(OR (SGTUzero x) (SGTUzero y)) => (SGTUzero (OR <x.Type> x y))

// remove redundant *const ops
(ADDconst [0] x) => x
(SUBconst [0] x) => x
(ANDconst [0] _) => (MOVWconst [0])
(ANDconst [-1] x) => x
(ORconst [0] x) => x
(ORconst [-1] _) => (MOVWconst [-1])
(XORconst [0] x) => x
(XORconst [-1] x) => (NORconst [0] x)

// generic constant folding
(ADDconst [c] (MOVWconst [d])) => (MOVWconst [int32(c+d)])
(ADDconst [c] (ADDconst [d] x)) => (ADDconst [c+d] x)
(ADDconst [c] (SUBconst [d] x)) => (ADDconst [c-d] x)
(SUBconst [c] (MOVWconst [d])) => (MOVWconst [d-c])
(SUBconst [c] (SUBconst [d] x)) => (ADDconst [-c-d] x)
(SUBconst [c] (ADDconst [d] x)) => (ADDconst [-c+d] x)
(SLLconst [c] (MOVWconst [d])) => (MOVWconst [d<<uint32(c)])
(SRLconst [c] (MOVWconst [d])) => (MOVWconst [int32(uint32(d)>>uint32(c))])
(SRAconst [c] (MOVWconst [d])) => (MOVWconst [d>>uint32(c)])
(MUL (MOVWconst [c]) (MOVWconst [d])) => (MOVWconst [c*d])
(Select1 (MULTU (MOVWconst [c]) (MOVWconst [d]))) => (MOVWconst [int32(uint32(c)*uint32(d))])
(Select0 (MULTU (MOVWconst [c]) (MOVWconst [d]))) => (MOVWconst [int32((int64(uint32(c))*int64(uint32(d))>>32)])
(Select1 (DIV (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst [c/d])
(Select1 (DIVU (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst [int32(uint32(c)/uint32(d))])
(Select0 (DIV (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst [c%d])
(Select0 (DIVU (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst [int32(uint32(c)%uint32(d))])
(ANDconst [c] (MOVWconst [d])) => (MOVWconst [c&d])

```

```

(ANDconst [c] (ANDconst [d] x)) => (ANDconst [c&d] x)
(ORconst [c] (MOVWconst [d])) => (MOVWconst [c|d])
(ORconst [c] (ORconst [d] x)) => (ORconst [c|d] x)
(XORconst [c] (MOVWconst [d])) => (MOVWconst [c^d])
(XORconst [c] (XORconst [d] x)) => (XORconst [c^d] x)
(NORconst [c] (MOVWconst [d])) => (MOVWconst [^(c|d)])
(NEG (MOVWconst [c])) => (MOVWconst [-c])
(MOVBreg (MOVWconst [c])) => (MOVWconst [int32(int8(c))])
(MOVBUreg (MOVWconst [c])) => (MOVWconst [int32(uint8(c))])
(MOVHreg (MOVWconst [c])) => (MOVWconst [int32(int16(c))])
(MOVHUreg (MOVWconst [c])) => (MOVWconst [int32(uint16(c))])
(MOVWreg (MOVWconst [c])) => (MOVWconst [c])

// constant comparisons
(SGTconst [c] (MOVWconst [d])) && c > d => (MOVWconst [1])
(SGTconst [c] (MOVWconst [d])) && c <= d => (MOVWconst [0])
(SGTUconst [c] (MOVWconst [d]))
&& uint32(c) > uint32(d) => (MOVWconst [1])
(SGTUconst [c] (MOVWconst [d])) && uint32(c) <= uint32(d) => (MOVWconst [0])
(SGTzero (MOVWconst [d])) && d > 0 => (MOVWconst [1])
(SGTzero (MOVWconst [d])) && d <= 0 => (MOVWconst [0])
(SGTUzero (MOVWconst [d])) && d != 0 => (MOVWconst [1])
(SGTUzero (MOVWconst [d])) && d == 0 => (MOVWconst [0])

// other known comparisons
(SGTconst [c] (MOVBreg _)) && 0x7f < c => (MOVWconst [1])
(SGTconst [c] (MOVBreg _)) && c <= -0x80 => (MOVWconst [0])
(SGTconst [c] (MOVBUreg _)) && 0xff < c => (MOVWconst [1])
(SGTconst [c] (MOVBUreg _)) && c < 0 => (MOVWconst [0])
(SGTUconst [c] (MOVBUreg _)) && 0xff < uint32(c) => (MOVWconst [1])
(SGTconst [c] (MOVHreg _)) && 0x7fff < c => (MOVWconst [1])
(SGTconst [c] (MOVHreg _)) && c <= -0x8000 => (MOVWconst [0])
(SGTconst [c] (MOVHUreg _)) && 0xffff < c => (MOVWconst [1])
(SGTconst [c] (MOVHUreg _)) && c < 0 => (MOVWconst [0])
(SGTUconst [c] (MOVHUreg _)) && 0xffff < uint32(c) => (MOVWconst [1])
(SGTconst
[c] (ANDconst [m] _)) && 0 <= m && m < c => (MOVWconst [1])
(SGTUconst [c] (ANDconst [m] _)) && uint32(m) < uint32(c) => (MOVWconst [1])
(SGTconst [c] (SRLconst _ [d])) && 0 <= c && uint32(d) <= 31 && 0xffffffff >> uint32(d) < uint32(c) =>
(MOVWconst [1])
(SGTUconst [c] (SRLconst _ [d])) && uint32(d) <= 31 && 0xffffffff >> uint32(d) < uint32(c) => (MOVWconst [1])

// absorb constants into branches
(EQ (MOVWconst [0]) yes no) => (First yes no)
(EQ (MOVWconst [c]) yes no) && c != 0 => (First no yes)
(NE (MOVWconst [0]) yes no) => (First no yes)
(NE (MOVWconst [c]) yes no) && c != 0 => (First yes no)
(LTZ (MOVWconst [c]) yes no) && c < 0 => (First yes no)

```



```

(LTZ (MOVWconst [c]) yes no) && c >= 0 => (First no yes)
(LEZ (MOVWconst [c]) yes no) && c <= 0 => (First yes no)
(LEZ (MOVWconst [c]) yes no) && c > 0 => (First no yes)
(GTZ (MOVWconst [c]) yes no) && c > 0 => (First yes no)
(GTZ (MOVWconst [c]) yes no) && c <= 0 => (First no yes)
(GEZ (MOVWconst [c]) yes no) && c >= 0 => (First yes
no)
(GEZ (MOVWconst [c]) yes no) && c < 0 => (First no yes)

// conditional move
(CMOVZ _ f (MOVWconst [0])) => f
(CMOVZ a _ (MOVWconst [c])) && c!=0 => a
(CMOVZzero _ (MOVWconst [0])) => (MOVWconst [0])
(CMOVZzero a (MOVWconst [c])) && c!=0 => a
(CMOVZ a (MOVWconst [0]) c) => (CMOVZzero a c)

// atomic
(LoweredAtomicStore32 ptr (MOVWconst [0]) mem) => (LoweredAtomicStorezero ptr mem)
(LoweredAtomicAdd ptr (MOVWconst [c]) mem) && is16Bit(int64(c)) => (LoweredAtomicAddconst [c] ptr mem)

Found in path(s):
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/MIPS.rules
No license file was found, but licenses were detected in source scan.

// Copyright 2016 The Go Authors. All rights reserved.
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// This file contains rules to decompose [u]int64 types on 32-bit
// architectures. These rules work together with the decomposeBuiltIn
// pass which handles phis of these typ.

(Int64Hi (Int64Make hi _) => hi
(Int64Lo (Int64Make _ lo)) => lo

(Load <t> ptr mem) && is64BitInt(t) && !config.BigEndian && t.IsSigned() =>
(Int64Make
(Load <typ.Int32> (OffPtr <typ.Int32Ptr> [4] ptr) mem)
(Load <typ.UInt32> ptr mem))

(Load <t> ptr mem) && is64BitInt(t) && !config.BigEndian && !t.IsSigned() =>
(Int64Make
(Load <typ.UInt32> (OffPtr <typ.UInt32Ptr> [4] ptr) mem)
(Load <typ.UInt32> ptr mem))

(Load <t> ptr mem) && is64BitInt(t) && config.BigEndian && t.IsSigned() =>
(Int64Make
(Load <typ.Int32> ptr mem)

```

```

(Load <typ.UInt32> (OffPtr <typ.UInt32Ptr> [4] ptr)
mem))

(Load <t> ptr mem) && is64BitInt(t) && config.BigEndian && !t.IsSigned() =>
(Int64Make
(Load <typ.UInt32> ptr mem)
(Load <typ.UInt32> (OffPtr <typ.UInt32Ptr> [4] ptr) mem))

(Store {t} dst (Int64Make hi lo) mem) && t.Size() == 8 && !config.BigEndian =>
(Store {hi.Type}
(OffPtr <hi.Type.PtrTo()> [4] dst)
hi
(Store {lo.Type} dst lo mem))

(Store {t} dst (Int64Make hi lo) mem) && t.Size() == 8 && config.BigEndian =>
(Store {lo.Type}
(OffPtr <lo.Type.PtrTo()> [4] dst)
lo
(Store {hi.Type} dst hi mem))

// These are not enabled during decomposeBuiltin if late call expansion, but they are always enabled for softFloat
(Arg {n} [off]) && is64BitInt(v.Type) && !config.BigEndian && v.Type.IsSigned() && !(b.Func.pass.name ==
"decompose builtin") =>
(Int64Make
(Arg <typ.Int32> {n} [off+4])
(Arg <typ.UInt32> {n} [off]))
(Arg {n} [off]) && is64BitInt(v.Type) && !config.BigEndian && !v.Type.IsSigned() && !(b.Func.pass.name ==
"decompose builtin") =>
(Int64Make
(Arg <typ.UInt32> {n} [off+4])
(Arg <typ.UInt32> {n} [off]))

(Arg {n} [off]) && is64BitInt(v.Type) && config.BigEndian && v.Type.IsSigned() && !(b.Func.pass.name ==
"decompose builtin") =>
(Int64Make
(Arg <typ.Int32> {n} [off])
(Arg <typ.UInt32> {n} [off+4]))
(Arg {n} [off]) && is64BitInt(v.Type) && config.BigEndian && !v.Type.IsSigned() && !(b.Func.pass.name ==
"decompose builtin") =>
(Int64Make
(Arg <typ.UInt32> {n} [off])
(Arg <typ.UInt32> {n} [off+4]))

(Add64 x y) =>
(Int64Make
(Add32withcarry <typ.Int32>
(Int64Hi x)
(Int64Hi y)

```

```

(Select1 <types.TypeFlags> (Add32carry (Int64Lo x) (Int64Lo y))))
(Select0 <typ.UInt32> (Add32carry (Int64Lo x) (Int64Lo y))))

(Sub64 x y) =>
(Int64Make
(Sub32withcarry <typ.Int32>
(Int64Hi x)
(Int64Hi y)
(Select1 <types.TypeFlags> (Sub32carry (Int64Lo x) (Int64Lo y))))
(Select0 <typ.UInt32> (Sub32carry (Int64Lo x) (Int64Lo y))))

(Mul64 x y) =>
(Int64Make
(Add32 <typ.UInt32>
(Mul32 <typ.UInt32>
(Int64Lo x) (Int64Hi y))
(Add32 <typ.UInt32>
(Mul32 <typ.UInt32> (Int64Hi x) (Int64Lo y))
(Select0 <typ.UInt32> (Mul32uhilo (Int64Lo x) (Int64Lo y))))))
(Select1 <typ.UInt32> (Mul32uhilo (Int64Lo x) (Int64Lo y))))

(And64 x y) =>
(Int64Make
(And32 <typ.UInt32> (Int64Hi x) (Int64Hi y))
(And32 <typ.UInt32> (Int64Lo x) (Int64Lo y)))

(Or64 x y) =>
(Int64Make
(Or32 <typ.UInt32> (Int64Hi x) (Int64Hi y))
(Or32 <typ.UInt32> (Int64Lo x) (Int64Lo y)))

(Xor64 x y) =>
(Int64Make
(Xor32 <typ.UInt32> (Int64Hi x) (Int64Hi y))
(Xor32 <typ.UInt32> (Int64Lo x) (Int64Lo y)))

(Neg64 <t> x) => (Sub64 (Const64 <t> [0]) x)

(Com64 x) =>
(Int64Make
(Com32 <typ.UInt32> (Int64Hi x))
(Com32 <typ.UInt32> (Int64Lo x)))

// Sadly, just because we know that x is non-zero,
// we don't know whether either component is,
// so just treat Ctz64NonZero the same as Ctz64.
(Ctz64NonZero ...) => (Ctz64 ...)

```

```

(Ctz64 x) =>
(Add32 <typ.UInt32>
(Ctz32 <typ.UInt32> (Int64Lo x))
(And32 <typ.UInt32>
(Com32
<typ.UInt32> (Zeromask (Int64Lo x)))
(Ctz32 <typ.UInt32> (Int64Hi x))))

(BitLen64 x) =>
(Add32 <typ.Int>
(BitLen32 <typ.Int> (Int64Hi x))
(BitLen32 <typ.Int>
(Or32 <typ.UInt32>
(Int64Lo x)
(Zeromask (Int64Hi x))))))

(Bswap64 x) =>
(Int64Make
(Bswap32 <typ.UInt32> (Int64Lo x))
(Bswap32 <typ.UInt32> (Int64Hi x)))

(SignExt32to64 x) => (Int64Make (Signmask x) x)
(SignExt16to64 x) => (SignExt32to64 (SignExt16to32 x))
(SignExt8to64 x) => (SignExt32to64 (SignExt8to32 x))

(ZeroExt32to64 x) => (Int64Make (Const32 <typ.UInt32> [0]) x)
(ZeroExt16to64 x) => (ZeroExt32to64 (ZeroExt16to32 x))
(ZeroExt8to64 x) => (ZeroExt32to64 (ZeroExt8to32 x))

(Trunc64to32 (Int64Make _ lo)) => lo
(Trunc64to16 (Int64Make _ lo)) => (Trunc32to16 lo)
(Trunc64to8 (Int64Make _ lo)) => (Trunc32to8 lo)
// Most general
(Trunc64to32 x) => (Int64Lo x)
(Trunc64to16 x) => (Trunc32to16 (Int64Lo x))
(Trunc64to8 x) => (Trunc32to8 (Int64Lo x))

(Lsh32x64 _ (Int64Make (Const32 [c]) _))
&& c != 0 => (Const32 [0])
(Rsh32x64 x (Int64Make (Const32 [c]) _) && c != 0 => (Signmask x)
(Rsh32Ux64 _ (Int64Make (Const32 [c]) _) && c != 0 => (Const32 [0])
(Lsh16x64 _ (Int64Make (Const32 [c]) _) && c != 0 => (Const32 [0])
(Rsh16x64 x (Int64Make (Const32 [c]) _) && c != 0 => (Signmask (SignExt16to32 x))
(Rsh16Ux64 _ (Int64Make (Const32 [c]) _) && c != 0 => (Const32 [0])
(Lsh8x64 _ (Int64Make (Const32 [c]) _) && c != 0 => (Const32 [0])
(Rsh8x64 x (Int64Make (Const32 [c]) _) && c != 0 => (Signmask (SignExt8to32 x))
(Rsh8Ux64 _ (Int64Make (Const32 [c]) _) && c != 0 => (Const32 [0])

```

```

(Lsh32x64 [c] x (Int64Make (Const32 [0]) lo)) => (Lsh32x32 [c] x lo)
(Rsh32x64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh32x32 [c] x lo)
(Rsh32Ux64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh32Ux32 [c] x lo)
(Lsh16x64 [c] x (Int64Make (Const32 [0]) lo)) => (Lsh16x32 [c] x lo)
(Rsh16x64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh16x32 [c] x lo)
(Rsh16Ux64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh16Ux32
[c] x lo)
(Lsh8x64 [c] x (Int64Make (Const32 [0]) lo)) => (Lsh8x32 [c] x lo)
(Rsh8x64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh8x32 [c] x lo)
(Rsh8Ux64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh8Ux32 [c] x lo)

(Lsh64x64 _ (Int64Make (Const32 [c] _)) && c != 0 => (Const64 [0])
(Rsh64x64 x (Int64Make (Const32 [c] _)) && c != 0 => (Int64Make (Signmask (Int64Hi x)) (Signmask (Int64Hi
x))))
(Rsh64Ux64 _ (Int64Make (Const32 [c] _)) && c != 0 => (Const64 [0])

(Lsh64x64 [c] x (Int64Make (Const32 [0]) lo)) => (Lsh64x32 [c] x lo)
(Rsh64x64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh64x32 [c] x lo)
(Rsh64Ux64 [c] x (Int64Make (Const32 [0]) lo)) => (Rsh64Ux32 [c] x lo)

// turn x64 non-constant shifts to x32 shifts
// if high 32-bit of the shift is nonzero, make a huge shift
(Lsh64x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Lsh64x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh64x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh64x32 x (Or32 <typ.UInt32> (Zeromask
hi) lo))
(Rsh64Ux64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh64Ux32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Lsh32x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Lsh32x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh32x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh32x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh32Ux64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh32Ux32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Lsh16x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Lsh16x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh16x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh16x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh16Ux64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh16Ux32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Lsh8x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Lsh8x32 x (Or32 <typ.UInt32> (Zeromask hi) lo))
(Rsh8x64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh8x32 x (Or32
<typ.UInt32> (Zeromask hi) lo))
(Rsh8Ux64 x (Int64Make hi lo)) && hi.Op != OpConst32 =>
    (Rsh8Ux32 x (Or32 <typ.UInt32> (Zeromask hi) lo))

```

```

// Most general
(Lsh64x64 x y) => (Lsh64x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh64x64 x y) => (Rsh64x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh64Ux64 x y) => (Rsh64Ux32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Lsh32x64 x y) => (Lsh32x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh32x64 x y) => (Rsh32x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh32Ux64 x y) => (Rsh32Ux32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Lsh16x64 x y) => (Lsh16x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh16x64 x y) => (Rsh16x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh16Ux64 x y) => (Rsh16Ux32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Lsh8x64 x y) => (Lsh8x32 x (Or32 <typ.UInt32>
(Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh8x64 x y) => (Rsh8x32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))
(Rsh8Ux64 x y) => (Rsh8Ux32 x (Or32 <typ.UInt32> (Zeromask (Int64Hi y)) (Int64Lo y)))

// Clean up constants a little
(Or32 <typ.UInt32> (Zeromask (Const32 [c])) y) && c == 0 => y
(Or32 <typ.UInt32> (Zeromask (Const32 [c])) y) && c != 0 => (Const32 <typ.UInt32> [-1])

// 64x left shift
// result.hi = hi<<s | lo>>(32-s) | lo<<(s-32) // >> is unsigned, large shifts result 0
// result.lo = lo<<s
(Lsh64x32 x s) =>
(Int64Make
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Lsh32x32 <typ.UInt32> (Int64Hi x) s)
(Rsh32Ux32 <typ.UInt32>
(Int64Lo x)
(Sub32 <typ.UInt32> (Const32 <typ.UInt32> [32]) s))))
(Lsh32x32 <typ.UInt32>
(Int64Lo x)
(Sub32 <typ.UInt32> s (Const32 <typ.UInt32> [32])))
(Lsh32x32 <typ.UInt32> (Int64Lo x) s))
(Lsh64x16 x s) =>
(Int64Make
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Lsh32x16 <typ.UInt32> (Int64Hi x)
s)
(Rsh32Ux16 <typ.UInt32>
(Int64Lo x)
(Sub16 <typ.UInt16> (Const16 <typ.UInt16> [32]) s))))
(Lsh32x16 <typ.UInt32>
(Int64Lo x)
(Sub16 <typ.UInt16> s (Const16 <typ.UInt16> [32])))
(Lsh32x16 <typ.UInt32> (Int64Lo x) s))

```

```

(Lsh64x8 x s) =>
(Int64Make
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Lsh32x8 <typ.UInt32> (Int64Hi x) s)
(Rsh32Ux8 <typ.UInt32>
(Int64Lo x)
(Sub8 <typ.UInt8> (Const8 <typ.UInt8> [32]) s)))
(Lsh32x8 <typ.UInt32>
(Int64Lo x)
(Sub8 <typ.UInt8> s (Const8 <typ.UInt8> [32])))
(Lsh32x8 <typ.UInt32> (Int64Lo x) s)

// 64x unsigned right shift
// result.hi = hi>>s
// result.lo = lo>>s | hi<<(32-s) | hi>>(s-32) // >> is unsigned, large shifts result 0
(Rsh64Ux32 x s) =>
(Int64Make
(Rsh32Ux32 <typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Rsh32Ux32 <typ.UInt32> (Int64Lo x) s)
(Lsh32x32 <typ.UInt32>
(Int64Hi x)
(Sub32 <typ.UInt32> (Const32 <typ.UInt32> [32]) s)))
(Rsh32Ux32
<typ.UInt32>
(Int64Hi x)
(Sub32 <typ.UInt32> s (Const32 <typ.UInt32> [32])))
(Rsh64Ux16 x s) =>
(Int64Make
(Rsh32Ux16 <typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Rsh32Ux16 <typ.UInt32> (Int64Lo x) s)
(Lsh32x16 <typ.UInt32>
(Int64Hi x)
(Sub16 <typ.UInt16> (Const16 <typ.UInt16> [32]) s)))
(Rsh32Ux16 <typ.UInt32>
(Int64Hi x)
(Sub16 <typ.UInt16> s (Const16 <typ.UInt16> [32])))
(Rsh64Ux8 x s) =>
(Int64Make
(Rsh32Ux8 <typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Rsh32Ux8 <typ.UInt32> (Int64Lo x) s)
(Lsh32x8 <typ.UInt32>

```

```

(Int64Hi x)
(Sub8 <typ.UInt8> (Const8 <typ.UInt8> [32] s)))
(Rsh32Ux8 <typ.UInt32>
(Int64Hi x)
(Sub8 <typ.UInt8> s (Const8 <typ.UInt8> [32])))

// 64x signed right shift
// result.hi = hi>>s
// result.lo = lo>>s | hi<<(32-s) | (hi>>(s-32))&zeromask(s>>5) // hi>>(s-32) is signed, large shifts result 0/-1
(Rsh64x32 x s) =>
(Int64Make
(Rsh32x32
<typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Rsh32Ux32 <typ.UInt32> (Int64Lo x) s)
(Lsh32x32 <typ.UInt32>
(Int64Hi x)
(Sub32 <typ.UInt32> (Const32 <typ.UInt32> [32] s))))
(And32 <typ.UInt32>
(Rsh32x32 <typ.UInt32>
(Int64Hi x)
(Sub32 <typ.UInt32> s (Const32 <typ.UInt32> [32])))
(Zeromask
(Rsh32Ux32 <typ.UInt32> s (Const32 <typ.UInt32> [5])))))
(Rsh64x16 x s) =>
(Int64Make
(Rsh32x16 <typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32 <typ.UInt32>
(Rsh32Ux16 <typ.UInt32> (Int64Lo x) s)
(Lsh32x16 <typ.UInt32>
(Int64Hi x)
(Sub16 <typ.UInt16> (Const16 <typ.UInt16> [32] s))))
(And32 <typ.UInt32>
(Rsh32x16 <typ.UInt32>
(Int64Hi x)
(Sub16 <typ.UInt16> s (Const16 <typ.UInt16> [32])))
(Zeromask
(ZeroExt16to32
(Rsh16Ux32 <typ.UInt16> s (Const32 <typ.UInt32> [5])))))
(Rsh64x8 x s) =>
(Int64Make
(Rsh32x8 <typ.UInt32> (Int64Hi x) s)
(Or32 <typ.UInt32>
(Or32
<typ.UInt32>
(Rsh32Ux8 <typ.UInt32> (Int64Lo x) s)

```



```

(Lsh32x8 <typ.UInt32>
(Int64Hi x)
(Sub8 <typ.UInt8> (Const8 <typ.UInt8> [32]) s)))
(And32 <typ.UInt32>
(Rsh32x8 <typ.UInt32>
(Int64Hi x)
(Sub8 <typ.UInt8> s (Const8 <typ.UInt8> [32])))
(Zeromask
(ZeroExt8to32
(Rsh8Ux32 <typ.UInt8> s (Const32 <typ.UInt32> [5]))))))

```

```

(Const64 <t> [c]) && t.IsSigned() =>
(Int64Make (Const32 <typ.Int32> [int32(c)>>32]) (Const32 <typ.UInt32> [int32(c)]))
(Const64 <t> [c]) && !t.IsSigned() =>
(Int64Make (Const32 <typ.UInt32> [int32(c)>>32]) (Const32 <typ.UInt32> [int32(c)]))

```

```

(Eq64 x y) =>
(AndB
(Eq32 (Int64Hi x) (Int64Hi y))
(Eq32 (Int64Lo x) (Int64Lo y)))

```

```

(Neq64 x y) =>
(OrB
(Neq32 (Int64Hi x) (Int64Hi y))
(Neq32 (Int64Lo x) (Int64Lo y)))

```

```

(Less64U x y) =>
(OrB
(Less32U (Int64Hi x) (Int64Hi y))
(AndB
(Eq32 (Int64Hi x) (Int64Hi y))
(Less32U (Int64Lo x) (Int64Lo y))))

```

```

(Leq64U x y) =>
(OrB
(Less32U (Int64Hi x) (Int64Hi y))
(AndB
(Eq32
(Int64Hi x) (Int64Hi y))
(Leq32U (Int64Lo x) (Int64Lo y))))

```

```

(Less64 x y) =>
(OrB
(Less32 (Int64Hi x) (Int64Hi y))
(AndB
(Eq32 (Int64Hi x) (Int64Hi y))
(Less32U (Int64Lo x) (Int64Lo y))))

```

```
(Leq64 x y) =>
(OrB
(Less32 (Int64Hi x) (Int64Hi y))
(AndB
(Eq32 (Int64Hi x) (Int64Hi y))
(Leq32U (Int64Lo x) (Int64Lo y))))
```

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/dec64.rules
```

No license file was found, but licenses were detected in source scan.

```
// Copyright 2016 The Go Authors. All rights reserved.
```

```
// Use of this source code is governed by a BSD-style
```

```
// license that can be found in the LICENSE file.
```

```
(Add(Ptr|32|16|8) ...) => (ADD ...)
```

```
(Add(32|64)F ...) => (ADD(F|D) ...)
```

```
(Add32carry ...) => (ADDS ...)
```

```
(Add32withcarry ...) => (ADC ...)
```

```
(Sub(Ptr|32|16|8) ...) => (SUB ...)
```

```
(Sub(32|64)F ...) => (SUB(F|D) ...)
```

```
(Sub32carry ...) => (SUBS ...)
```

```
(Sub32withcarry ...) => (SBC ...)
```

```
(Mul(32|16|8) ...) => (MUL ...)
```

```
(Mul(32|64)F ...) => (MUL(F|D) ...)
```

```
(Hmul(32|32u) ...) => (HMU(L|LU) ...)
```

```
(Mul32uhilo ...) => (MULLU ...)
```

```
(Div32 x y) =>
```

```
(SUB (XOR <typ.UInt32>                                     // negate the result if one operand is negative
```

```
(Select0 <typ.UInt32> (CALLudiv
```

```
(SUB <typ.UInt32> (XOR x <typ.UInt32> (Signmask x)) (Signmask x)) // negate x if negative
```

```
(SUB <typ.UInt32> (XOR y <typ.UInt32> (Signmask y)) (Signmask y)))) // negate y if
```

```
negative
```

```
(Signmask (XOR <typ.UInt32> x y)) (Signmask (XOR <typ.UInt32> x y)))
```

```
(Div32u x y) => (Select0 <typ.UInt32> (CALLudiv x y))
```

```
(Div16 x y) => (Div32 (SignExt16to32 x) (SignExt16to32 y))
```

```
(Div16u x y) => (Div32u (ZeroExt16to32 x) (ZeroExt16to32 y))
```

```
(Div8 x y) => (Div32 (SignExt8to32 x) (SignExt8to32 y))
```

```
(Div8u x y) => (Div32u (ZeroExt8to32 x) (ZeroExt8to32 y))
```

```
(Div(32|64)F ...) => (DIV(F|D) ...)
```

```
(Mod32 x y) =>
```

```
(SUB (XOR <typ.UInt32>                                     // negate the result if x is negative
```

```
(Select1 <typ.UInt32> (CALLudiv
```

```
(SUB <typ.UInt32> (XOR <typ.UInt32> x (Signmask x)) (Signmask x)) // negate x if negative
```

```

    (SUB <typ.UInt32> (XOR <typ.UInt32> y (Signmask y)) (Signmask y))) // negate y if negative
    (Signmask x)) (Signmask x))
(Mod32u x y) => (Select1 <typ.UInt32> (CALLudiv x y))
(Mod16 x y) => (Mod32 (SignExt16to32 x) (SignExt16to32 y))
(Mod16u x y) => (Mod32u (ZeroExt16to32 x) (ZeroExt16to32 y))
(Mod8 x y) => (Mod32 (SignExt8to32
x) (SignExt8to32 y))
(Mod8u x y) => (Mod32u (ZeroExt8to32 x) (ZeroExt8to32 y))

// (x + y) / 2 with x>=y -> (x - y) / 2 + y
(Avg32u <t> x y) => (ADD (SRLconst <t> (SUB <t> x y) [1]) y)

(And(32|16|8) ...) => (AND ...)
(Or(32|16|8) ...) => (OR ...)
(Xor(32|16|8) ...) => (XOR ...)

// unary ops
(Neg(32|16|8) x) => (RSBconst [0] x)
(Neg(32|64)F ...) => (NEG(F|D) ...)

(Com(32|16|8) ...) => (MVN ...)

(Sqrt ...) => (SQRTD ...)
(Sqrt32 ...) => (SQRTF ...)
(Abs ...) => (ABSD ...)

// TODO: optimize this for ARMv5 and ARMv6
(Ctz32NonZero ...) => (Ctz32 ...)
(Ctz16NonZero ...) => (Ctz32 ...)
(Ctz8NonZero ...) => (Ctz32 ...)

// count trailing zero for ARMv5 and ARMv6
// 32 - CLZ(x&-x - 1)
(Ctz32 <t> x) && buildcfg.GOARM<=6 =>
(RSBconst [32] (CLZ <t> (SUBconst <t> (AND <t> x (RSBconst <t> [0] x)) [1])))
(Ctz16 <t> x) && buildcfg.GOARM<=6 =>
(RSBconst [32] (CLZ <t> (SUBconst <typ.UInt32> (AND <typ.UInt32> (ORconst <typ.UInt32> [0x10000] x)
(RSBconst <typ.UInt32> [0] (ORconst <typ.UInt32> [0x10000]
x))) [1])))
(Ctz8 <t> x) && buildcfg.GOARM<=6 =>
(RSBconst [32] (CLZ <t> (SUBconst <typ.UInt32> (AND <typ.UInt32> (ORconst <typ.UInt32> [0x100] x)
(RSBconst <typ.UInt32> [0] (ORconst <typ.UInt32> [0x100] x))) [1])))

// count trailing zero for ARMv7
(Ctz32 <t> x) && buildcfg.GOARM==7 => (CLZ <t> (RBIT <t> x))
(Ctz16 <t> x) && buildcfg.GOARM==7 => (CLZ <t> (RBIT <typ.UInt32> (ORconst <typ.UInt32> [0x10000] x)))
(Ctz8 <t> x) && buildcfg.GOARM==7 => (CLZ <t> (RBIT <typ.UInt32> (ORconst <typ.UInt32> [0x100] x)))

```

```

// bit length
(BitLen32 <t> x) => (RSBconst [32] (CLZ <t> x))

// byte swap for ARMv5
// let (a, b, c, d) be the bytes of x from high to low
// t1 = x right rotate 16 bits -- (c, d, a, b )
// t2 = x ^ t1          -- (a^c, b^d, a^c, b^d)
// t3 = t2 &^ 0xff0000   -- (a^c, 0, a^c, b^d)
// t4 = t3 >> 8         -- (0, a^c, 0, a^c)
// t5 = x right rotate 8 bits -- (d, a, b, c )
// result = t4 ^ t5     -- (d, c, b, a )
// using
shifted ops this can be done in 4 instructions.
(Bswap32 <t> x) && buildcfg.GOARM==5 =>
(XOR <t>
(SRLconst <t> (BICconst <t> (XOR <t> x (SRRconst <t> [16] x)) [0xff0000]) [8])
(SRRconst <t> x [8]))

// byte swap for ARMv6 and above
(Bswap32 x) && buildcfg.GOARM>=6 => (REV x)

// boolean ops -- booleans are represented with 0=false, 1=true
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (XORconst [1] (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not x) => (XORconst [1] x)

// shifts
// hardware instruction uses only the low byte of the shift
// we compare to 256 to ensure Go semantics for large shifts
(Lsh32x32 x y) => (CMOVWHSconst (SLL <x.Type> x y) (CMPconst [256] y) [0])
(Lsh32x16 x y) => (CMOVWHSconst (SLL <x.Type> x (ZeroExt16to32 y)) (CMPconst [256] (ZeroExt16to32 y))
[0])
(Lsh32x8 x y) => (SLL x (ZeroExt8to32 y))

(Lsh16x32 x y) => (CMOVWHSconst (SLL <x.Type> x y) (CMPconst [256] y) [0])
(Lsh16x16 x y) => (CMOVWHSconst (SLL <x.Type> x (ZeroExt16to32 y)) (CMPconst
[256] (ZeroExt16to32 y)) [0])
(Lsh16x8 x y) => (SLL x (ZeroExt8to32 y))

(Lsh8x32 x y) => (CMOVWHSconst (SLL <x.Type> x y) (CMPconst [256] y) [0])
(Lsh8x16 x y) => (CMOVWHSconst (SLL <x.Type> x (ZeroExt16to32 y)) (CMPconst [256] (ZeroExt16to32 y))
[0])
(Lsh8x8 x y) => (SLL x (ZeroExt8to32 y))

(Rsh32Ux32 x y) => (CMOVWHSconst (SRL <x.Type> x y) (CMPconst [256] y) [0])
(Rsh32Ux16 x y) => (CMOVWHSconst (SRL <x.Type> x (ZeroExt16to32 y)) (CMPconst [256] (ZeroExt16to32

```

```

y)) [0])
(Rsh32Ux8 x y) => (SRL x (ZeroExt8to32 y))

(Rsh16Ux32 x y) => (CMOVWHSconst (SRL <x.Type> (ZeroExt16to32 x) y) (CMPconst [256] y) [0])
(Rsh16Ux16 x y) => (CMOVWHSconst (SRL <x.Type> (ZeroExt16to32 x) (ZeroExt16to32 y)) (CMPconst [256]
(ZeroExt16to32 y)) [0])
(Rsh16Ux8 x y) => (SRL (ZeroExt16to32 x) (ZeroExt8to32 y))

(Rsh8Ux32 x y) => (CMOVWHSconst (SRL <x.Type> (ZeroExt8to32 x) y) (CMPconst [256] y) [0])
(Rsh8Ux16 x y) => (CMOVWHSconst (SRL <x.Type> (ZeroExt8to32 x) (ZeroExt16to32 y)) (CMPconst [256]
(ZeroExt16to32
y)) [0])
(Rsh8Ux8 x y) => (SRL (ZeroExt8to32 x) (ZeroExt8to32 y))

(Rsh32x32 x y) => (SRAcond x y (CMPconst [256] y))
(Rsh32x16 x y) => (SRAcond x (ZeroExt16to32 y) (CMPconst [256] (ZeroExt16to32 y)))
(Rsh32x8 x y) => (SRA x (ZeroExt8to32 y))

(Rsh16x32 x y) => (SRAcond (SignExt16to32 x) y (CMPconst [256] y))
(Rsh16x16 x y) => (SRAcond (SignExt16to32 x) (ZeroExt16to32 y) (CMPconst [256] (ZeroExt16to32 y)))
(Rsh16x8 x y) => (SRA (SignExt16to32 x) (ZeroExt8to32 y))

(Rsh8x32 x y) => (SRAcond (SignExt8to32 x) y (CMPconst [256] y))
(Rsh8x16 x y) => (SRAcond (SignExt8to32 x) (ZeroExt16to32 y) (CMPconst [256] (ZeroExt16to32 y)))
(Rsh8x8 x y) => (SRA (SignExt8to32 x) (ZeroExt8to32 y))

// constant shifts
// generic opt rewrites all constant shifts to shift by Const64
(Lsh32x64 x (Const64 [c])) && uint64(c) < 32 => (SLLconst x [int32(c)])
(Rsh32x64 x (Const64 [c])) && uint64(c) < 32 => (SRAconst x [int32(c)])
(Rsh32Ux64 x (Const64 [c])) && uint64(c) < 32 => (SRLconst x [int32(c)])
(Lsh16x64
x (Const64 [c])) && uint64(c) < 16 => (SLLconst x [int32(c)])
(Rsh16x64 x (Const64 [c])) && uint64(c) < 16 => (SRAconst (SLLconst <typ.UInt32> x [16]) [int32(c+16)])
(Rsh16Ux64 x (Const64 [c])) && uint64(c) < 16 => (SRLconst (SLLconst <typ.UInt32> x [16]) [int32(c+16)])
(Lsh8x64 x (Const64 [c])) && uint64(c) < 8 => (SLLconst x [int32(c)])
(Rsh8x64 x (Const64 [c])) && uint64(c) < 8 => (SRAconst (SLLconst <typ.UInt32> x [24]) [int32(c+24)])
(Rsh8Ux64 x (Const64 [c])) && uint64(c) < 8 => (SRLconst (SLLconst <typ.UInt32> x [24]) [int32(c+24)])

// large constant shifts
(Lsh32x64 _ (Const64 [c])) && uint64(c) >= 32 => (Const32 [0])
(Rsh32Ux64 _ (Const64 [c])) && uint64(c) >= 32 => (Const32 [0])
(Lsh16x64 _ (Const64 [c])) && uint64(c) >= 16 => (Const16 [0])
(Rsh16Ux64 _ (Const64 [c])) && uint64(c) >= 16 => (Const16 [0])
(Lsh8x64 _ (Const64 [c])) && uint64(c) >= 8 => (Const8 [0])
(Rsh8Ux64 _ (Const64 [c])) && uint64(c) >= 8 => (Const8 [0])

// large constant signed right shift,

```

```

we leave the sign bit
(Rsh32x64 x (Const64 [c])) && uint64(c) >= 32 => (SRAconst x [31])
(Rsh16x64 x (Const64 [c])) && uint64(c) >= 16 => (SRAconst (SLLconst <typ.UInt32> x [16]) [31])
(Rsh8x64 x (Const64 [c])) && uint64(c) >= 8 => (SRAconst (SLLconst <typ.UInt32> x [24]) [31])

// constants
(Const(8|16|32) [val]) => (MOVWconst [int32(val)])
(Const(32|64)F [val]) => (MOV(F|D)const [float64(val)])
(ConstNil) => (MOVWconst [0])
(ConstBool [t]) => (MOVWconst [b2i32(t)])

// truncations
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8 ...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)

// Zero-/Sign-extensions
(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)

(SignExt8to16 ...) => (MOVBreg ...)
(SignExt8to32 ...) => (MOVBreg ...)
(SignExt16to32 ...) => (MOVHreg ...)

(Signmask x) => (SRAconst x [31])
(Zeromask x) => (SRAconst (RSBshiftRL <typ.Int32> x x [1]) [31])
// sign bit of uint32(x)>>1 - x
(Slicemask <t> x) => (SRAconst (RSBconst <t> [0] x) [31])

// float <-> int conversion
(Cvt32to32F ...) => (MOVWF ...)
(Cvt32to64F ...) => (MOVWD ...)
(Cvt32Uto32F ...) => (MOVWUF ...)
(Cvt32Uto64F ...) => (MOVWUD ...)
(Cvt32Fto32 ...) => (MOVFW ...)
(Cvt64Fto32 ...) => (MOVDW ...)
(Cvt32Fto32U ...) => (MOVFWU ...)
(Cvt64Fto32U ...) => (MOVDWU ...)
(Cvt32Fto64F ...) => (MOVFD ...)
(Cvt64Fto32F ...) => (MOVDF ...)

(Round(32|64)F ...) => (Copy ...)

(CvtBoolToUInt8 ...) => (Copy ...)

// fused-multiply-add

```

```

(FMA x y z) => (FMULAD z x y)

// comparisons
(Eq8 x y) => (Equal (CMP (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Eq16 x y) => (Equal (CMP (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Eq32 x y) => (Equal (CMP x y))
(EqPtr x y) => (Equal (CMP x y))
(Eq(32|64)F x y) => (Equal (CMP(F|D) x y))

(Neq8 x y) => (NotEqual (CMP (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Neq16 x y) => (NotEqual (CMP (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Neq32 x y) => (NotEqual (CMP x y))
(NeqPtr
 x y) => (NotEqual (CMP x y))
(Neq(32|64)F x y) => (NotEqual (CMP(F|D) x y))

(Less8 x y) => (LessThan (CMP (SignExt8to32 x) (SignExt8to32 y)))
(Less16 x y) => (LessThan (CMP (SignExt16to32 x) (SignExt16to32 y)))
(Less32 x y) => (LessThan (CMP x y))
(Less(32|64)F x y) => (GreaterThan (CMP(F|D) y x)) // reverse operands to work around NaN

(Less8U x y) => (LessThanU (CMP (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Less16U x y) => (LessThanU (CMP (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Less32U x y) => (LessThanU (CMP x y))

(Leq8 x y) => (LessEqual (CMP (SignExt8to32 x) (SignExt8to32 y)))
(Leq16 x y) => (LessEqual (CMP (SignExt16to32 x) (SignExt16to32 y)))
(Leq32 x y) => (LessEqual (CMP x y))
(Leq(32|64)F x y) => (GreaterEqual (CMP(F|D) y x)) // reverse operands to work around NaN

(Leq8U x y) => (LessEqualU (CMP (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Leq16U x y) => (LessEqualU (CMP (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Leq32U x y) => (LessEqualU (CMP x y))

(OffPtr [off] ptr:(SP)) => (MOVWaddr
 [int32(off)] ptr)
(OffPtr [off] ptr) => (ADDconst [int32(off)] ptr)

(Addr {sym} base) => (MOVWaddr {sym} base)
(LocalAddr {sym} base _) => (MOVWaddr {sym} base)

// loads
(Load <t> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && isSigned(t)) => (MOVBLload ptr mem)
(Load <t> ptr mem) && (is8BitInt(t) && !isSigned(t)) => (MOVBUload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && isSigned(t)) => (MOVHLload ptr mem)
(Load <t> ptr mem) && (is16BitInt(t) && !isSigned(t)) => (MOVHUload ptr mem)
(Load <t> ptr mem) && (is32BitInt(t) || isPtr(t)) => (MOVWLload ptr mem)

```

```

(Load <t> ptr mem) && is32BitFloat(t) => (MOVFloat ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (MOVDload ptr mem)

// stores
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)
(Store {t} ptr val mem) &&
t.Size() == 4 && is32BitFloat(val.Type) => (MOVFloatstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVDstore ptr val mem)

// zero instructions
(Zero [0] _ mem) => mem
(Zero [1] ptr mem) => (MOVBstore ptr (MOVWconst [0]) mem)
(Zero [2] {t} ptr mem) && t.Alignment()%2 == 0 =>
(MOVHstore ptr (MOVWconst [0]) mem)
(Zero [2] ptr mem) =>
(MOVBstore [1] ptr (MOVWconst [0])
(MOVBstore [0] ptr (MOVWconst [0]) mem))
(Zero [4] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore ptr (MOVWconst [0]) mem)
(Zero [4] {t} ptr mem) && t.Alignment()%2 == 0 =>
(MOVHstore [2] ptr (MOVWconst [0])
(MOVHstore [0] ptr (MOVWconst [0]) mem))
(Zero [4] ptr mem) =>
(MOVBstore [3] ptr (MOVWconst [0])
(MOVBstore [2] ptr (MOVWconst [0])
(MOVBstore [1] ptr (MOVWconst [0])
(MOVBstore [0] ptr (MOVWconst [0]) mem))))

(Zero [3] ptr mem) =>
(MOVBstore [2] ptr (MOVWconst [0])
(MOVBstore [1] ptr (MOVWconst [0])
(MOVBstore [0] ptr (MOVWconst [0]) mem)))

// Medium
zeroing uses a duff device
// 4 and 128 are magic constants, see runtime/mkduff.go
(Zero [s] {t} ptr mem)
&& s%4 == 0 && s > 4 && s <= 512
&& t.Alignment()%4 == 0 && !config.noDuffDevice =>
(DUFFZERO [4 * (128 - s/4)] ptr (MOVWconst [0]) mem)

// Large zeroing uses a loop
(Zero [s] {t} ptr mem)
&& (s > 512 || config.noDuffDevice) || t.Alignment()%4 != 0 =>
(LoweredZero [t.Alignment()]
ptr

```



```

(ADDconst <ptr.Type> ptr [int32(s-moveSize(t.Alignment(), config))])
(MOVWconst [0])
mem)

// moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBUload src mem) mem)
(Move [2] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore dst (MOVHUload src mem) mem)
(Move [2] dst src mem) =>
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem))
(Move [4] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore dst (MOVWload src mem) mem)
(Move [4] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [2] dst (MOVHUload [2] src mem)
(MOVHstore
dst (MOVHUload src mem) mem))
(Move [4] dst src mem) =>
(MOVBstore [3] dst (MOVBUload [3] src mem)
(MOVBstore [2] dst (MOVBUload [2] src mem)
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem))))

(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBUload [2] src mem)
(MOVBstore [1] dst (MOVBUload [1] src mem)
(MOVBstore dst (MOVBUload src mem) mem)))

// Medium move uses a duff device
// 8 and 128 are magic constants, see runtime/mkduff.go
(Move [s] {t} dst src mem)
&& s%4 == 0 && s > 4 && s <= 512
&& t.Alignment()%4 == 0 && !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [8 * (128 - s/4)] dst src mem)

// Large move uses a loop
(Move [s] {t} dst src mem)
&& ((s > 512 || config.noDuffDevice) || t.Alignment()%4 != 0) && logLargeCopy(v, s) =>
(LoweredMove [t.Alignment()]
dst
src
(ADDconst <src.Type> src [int32(s-moveSize(t.Alignment(), config))])
mem)

// calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall

```

```

... => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// checks
(NilCheck ...) => (LoweredNilCheck ...)
(IsNotNil ptr) => (NotEqual (CMPconst [0] ptr))
(IsInBounds idx len) => (LessThanU (CMP idx len))
(IsSliceInBounds idx len) => (LessEqualU (CMP idx len))

// pseudo-ops
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

// Absorb pseudo-ops into blocks.
(If (Equal cc) yes no) => (EQ cc yes no)
(If (NotEqual cc) yes no) => (NE cc yes no)
(If (LessThan cc) yes no) => (LT cc yes no)
(If (LessThanU cc) yes no) => (ULT cc yes no)
(If (LessEqual cc) yes no) => (LE cc yes no)
(If (LessEqualU cc) yes no) => (ULE cc yes no)
(If (GreaterThan cc) yes no) => (GT cc yes no)
(If (GreaterThanU cc) yes no) => (UGT cc yes no)
(If (GreaterEqual cc) yes no) => (GE cc yes no)
(If (GreaterEqualU cc) yes no) => (UGE cc yes no)

(If cond yes no) => (NE (CMPconst [0] cond) yes
no)

// Absorb boolean tests into block
(NE (CMPconst [0] (Equal cc)) yes no) => (EQ cc yes no)
(NE (CMPconst [0] (NotEqual cc)) yes no) => (NE cc yes no)
(NE (CMPconst [0] (LessThan cc)) yes no) => (LT cc yes no)
(NE (CMPconst [0] (LessThanU cc)) yes no) => (ULT cc yes no)
(NE (CMPconst [0] (LessEqual cc)) yes no) => (LE cc yes no)
(NE (CMPconst [0] (LessEqualU cc)) yes no) => (ULE cc yes no)
(NE (CMPconst [0] (GreaterThan cc)) yes no) => (GT cc yes no)
(NE (CMPconst [0] (GreaterThanU cc)) yes no) => (UGT cc yes no)
(NE (CMPconst [0] (GreaterEqual cc)) yes no) => (GE cc yes no)
(NE (CMPconst [0] (GreaterEqualU cc)) yes no) => (UGE cc yes no)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

```

```

(PanicExtend [kind]
 hi lo y mem) && boundsABI(kind) == 0 => (LoweredPanicExtendA [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 1 => (LoweredPanicExtendB [kind] hi lo y mem)
(PanicExtend [kind] hi lo y mem) && boundsABI(kind) == 2 => (LoweredPanicExtendC [kind] hi lo y mem)

```

```
// Optimizations
```

```
// fold offset into address
```

```

(ADDconst [off1] (MOVWaddr [off2] {sym} ptr)) => (MOVWaddr [off1+off2] {sym} ptr)
(SUBconst [off1] (MOVWaddr [off2] {sym} ptr)) => (MOVWaddr [off2-off1] {sym} ptr)

```

```
// fold address into load/store
```

```

(MOVBload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVBload [off1+off2] {sym} ptr mem)
(MOVBload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVBload [off1-off2] {sym} ptr mem)
(MOVBUload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVBUload [off1+off2] {sym} ptr mem)
(MOVBUload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVBUload [off1-off2] {sym} ptr mem)
(MOVHload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVHload [off1+off2] {sym} ptr mem)
(MOVHload [off1]
 {sym} (SUBconst [off2] ptr) mem) => (MOVHload [off1-off2] {sym} ptr mem)
(MOVHUload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVHUload [off1+off2] {sym} ptr mem)
(MOVHUload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVHUload [off1-off2] {sym} ptr mem)
(MOVWload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVWload [off1+off2] {sym} ptr mem)
(MOVWload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVWload [off1-off2] {sym} ptr mem)
(MOVFload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVFload [off1+off2] {sym} ptr mem)
(MOVFload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVFload [off1-off2] {sym} ptr mem)
(MOVDload [off1] {sym} (ADDconst [off2] ptr) mem) => (MOVDload [off1+off2] {sym} ptr mem)
(MOVDload [off1] {sym} (SUBconst [off2] ptr) mem) => (MOVDload [off1-off2] {sym} ptr mem)

```

```

(MOVBstore [off1] {sym} (ADDconst [off2] ptr) val mem) => (MOVBstore [off1+off2] {sym} ptr val mem)
(MOVBstore [off1] {sym} (SUBconst [off2] ptr) val mem) => (MOVBstore [off1-off2] {sym} ptr val mem)
(MOVHstore
 [off1] {sym} (ADDconst [off2] ptr) val mem) => (MOVHstore [off1+off2] {sym} ptr val mem)
(MOVHstore [off1] {sym} (SUBconst [off2] ptr) val mem) => (MOVHstore [off1-off2] {sym} ptr val mem)
(MOVWstore [off1] {sym} (ADDconst [off2] ptr) val mem) => (MOVWstore [off1+off2] {sym} ptr val mem)
(MOVWstore [off1] {sym} (SUBconst [off2] ptr) val mem) => (MOVWstore [off1-off2] {sym} ptr val mem)
(MOVFstore [off1] {sym} (ADDconst [off2] ptr) val mem) => (MOVFstore [off1+off2] {sym} ptr val mem)
(MOVFstore [off1] {sym} (SUBconst [off2] ptr) val mem) => (MOVFstore [off1-off2] {sym} ptr val mem)
(MOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) => (MOVDstore [off1+off2] {sym} ptr val mem)
(MOVDstore [off1] {sym} (SUBconst [off2] ptr) val mem) => (MOVDstore [off1-off2] {sym} ptr val mem)

```

```

(MOVBload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
 (MOVBload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVBUload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) &&
 canMergeSym(sym1,sym2) =>
 (MOVBUload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHload [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
 (MOVHload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)

```

```
(MOVHULoad [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
(MOVHULoad [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWLoad [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
(MOVWLoad [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVFLoad [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
(MOVFLoad [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDLoad [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2) =>
(MOVDLoad [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
```

```
(MOVBstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) =>
(MOVBstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVHstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) val
mem) && canMergeSym(sym1,sym2) =>
(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVWstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) =>
(MOVWstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVFstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) =>
(MOVFstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVDstore [off1] {sym1} (MOVWaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2) =>
(MOVDstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
```

```
// replace load from same location as preceding store with zero/sign extension (or copy in case of full width)
(MOVBload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBreg x)
(MOVBULoad [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBUreg x)
(MOVHload [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _) && sym == sym2 &&
off == off2 && isSamePtr(ptr, ptr2) => (MOVHreg x)
(MOVHULoad [off] {sym} ptr (MOVHstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVHUreg x)
(MOVWload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
```

```
(MOVFLoad [off] {sym} ptr (MOVFstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
(MOVDload [off] {sym} ptr (MOVDstore [off2] {sym2} ptr2 x _) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
```

```
(MOVWloadidx ptr idx (MOVWstoreidx ptr2 idx x _) && isSamePtr(ptr, ptr2) => x
(MOVWloadshiftLL ptr idx [c] (MOVWstoreshiftLL ptr2 idx [d] x _) && c==d && isSamePtr(ptr, ptr2) => x
(MOVWloadshiftRL ptr idx [c] (MOVWstoreshiftRL ptr2 idx [d] x _) && c==d && isSamePtr(ptr, ptr2) => x
(MOVWloadshiftRA ptr idx [c] (MOVWstoreshiftRA ptr2 idx [d] x _) && c==d && isSamePtr(ptr, ptr2) => x
(MOVBULoadidx ptr idx (MOVBstoreidx ptr2 idx x _) && isSamePtr(ptr,
ptr2) => (MOVBUreg x)
(MOVBloadidx ptr idx (MOVBstoreidx ptr2 idx x _) && isSamePtr(ptr, ptr2) => (MOVBreg x)
(MOVHULoadidx ptr idx (MOVHstoreidx ptr2 idx x _) && isSamePtr(ptr, ptr2) => (MOVHUreg x)
(MOVHloadidx ptr idx (MOVHstoreidx ptr2 idx x _) && isSamePtr(ptr, ptr2) => (MOVHreg x)
```

```

// fold constant into arithmetic ops
(ADD x (MOVWconst [c])) => (ADDconst [c] x)
(SUB (MOVWconst [c]) x) => (RSBconst [c] x)
(SUB x (MOVWconst [c])) => (SUBconst [c] x)
(RSB (MOVWconst [c]) x) => (SUBconst [c] x)
(RSB x (MOVWconst [c])) => (RSBconst [c] x)

(ADDS x (MOVWconst [c])) => (ADDSconst [c] x)
(SUBS x (MOVWconst [c])) => (SUBSconst [c] x)

(ADC (MOVWconst [c]) x flags) => (ADCconst [c] x flags)
(SBC (MOVWconst [c]) x flags) => (RSCconst [c] x flags)
(SBC x (MOVWconst [c]) flags) => (SBCconst [c] x flags)

(AND x (MOVWconst [c])) => (ANDconst [c] x)
(OR x (MOVWconst [c])) => (ORconst [c] x)
(XOR x (MOVWconst [c])) => (XORconst [c] x)
(BIC x (MOVWconst [c])) => (BICconst [c] x)

(SLL
x (MOVWconst [c])) && 0 <= c && c < 32 => (SLLconst x [c])
(SRL x (MOVWconst [c])) && 0 <= c && c < 32 => (SRLconst x [c])
(SRA x (MOVWconst [c])) && 0 <= c && c < 32 => (SRAconst x [c])

(CMP x (MOVWconst [c])) => (CMPconst [c] x)
(CMP (MOVWconst [c]) x) => (InvertFlags (CMPconst [c] x))
(CMN x (MOVWconst [c])) => (CMNconst [c] x)
(TST x (MOVWconst [c])) => (TSTconst [c] x)
(TEQ x (MOVWconst [c])) => (TEQconst [c] x)

(SRR x (MOVWconst [c])) => (SRRconst x [c&31])

// Canonicalize the order of arguments to comparisons - helps with CSE.
(CMP x y) && canonLessThan(x,y) => (InvertFlags (CMP y x))

// don't extend after proper load
// MOVWreg instruction is not emitted if src and dst registers are same, but it ensures the type.
(MOVBreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVBUreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVHreg x:(MOVHload _ _)) => (MOVWreg x)
(MOVHUreg x:(MOVBload _ _)) => (MOVWreg x)
(MOVHUreg
x:(MOVHload _ _)) => (MOVWreg x)

// fold extensions and ANDs together
(MOVBUreg (ANDconst [c] x)) => (ANDconst [c&0xff] x)

```

```

(MOVHUreg (ANDconst [c] x)) => (ANDconst [c&0xffff] x)
(MOVBreg (ANDconst [c] x)) && c & 0x80 == 0 => (ANDconst [c&0x7f] x)
(MOVHreg (ANDconst [c] x)) && c & 0x8000 == 0 => (ANDconst [c&0x7fff] x)

// fold double extensions
(MOVBreg x:(MOVBreg _)) => (MOVWreg x)
(MOVBUreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHreg x:(MOVBreg _)) => (MOVWreg x)
(MOVHreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHreg x:(MOVHreg _)) => (MOVWreg x)
(MOVHUreg x:(MOVBUreg _)) => (MOVWreg x)
(MOVHUreg x:(MOVHUreg _)) => (MOVWreg x)

// don't extend before store
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off]
{sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)

// if a register move has only 1 use, just use the same register without emitting instruction
// MOVWnop doesn't emit instruction, only for ensuring the type.
(MOVWreg x) && x.Uses == 1 => (MOVWnop x)

// TODO: we should be able to get rid of MOVWnop all together.
// But for now, this is enough to get rid of lots of them.
(MOVWnop (MOVWconst [c])) => (MOVWconst [c])

// mul by constant
(MUL x (MOVWconst [c])) && int32(c) == -1 => (RSBconst [0] x)
(MUL _ (MOVWconst [0])) => (MOVWconst [0])
(MUL x (MOVWconst [1])) => x
(MUL x (MOVWconst [c])) && isPowerOfTwo32(c) => (SLLconst [int32(log32(c))] x)
(MUL x (MOVWconst [c])) && isPowerOfTwo32(c-1) && c >= 3 => (ADDshiftLL x x [int32(log32(c-1))])
(MUL x (MOVWconst [c])) && isPowerOfTwo32(c+1) && c >= 7 => (RSBshiftLL x x [int32(log32(c+1))])
(MUL x (MOVWconst [c])) && c%3 == 0 && isPowerOfTwo32(c/3)
=> (SLLconst [int32(log32(c/3))] (ADDshiftLL <x.Type> x x [1]))
(MUL x (MOVWconst [c])) && c%5 == 0 && isPowerOfTwo32(c/5) => (SLLconst [int32(log32(c/5))]
(ADDshiftLL <x.Type> x x [2]))
(MUL x (MOVWconst [c])) && c%7 == 0 && isPowerOfTwo32(c/7) => (SLLconst [int32(log32(c/7))]
(RSBshiftLL <x.Type> x x [3]))
(MUL x (MOVWconst [c])) && c%9 == 0 && isPowerOfTwo32(c/9) => (SLLconst [int32(log32(c/9))]
(ADDshiftLL <x.Type> x x [3]))

(MULA x (MOVWconst [c]) a) && c == -1 => (SUB a x)
(MULA _ (MOVWconst [0]) a) => a

```

(MULA x (MOVWconst [1]) a) => (ADD x a)  
(MULA x (MOVWconst [c]) a) && isPowerOfTwo32(c) => (ADD (SLLconst <x.Type> [int32(log32(c))] x) a)  
(MULA x (MOVWconst [c]) a) && isPowerOfTwo32(c-1) && c >= 3 => (ADD (ADDshiftLL <x.Type> x x [int32(log32(c-1))]) a)  
(MULA x (MOVWconst [c]) a) && isPowerOfTwo32(c+1) && c >= 7 => (ADD (RSBshiftLL <x.Type> x x [int32(log32(c+1))]) a)  
(MULA x (MOVWconst [c]) a) && c%3 == 0 && isPowerOfTwo32(c/3) => (ADD (SLLconst <x.Type> [int32(log32(c/3))] (ADDshiftLL <x.Type> x x [1])) a)  
(MULA x (MOVWconst [c]) a) && c%5 == 0 && isPowerOfTwo32(c/5) => (ADD (SLLconst <x.Type> [int32(log32(c/5))] (ADDshiftLL <x.Type> x x [2])) a)  
(MULA x (MOVWconst [c]) a) && c%7 == 0 && isPowerOfTwo32(c/7) => (ADD (SLLconst <x.Type> [int32(log32(c/7))] (RSBshiftLL <x.Type> x x [3])) a)  
(MULA x (MOVWconst [c]) a) && c%9 == 0 && isPowerOfTwo32(c/9) => (ADD (SLLconst <x.Type> [int32(log32(c/9))] (ADDshiftLL <x.Type> x x [3])) a)

(MULA (MOVWconst [c]) x a) && c == -1 => (SUB a x)  
(MULA (MOVWconst [0]) \_ a) => a  
(MULA (MOVWconst [1]) x a) => (ADD x a)  
(MULA (MOVWconst [c]) x a) && isPowerOfTwo32(c) => (ADD (SLLconst <x.Type> [int32(log32(c))] x) a)  
(MULA (MOVWconst [c]) x a) && isPowerOfTwo32(c-1) && c >= 3 => (ADD (ADDshiftLL <x.Type> x x [int32(log32(c-1))]) a)  
(MULA (MOVWconst [c]) x a) && isPowerOfTwo32(c+1) && c >= 7 => (ADD (RSBshiftLL <x.Type> x x [int32(log32(c+1))]) a)  
(MULA (MOVWconst [c]) x a) && c%3 == 0 && isPowerOfTwo32(c/3) => (ADD (SLLconst <x.Type> [int32(log32(c/3))] (ADDshiftLL <x.Type> x x [1])) a)  
(MULA (MOVWconst [c]) x a) && c%5 == 0 && isPowerOfTwo32(c/5) => (ADD (SLLconst <x.Type> [int32(log32(c/5))] (ADDshiftLL <x.Type> x x [2])) a)  
(MULA (MOVWconst [c]) x a) && c%7 == 0 && isPowerOfTwo32(c/7) => (ADD (SLLconst <x.Type> [int32(log32(c/7))] (RSBshiftLL <x.Type> x x [3])) a)  
(MULA (MOVWconst [c]) x a) && c%9 == 0 && isPowerOfTwo32(c/9) => (ADD (SLLconst <x.Type> [int32(log32(c/9))] (ADDshiftLL <x.Type> x x [3])) a)

(MULS x (MOVWconst [c]) a) && c == -1 => (ADD a x)  
(MULS \_ (MOVWconst [0]) a) => a  
(MULS x (MOVWconst [1]) a) => (RSB x a)  
(MULS x (MOVWconst [c]) a) && isPowerOfTwo32(c) => (RSB (SLLconst <x.Type> [int32(log32(c))] x) a)  
(MULS x (MOVWconst [c]) a) && isPowerOfTwo32(c-1) && c >= 3 => (RSB (ADDshiftLL <x.Type> x x [int32(log32(c-1))]) a)  
(MULS x (MOVWconst [c]) a) && isPowerOfTwo32(c+1) && c >= 7 => (RSB (RSBshiftLL <x.Type> x x [int32(log32(c+1))]) a)  
(MULS x (MOVWconst [c]) a) && c%3 == 0 && isPowerOfTwo32(c/3) => (RSB (SLLconst <x.Type> [int32(log32(c/3))] (ADDshiftLL <x.Type> x x [1])) a)  
(MULS x (MOVWconst [c]) a) && c%5 == 0 && isPowerOfTwo32(c/5) => (RSB (SLLconst <x.Type> [int32(log32(c/5))] (ADDshiftLL <x.Type> x x [2])) a)  
(MULS x (MOVWconst [c]) a) && c%7 == 0 && isPowerOfTwo32(c/7) => (RSB (SLLconst <x.Type> [int32(log32(c/7))] (RSBshiftLL <x.Type> x x [3])) a)  
(MULS x (MOVWconst [c]) a) && c%9 == 0 && isPowerOfTwo32(c/9) => (RSB (SLLconst <x.Type> [int32(log32(c/9))] (ADDshiftLL <x.Type> x x [3])) a)

```

[int32(log32(c/9))] (ADDshiftLL <x.Type> x x [3])) a)

(MULS (MOVWconst [c] x a) && c == -1 => (ADD a x)
(MULS (MOVWconst [0]) _ a) => a
(MULS (MOVWconst [1] x a) => (RSB x a)
(MULS (MOVWconst [c] x a) && isPowerOfTwo32(c) => (RSB (SLLconst <x.Type> [int32(log32(c))] x) a)
(MULS (MOVWconst [c] x a) && isPowerOfTwo32(c-1) && c >= 3 => (RSB (ADDshiftLL <x.Type> x x
[int32(log32(c-1))]) a)
(MULS (MOVWconst [c] x a) && isPowerOfTwo32(c+1) && c >= 7 => (RSB (RSBshiftLL <x.Type> x x
[int32(log32(c+1))]) a)
(MULS (MOVWconst
[c] x a) && c%3 == 0 && isPowerOfTwo32(c/3) => (RSB (SLLconst <x.Type> [int32(log32(c/3))] (ADDshiftLL
<x.Type> x x [1])) a)
(MULS (MOVWconst [c] x a) && c%5 == 0 && isPowerOfTwo32(c/5) => (RSB (SLLconst <x.Type>
[int32(log32(c/5))] (ADDshiftLL <x.Type> x x [2])) a)
(MULS (MOVWconst [c] x a) && c%7 == 0 && isPowerOfTwo32(c/7) => (RSB (SLLconst <x.Type>
[int32(log32(c/7))] (RSBshiftLL <x.Type> x x [3])) a)
(MULS (MOVWconst [c] x a) && c%9 == 0 && isPowerOfTwo32(c/9) => (RSB (SLLconst <x.Type>
[int32(log32(c/9))] (ADDshiftLL <x.Type> x x [3])) a)

// div by constant
(Select0 (CALLudiv x (MOVWconst [1])) => x
(Select1 (CALLudiv _ (MOVWconst [1])) => (MOVWconst [0])
(Select0 (CALLudiv x (MOVWconst [c])) && isPowerOfTwo32(c) => (SRLconst [int32(log32(c))] x)
(Select1 (CALLudiv x (MOVWconst [c])) && isPowerOfTwo32(c) => (ANDconst [c-1] x)

// constant comparisons
(CMPconst (MOVWconst [x] [y]) => (FlagConstant [subFlags32(x,y)])
(CMNconst (MOVWconst [x] [y]) => (FlagConstant [addFlags32(x,y)])
(TSTconst
(MOVWconst [x] [y]) => (FlagConstant [logicFlags32(x&y)])
(TEQconst (MOVWconst [x] [y]) => (FlagConstant [logicFlags32(x^y)])

// other known comparisons
(CMPconst (MOVBUreg _) [c] && 0xff < c => (FlagConstant [subFlags32(0, 1)])
(CMPconst (MOVHUreg _) [c] && 0xffff < c => (FlagConstant [subFlags32(0, 1)])
(CMPconst (ANDconst _ [m] [n]) && 0 <= m && m < n => (FlagConstant [subFlags32(0, 1)])
(CMPconst (SRLconst _ [c] [n]) && 0 <= n && 0 < c && c <= 32 && (1<<uint32(32-c)) <= uint32(n) =>
(FlagConstant [subFlags32(0, 1)])

// absorb flag constants into branches
(EQ (FlagConstant [fc]) yes no) && fc.eq() => (First yes no)
(EQ (FlagConstant [fc]) yes no) && !fc.eq() => (First no yes)

(NE (FlagConstant [fc]) yes no) && fc.ne() => (First yes no)
(NE (FlagConstant [fc]) yes no) && !fc.ne() => (First no yes)

(LT (FlagConstant [fc]) yes no) && fc.lt() => (First yes no)

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(LT (FlagConstant [fc]) yes no) && !fc.lt() => (First no yes)

(LE (FlagConstant [fc]) yes no)
&& fc.le() => (First yes no)
(LE (FlagConstant [fc]) yes no) && !fc.le() => (First no yes)

(GT (FlagConstant [fc]) yes no) && fc.gt() => (First yes no)
(GT (FlagConstant [fc]) yes no) && !fc.gt() => (First no yes)

(GE (FlagConstant [fc]) yes no) && fc.ge() => (First yes no)
(GE (FlagConstant [fc]) yes no) && !fc.ge() => (First no yes)

(ULT (FlagConstant [fc]) yes no) && fc.ult() => (First yes no)
(ULT (FlagConstant [fc]) yes no) && !fc.ult() => (First no yes)

(ULE (FlagConstant [fc]) yes no) && fc.ule() => (First yes no)
(ULE (FlagConstant [fc]) yes no) && !fc.ule() => (First no yes)

(UGT (FlagConstant [fc]) yes no) && fc.ugt() => (First yes no)
(UGT (FlagConstant [fc]) yes no) && !fc.ugt() => (First no yes)

(UGE (FlagConstant [fc]) yes no) && fc.uge() => (First yes no)
(UGE (FlagConstant [fc]) yes no) && !fc.uge() => (First no yes)

(LTnoov (FlagConstant [fc]) yes no) && fc.ltNoov() => (First yes no)
(LTnoov (FlagConstant [fc]) yes no) && !fc.ltNoov() => (First no yes)

(LEnoov
(FlagConstant [fc]) yes no) && fc.leNoov() => (First yes no)
(LEnoov (FlagConstant [fc]) yes no) && !fc.leNoov() => (First no yes)

(GTnoov (FlagConstant [fc]) yes no) && fc.gtNoov() => (First yes no)
(GTnoov (FlagConstant [fc]) yes no) && !fc.gtNoov() => (First no yes)

(GEnoov (FlagConstant [fc]) yes no) && fc.geNoov() => (First yes no)
(GEnoov (FlagConstant [fc]) yes no) && !fc.geNoov() => (First no yes)

// absorb InvertFlags into branches
(LT (InvertFlags cmp) yes no) => (GT cmp yes no)
(GT (InvertFlags cmp) yes no) => (LT cmp yes no)
(LE (InvertFlags cmp) yes no) => (GE cmp yes no)
(GE (InvertFlags cmp) yes no) => (LE cmp yes no)
(ULT (InvertFlags cmp) yes no) => (UGT cmp yes no)
(UGT (InvertFlags cmp) yes no) => (ULT cmp yes no)
(ULE (InvertFlags cmp) yes no) => (UGE cmp yes no)
(UGE (InvertFlags cmp) yes no) => (ULE cmp yes no)
(EQ (InvertFlags cmp) yes no) => (EQ cmp yes no)
(NE (InvertFlags cmp) yes no) => (NE cmp yes no)

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(LTnoov (InvertFlags cmp) yes no) => (GTnoov
  cmp yes no)
(GEnoov (InvertFlags cmp) yes no) => (LEnoov cmp yes no)
(LEnoov (InvertFlags cmp) yes no) => (GEnoov cmp yes no)
(GTnoov (InvertFlags cmp) yes no) => (LTnoov cmp yes no)

// absorb flag constants into boolean values
(Equal (FlagConstant [fc])) => (MOVWconst [b2i32(fc.eq())])
(NotEqual (FlagConstant [fc])) => (MOVWconst [b2i32(fc.ne())])
(LessThan (FlagConstant [fc])) => (MOVWconst [b2i32(fc.lt())])
(LessThanU (FlagConstant [fc])) => (MOVWconst [b2i32(fc.ult())])
(LessEqual (FlagConstant [fc])) => (MOVWconst [b2i32(fc.le())])
(LessEqualU (FlagConstant [fc])) => (MOVWconst [b2i32(fc.ule())])
(GreaterThan (FlagConstant [fc])) => (MOVWconst [b2i32(fc.gt())])
(GreaterThanU (FlagConstant [fc])) => (MOVWconst [b2i32(fc.ugt())])
(GreaterEqual (FlagConstant [fc])) => (MOVWconst [b2i32(fc.ge())])
(GreaterEqualU (FlagConstant [fc])) => (MOVWconst [b2i32(fc.uge())])

// absorb InvertFlags into boolean values
(Equal (InvertFlags x)) => (Equal x)
(NotEqual (InvertFlags x)) => (NotEqual
  x)
(LessThan (InvertFlags x)) => (GreaterThan x)
(LessThanU (InvertFlags x)) => (GreaterThanU x)
(GreaterThan (InvertFlags x)) => (LessThan x)
(GreaterThanU (InvertFlags x)) => (LessThanU x)
(LessEqual (InvertFlags x)) => (GreaterEqual x)
(LessEqualU (InvertFlags x)) => (GreaterEqualU x)
(GreaterEqual (InvertFlags x)) => (LessEqual x)
(GreaterEqualU (InvertFlags x)) => (LessEqualU x)

// absorb flag constants into conditional instructions
(CMOVWLSconst _ (FlagConstant [fc]) [c] && fc.ule()) => (MOVWconst [c])
(CMOVWLSconst x (FlagConstant [fc]) [c] && fc.ugt()) => x

(CMOVWHSconst _ (FlagConstant [fc]) [c] && fc.uge()) => (MOVWconst [c])
(CMOVWHSconst x (FlagConstant [fc]) [c] && fc.ult()) => x

(CMOVWLSconst x (InvertFlags flags) [c]) => (CMOVWHSconst x flags [c])
(CMOVWHSconst x (InvertFlags flags) [c]) => (CMOVWLSconst x flags [c])

(SRAcond x _ (FlagConstant [fc])) && fc.uge() => (SRAconst x [31])
(SRAcond x y (FlagConstant [fc])) && fc.ult() => (SRA x y)

// remove redundant
*const ops
(ADDconst [0] x) => x
(SUBconst [0] x) => x

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(ANDconst [0] _) => (MOVWconst [0])
(ANDconst [c] x) && int32(c)===-1 => x
(ORconst [0] x) => x
(ORconst [c] _) && int32(c)===-1 => (MOVWconst [-1])
(XORconst [0] x) => x
(BICconst [0] x) => x
(BICconst [c] _) && int32(c)===-1 => (MOVWconst [0])

// generic constant folding
(ADDconst [c] x) && !isARMImmRot(uint32(c)) && isARMImmRot(uint32(-c)) => (SUBconst [-c] x)
(SUBconst [c] x) && !isARMImmRot(uint32(c)) && isARMImmRot(uint32(-c)) => (ADDconst [-c] x)
(ANDconst [c] x) && !isARMImmRot(uint32(c)) && isARMImmRot(^uint32(c)) => (BICconst [int32(^uint32(c))]
x)
(BICconst [c] x) && !isARMImmRot(uint32(c)) && isARMImmRot(^uint32(c)) => (ANDconst [int32(^uint32(c))]
x)
(ADDconst [c] x) && buildcfg.GOARM==7 && !isARMImmRot(uint32(c)) && uint32(c)>0xffff && uint32(-
c)<=0xffff => (SUBconst [-c] x)
(SUBconst [c] x) && buildcfg.GOARM==7 && !isARMImmRot(uint32(c)) && uint32(c)>0xffff && uint32(-
c)<=0xffff => (ADDconst [-c] x)
(ANDconst [c] x) &&
buildcfg.GOARM==7 && !isARMImmRot(uint32(c)) && uint32(c)>0xffff && ^uint32(c)<=0xffff => (BICconst
[int32(^uint32(c))] x)
(BICconst [c] x) && buildcfg.GOARM==7 && !isARMImmRot(uint32(c)) && uint32(c)>0xffff &&
^uint32(c)<=0xffff => (ANDconst [int32(^uint32(c))] x)
(ADDconst [c] (MOVWconst [d])) => (MOVWconst [c+d])
(ADDconst [c] (ADDconst [d] x)) => (ADDconst [c+d] x)
(ADDconst [c] (SUBconst [d] x)) => (ADDconst [c-d] x)
(ADDconst [c] (RSBconst [d] x)) => (RSBconst [c+d] x)
(ADCconst [c] (ADDconst [d] x) flags) => (ADCconst [c+d] x flags)
(ADCconst [c] (SUBconst [d] x) flags) => (ADCconst [c-d] x flags)
(SUBconst [c] (MOVWconst [d])) => (MOVWconst [d-c])
(SUBconst [c] (SUBconst [d] x)) => (ADDconst [-c-d] x)
(SUBconst [c] (ADDconst [d] x)) => (ADDconst [-c+d] x)
(SUBconst [c] (RSBconst [d] x)) => (RSBconst [-c+d] x)
(SBCconst [c] (ADDconst [d] x) flags) => (SBCconst [c-d] x flags)
(SBCconst [c] (SUBconst [d] x) flags) => (SBCconst [c+d] x flags)
(RSBconst [c] (MOVWconst [d])) => (MOVWconst
[c-d])
(RSBconst [c] (RSBconst [d] x)) => (ADDconst [c-d] x)
(RSBconst [c] (ADDconst [d] x)) => (RSBconst [c-d] x)
(RSBconst [c] (SUBconst [d] x)) => (RSBconst [c+d] x)
(RSCconst [c] (ADDconst [d] x) flags) => (RSCconst [c-d] x flags)
(RSCconst [c] (SUBconst [d] x) flags) => (RSCconst [c+d] x flags)
(SLLconst [c] (MOVWconst [d])) => (MOVWconst [d<<uint64(c)])
(SRLconst [c] (MOVWconst [d])) => (MOVWconst [int32(uint32(d)>>uint64(c))])
(SRAconst [c] (MOVWconst [d])) => (MOVWconst [d>>uint64(c)])
(MUL (MOVWconst [c]) (MOVWconst [d])) => (MOVWconst [c*d])
(MULA (MOVWconst [c]) (MOVWconst [d]) a) => (ADDconst [c*d] a)

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(MULS (MOVWconst [c]) (MOVWconst [d]) a) => (SUBconst [c*d] a)
(Select0 (CALLUdiv (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst
[int32(uint32(c)/uint32(d))])
(Select1 (CALLUdiv (MOVWconst [c]) (MOVWconst [d]))) && d != 0 => (MOVWconst
[int32(uint32(c)%uint32(d))])
(ANDconst [c] (MOVWconst [d])) => (MOVWconst [c&d])
(ANDconst [c] (ANDconst [d] x)) => (ANDconst
[c&d] x)
(ORconst [c] (MOVWconst [d])) => (MOVWconst [c|d])
(ORconst [c] (ORconst [d] x)) => (ORconst [c|d] x)
(XORconst [c] (MOVWconst [d])) => (MOVWconst [c^d])
(XORconst [c] (XORconst [d] x)) => (XORconst [c^d] x)
(BICconst [c] (MOVWconst [d])) => (MOVWconst [d&^c])
(BICconst [c] (BICconst [d] x)) => (BICconst [c|d] x)
(MVN (MOVWconst [c])) => (MOVWconst [^c])
(MOVBreg (MOVWconst [c])) => (MOVWconst [int32(int8(c))])
(MOVBUreg (MOVWconst [c])) => (MOVWconst [int32(uint8(c))])
(MOVHreg (MOVWconst [c])) => (MOVWconst [int32(int16(c))])
(MOVHUreg (MOVWconst [c])) => (MOVWconst [int32(uint16(c))])
(MOVWreg (MOVWconst [c])) => (MOVWconst [c])
// BFX: Width = c >> 8, LSB = c & 0xff, result = d << (32 - Width - LSB) >> (32 - Width)
(BFX [c] (MOVWconst [d])) => (MOVWconst [d<<(32-uint32(c&0xff)-uint32(c)>>8)>>(32-uint32(c)>>8)])
(BFXU [c] (MOVWconst [d])) => (MOVWconst [int32(uint32(d)<<(32-uint32(c&0xff)-uint32(c)>>8)>>(32-
uint32(c)>>8))])

// absorb shifts into ops
(ADD x (SLLconst [c]
y)) => (ADDshiftLL x y [c])
(ADD x (SRLconst [c] y)) => (ADDshiftRL x y [c])
(ADD x (SRAconst [c] y)) => (ADDshiftRA x y [c])
(ADD x (SLL y z)) => (ADDshiftLLreg x y z)
(ADD x (SRL y z)) => (ADDshiftRLreg x y z)
(ADD x (SRA y z)) => (ADDshiftRAreg x y z)
(ADC x (SLLconst [c] y) flags) => (ADCshiftLL x y [c] flags)
(ADC x (SRLconst [c] y) flags) => (ADCshiftRL x y [c] flags)
(ADC x (SRAconst [c] y) flags) => (ADCshiftRA x y [c] flags)
(ADC x (SLL y z) flags) => (ADCshiftLLreg x y z flags)
(ADC x (SRL y z) flags) => (ADCshiftRLreg x y z flags)
(ADC x (SRA y z) flags) => (ADCshiftRAreg x y z flags)
(ADDS x (SLLconst [c] y)) => (ADDSshiftLL x y [c])
(ADDS x (SRLconst [c] y)) => (ADDSshiftRL x y [c])
(ADDS x (SRAconst [c] y)) => (ADDSshiftRA x y [c])
(ADDS x (SLL y z)) => (ADDSshiftLLreg x y z)
(ADDS x (SRL y z)) => (ADDSshiftRLreg x y z)
(ADDS x (SRA y z)) => (ADDSshiftRAreg x y z)
(SUB x (SLLconst [c] y)) => (SUBshiftLL x y [c])
(SUB (SLLconst [c] y) x) => (RSBshiftLL x y [c])
(SUB x (SRLconst

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[c] y)) => (SUBshiftRL x y [c])  
 (SUB (SRLconst [c] y) x) => (RSBshiftRL x y [c])  
 (SUB x (SRAconst [c] y)) => (SUBshiftRA x y [c])  
 (SUB (SRAconst [c] y) x) => (RSBshiftRA x y [c])  
 (SUB x (SLL y z)) => (SUBshiftLLreg x y z)  
 (SUB (SLL y z) x) => (RSBshiftLLreg x y z)  
 (SUB x (SRL y z)) => (SUBshiftRLreg x y z)  
 (SUB (SRL y z) x) => (RSBshiftRLreg x y z)  
 (SUB x (SRA y z)) => (SUBshiftRAreg x y z)  
 (SUB (SRA y z) x) => (RSBshiftRAreg x y z)  
 (SBC x (SLLconst [c] y) flags) => (SBCshiftLL x y [c] flags)  
 (SBC (SLLconst [c] y) x flags) => (RSCshiftLL x y [c] flags)  
 (SBC x (SRLconst [c] y) flags) => (SBCshiftRL x y [c] flags)  
 (SBC (SRLconst [c] y) x flags) => (RSCshiftRL x y [c] flags)  
 (SBC x (SRAconst [c] y) flags) => (SBCshiftRA x y [c] flags)  
 (SBC (SRAconst [c] y) x flags) => (RSCshiftRA x y [c] flags)  
 (SBC x (SLL y z) flags) => (SBCshiftLLreg x y z flags)  
 (SBC (SLL y z) x flags) => (RSCshiftLLreg x y z flags)  
 (SBC x (SRL y z) flags) => (SBCshiftRLreg x y z flags)  
 (SBC (SRL y z) x flags) =>  
 (RSCshiftRLreg x y z flags)  
 (SBC x (SRA y z) flags) => (SBCshiftRAreg x y z flags)  
 (SBC (SRA y z) x flags) => (RSCshiftRAreg x y z flags)  
 (SUBS x (SLLconst [c] y)) => (SUBSshiftLL x y [c])  
 (SUBS (SLLconst [c] y) x) => (RSBSshiftLL x y [c])  
 (SUBS x (SRLconst [c] y)) => (SUBSshiftRL x y [c])  
 (SUBS (SRLconst [c] y) x) => (RSBSshiftRL x y [c])  
 (SUBS x (SRAconst [c] y)) => (SUBSshiftRA x y [c])  
 (SUBS (SRAconst [c] y) x) => (RSBSshiftRA x y [c])  
 (SUBS x (SLL y z)) => (SUBSshiftLLreg x y z)  
 (SUBS (SLL y z) x) => (RSBSshiftLLreg x y z)  
 (SUBS x (SRL y z)) => (SUBSshiftRLreg x y z)  
 (SUBS (SRL y z) x) => (RSBSshiftRLreg x y z)  
 (SUBS x (SRA y z)) => (SUBSshiftRAreg x y z)  
 (SUBS (SRA y z) x) => (RSBSshiftRAreg x y z)  
 (RSB x (SLLconst [c] y)) => (RSBshiftLL x y [c])  
 (RSB (SLLconst [c] y) x) => (SUBshiftLL x y [c])  
 (RSB x (SRLconst [c] y)) => (RSBshiftRL x y [c])  
 (RSB (SRLconst [c] y) x) => (SUBshiftRL x y [c])  
 (RSB x (SRAconst [c] y)) => (RSBshiftRA x y [c])  
 (RSB (SRAconst [c] y) x) => (SUBshiftRA  
 x y [c])  
 (RSB x (SLL y z)) => (RSBshiftLLreg x y z)  
 (RSB (SLL y z) x) => (SUBshiftLLreg x y z)  
 (RSB x (SRL y z)) => (RSBshiftRLreg x y z)  
 (RSB (SRL y z) x) => (SUBshiftRLreg x y z)  
 (RSB x (SRA y z)) => (RSBshiftRAreg x y z)  
 (RSB (SRA y z) x) => (SUBshiftRAreg x y z)

(AND x (SLLconst [c] y)) => (ANDshiftLL x y [c])  
 (AND x (SRLconst [c] y)) => (ANDshiftRL x y [c])  
 (AND x (SRAconst [c] y)) => (ANDshiftRA x y [c])  
 (AND x (SLL y z)) => (ANDshiftLLreg x y z)  
 (AND x (SRL y z)) => (ANDshiftRLreg x y z)  
 (AND x (SRA y z)) => (ANDshiftRAreg x y z)  
 (OR x (SLLconst [c] y)) => (ORshiftLL x y [c])  
 (OR x (SRLconst [c] y)) => (ORshiftRL x y [c])  
 (OR x (SRAconst [c] y)) => (ORshiftRA x y [c])  
 (OR x (SLL y z)) => (ORshiftLLreg x y z)  
 (OR x (SRL y z)) => (ORshiftRLreg x y z)  
 (OR x (SRA y z)) => (ORshiftRAreg x y z)  
 (XOR x (SLLconst [c] y)) => (XORshiftLL x y [c])  
 (XOR x (SRLconst [c] y)) => (XORshiftRL x y [c])  
 (XOR x (SRAconst [c] y)) => (XORshiftRA x y [c])  
 (XOR x (SRRconst [c] y)) => (XORshiftRR x y [c])  
 (XOR  
 x (SLL y z)) => (XORshiftLLreg x y z)  
 (XOR x (SRL y z)) => (XORshiftRLreg x y z)  
 (XOR x (SRA y z)) => (XORshiftRAreg x y z)  
 (BIC x (SLLconst [c] y)) => (BICshiftLL x y [c])  
 (BIC x (SRLconst [c] y)) => (BICshiftRL x y [c])  
 (BIC x (SRAconst [c] y)) => (BICshiftRA x y [c])  
 (BIC x (SLL y z)) => (BICshiftLLreg x y z)  
 (BIC x (SRL y z)) => (BICshiftRLreg x y z)  
 (BIC x (SRA y z)) => (BICshiftRAreg x y z)  
 (MVN (SLLconst [c] x)) => (MVNshiftLL x [c])  
 (MVN (SRLconst [c] x)) => (MVNshiftRL x [c])  
 (MVN (SRAconst [c] x)) => (MVNshiftRA x [c])  
 (MVN (SLL x y)) => (MVNshiftLLreg x y)  
 (MVN (SRL x y)) => (MVNshiftRLreg x y)  
 (MVN (SRA x y)) => (MVNshiftRAreg x y)

(CMP x (SLLconst [c] y)) => (CMPshiftLL x y [c])  
 (CMP (SLLconst [c] y) x) => (InvertFlags (CMPshiftLL x y [c]))  
 (CMP x (SRLconst [c] y)) => (CMPshiftRL x y [c])  
 (CMP (SRLconst [c] y) x) => (InvertFlags (CMPshiftRL x y [c]))  
 (CMP x (SRAconst [c] y)) => (CMPshiftRA x y [c])  
 (CMP (SRAconst [c] y) x) => (InvertFlags (CMPshiftRA x y [c]))  
 (CMP  
 x (SLL y z)) => (CMPshiftLLreg x y z)  
 (CMP (SLL y z) x) => (InvertFlags (CMPshiftLLreg x y z))  
 (CMP x (SRL y z)) => (CMPshiftRLreg x y z)  
 (CMP (SRL y z) x) => (InvertFlags (CMPshiftRLreg x y z))  
 (CMP x (SRA y z)) => (CMPshiftRAreg x y z)  
 (CMP (SRA y z) x) => (InvertFlags (CMPshiftRAreg x y z))  
 (TST x (SLLconst [c] y)) => (TSTshiftLL x y [c])  
 (TST x (SRLconst [c] y)) => (TSTshiftRL x y [c])

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(TST x (SRAconst [c] y)) => (TSTshiftRA x y [c])
(TST x (SLL y z)) => (TSTshiftLLreg x y z)
(TST x (SRL y z)) => (TSTshiftRLreg x y z)
(TST x (SRA y z)) => (TSTshiftRAreg x y z)
(TEQ x (SLLconst [c] y)) => (TEQshiftLL x y [c])
(TEQ x (SRLconst [c] y)) => (TEQshiftRL x y [c])
(TEQ x (SRAconst [c] y)) => (TEQshiftRA x y [c])
(TEQ x (SLL y z)) => (TEQshiftLLreg x y z)
(TEQ x (SRL y z)) => (TEQshiftRLreg x y z)
(TEQ x (SRA y z)) => (TEQshiftRAreg x y z)
(CMN x (SLLconst [c] y)) => (CMNshiftLL x y [c])
(CMN x (SRLconst [c] y)) => (CMNshiftRL x y [c])
(CMN x (SRAconst [c] y)) => (CMNshiftRA x y [c])
(CMN
 x (SLL y z)) => (CMNshiftLLreg x y z)
(CMN x (SRL y z)) => (CMNshiftRLreg x y z)
(CMN x (SRA y z)) => (CMNshiftRAreg x y z)

// prefer *const ops to *shift ops
(ADDshiftLL (MOVWconst [c] x [d]) => (ADDconst [c] (SLLconst <x.Type> x [d]))
(ADDshiftRL (MOVWconst [c] x [d]) => (ADDconst [c] (SRLconst <x.Type> x [d]))
(ADDshiftRA (MOVWconst [c] x [d]) => (ADDconst [c] (SRAconst <x.Type> x [d]))
(ADCshiftLL (MOVWconst [c] x [d] flags) => (ADCconst [c] (SLLconst <x.Type> x [d] flags)
(ADCshiftRL (MOVWconst [c] x [d] flags) => (ADCconst [c] (SRLconst <x.Type> x [d] flags)
(ADCshiftRA (MOVWconst [c] x [d] flags) => (ADCconst [c] (SRAconst <x.Type> x [d] flags)
(ADDSshiftLL (MOVWconst [c] x [d]) => (ADDSconst [c] (SLLconst <x.Type> x [d]))
(ADDSshiftRL (MOVWconst [c] x [d]) => (ADDSconst [c] (SRLconst <x.Type> x [d]))
(ADDSshiftRA (MOVWconst [c] x [d]) => (ADDSconst [c] (SRAconst <x.Type> x [d]))
(SUBshiftLL (MOVWconst [c] x [d]) => (RSBconst [c] (SLLconst <x.Type> x [d]))
(SUBshiftRL
 (MOVWconst [c] x [d]) => (RSBconst [c] (SRLconst <x.Type> x [d]))
(SUBshiftRA (MOVWconst [c] x [d]) => (RSBconst [c] (SRAconst <x.Type> x [d]))
(SBCshiftLL (MOVWconst [c] x [d] flags) => (RSCconst [c] (SLLconst <x.Type> x [d] flags)
(SBCshiftRL (MOVWconst [c] x [d] flags) => (RSCconst [c] (SRLconst <x.Type> x [d] flags)
(SBCshiftRA (MOVWconst [c] x [d] flags) => (RSCconst [c] (SRAconst <x.Type> x [d] flags)
(SUBSshiftLL (MOVWconst [c] x [d]) => (RSBSconst [c] (SLLconst <x.Type> x [d]))
(SUBSshiftRL (MOVWconst [c] x [d]) => (RSBSconst [c] (SRLconst <x.Type> x [d]))
(SUBSshiftRA (MOVWconst [c] x [d]) => (RSBSconst [c] (SRAconst <x.Type> x [d]))
(RSBshiftLL (MOVWconst [c] x [d]) => (SUBconst [c] (SLLconst <x.Type> x [d]))
(RSBshiftRL (MOVWconst [c] x [d]) => (SUBconst [c] (SRLconst <x.Type> x [d]))
(RSBshiftRA (MOVWconst [c] x [d]) => (SUBconst [c] (SRAconst <x.Type> x [d]))
(RSCshiftLL (MOVWconst [c] x [d] flags) => (SBCconst [c] (SLLconst <x.Type> x [d] flags)
(RSCshiftRL
 (MOVWconst [c] x [d] flags) => (SBCconst [c] (SRLconst <x.Type> x [d] flags)
(RSCshiftRA (MOVWconst [c] x [d] flags) => (SBCconst [c] (SRAconst <x.Type> x [d] flags)
(RSBSshiftLL (MOVWconst [c] x [d]) => (SUBSconst [c] (SLLconst <x.Type> x [d]))
(RSBSshiftRL (MOVWconst [c] x [d]) => (SUBSconst [c] (SRLconst <x.Type> x [d]))
(RSBSshiftRA (MOVWconst [c] x [d]) => (SUBSconst [c] (SRAconst <x.Type> x [d]))

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(ANDshiftLL (MOVWconst [c] x [d]) => (ANDconst [c] (SLLconst <x.Type> x [d]))  
 (ANDshiftRL (MOVWconst [c] x [d]) => (ANDconst [c] (SRLconst <x.Type> x [d]))  
 (ANDshiftRA (MOVWconst [c] x [d]) => (ANDconst [c] (SRAconst <x.Type> x [d]))  
 (ORshiftLL (MOVWconst [c] x [d]) => (ORconst [c] (SLLconst <x.Type> x [d]))  
 (ORshiftRL (MOVWconst [c] x [d]) => (ORconst [c] (SRLconst <x.Type> x [d]))  
 (ORshiftRA (MOVWconst [c] x [d]) => (ORconst [c] (SRAconst <x.Type> x [d]))  
 (XORshiftLL (MOVWconst [c] x [d]) => (XORconst [c] (SLLconst <x.Type> x [d]))  
 (XORshiftRL (MOVWconst [c] x [d])  
 => (XORconst [c] (SRLconst <x.Type> x [d]))  
 (XORshiftRA (MOVWconst [c] x [d]) => (XORconst [c] (SRAconst <x.Type> x [d]))  
 (XORshiftRR (MOVWconst [c] x [d]) => (XORconst [c] (SRRconst <x.Type> x [d]))  
 (CMPshiftLL (MOVWconst [c] x [d]) => (InvertFlags (CMPconst [c] (SLLconst <x.Type> x [d])))  
 (CMPshiftRL (MOVWconst [c] x [d]) => (InvertFlags (CMPconst [c] (SRLconst <x.Type> x [d])))  
 (CMPshiftRA (MOVWconst [c] x [d]) => (InvertFlags (CMPconst [c] (SRAconst <x.Type> x [d])))  
 (TSTshiftLL (MOVWconst [c] x [d]) => (TSTconst [c] (SLLconst <x.Type> x [d]))  
 (TSTshiftRL (MOVWconst [c] x [d]) => (TSTconst [c] (SRLconst <x.Type> x [d]))  
 (TSTshiftRA (MOVWconst [c] x [d]) => (TSTconst [c] (SRAconst <x.Type> x [d]))  
 (TEQshiftLL (MOVWconst [c] x [d]) => (TEQconst [c] (SLLconst <x.Type> x [d]))  
 (TEQshiftRL (MOVWconst [c] x [d]) => (TEQconst [c] (SRLconst <x.Type> x [d]))  
 (TEQshiftRA (MOVWconst [c] x [d]) => (TEQconst [c] (SRAconst <x.Type> x [d]))  
 (CMNshiftLL (MOVWconst [c] x [d]) => (CMNconst  
 [c] (SLLconst <x.Type> x [d]))  
 (CMNshiftRL (MOVWconst [c] x [d]) => (CMNconst [c] (SRLconst <x.Type> x [d]))  
 (CMNshiftRA (MOVWconst [c] x [d]) => (CMNconst [c] (SRAconst <x.Type> x [d]))

(ADDshiftLLreg (MOVWconst [c] x y) => (ADDconst [c] (SLL <x.Type> x y))  
 (ADDshiftRLreg (MOVWconst [c] x y) => (ADDconst [c] (SRL <x.Type> x y))  
 (ADDshiftRAreg (MOVWconst [c] x y) => (ADDconst [c] (SRA <x.Type> x y))  
 (ADCshiftLLreg (MOVWconst [c] x y flags) => (ADCconst [c] (SLL <x.Type> x y) flags)  
 (ADCshiftRLreg (MOVWconst [c] x y flags) => (ADCconst [c] (SRL <x.Type> x y) flags)  
 (ADCshiftRAreg (MOVWconst [c] x y flags) => (ADCconst [c] (SRA <x.Type> x y) flags)  
 (ADDSshiftLLreg (MOVWconst [c] x y) => (ADDSconst [c] (SLL <x.Type> x y))  
 (ADDSshiftRLreg (MOVWconst [c] x y) => (ADDSconst [c] (SRL <x.Type> x y))  
 (ADDSshiftRAreg (MOVWconst [c] x y) => (ADDSconst [c] (SRA <x.Type> x y))  
 (SUBshiftLLreg (MOVWconst [c] x y) => (RSBconst [c] (SLL <x.Type> x y))  
 (SUBshiftRLreg (MOVWconst [c] x  
 y) => (RSBconst [c] (SRL <x.Type> x y))  
 (SUBshiftRAreg (MOVWconst [c] x y) => (RSBconst [c] (SRA <x.Type> x y))  
 (SBCshiftLLreg (MOVWconst [c] x y flags) => (RSCconst [c] (SLL <x.Type> x y) flags)  
 (SBCshiftRLreg (MOVWconst [c] x y flags) => (RSCconst [c] (SRL <x.Type> x y) flags)  
 (SBCshiftRAreg (MOVWconst [c] x y flags) => (RSCconst [c] (SRA <x.Type> x y) flags)  
 (SUBSshiftLLreg (MOVWconst [c] x y) => (RSBSconst [c] (SLL <x.Type> x y))  
 (SUBSshiftRLreg (MOVWconst [c] x y) => (RSBSconst [c] (SRL <x.Type> x y))  
 (SUBSshiftRAreg (MOVWconst [c] x y) => (RSBSconst [c] (SRA <x.Type> x y))  
 (RSBshiftLLreg (MOVWconst [c] x y) => (SUBconst [c] (SLL <x.Type> x y))  
 (RSBshiftRLreg (MOVWconst [c] x y) => (SUBconst [c] (SRL <x.Type> x y))  
 (RSBshiftRAreg (MOVWconst [c] x y) => (SUBconst [c] (SRA <x.Type> x y))  
 (RSCshiftLLreg (MOVWconst [c] x y flags) => (SBCconst [c] (SLL <x.Type> x y) flags)



```

(RSCshiftRLreg (MOVWconst [c] x y flags) => (SBCconst [c] (SRL <x.Type> x y) flags)
(RSCshiftRAreg (MOVWconst
[c] x y flags) => (SBCconst [c] (SRA <x.Type> x y) flags)
(RSBSshiftLLreg (MOVWconst [c] x y) => (SUBSconst [c] (SLL <x.Type> x y))
(RSBSshiftRLreg (MOVWconst [c] x y) => (SUBSconst [c] (SRL <x.Type> x y))
(RSBSshiftRAreg (MOVWconst [c] x y) => (SUBSconst [c] (SRA <x.Type> x y))
(ANDshiftLLreg (MOVWconst [c] x y) => (ANDconst [c] (SLL <x.Type> x y))
(ANDshiftRLreg (MOVWconst [c] x y) => (ANDconst [c] (SRL <x.Type> x y))
(ANDshiftRAreg (MOVWconst [c] x y) => (ANDconst [c] (SRA <x.Type> x y))
(ORshiftLLreg (MOVWconst [c] x y) => (ORconst [c] (SLL <x.Type> x y))
(ORshiftRLreg (MOVWconst [c] x y) => (ORconst [c] (SRL <x.Type> x y))
(ORshiftRAreg (MOVWconst [c] x y) => (ORconst [c] (SRA <x.Type> x y))
(XORshiftLLreg (MOVWconst [c] x y) => (XORconst [c] (SLL <x.Type> x y))
(XORshiftRLreg (MOVWconst [c] x y) => (XORconst [c] (SRL <x.Type> x y))
(XORshiftRAreg (MOVWconst [c] x y) => (XORconst [c] (SRA <x.Type> x y))
(CMPshiftLLreg (MOVWconst [c] x y) => (InvertFlags (CMPconst
[c] (SLL <x.Type> x y)))
(CMPshiftRLreg (MOVWconst [c] x y) => (InvertFlags (CMPconst [c] (SRL <x.Type> x y)))
(CMPshiftRAreg (MOVWconst [c] x y) => (InvertFlags (CMPconst [c] (SRA <x.Type> x y)))
(TSTshiftLLreg (MOVWconst [c] x y) => (TSTconst [c] (SLL <x.Type> x y))
(TSTshiftRLreg (MOVWconst [c] x y) => (TSTconst [c] (SRL <x.Type> x y))
(TSTshiftRAreg (MOVWconst [c] x y) => (TSTconst [c] (SRA <x.Type> x y))
(TEQshiftLLreg (MOVWconst [c] x y) => (TEQconst [c] (SLL <x.Type> x y))
(TEQshiftRLreg (MOVWconst [c] x y) => (TEQconst [c] (SRL <x.Type> x y))
(TEQshiftRAreg (MOVWconst [c] x y) => (TEQconst [c] (SRA <x.Type> x y))
(CMNshiftLLreg (MOVWconst [c] x y) => (CMNconst [c] (SLL <x.Type> x y))
(CMNshiftRLreg (MOVWconst [c] x y) => (CMNconst [c] (SRL <x.Type> x y))
(CMNshiftRAreg (MOVWconst [c] x y) => (CMNconst [c] (SRA <x.Type> x y))

// constant folding in *shift ops
(ADDshiftLL x (MOVWconst [c] [d]) => (ADDconst x [c<<uint64(d)])
(ADDshiftRL x (MOVWconst [c] [d]) =>
(ADDconst x [int32(uint32(c)>>uint64(d))])
(ADDshiftRA x (MOVWconst [c] [d]) => (ADDconst x [c>>uint64(d)])
(ADCshiftLL x (MOVWconst [c] [d] flags) => (ADCconst x [c<<uint64(d)] flags)
(ADCshiftRL x (MOVWconst [c] [d] flags) => (ADCconst x [int32(uint32(c)>>uint64(d))] flags)
(ADCshiftRA x (MOVWconst [c] [d] flags) => (ADCconst x [c>>uint64(d)] flags)
(ADDSshiftLL x (MOVWconst [c] [d]) => (ADDSconst x [c<<uint64(d)])
(ADDSshiftRL x (MOVWconst [c] [d]) => (ADDSconst x [int32(uint32(c)>>uint64(d))])
(ADDSshiftRA x (MOVWconst [c] [d]) => (ADDSconst x [c>>uint64(d)])
(SUBshiftLL x (MOVWconst [c] [d]) => (SUBconst x [c<<uint64(d)])
(SUBshiftRL x (MOVWconst [c] [d]) => (SUBconst x [int32(uint32(c)>>uint64(d))])
(SUBshiftRA x (MOVWconst [c] [d]) => (SUBconst x [c>>uint64(d)])
(SBCshiftLL x (MOVWconst [c] [d] flags) => (SBCconst x [c<<uint64(d)] flags)
(SBCshiftRL x (MOVWconst [c] [d] flags) => (SBCconst x [int32(uint32(c)>>uint64(d))] flags)
(SBCshiftRA x (MOVWconst [c] [d] flags)
=> (SBCconst x [c>>uint64(d)] flags)
(SUBSshiftLL x (MOVWconst [c] [d]) => (SUBSconst x [c<<uint64(d)])

```

(SUBSshiftRL x (MOVWconst [c]) [d]) => (SUBSconst x [int32(uint32(c)>>uint64(d))])  
(SUBSshiftRA x (MOVWconst [c]) [d]) => (SUBSconst x [c>>uint64(d)])  
(RSBshiftLL x (MOVWconst [c]) [d]) => (RSBconst x [c<<uint64(d)])  
(RSBshiftRL x (MOVWconst [c]) [d]) => (RSBconst x [int32(uint32(c)>>uint64(d))])  
(RSBshiftRA x (MOVWconst [c]) [d]) => (RSBconst x [c>>uint64(d)])  
(RSCshiftLL x (MOVWconst [c]) [d] flags) => (RSCconst x [c<<uint64(d)] flags)  
(RSCshiftRL x (MOVWconst [c]) [d] flags) => (RSCconst x [int32(uint32(c)>>uint64(d))] flags)  
(RSCshiftRA x (MOVWconst [c]) [d] flags) => (RSCconst x [c>>uint64(d)] flags)  
(RSBSshiftLL x (MOVWconst [c]) [d]) => (RSBSconst x [c<<uint64(d)])  
(RSBSshiftRL x (MOVWconst [c]) [d]) => (RSBSconst x [int32(uint32(c)>>uint64(d))])  
(RSBSshiftRA x (MOVWconst [c]) [d]) => (RSBSconst x [c>>uint64(d)])  
(ANDshiftLL x (MOVWconst [c]) [d]) => (ANDconst x [c<<uint64(d)])  
(ANDshiftRL  
x (MOVWconst [c]) [d]) => (ANDconst x [int32(uint32(c)>>uint64(d))])  
(ANDshiftRA x (MOVWconst [c]) [d]) => (ANDconst x [c>>uint64(d)])  
(ORshiftLL x (MOVWconst [c]) [d]) => (ORconst x [c<<uint64(d)])  
(ORshiftRL x (MOVWconst [c]) [d]) => (ORconst x [int32(uint32(c)>>uint64(d))])  
(ORshiftRA x (MOVWconst [c]) [d]) => (ORconst x [c>>uint64(d)])  
(XORshiftLL x (MOVWconst [c]) [d]) => (XORconst x [c<<uint64(d)])  
(XORshiftRL x (MOVWconst [c]) [d]) => (XORconst x [int32(uint32(c)>>uint64(d))])  
(XORshiftRA x (MOVWconst [c]) [d]) => (XORconst x [c>>uint64(d)])  
(XORshiftRR x (MOVWconst [c]) [d]) => (XORconst x [int32(uint32(c)>>uint64(d)|uint32(c)<<uint64(32-d))])  
(BICshiftLL x (MOVWconst [c]) [d]) => (BICconst x [c<<uint64(d)])  
(BICshiftRL x (MOVWconst [c]) [d]) => (BICconst x [int32(uint32(c)>>uint64(d))])  
(BICshiftRA x (MOVWconst [c]) [d]) => (BICconst x [c>>uint64(d)])  
(MVNshiftLL (MOVWconst [c]) [d]) => (MOVWconst [^c<<uint64(d)])  
(MVNshiftRL (MOVWconst [c]) [d]) => (MOVWconst  
[^int32(uint32(c)>>uint64(d))])  
(MVNshiftRA (MOVWconst [c]) [d]) => (MOVWconst [int32(c)>>uint64(d)])  
(CMPshiftLL x (MOVWconst [c]) [d]) => (CMPconst x [c<<uint64(d)])  
(CMPshiftRL x (MOVWconst [c]) [d]) => (CMPconst x [int32(uint32(c)>>uint64(d))])  
(CMPshiftRA x (MOVWconst [c]) [d]) => (CMPconst x [c>>uint64(d)])  
(TSTshiftLL x (MOVWconst [c]) [d]) => (TSTconst x [c<<uint64(d)])  
(TSTshiftRL x (MOVWconst [c]) [d]) => (TSTconst x [int32(uint32(c)>>uint64(d))])  
(TSTshiftRA x (MOVWconst [c]) [d]) => (TSTconst x [c>>uint64(d)])  
(TEQshiftLL x (MOVWconst [c]) [d]) => (TEQconst x [c<<uint64(d)])  
(TEQshiftRL x (MOVWconst [c]) [d]) => (TEQconst x [int32(uint32(c)>>uint64(d))])  
(TEQshiftRA x (MOVWconst [c]) [d]) => (TEQconst x [c>>uint64(d)])  
(CMNshiftLL x (MOVWconst [c]) [d]) => (CMNconst x [c<<uint64(d)])  
(CMNshiftRL x (MOVWconst [c]) [d]) => (CMNconst x [int32(uint32(c)>>uint64(d))])  
(CMNshiftRA x (MOVWconst [c]) [d]) => (CMNconst x [c>>uint64(d)])  
  
(ADDshiftLLreg x y (MOVWconst [c])) && 0 <=  
c && c < 32 => (ADDshiftLL x y [c])  
(ADDshiftRLreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (ADDshiftRL x y [c])  
(ADDshiftRAreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (ADDshiftRA x y [c])  
(ADCshiftLLreg x y (MOVWconst [c]) flags) && 0 <= c && c < 32 => (ADCshiftLL x y [c] flags)  
(ADCshiftRLreg x y (MOVWconst [c]) flags) && 0 <= c && c < 32 => (ADCshiftRL x y [c] flags)



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x y (MOVWconst [c])) && 0 <= c && c < 32 => (TEQshiftRL x y [c])
(TEQshiftRAreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (TEQshiftRA x y [c])
(CMNshiftLLreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (CMNshiftLL x y [c])
(CMNshiftRLreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (CMNshiftRL x y [c])
(CMNshiftRAreg x y (MOVWconst [c])) && 0 <= c && c < 32 => (CMNshiftRA x y [c])

// Generate rotates
(ADDshiftLL [c] (SRLconst x [32-c] x) => (SRRconst [32-c] x)
(ORshiftLL [c] (SRLconst x [32-c] x) => (SRRconst [32-c] x)
(XORshiftLL [c] (SRLconst x [32-c] x) => (SRRconst [32-c] x)
(ADDshiftRL [c] (SLLconst x [32-c] x) => (SRRconst [ c] x)
(ORshiftRL [c] (SLLconst x [32-c] x) => (SRRconst [ c] x)
(XORshiftRL [c] (SLLconst x [32-c] x) => (SRRconst [ c] x)

(RotateLeft16 <t> x (MOVWconst [c])) => (Or16 (Lsh16x32 <t> x (MOVWconst [c&15])) (Rsh16Ux32 <t> x
(MOVWconst [-c&15])))
(RotateLeft8 <t> x (MOVWconst [c])) => (Or8 (Lsh8x32 <t> x (MOVWconst [c&7])) (Rsh8Ux32 <t> x
(MOVWconst
[-c&7])))
(RotateLeft32 x y) => (SRR x (RSBconst [0] <y.Type> y))

// ((x>>8) | (x<<8)) -> (REV16 x), the type of x is uint16, "|" can also be "^" or "+".
// UBFX instruction is supported by ARMv6T2, ARMv7 and above versions, REV16 is supported by
// ARMv6 and above versions. So for ARMv6, we need to match SLLconst, SRLconst and ORshiftLL.
((ADDshiftLL|ORshiftLL|XORshiftLL) <typ.UInt16> [8] (BFXU <typ.UInt16> [int32(armBFAuxInt(8, 8))] x) x)
=> (REV16 x)
((ADDshiftLL|ORshiftLL|XORshiftLL) <typ.UInt16> [8] (SRLconst <typ.UInt16> [24] (SLLconst [16] x)) x) &&
buildcfg.GOARM>=6 => (REV16 x)

// use indexed loads and stores
(MOVWload [0] {sym} (ADD ptr idx) mem) && sym == nil => (MOVWloadidx ptr idx mem)
(MOVWstore [0] {sym} (ADD ptr idx) val mem) && sym == nil => (MOVWstoreidx ptr idx val mem)
(MOVWload [0] {sym} (ADDshiftLL ptr idx [c]) mem) && sym == nil => (MOVWloadshiftLL ptr idx [c] mem)
(MOVWload [0] {sym} (ADDshiftRL ptr idx [c]) mem) && sym == nil => (MOVWloadshiftRL ptr idx
[c] mem)
(MOVWload [0] {sym} (ADDshiftRA ptr idx [c]) mem) && sym == nil => (MOVWloadshiftRA ptr idx [c] mem)
(MOVWstore [0] {sym} (ADDshiftLL ptr idx [c]) val mem) && sym == nil => (MOVWstoreshiftLL ptr idx [c] val
mem)
(MOVWstore [0] {sym} (ADDshiftRL ptr idx [c]) val mem) && sym == nil => (MOVWstoreshiftRL ptr idx [c] val
mem)
(MOVWstore [0] {sym} (ADDshiftRA ptr idx [c]) val mem) && sym == nil => (MOVWstoreshiftRA ptr idx [c]
val mem)
(MOVBUload [0] {sym} (ADD ptr idx) mem) && sym == nil => (MOVBUloadidx ptr idx mem)
(MOVBload [0] {sym} (ADD ptr idx) mem) && sym == nil => (MOVBloadidx ptr idx mem)
(MOVBstore [0] {sym} (ADD ptr idx) val mem) && sym == nil => (MOVBstoreidx ptr idx val mem)
(MOVHUload [0] {sym} (ADD ptr idx) mem) && sym == nil => (MOVHUloadidx ptr idx mem)
(MOVHload [0] {sym} (ADD ptr idx) mem) && sym == nil => (MOVHloadidx ptr idx mem)
(MOVHstore [0] {sym} (ADD ptr idx) val mem) && sym == nil => (MOVHstoreidx ptr idx val mem)

```

```

// constant folding in indexed loads and
stores
(MOVWloadidx ptr (MOVWconst [c]) mem) => (MOVWload [c] ptr mem)
(MOVWloadidx (MOVWconst [c]) ptr mem) => (MOVWload [c] ptr mem)
(MOVBloadidx ptr (MOVWconst [c]) mem) => (MOVBload [c] ptr mem)
(MOVBloadidx (MOVWconst [c]) ptr mem) => (MOVBload [c] ptr mem)
(MOVBUloadidx ptr (MOVWconst [c]) mem) => (MOVBUload [c] ptr mem)
(MOVBUloadidx (MOVWconst [c]) ptr mem) => (MOVBUload [c] ptr mem)
(MOVHUloadidx ptr (MOVWconst [c]) mem) => (MOVHUload [c] ptr mem)
(MOVHUloadidx (MOVWconst [c]) ptr mem) => (MOVHUload [c] ptr mem)
(MOVHloadidx ptr (MOVWconst [c]) mem) => (MOVHload [c] ptr mem)
(MOVHloadidx (MOVWconst [c]) ptr mem) => (MOVHload [c] ptr mem)

(MOVWstoreidx ptr (MOVWconst [c]) val mem) => (MOVWstore [c] ptr val mem)
(MOVWstoreidx (MOVWconst [c]) ptr val mem) => (MOVWstore [c] ptr val mem)
(MOVBstoreidx ptr (MOVWconst [c]) val mem) => (MOVBstore [c] ptr val mem)
(MOVBstoreidx (MOVWconst [c]) ptr val mem) => (MOVBstore [c] ptr val mem)
(MOVHstoreidx ptr (MOVWconst [c]) val mem) =>
(MOVHstore [c] ptr val mem)
(MOVHstoreidx (MOVWconst [c]) ptr val mem) => (MOVHstore [c] ptr val mem)

(MOVWloadidx ptr (SLLconst idx [c]) mem) => (MOVWloadshiftLL ptr idx [c] mem)
(MOVWloadidx (SLLconst idx [c]) ptr mem) => (MOVWloadshiftLL ptr idx [c] mem)
(MOVWloadidx ptr (SRLconst idx [c]) mem) => (MOVWloadshiftRL ptr idx [c] mem)
(MOVWloadidx (SRLconst idx [c]) ptr mem) => (MOVWloadshiftRL ptr idx [c] mem)
(MOVWloadidx ptr (SRAconst idx [c]) mem) => (MOVWloadshiftRA ptr idx [c] mem)
(MOVWloadidx (SRAconst idx [c]) ptr mem) => (MOVWloadshiftRA ptr idx [c] mem)

(MOVWstoreidx ptr (SLLconst idx [c]) val mem) => (MOVWstoreshiftLL ptr idx [c] val mem)
(MOVWstoreidx (SLLconst idx [c]) ptr val mem) => (MOVWstoreshiftLL ptr idx [c] val mem)
(MOVWstoreidx ptr (SRLconst idx [c]) val mem) => (MOVWstoreshiftRL ptr idx [c] val mem)
(MOVWstoreidx (SRLconst idx [c]) ptr val mem) => (MOVWstoreshiftRL ptr idx [c] val mem)
(MOVWstoreidx ptr (SRAconst idx [c]) val mem) => (MOVWstoreshiftRA ptr idx [c]
val mem)
(MOVWstoreidx (SRAconst idx [c]) ptr val mem) => (MOVWstoreshiftRA ptr idx [c] val mem)

(MOVWloadshiftLL ptr (MOVWconst [c]) [d] mem) => (MOVWload [int32(uint32(c)<<uint64(d))] ptr mem)
(MOVWloadshiftRL ptr (MOVWconst [c]) [d] mem) => (MOVWload [int32(uint32(c)>>uint64(d))] ptr mem)
(MOVWloadshiftRA ptr (MOVWconst [c]) [d] mem) => (MOVWload [c>>uint64(d)] ptr mem)

(MOVWstoreshiftLL ptr (MOVWconst [c]) [d] val mem) => (MOVWstore [int32(uint32(c)<<uint64(d))] ptr val
mem)
(MOVWstoreshiftRL ptr (MOVWconst [c]) [d] val mem) => (MOVWstore [int32(uint32(c)>>uint64(d))] ptr val
mem)
(MOVWstoreshiftRA ptr (MOVWconst [c]) [d] val mem) => (MOVWstore [c>>uint64(d)] ptr val mem)

// generic simplifications

```

```

(ADD x (RSBconst [0] y)) => (SUB x y)
(ADD <↳ (RSBconst [c] x) (RSBconst [d] y)) => (RSBconst [c+d] (ADD <↳ x y))
(SUB x x) => (MOVWconst [0])
(RSB x x) => (MOVWconst [0])
(AND x x) => x
(OR x x) => x
(XOR x x) => (MOVWconst [0])
(BIC x x) => (MOVWconst [0])

(ADD (MUL x y) a) =>
(MULA x y a)
(SUB a (MUL x y)) && buildcfg.GOARM == 7 => (MULS x y a)
(RSB (MUL x y) a) && buildcfg.GOARM == 7 => (MULS x y a)

(NEGF (MULF x y)) && buildcfg.GOARM >= 6 => (NMULF x y)
(NEGD (MULD x y)) && buildcfg.GOARM >= 6 => (NMULD x y)
(MULF (NEGF x) y) && buildcfg.GOARM >= 6 => (NMULF x y)
(MULD (NEGD x) y) && buildcfg.GOARM >= 6 => (NMULD x y)
(NMULF (NEGF x) y) => (MULF x y)
(NMULD (NEGD x) y) => (MULD x y)

// the result will overwrite the addend, since they are in the same register
(ADDF a (MULF x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULAF a x y)
(ADDF a (NMULF x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULSF a x y)
(ADDD a (MULD x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULAD a x y)
(ADDD a (NMULD x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULSD a x y)
(SUBF a (MULF x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULSF a x y)
(SUBF a (NMULF x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULAF a x y)
(SUBD a (MULD x y)) && a.Uses == 1 && buildcfg.GOARM
>= 6 => (MULSD a x y)
(SUBD a (NMULD x y)) && a.Uses == 1 && buildcfg.GOARM >= 6 => (MULAD a x y)

(AND x (MVN y)) => (BIC x y)

// simplification with *shift ops
(SUBshiftLL (SLLconst x [c]) x [c]) => (MOVWconst [0])
(SUBshiftRL (SRLconst x [c]) x [c]) => (MOVWconst [0])
(SUBshiftRA (SRAconst x [c]) x [c]) => (MOVWconst [0])
(RSBshiftLL (SLLconst x [c]) x [c]) => (MOVWconst [0])
(RSBshiftRL (SRLconst x [c]) x [c]) => (MOVWconst [0])
(RSBshiftRA (SRAconst x [c]) x [c]) => (MOVWconst [0])
(ANDshiftLL y:(SLLconst x [c]) x [c]) => y
(ANDshiftRL y:(SRLconst x [c]) x [c]) => y
(ANDshiftRA y:(SRAconst x [c]) x [c]) => y
(ORshiftLL y:(SLLconst x [c]) x [c]) => y
(ORshiftRL y:(SRLconst x [c]) x [c]) => y
(ORshiftRA y:(SRAconst x [c]) x [c]) => y
(XORshiftLL (SLLconst x [c]) x [c]) => (MOVWconst [0])

```

```

(XORshiftRL (SRLconst x [c]) x [c]) => (MOVWconst [0])
(XORshiftRA (SRAconst x [c]) x [c]) => (MOVWconst [0])
(BICshiftLL (SLLconst x [c]) x [c]) => (MOVWconst [0])
(BICshiftRL (SRLconst x [c])
x [c]) => (MOVWconst [0])
(BICshiftRA (SRAconst x [c]) x [c]) => (MOVWconst [0])
(AND x (MVNshiftLL y [c])) => (BICshiftLL x y [c])
(AND x (MVNshiftRL y [c])) => (BICshiftRL x y [c])
(AND x (MVNshiftRA y [c])) => (BICshiftRA x y [c])

// floating point optimizations
(CMPF x (MOVFconst [0])) => (CMPF0 x)
(CMPD x (MOVDconst [0])) => (CMPD0 x)

// bit extraction
(SRAconst (SLLconst x [c]) [d]) && buildcfg.GOARM==7 && uint64(d)>=uint64(c) && uint64(d)<=31 => (BFX
[(d-c)|(32-d)<<8] x)
(SRLconst (SLLconst x [c]) [d]) && buildcfg.GOARM==7 && uint64(d)>=uint64(c) && uint64(d)<=31 =>
(BFXU [(d-c)|(32-d)<<8] x)

// comparison simplification
((EQ|NE) (CMP x (RSBconst [0] y))) => ((EQ|NE) (CMN x y)) // sense of carry bit not preserved; see also #50854
((EQ|NE) (CMN x (RSBconst [0] y))) => ((EQ|NE) (CMP x y)) // sense of carry bit not preserved; see also #50864
(EQ (CMPconst [0] l:(SUB x y)) yes no) && 1.Uses==1 => (EQ (CMP x y) yes no)
(EQ (CMPconst [0] l:(MULS x y a)) yes no) && 1.Uses==1 => (EQ
(CMP a (MUL <x.Type> x y)) yes no)
(EQ (CMPconst [0] l:(SUBconst [c] x)) yes no) && 1.Uses==1 => (EQ (CMPconst [c] x) yes no)
(EQ (CMPconst [0] l:(SUBshiftLL x y [c])) yes no) && 1.Uses==1 => (EQ (CMPshiftLL x y [c]) yes no)
(EQ (CMPconst [0] l:(SUBshiftRL x y [c])) yes no) && 1.Uses==1 => (EQ (CMPshiftRL x y [c]) yes no)
(EQ (CMPconst [0] l:(SUBshiftRA x y [c])) yes no) && 1.Uses==1 => (EQ (CMPshiftRA x y [c]) yes no)
(EQ (CMPconst [0] l:(SUBshiftLLreg x y z)) yes no) && 1.Uses==1 => (EQ (CMPshiftLLreg x y z) yes no)
(EQ (CMPconst [0] l:(SUBshiftRLreg x y z)) yes no) && 1.Uses==1 => (EQ (CMPshiftRLreg x y z) yes no)
(EQ (CMPconst [0] l:(SUBshiftRAreg x y z)) yes no) && 1.Uses==1 => (EQ (CMPshiftRAreg x y z) yes no)
(NE (CMPconst [0] l:(SUB x y)) yes no) && 1.Uses==1 => (NE (CMP x y) yes no)
(NE (CMPconst [0] l:(MULS x y a)) yes no) && 1.Uses==1 => (NE (CMP a (MUL <x.Type> x y)) yes no)
(NE (CMPconst [0] l:(SUBconst [c] x)) yes no) && 1.Uses==1 => (NE (CMPconst [c] x) yes no)
(NE (CMPconst
[0] l:(SUBshiftLL x y [c])) yes no) && 1.Uses==1 => (NE (CMPshiftLL x y [c]) yes no)
(NE (CMPconst [0] l:(SUBshiftRL x y [c])) yes no) && 1.Uses==1 => (NE (CMPshiftRL x y [c]) yes no)
(NE (CMPconst [0] l:(SUBshiftRA x y [c])) yes no) && 1.Uses==1 => (NE (CMPshiftRA x y [c]) yes no)
(NE (CMPconst [0] l:(SUBshiftLLreg x y z)) yes no) && 1.Uses==1 => (NE (CMPshiftLLreg x y z) yes no)
(NE (CMPconst [0] l:(SUBshiftRLreg x y z)) yes no) && 1.Uses==1 => (NE (CMPshiftRLreg x y z) yes no)
(NE (CMPconst [0] l:(SUBshiftRAreg x y z)) yes no) && 1.Uses==1 => (NE (CMPshiftRAreg x y z) yes no)
(EQ (CMPconst [0] l:(ADD x y)) yes no) && 1.Uses==1 => (EQ (CMN x y) yes no)
(EQ (CMPconst [0] l:(MULA x y a)) yes no) && 1.Uses==1 => (EQ (CMN a (MUL <x.Type> x y)) yes no)
(EQ (CMPconst [0] l:(ADDconst [c] x)) yes no) && 1.Uses==1 => (EQ (CMNconst [c] x) yes no)
(EQ (CMPconst [0] l:(ADDshiftLL x y [c])) yes no) && 1.Uses==1 => (EQ (CMNshiftLL x y [c]) yes no)
(EQ (CMPconst [0] l:(ADDshiftRL x y [c])) yes

```

no) && 1.Uses==1 => (EQ (CMNshiftRL x y [c]) yes no)  
(EQ (CMPconst [0] l:(ADDshiftRA x y [c])) yes no) && 1.Uses==1 => (EQ (CMNshiftRA x y [c]) yes no)  
(EQ (CMPconst [0] l:(ADDshiftLLreg x y z)) yes no) && 1.Uses==1 => (EQ (CMNshiftLLreg x y z) yes no)  
(EQ (CMPconst [0] l:(ADDshiftRLreg x y z)) yes no) && 1.Uses==1 => (EQ (CMNshiftRLreg x y z) yes no)  
(EQ (CMPconst [0] l:(ADDshiftRAreg x y z)) yes no) && 1.Uses==1 => (EQ (CMNshiftRAreg x y z) yes no)  
(NE (CMPconst [0] l:(ADD x y)) yes no) && 1.Uses==1 => (NE (CMN x y) yes no)  
(NE (CMPconst [0] l:(MULA x y a)) yes no) && 1.Uses==1 => (NE (CMN a (MUL <x.Type> x y)) yes no)  
(NE (CMPconst [0] l:(ADDconst [c] x)) yes no) && 1.Uses==1 => (NE (CMNconst [c] x) yes no)  
(NE (CMPconst [0] l:(ADDshiftLL x y [c])) yes no) && 1.Uses==1 => (NE (CMNshiftLL x y [c]) yes no)  
(NE (CMPconst [0] l:(ADDshiftRL x y [c])) yes no) && 1.Uses==1 => (NE (CMNshiftRL x y [c]) yes no)  
(NE (CMPconst [0] l:(ADDshiftRA x y [c])) yes no) && 1.Uses==1 => (NE (CMNshiftRA  
x y [c]) yes no)  
(NE (CMPconst [0] l:(ADDshiftLLreg x y z)) yes no) && 1.Uses==1 => (NE (CMNshiftLLreg x y z) yes no)  
(NE (CMPconst [0] l:(ADDshiftRLreg x y z)) yes no) && 1.Uses==1 => (NE (CMNshiftRLreg x y z) yes no)  
(NE (CMPconst [0] l:(ADDshiftRAreg x y z)) yes no) && 1.Uses==1 => (NE (CMNshiftRAreg x y z) yes no)  
(EQ (CMPconst [0] l:(AND x y)) yes no) && 1.Uses==1 => (EQ (TST x y) yes no)  
(EQ (CMPconst [0] l:(ANDconst [c] x)) yes no) && 1.Uses==1 => (EQ (TSTconst [c] x) yes no)  
(EQ (CMPconst [0] l:(ANDshiftLL x y [c])) yes no) && 1.Uses==1 => (EQ (TSTshiftLL x y [c]) yes no)  
(EQ (CMPconst [0] l:(ANDshiftRL x y [c])) yes no) && 1.Uses==1 => (EQ (TSTshiftRL x y [c]) yes no)  
(EQ (CMPconst [0] l:(ANDshiftRA x y [c])) yes no) && 1.Uses==1 => (EQ (TSTshiftRA x y [c]) yes no)  
(EQ (CMPconst [0] l:(ANDshiftLLreg x y z)) yes no) && 1.Uses==1 => (EQ (TSTshiftLLreg x y z) yes no)  
(EQ (CMPconst [0] l:(ANDshiftRLreg x y z)) yes no) && 1.Uses==1 => (EQ (TSTshiftRLreg x y z) yes no)  
(EQ (CMPconst  
[0] l:(ANDshiftRAreg x y z)) yes no) && 1.Uses==1 => (EQ (TSTshiftRAreg x y z) yes no)  
(NE (CMPconst [0] l:(AND x y)) yes no) && 1.Uses==1 => (NE (TST x y) yes no)  
(NE (CMPconst [0] l:(ANDconst [c] x)) yes no) && 1.Uses==1 => (NE (TSTconst [c] x) yes no)  
(NE (CMPconst [0] l:(ANDshiftLL x y [c])) yes no) && 1.Uses==1 => (NE (TSTshiftLL x y [c]) yes no)  
(NE (CMPconst [0] l:(ANDshiftRL x y [c])) yes no) && 1.Uses==1 => (NE (TSTshiftRL x y [c]) yes no)  
(NE (CMPconst [0] l:(ANDshiftRA x y [c])) yes no) && 1.Uses==1 => (NE (TSTshiftRA x y [c]) yes no)  
(NE (CMPconst [0] l:(ANDshiftLLreg x y z)) yes no) && 1.Uses==1 => (NE (TSTshiftLLreg x y z) yes no)  
(NE (CMPconst [0] l:(ANDshiftRLreg x y z)) yes no) && 1.Uses==1 => (NE (TSTshiftRLreg x y z) yes no)  
(NE (CMPconst [0] l:(ANDshiftRAreg x y z)) yes no) && 1.Uses==1 => (NE (TSTshiftRAreg x y z) yes no)  
(EQ (CMPconst [0] l:(XOR x y)) yes no) && 1.Uses==1 => (EQ (TEQ x y) yes no)  
(EQ (CMPconst [0] l:(XORconst [c] x)) yes no) && 1.Uses==1 => (EQ  
(TEQconst [c] x) yes no)  
(EQ (CMPconst [0] l:(XORshiftLL x y [c])) yes no) && 1.Uses==1 => (EQ (TEQshiftLL x y [c]) yes no)  
(EQ (CMPconst [0] l:(XORshiftRL x y [c])) yes no) && 1.Uses==1 => (EQ (TEQshiftRL x y [c]) yes no)  
(EQ (CMPconst [0] l:(XORshiftRA x y [c])) yes no) && 1.Uses==1 => (EQ (TEQshiftRA x y [c]) yes no)  
(EQ (CMPconst [0] l:(XORshiftLLreg x y z)) yes no) && 1.Uses==1 => (EQ (TEQshiftLLreg x y z) yes no)  
(EQ (CMPconst [0] l:(XORshiftRLreg x y z)) yes no) && 1.Uses==1 => (EQ (TEQshiftRLreg x y z) yes no)  
(EQ (CMPconst [0] l:(XORshiftRAreg x y z)) yes no) && 1.Uses==1 => (EQ (TEQshiftRAreg x y z) yes no)  
(NE (CMPconst [0] l:(XOR x y)) yes no) && 1.Uses==1 => (NE (TEQ x y) yes no)  
(NE (CMPconst [0] l:(XORconst [c] x)) yes no) && 1.Uses==1 => (NE (TEQconst [c] x) yes no)  
(NE (CMPconst [0] l:(XORshiftLL x y [c])) yes no) && 1.Uses==1 => (NE (TEQshiftLL x y [c]) yes no)  
(NE (CMPconst [0] l:(XORshiftRL x y [c])) yes no) && 1.Uses==1 => (NE (TEQshiftRL x y [c]) yes no)  
(NE (CMPconst  
[0] l:(XORshiftRA x y [c])) yes no) && 1.Uses==1 => (NE (TEQshiftRA x y [c]) yes no)  
(NE (CMPconst [0] l:(XORshiftLLreg x y z)) yes no) && 1.Uses==1 => (NE (TEQshiftLLreg x y z) yes no)





(LT (CMPconst [0] l:(ANDshiftRLreg x y z)) yes no) && 1.Uses==1 => (LTnoov (TSTshiftRLreg x y z) yes no)  
 (LT (CMPconst [0] l:(ANDshiftRAreg x y z)) yes no) && 1.Uses==1 => (LTnoov (TSTshiftRAreg x y z) yes no)  
 (LE (CMPconst [0] l:(AND x y)) yes no) && 1.Uses==1 => (LEnoov (TST x y) yes no)  
 (LE (CMPconst [0] l:(ANDconst [c] x)) yes no) && 1.Uses==1 => (LEnoov (TSTconst [c] x) yes no)  
 (LE (CMPconst [0] l:(ANDshiftLL  
 x y [c])) yes no) && 1.Uses==1 => (LEnoov (TSTshiftLL x y [c]) yes no)  
 (LE (CMPconst [0] l:(ANDshiftRL x y [c])) yes no) && 1.Uses==1 => (LEnoov (TSTshiftRL x y [c]) yes no)  
 (LE (CMPconst [0] l:(ANDshiftRA x y [c])) yes no) && 1.Uses==1 => (LEnoov (TSTshiftRA x y [c]) yes no)  
 (LE (CMPconst [0] l:(ANDshiftLLreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TSTshiftLLreg x y z) yes no)  
 (LE (CMPconst [0] l:(ANDshiftRLreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TSTshiftRLreg x y z) yes no)  
 (LE (CMPconst [0] l:(ANDshiftRAreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TSTshiftRAreg x y z) yes no)  
 (LT (CMPconst [0] l:(XOR x y)) yes no) && 1.Uses==1 => (LTnoov (TEQ x y) yes no)  
 (LT (CMPconst [0] l:(XORconst [c] x)) yes no) && 1.Uses==1 => (LTnoov (TEQconst [c] x) yes no)  
 (LT (CMPconst [0] l:(XORshiftLL x y [c])) yes no) && 1.Uses==1 => (LTnoov (TEQshiftLL x y [c]) yes no)  
 (LT (CMPconst [0] l:(XORshiftRL x y [c])) yes no) && 1.Uses==1 => (LTnoov (TEQshiftRL x y [c]) yes no)  
 (LT (CMPconst [0] l:(XORshiftRA  
 x y [c])) yes no) && 1.Uses==1 => (LTnoov (TEQshiftRA x y [c]) yes no)  
 (LT (CMPconst [0] l:(XORshiftLLreg x y z)) yes no) && 1.Uses==1 => (LTnoov (TEQshiftLLreg x y z) yes no)  
 (LT (CMPconst [0] l:(XORshiftRLreg x y z)) yes no) && 1.Uses==1 => (LTnoov (TEQshiftRLreg x y z) yes no)  
 (LT (CMPconst [0] l:(XORshiftRAreg x y z)) yes no) && 1.Uses==1 => (LTnoov (TEQshiftRAreg x y z) yes no)  
 (LE (CMPconst [0] l:(XOR x y)) yes no) && 1.Uses==1 => (LEnoov (TEQ x y) yes no)  
 (LE (CMPconst [0] l:(XORconst [c] x)) yes no) && 1.Uses==1 => (LEnoov (TEQconst [c] x) yes no)  
 (LE (CMPconst [0] l:(XORshiftLL x y [c])) yes no) && 1.Uses==1 => (LEnoov (TEQshiftLL x y [c]) yes no)  
 (LE (CMPconst [0] l:(XORshiftRL x y [c])) yes no) && 1.Uses==1 => (LEnoov (TEQshiftRL x y [c]) yes no)  
 (LE (CMPconst [0] l:(XORshiftRA x y [c])) yes no) && 1.Uses==1 => (LEnoov (TEQshiftRA x y [c]) yes no)  
 (LE (CMPconst [0] l:(XORshiftLLreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TEQshiftLLreg x y z) yes no)  
 (LE (CMPconst  
 [0] l:(XORshiftRLreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TEQshiftRLreg x y z) yes no)  
 (LE (CMPconst [0] l:(XORshiftRAreg x y z)) yes no) && 1.Uses==1 => (LEnoov (TEQshiftRAreg x y z) yes no)  
 (GT (CMPconst [0] l:(SUB x y)) yes no) && 1.Uses==1 => (GTnoov (CMP x y) yes no)  
 (GT (CMPconst [0] l:(MULS x y a)) yes no) && 1.Uses==1 => (GTnoov (CMP a (MUL <x.Type> x y)) yes no)  
 (GT (CMPconst [0] l:(SUBconst [c] x)) yes no) && 1.Uses==1 => (GTnoov (CMPconst [c] x) yes no)  
 (GT (CMPconst [0] l:(SUBshiftLL x y [c])) yes no) && 1.Uses==1 => (GTnoov (CMPshiftLL x y [c]) yes no)  
 (GT (CMPconst [0] l:(SUBshiftRL x y [c])) yes no) && 1.Uses==1 => (GTnoov (CMPshiftRL x y [c]) yes no)  
 (GT (CMPconst [0] l:(SUBshiftRA x y [c])) yes no) && 1.Uses==1 => (GTnoov (CMPshiftRA x y [c]) yes no)  
 (GT (CMPconst [0] l:(SUBshiftLLreg x y z)) yes no) && 1.Uses==1 => (GTnoov (CMPshiftLLreg x y z) yes no)  
 (GT (CMPconst [0] l:(SUBshiftRLreg x y z)) yes no) && 1.Uses==1 => (GTnoov (CMPshiftRLreg x y z) yes no)  
 (GT (CMPconst  
 [0] l:(SUBshiftRAreg x y z)) yes no) && 1.Uses==1 => (GTnoov (CMPshiftRAreg x y z) yes no)  
 (GE (CMPconst [0] l:(SUB x y)) yes no) && 1.Uses==1 => (GENoov (CMP x y) yes no)  
 (GE (CMPconst [0] l:(MULS x y a)) yes no) && 1.Uses==1 => (GENoov (CMP a (MUL <x.Type> x y)) yes no)  
 (GE (CMPconst [0] l:(SUBconst [c] x)) yes no) && 1.Uses==1 => (GENoov (CMPconst [c] x) yes no)  
 (GE (CMPconst [0] l:(SUBshiftLL x y [c])) yes no) && 1.Uses==1 => (GENoov (CMPshiftLL x y [c]) yes no)  
 (GE (CMPconst [0] l:(SUBshiftRL x y [c])) yes no) && 1.Uses==1 => (GENoov (CMPshiftRL x y [c]) yes no)  
 (GE (CMPconst [0] l:(SUBshiftRA x y [c])) yes no) && 1.Uses==1 => (GENoov (CMPshiftRA x y [c]) yes no)  
 (GE (CMPconst [0] l:(SUBshiftLLreg x y z)) yes no) && 1.Uses==1 => (GENoov (CMPshiftLLreg x y z) yes no)  
 (GE (CMPconst [0] l:(SUBshiftRLreg x y z)) yes no) && 1.Uses==1 => (GENoov (CMPshiftRLreg x y z) yes no)  
 (GE (CMPconst [0] l:(SUBshiftRAreg x y z)) yes no) && 1.Uses==1 => (GENoov (CMPshiftRAreg x y z) yes no)



```
(GE (CMPconst [0] l:(XORconst [c] x)) yes no) && 1.Uses==1 => (GENoov (TEQconst [c] x) yes no)
(GE (CMPconst [0] l:(XORshiftLL x y [c])) yes no) && 1.Uses==1 => (GENoov (TEQshiftLL x y [c]) yes no)
(GE (CMPconst [0] l:(XORshiftRL x y [c])) yes no) && 1.Uses==1 => (GENoov (TEQshiftRL x y [c]) yes no)
(GE (CMPconst [0] l:(XORshiftRA x y [c])) yes no) && 1.Uses==1 => (GENoov (TEQshiftRA x y [c]) yes no)
(GE (CMPconst [0] l:(XORshiftLLreg x y z)) yes no) && 1.Uses==1 => (GENoov (TEQshiftLLreg x y z) yes no)
(GE (CMPconst [0] l:(XORshiftRLreg x y z)) yes no) && 1.Uses==1 => (GENoov (TEQshiftRLreg x y z) yes no)
(GE (CMPconst [0] l:(XORshiftRAREg x y z)) yes no) && 1.Uses==1 => (GENoov (TEQshiftRAREg x y z) yes no)
```

(MOVBUnload

```
[off] {sym} (SB _) && symIsRO(sym) => (MOVWconst [int32(read8(sym, int64(off)))]))
(MOVHUnload [off] {sym} (SB _) && symIsRO(sym) => (MOVWconst [int32(read16(sym, int64(off)),
config.ctx.Arch.ByteOrder)]))
(MOVWload [off] {sym} (SB _) && symIsRO(sym) => (MOVWconst [int32(read32(sym, int64(off)),
config.ctx.Arch.ByteOrder)]))
```

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/ARM.rules
No license file was found, but licenses were detected in source scan.
```

# Copyright 2020 The Go Authors. All rights reserved.

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/cover.bash
No license file was found, but licenses were detected in source scan.
```

// Copyright 2017 The Go Authors. All rights reserved.

Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/gen/cmpConstGen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/softfloat.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/magic_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/testdata/hist.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/branches.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/looprotate.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/bitset.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/dwarfgen/dwinl.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/type.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/pprof.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/scope.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/debug_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/branchelim.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/bootstrap.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/cache.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/testdata/scopes.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/reproduciblebuilds_test.go
```

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/pkg.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/sizeof_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/decls5.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/debug.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/dwarfgen/scope.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/utils.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/branchelim_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/sym.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/inl_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/truncconst_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/nodes_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/importer/testdata/issue20046.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/cycles5.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/reproducible/issue20272.go
No license file was found, but licenses were detected in source scan.
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Found in path(s):

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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/phielim.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/short_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/deadcode_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/block.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/global_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/func.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/decOps.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/location.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/example_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/deferNoReturn_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/AMD64Ops.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/regalloc.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/assert_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/dom_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/support.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/arith_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/chan_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/decompose.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/export_test.go
*
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/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/tighten.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/fuse.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/config.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/ctl\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/lower.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/opt.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/op.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/critical.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/flagalloc.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/nilcheck.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/passbm\_test.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/rulegen.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/sparsetree.go  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/test/testdata/loadstore\_test.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/string\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/fp\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/break\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/html.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/regalloc\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/unsafe\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/append\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/sparsemap.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/layout.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/cmp\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/regalloc\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/deadstore.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/ssa\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/print.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/check.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/genericOps.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/sym\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/func\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/id.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/sparseset.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/stackalloc.go

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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/util.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/main.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/cse.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/gen/zeroGen.go
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/copyelim.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/deadcode.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/closure_test.go
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zip/compile/internal/test/testdata/addressed_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/schedule.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/gen/copyGen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/bexport.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/shift_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/schedule_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/dom.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/gen/arithBoundaryGen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssagen/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/value.go
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```

```

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```

```

// Lowering arithmetic
(Add(64|32|16|8) ...) => (ADD(Q|L|L|L) ...)
(AddPtr ...) => (ADDQ ...)
(Add(32|64)F ...) => (ADDS(S|D) ...)

(Sub(64|32|16|8) ...) => (SUB(Q|L|L|L) ...)
(SubPtr ...) => (SUBQ ...)
(Sub(32|64)F ...) => (SUBS(S|D) ...)

(Mul(64|32|16|8) ...) => (MUL(Q|L|L|L) ...)
(Mul(32|64)F ...) => (MULS(S|D) ...)

(Select0 (Mul64uover x y)) => (Select0 <typ.UInt64> (MULQU x y))
(Select0 (Mul32uover x y)) => (Select0 <typ.UInt32> (MULLU x y))
(Select1 (Mul(64|32)uover x y)) => (SETO (Select1 <types.TypeFlags> (MUL(Q|L)U x y)))

(Hmul(64|32) ...) => (HMUL(Q|L) ...)
(Hmul(64|32)u ...) => (HMUL(Q|L)U ...)

(Div(64|32|16) [a] x y) => (Select0 (DIV(Q|L|W) [a] x y))
(Div8 x y) => (Select0 (DIVW (SignExt8to16 x) (SignExt8to16 y)))

```

```

(Div(64|32|16)u x y) => (Select0
  (DIV(Q|L|W)U x y))
(Div8u x y) => (Select0 (DIVWU (ZeroExt8to16 x) (ZeroExt8to16 y)))
(Div(32|64)F ...) => (DIVS(S|D) ...)

(Select0 (Add64carry x y c)) =>
  (Select0 <typ.UInt64> (ADCQ x y (Select1 <types.TypeFlags> (NEGLflags c))))
(Select1 (Add64carry x y c)) =>
  (NEGQ <typ.UInt64> (SBBQcarrymask <typ.UInt64> (Select1 <types.TypeFlags> (ADCQ x y (Select1
  <types.TypeFlags> (NEGLflags c))))))
(Select0 (Sub64borrow x y c)) =>
  (Select0 <typ.UInt64> (SBBQ x y (Select1 <types.TypeFlags> (NEGLflags c))))
(Select1 (Sub64borrow x y c)) =>
  (NEGQ <typ.UInt64> (SBBQcarrymask <typ.UInt64> (Select1 <types.TypeFlags> (SBBQ x y (Select1
  <types.TypeFlags> (NEGLflags c))))))

// Optimize ADCQ and friends
(ADCQ x (MOVQconst [c]) carry) && is32Bit(c) => (ADCQconst x [int32(c)] carry)
(ADCQ x y (FlagEQ)) => (ADDQcarry x y)
(ADCQconst x [c] (FlagEQ)) => (ADDQconstcarry x [c])
(ADDQcarry x (MOVQconst [c])) && is32Bit(c) => (ADDQconstcarry x [int32(c)])
(SBBQ x (MOVQconst [c]) borrow) && is32Bit(c) =>
  (SBBQconst x [int32(c)] borrow)
(SBBQ x y (FlagEQ)) => (SUBQborrow x y)
(SBBQconst x [c] (FlagEQ)) => (SUBQconstborrow x [c])
(SUBQborrow x (MOVQconst [c])) && is32Bit(c) => (SUBQconstborrow x [int32(c)])
(Select1 (NEGLflags (MOVQconst [0]))) => (FlagEQ)
(Select1 (NEGLflags (NEGQ (SBBQcarrymask x)))) => x

(Mul64uhilo ...) => (MULQU2 ...)
(Div128u ...) => (DIVQU2 ...)

(Avg64u ...) => (AVGQU ...)

(Mod(64|32|16) [a] x y) => (Select1 (DIV(Q|L|W) [a] x y))
(Mod8 x y) => (Select1 (DIVW (SignExt8to16 x) (SignExt8to16 y)))
(Mod(64|32|16)u x y) => (Select1 (DIV(Q|L|W)U x y))
(Mod8u x y) => (Select1 (DIVWU (ZeroExt8to16 x) (ZeroExt8to16 y)))

(And(64|32|16|8) ...) => (AND(Q|L|L|L) ...)
(Or(64|32|16|8) ...) => (OR(Q|L|L|L) ...)
(Xor(64|32|16|8) ...) => (XOR(Q|L|L|L) ...)
(Com(64|32|16|8) ...) => (NOT(Q|L|L|L) ...)

(Neg(64|32|16|8) ...) => (NEG(Q|L|L|L) ...)
(Neg32F x) => (PXOR x (MOVSSconst <typ.Float32> [float32(math.Copysign(0, -1))]))
(Neg64F x) => (PXOR x (MOVSDconst <typ.Float64> [math.Copysign(0,

```



-1]))

// Lowering boolean ops

(AndB ...) => (ANDL ...)

(OrB ...) => (ORL ...)

(Not x) => (XORLconst [1] x)

// Lowering pointer arithmetic

(OffPtr [off] ptr) && is32Bit(off) => (ADDQconst [int32(off)] ptr)

(OffPtr [off] ptr) => (ADDQ (MOVQconst [off]) ptr)

// Lowering other arithmetic

(Ctz64 x) && buildcfg.GOAMD64 >= 3 => (TZCNTQ x)

(Ctz32 x) && buildcfg.GOAMD64 >= 3 => (TZCNTL x)

(Ctz64 <t> x) && buildcfg.GOAMD64 < 3 => (CMOVQEQ (Select0 <t> (BSFQ x)) (MOVQconst <t> [64]) (Select1 <types.TypeFlags> (BSFQ x)))

(Ctz32 x) && buildcfg.GOAMD64 < 3 => (Select0 (BSFQ (BTSQconst <typ.UInt64> [32] x)))

(Ctz16 x) => (BSFL (BTSQconst <typ.UInt32> [16] x))

(Ctz8 x) => (BSFL (BTSQconst <typ.UInt32> [ 8] x))

(Ctz64NonZero x) && buildcfg.GOAMD64 >= 3 => (TZCNTQ x)

(Ctz32NonZero x) && buildcfg.GOAMD64 >= 3 => (TZCNTL x)

(Ctz16NonZero x) && buildcfg.GOAMD64 >= 3 => (TZCNTL x)

(Ctz8NonZero x) && buildcfg.GOAMD64 >= 3 => (TZCNTL x)

(Ctz64NonZero x) && buildcfg.GOAMD64

< 3 => (Select0 (BSFQ x))

(Ctz32NonZero x) && buildcfg.GOAMD64 < 3 => (BSFL x)

(Ctz16NonZero x) && buildcfg.GOAMD64 < 3 => (BSFL x)

(Ctz8NonZero x) && buildcfg.GOAMD64 < 3 => (BSFL x)

// BitLen64 of a 64 bit value x requires checking whether x == 0, since BSRQ is undefined when x == 0.

// However, for zero-extended values, we can cheat a bit, and calculate

// BSR(x<<1 + 1), which is guaranteed to be non-zero, and which conveniently

// places the index of the highest set bit where we want it.

// For GOAMD64>=3, BitLen can be calculated by OperandSize - LZCNT(x).

(BitLen64 <t> x) && buildcfg.GOAMD64 < 3 => (ADDQconst [1] (CMOVQEQ <t> (Select0 <t> (BSRQ x)) (MOVQconst <t> [-1]) (Select1 <types.TypeFlags> (BSRQ x))))

(BitLen32 x) && buildcfg.GOAMD64 < 3 => (Select0 (BSRQ (LEAQ1 <typ.UInt64> [1] (MOVLQZX <typ.UInt64> x) (MOVLQZX <typ.UInt64> x))))

(BitLen16 x) && buildcfg.GOAMD64 < 3 => (BSRL (LEAL1 <typ.UInt32> [1] (MOVWQZX <typ.UInt32> x) (MOVWQZX <typ.UInt32> x)))

(BitLen8 x) &&

buildcfg.GOAMD64 < 3 => (BSRL (LEAL1 <typ.UInt32> [1] (MOVBQZX <typ.UInt32> x) (MOVBQZX <typ.UInt32> x)))

(BitLen64 <t> x) && buildcfg.GOAMD64 >= 3 => (NEGQ (ADDQconst <t> [-64] (LZCNTQ x)))

// Use 64-bit version to allow const-fold remove unnecessary arithmetic.

(BitLen32 <t> x) && buildcfg.GOAMD64 >= 3 => (NEGQ (ADDQconst <t> [-32] (LZCNTL x)))

(BitLen16 <t> x) && buildcfg.GOAMD64 >= 3 => (NEGQ (ADDQconst <t> [-32] (LZCNTL (MOVWQZX

<x.Type> x))))  
(BitLen8 <t> x) && buildcfg.GOAMD64 >= 3 => (NEGQ (ADDQconst <t> [-32] (LZCNTL (MOVBQZX  
<x.Type> x))))

(Bswap(64|32) ...) => (BSWAP(Q|L) ...)

(PopCount(64|32) ...) => (POPCNT(Q|L) ...)  
(PopCount16 x) => (POPCNTL (MOVWQZX <typ.UInt32> x))  
(PopCount8 x) => (POPCNTL (MOVBQZX <typ.UInt32> x))

(Sqrt ...) => (SQRTSD ...)  
(Sqrt32 ...) => (SQRTSS ...)

(RoundToEven x) => (ROUNDSD [0] x)  
(Floor x) => (ROUNDSD [1] x)  
(Ceil x) => (ROUNDSD [2] x)  
(Trunc x) => (ROUNDSD [3] x)

(FMA x y z) => (VFMADD231SD z x y)

// Lowering  
extension

// Note: we always extend to 64 bits even though some ops don't need that many result bits.

(SignExt8to16 ...) => (MOVBQZX ...)  
(SignExt8to32 ...) => (MOVBQZX ...)  
(SignExt8to64 ...) => (MOVBQZX ...)  
(SignExt16to32 ...) => (MOVWQZX ...)  
(SignExt16to64 ...) => (MOVWQZX ...)  
(SignExt32to64 ...) => (MOVLQZX ...)

(ZeroExt8to16 ...) => (MOVBQZX ...)  
(ZeroExt8to32 ...) => (MOVBQZX ...)  
(ZeroExt8to64 ...) => (MOVBQZX ...)  
(ZeroExt16to32 ...) => (MOVWQZX ...)  
(ZeroExt16to64 ...) => (MOVWQZX ...)  
(ZeroExt32to64 ...) => (MOVLQZX ...)

(Slicemask <t> x) => (SARQconst (NEGQ <t> x) [63])

(SpectreIndex <t> x y) => (CMOVQCC x (MOVQconst [0]) (CMPQ x y))  
(SpectreSliceIndex <t> x y) => (CMOVQHI x (MOVQconst [0]) (CMPQ x y))

// Lowering truncation

// Because we ignore high parts of registers, truncates are just copies.

(Trunc16to8 ...) => (Copy ...)  
(Trunc32to8 ...) => (Copy ...)  
(Trunc32to16 ...) => (Copy ...)  
(Trunc64to8 ...) => (Copy ...)

```

(Trunc64to16 ...) => (Copy ...)
(Trunc64to32
...) => (Copy ...)

// Lowering float <-> int
(Cvt32to32F ...) => (CVTSL2SS ...)
(Cvt32to64F ...) => (CVTSL2SD ...)
(Cvt64to32F ...) => (CVTSQ2SS ...)
(Cvt64to64F ...) => (CVTSQ2SD ...)

(Cvt32Fto32 ...) => (CVTTSS2SL ...)
(Cvt32Fto64 ...) => (CVTTSS2SQ ...)
(Cvt64Fto32 ...) => (CVTTSD2SL ...)
(Cvt64Fto64 ...) => (CVTTSD2SQ ...)

(Cvt32Fto64F ...) => (CVTSS2SD ...)
(Cvt64Fto32F ...) => (CVTSD2SS ...)

(Round(32|64)F ...) => (Copy ...)

(CvtBoolToUInt8 ...) => (Copy ...)

// Lowering shifts
// Unsigned shifts need to return 0 if shift amount is >= width of shifted value.
// result = (arg << shift) & (shift >= argbits ? 0 : 0xffffffffffff)
(Lsh64x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDQ (SHLQ <t> x y) (SBBQcarrymask <t>
(CMP(Q|L|W|B)const y [64])))
(Lsh32x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const y [32])))
(Lsh16x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const
y [32])))
(Lsh8x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHLL <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const y [32])))

(Lsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SHLQ x y)
(Lsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SHLL x y)
(Lsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SHLL x y)
(Lsh8x(64|32|16|8) x y) && shiftIsBounded(v) => (SHLL x y)

(Rsh64Ux(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDQ (SHRQ <t> x y) (SBBQcarrymask <t>
(CMP(Q|L|W|B)const y [64])))
(Rsh32Ux(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRL <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const y [32])))
(Rsh16Ux(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRW <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const y [16])))
(Rsh8Ux(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (ANDL (SHRB <t> x y) (SBBLcarrymask <t>
(CMP(Q|L|W|B)const y [8])))

```

```

(Rsh64Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SHRQ x y)
(Rsh32Ux(64|32|16|8) x y) && shiftIsBounded(v) =>
(SHRL x y)
(Rsh16Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SHRW x y)
(Rsh8Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SHRB x y)

// Signed right shift needs to return 0/-1 if shift amount is >= width of shifted value.
// We implement this by setting the shift value to -1 (all ones) if the shift value is >= width.
(Rsh64x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (SARQ <t> x (OR(Q|L|L|L) <y.Type> y (NOT(Q|L|L|L)
<y.Type> (SBB(Q|L|L|L)carrymask <y.Type> (CMP(Q|L|W|B)const y [64])))))
(Rsh32x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (SARL <t> x (OR(Q|L|L|L) <y.Type> y (NOT(Q|L|L|L)
<y.Type> (SBB(Q|L|L|L)carrymask <y.Type> (CMP(Q|L|W|B)const y [32])))))
(Rsh16x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (SARW <t> x (OR(Q|L|L|L) <y.Type> y (NOT(Q|L|L|L)
<y.Type> (SBB(Q|L|L|L)carrymask <y.Type> (CMP(Q|L|W|B)const y [16])))))
(Rsh8x(64|32|16|8) <t> x y) && !shiftIsBounded(v) => (SARB <t> x (OR(Q|L|L|L) <y.Type> y (NOT(Q|L|L|L)
<y.Type> (SBB(Q|L|L|L)carrymask <y.Type> (CMP(Q|L|W|B)const
y [8])))))

(Rsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SARQ x y)
(Rsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SARL x y)
(Rsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SARW x y)
(Rsh8x(64|32|16|8) x y) && shiftIsBounded(v) => (SARB x y)

// Prefer SARX/SHLX/SHRX instruction because it has less register restriction on the shift input.
(SAR(Q|L) x y) && buildcfg.GOAMD64 >= 3 => (SARX(Q|L) x y)
(SHL(Q|L) x y) && buildcfg.GOAMD64 >= 3 => (SHLX(Q|L) x y)
(SHR(Q|L) x y) && buildcfg.GOAMD64 >= 3 => (SHRX(Q|L) x y)

// Lowering integer comparisons
(Less(64|32|16|8) x y) => (SETL (CMP(Q|L|W|B) x y))
(Less(64|32|16|8)U x y) => (SETB (CMP(Q|L|W|B) x y))
(Leq(64|32|16|8) x y) => (SETLE (CMP(Q|L|W|B) x y))
(Leq(64|32|16|8)U x y) => (SETBE (CMP(Q|L|W|B) x y))
(Eq(Ptr|64|32|16|8|B) x y) => (SETEQ (CMP(Q|Q|L|W|B|B) x y))
(Neq(Ptr|64|32|16|8|B) x y) => (SETNE (CMP(Q|Q|L|W|B|B) x y))

// Lowering floating point comparisons
// Note Go assembler
gets UCOMISx operand order wrong, but it is right here
// and the operands are reversed when generating assembly language.
(Eq(32|64)F x y) => (SETEQF (UCOMIS(S|D) x y))
(Neq(32|64)F x y) => (SETNEF (UCOMIS(S|D) x y))
// Use SETGF/SETGEF with reversed operands to dodge NaN case.
(Less(32|64)F x y) => (SETGF (UCOMIS(S|D) y x))
(Leq(32|64)F x y) => (SETGEF (UCOMIS(S|D) y x))

// Lowering loads

```

```

(Load <t> ptr mem) && (is64BitInt(t) || isPtr(t)) => (MOVQload ptr mem)
(Load <t> ptr mem) && is32BitInt(t) => (MOVLload ptr mem)
(Load <t> ptr mem) && is16BitInt(t) => (MOVWload ptr mem)
(Load <t> ptr mem) && (t.IsBoolean() || is8BitInt(t)) => (MOVBload ptr mem)
(Load <t> ptr mem) && is32BitFloat(t) => (MOVSSload ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (MOVSDload ptr mem)

// Lowering stores
// These more-specific FP versions of Store pattern should come first.
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVSDstore ptr val mem)
(Store {t} ptr val mem)
&& t.Size() == 4 && is32BitFloat(val.Type) => (MOVSSstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 8 => (MOVQstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 => (MOVLstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)

// Lowering moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBload src mem) mem)
(Move [2] dst src mem) => (MOVWstore dst (MOVWload src mem) mem)
(Move [4] dst src mem) => (MOVLstore dst (MOVLload src mem) mem)
(Move [8] dst src mem) => (MOVQstore dst (MOVQload src mem) mem)
(Move [16] dst src mem) && config.useSSE => (MOVQstore dst (MOVQload src mem) mem)
(Move [16] dst src mem) && !config.useSSE =>
(MOVQstore [8] dst (MOVQload [8] src mem)
(MOVQstore dst (MOVQload src mem) mem))

(Move [32] dst src mem) =>
(Move [16]
(OffPtr <dst.Type> dst [16])
(OffPtr <src.Type> src [16])
(Move [16] dst src mem))

(Move
[48] dst src mem) && config.useSSE =>
(Move [32]
(OffPtr <dst.Type> dst [16])
(OffPtr <src.Type> src [16])
(Move [16] dst src mem))

(Move [64] dst src mem) && config.useSSE =>
(Move [32]
(OffPtr <dst.Type> dst [32])
(OffPtr <src.Type> src [32])
(Move [32] dst src mem))

```

```

(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBload [2] src mem)
 (MOVWstore dst (MOVWload src mem) mem))
(Move [5] dst src mem) =>
(MOVBstore [4] dst (MOVBload [4] src mem)
 (MOVLstore dst (MOVLload src mem) mem))
(Move [6] dst src mem) =>
(MOVWstore [4] dst (MOVWload [4] src mem)
 (MOVLstore dst (MOVLload src mem) mem))
(Move [7] dst src mem) =>
(MOVLstore [3] dst (MOVLload [3] src mem)
 (MOVLstore dst (MOVLload src mem) mem))
(Move [9] dst src mem) =>
(MOVBstore [8] dst (MOVBload [8] src mem)
 (MOVQstore dst (MOVQload src mem) mem))
(Move [10] dst src mem) =>
(MOVWstore [8] dst (MOVWload [8] src mem)
 (MOVQstore dst (MOVQload src mem) mem))
(Move [12] dst src mem) =>
(MOVLstore [8] dst
 (MOVLload [8] src mem)
 (MOVQstore dst (MOVQload src mem) mem))
(Move [s] dst src mem) && s == 11 || s >= 13 && s <= 15 =>
(MOVQstore [int32(s-8)] dst (MOVQload [int32(s-8)] src mem)
 (MOVQstore dst (MOVQload src mem) mem))

// Adjust moves to be a multiple of 16 bytes.
(Move [s] dst src mem)
&& s > 16 && s%16 != 0 && s%16 <= 8 =>
(Move [s-s%16]
 (OffPtr <dst.Type> dst [s%16])
 (OffPtr <src.Type> src [s%16])
 (MOVQstore dst (MOVQload src mem) mem))
(Move [s] dst src mem)
&& s > 16 && s%16 != 0 && s%16 > 8 && config.useSSE =>
(Move [s-s%16]
 (OffPtr <dst.Type> dst [s%16])
 (OffPtr <src.Type> src [s%16])
 (MOVQstore dst (MOVQload src mem) mem))
(Move [s] dst src mem)
&& s > 16 && s%16 != 0 && s%16 > 8 && !config.useSSE =>
(Move [s-s%16]
 (OffPtr <dst.Type> dst [s%16])
 (OffPtr <src.Type> src [s%16])
 (MOVQstore [8] dst (MOVQload [8] src mem)
 (MOVQstore dst (MOVQload src mem) mem)))

```

```

// Medium copying uses a duff device.

```

```

(Move [s] dst src mem)
&& s > 64 && s <= 16*64
&& s%16 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [s] dst src mem)

// Large copying uses REP MOVSB.
(Move [s] dst src mem) && (s > 16*64 || config.noDuffDevice) && s%8 == 0 && logLargeCopy(v, s) =>
(REPMOVSB dst src (MOVQconst [s/8]) mem)

// Lowering Zero instructions
(Zero [0] _ mem) => mem
(Zero [1] destptr mem) => (MOVBstoreconst [makeValAndOff(0,0)] destptr mem)
(Zero [2] destptr mem) => (MOVWstoreconst [makeValAndOff(0,0)] destptr mem)
(Zero [4] destptr mem) => (MOVLstoreconst [makeValAndOff(0,0)] destptr mem)
(Zero [8] destptr mem) => (MOVQstoreconst [makeValAndOff(0,0)] destptr mem)

(Zero [3] destptr mem) =>
(MOVBstoreconst [makeValAndOff(0,2)] destptr
(MOVWstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [5] destptr mem) =>
(MOVBstoreconst [makeValAndOff(0,4)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [6] destptr mem) =>
(MOVWstoreconst [makeValAndOff(0,4)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero
[7] destptr mem) =>
(MOVLstoreconst [makeValAndOff(0,3)] destptr
(MOVLstoreconst [makeValAndOff(0,0)] destptr mem))

// Strip off any fractional word zeroing.
(Zero [s] destptr mem) && s%8 != 0 && s > 8 && !config.useSSE =>
(Zero [s-s%8] (OffPtr <destptr.Type> destptr [s%8])
(MOVQstoreconst [makeValAndOff(0,0)] destptr mem))

// Zero small numbers of words directly.
(Zero [16] destptr mem) && !config.useSSE =>
(MOVQstoreconst [makeValAndOff(0,8)] destptr
(MOVQstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [24] destptr mem) && !config.useSSE =>
(MOVQstoreconst [makeValAndOff(0,16)] destptr
(MOVQstoreconst [makeValAndOff(0,8)] destptr
(MOVQstoreconst [makeValAndOff(0,0)] destptr mem)))
(Zero [32] destptr mem) && !config.useSSE =>
(MOVQstoreconst [makeValAndOff(0,24)] destptr
(MOVQstoreconst [makeValAndOff(0,16)] destptr
(MOVQstoreconst [makeValAndOff(0,8)] destptr

```

```

(MOVQstoreconst [makeValAndOff(0,0)] destptr mem)))

(Zero [s] destptr mem) && s > 8 &&
s < 16 && config.useSSE =>
(MOVQstoreconst [makeValAndOff(0,int32(s-8))] destptr
(MOVQstoreconst [makeValAndOff(0,0)] destptr mem))

// Adjust zeros to be a multiple of 16 bytes.
(Zero [s] destptr mem) && s%16 != 0 && s > 16 && s%16 > 8 && config.useSSE =>
(Zero [s-s%16] (OffPtr <destptr.Type> destptr [s%16])
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem))

(Zero [s] destptr mem) && s%16 != 0 && s > 16 && s%16 <= 8 && config.useSSE =>
(Zero [s-s%16] (OffPtr <destptr.Type> destptr [s%16])
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem))

(Zero [16] destptr mem) && config.useSSE =>
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem)
(Zero [32] destptr mem) && config.useSSE =>
(MOVOstoreconst [makeValAndOff(0,16)] destptr
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem))
(Zero [48] destptr mem) && config.useSSE =>
(MOVOstoreconst [makeValAndOff(0,32)] destptr
(MOVOstoreconst [makeValAndOff(0,16)] destptr
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem)))
(Zero [64]
destptr mem) && config.useSSE =>
(MOVOstoreconst [makeValAndOff(0,48)] destptr
(MOVOstoreconst [makeValAndOff(0,32)] destptr
(MOVOstoreconst [makeValAndOff(0,16)] destptr
(MOVOstoreconst [makeValAndOff(0,0)] destptr mem))))

// Medium zeroing uses a duff device.
(Zero [s] destptr mem)
&& s > 64 && s <= 1024 && s%16 == 0 && !config.noDuffDevice =>
(DUFFZERO [s] destptr mem)

// Large zeroing uses REP STOSQ.
(Zero [s] destptr mem)
&& (s > 1024 || (config.noDuffDevice && s > 64 || !config.useSSE && s > 32))
&& s%8 == 0 =>
(REPSTOSQ destptr (MOVQconst [s/8]) (MOVQconst [0]) mem)

// Lowering constants
(Const8 [c]) => (MOVLconst [int32(c)])
(Const16 [c]) => (MOVLconst [int32(c)])
(Const32 ...) => (MOVLconst ...)
(Const64 ...) => (MOVQconst ...)

```



```

(Const32F ...) => (MOVSSconst ...)
(Const64F ...) => (MOVSDconst ...)
(ConstNil  ) => (MOVQconst [0])
(ConstBool [c]) => (MOVLconst [b2i32(c)])

// Lowering calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure
...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// Lowering conditional moves
// If the condition is a SETxx, we can just run a CMOV from the comparison that was
// setting the flags.
// Legend: HI=unsigned ABOVE, CS=unsigned BELOW, CC=unsigned ABOVE EQUAL, LS=unsigned BELOW
EQUAL
(CondSelect <t> x y (SET(EQ|NE|L|G|LE|GE|A|B|AE|BE|EQF|NEF|GF|GEF) cond)) && (is64BitInt(t) || isPtr(t))
=> (CMOVQ(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS|EQF|NEF|GTF|GEF) y x cond)
(CondSelect <t> x y (SET(EQ|NE|L|G|LE|GE|A|B|AE|BE|EQF|NEF|GF|GEF) cond)) && is32BitInt(t)
=> (CMOVL(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS|EQF|NEF|GTF|GEF) y x cond)
(CondSelect <t> x y (SET(EQ|NE|L|G|LE|GE|A|B|AE|BE|EQF|NEF|GF|GEF) cond)) && is16BitInt(t)
=> (CMOVW(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS|EQF|NEF|GTF|GEF) y x cond)

// If the condition does not set the flags, we need to generate a comparison.
(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 1
=> (CondSelect <t> x y
(MOVBQZX <typ.UInt64> check))
(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 2
=> (CondSelect <t> x y (MOVWQZX <typ.UInt64> check))
(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 4
=> (CondSelect <t> x y (MOVLQZX <typ.UInt64> check))

(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 8 && (is64BitInt(t) || isPtr(t))
=> (CMOVQNE y x (CMPQconst [0] check))
(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 8 && is32BitInt(t)
=> (CMOVLNE y x (CMPQconst [0] check))
(CondSelect <t> x y check) && !check.Type.IsFlags() && check.Type.Size() == 8 && is16BitInt(t)
=> (CMOVWNE y x (CMPQconst [0] check))

// Absorb InvertFlags
(CMOVQ(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS) x y (InvertFlags cond))
=> (CMOVQ(EQ|NE|GT|LT|GE|LE|CS|HI|LS|CC) x y cond)
(CMOVL(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS) x y (InvertFlags cond))
=> (CMOVL(EQ|NE|GT|LT|GE|LE|CS|HI|LS|CC) x y cond)
(CMOVW(EQ|NE|LT|GT|LE|GE|HI|CS|CC|LS)
x y (InvertFlags cond))
=> (CMOVW(EQ|NE|GT|LT|GE|LE|CS|HI|LS|CC) x y cond)

```

```

// Absorb constants generated during lower
(CMOV(QEQ|QLE|QGE|QCC|QLS|LEQ|LLE|LGE|LCC|LLS|WEQ|WLE|WGE|WCC|WLS) _ x (FlagEQ)) => x
(CMOV(QNE|QLT|QGT|QCS|QHI|LNE|LLT|LGT|LCS|LHI|WNE|WLT|WGT|WCS|WHI) y _ (FlagEQ)) => y
(CMOV(QNE|QGT|QGE|QHI|QCC|LNE|LGT|LGE|LHI|LCC|WNE|WGT|WGE|WHI|WCC) _ x (FlagGT_UGT))
=> x
(CMOV(QEQ|QLE|QLT|QLS|QCS|LEQ|LLE|LLT|LLS|LCS|WEQ|WLE|WLT|WLS|WCS) y _ (FlagGT_UGT)) =>
y
(CMOV(QNE|QGT|QGE|QLS|QCS|LNE|LGT|LGE|LLS|LCS|WNE|WGT|WGE|WLS|WCS) _ x (FlagGT_ULT))
=> x
(CMOV(QEQ|QLE|QLT|QHI|QCC|LEQ|LLE|LLT|LHI|LCC|WEQ|WLE|WLT|WHI|WCC) y _ (FlagGT_ULT)) =>
y
(CMOV(QNE|QLT|QLE|QCS|QLS|LNE|LLT|LLE|LCS|LLS|WNE|WLT|WLE|WCS|WLS) _ x (FlagLT_ULT)) =>
x
(CMOV(QEQ|QGT|QGE|QHI|QCC|LEQ|LGT|LGE|LHI|LCC|WEQ|WGT|WGE|WHI|WCC) y _ (FlagLT_ULT))
=> y
(CMOV(QNE|QLT|QLE|QHI|QCC|LNE|LLT|LLE|LHI|LCC|WNE|WLT|WLE|WHI|WCC) _ x (FlagLT_UGT)) =>
x
(CMOV(QEQ|QGT|QGE|QCS|QLS|LEQ|LGT|LGE|LCS|LLS|WEQ|WGT|WGE|WCS|WLS)
y _ (FlagLT_UGT)) => y

```

// Miscellaneous

```

(IsNotNil p) => (SETNE (TESTQ p p))
(IsInBounds idx len) => (SETB (CMPQ idx len))
(IsSliceInBounds idx len) => (SETBE (CMPQ idx len))
(NilCheck ...) => (LoweredNilCheck ...)
(GetG mem) && v.Block.Func.OwnAux.Fn.ABI() != obj.ABIInternal => (LoweredGetG mem) // only lower in old
ABI. in new ABI we have a G register.
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)

(HasCPUFeature {s}) => (SETNE (CMPLconst [0] (LoweredHasCPUFeature {s})))
(Addr {sym} base) => (LEAQ {sym} base)
(LocalAddr {sym} base _) => (LEAQ {sym} base)

```

```

(MOVBstore [off] {sym} ptr y:(SETL x) mem) && y.Uses == 1 => (SETLstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETLE x) mem) && y.Uses == 1 => (SETLEstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETG x) mem) && y.Uses == 1 => (SETGstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETGE x)
mem) && y.Uses == 1 => (SETGEstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETEQ x) mem) && y.Uses == 1 => (SETEQstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETNE x) mem) && y.Uses == 1 => (SETNEstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETB x) mem) && y.Uses == 1 => (SETBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETBE x) mem) && y.Uses == 1 => (SETBEstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETA x) mem) && y.Uses == 1 => (SETAstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr y:(SETAE x) mem) && y.Uses == 1 => (SETAEstore [off] {sym} ptr x mem)

```

```

// block rewrites
(If (SETL cmp) yes no) => (LT cmp yes no)
(If (SETLE cmp) yes no) => (LE cmp yes no)
(If (SETG cmp) yes no) => (GT cmp yes no)
(If (SETGE cmp) yes no) => (GE cmp yes no)
(If (SETEQ cmp) yes no) => (EQ cmp yes no)
(If (SETNE cmp) yes no) => (NE cmp yes no)
(If (SETB cmp) yes no) => (ULT cmp yes no)
(If (SETBE cmp) yes no) => (ULE cmp
yes no)
(If (SETA cmp) yes no) => (UGT cmp yes no)
(If (SETAE cmp) yes no) => (UGE cmp yes no)
(If (SETO cmp) yes no) => (OS cmp yes no)

// Special case for floating point - LF/LEF not generated
(If (SETGF cmp) yes no) => (UGT cmp yes no)
(If (SETGEF cmp) yes no) => (UGE cmp yes no)
(If (SETEQF cmp) yes no) => (EQF cmp yes no)
(If (SETNEF cmp) yes no) => (NEF cmp yes no)

(If cond yes no) => (NE (TESTB cond cond) yes no)

(JumpTable idx) => (JUMPTABLE {makeJumpTableSym(b)} idx (LEAQ <typ.Uintptr> {makeJumpTableSym(b)}
(SB)))

// Atomic loads. Other than preserving their ordering with respect to other loads, nothing special here.
(AtomicLoad8 ptr mem) => (MOVBatomicload ptr mem)
(AtomicLoad32 ptr mem) => (MOVLatomicload ptr mem)
(AtomicLoad64 ptr mem) => (MOVQatomicload ptr mem)
(AtomicLoadPtr ptr mem) => (MOVQatomicload ptr mem)

// Atomic stores. We use XCHG to prevent the hardware reordering a subsequent load.
// TODO: most runtime uses of atomic stores don't need that property.
Use normal stores for those?
(AtomicStore8 ptr val mem) => (Select1 (XCHGB <types.NewTuple(typ.Uint8,types.TypeMem)> val ptr mem))
(AtomicStore32 ptr val mem) => (Select1 (XCHGL <types.NewTuple(typ.Uint32,types.TypeMem)> val ptr mem))
(AtomicStore64 ptr val mem) => (Select1 (XCHGQ <types.NewTuple(typ.Uint64,types.TypeMem)> val ptr mem))
(AtomicStorePtrNoWB ptr val mem) => (Select1 (XCHGQ <types.NewTuple(typ.BytePtr,types.TypeMem)> val ptr
mem))

// Atomic exchanges.
(AtomicExchange32 ptr val mem) => (XCHGL val ptr mem)
(AtomicExchange64 ptr val mem) => (XCHGQ val ptr mem)

// Atomic adds.
(AtomicAdd32 ptr val mem) => (AddTupleFirst32 val (XADDLlock val ptr mem))
(AtomicAdd64 ptr val mem) => (AddTupleFirst64 val (XADDQlock val ptr mem))
(Select0 <t> (AddTupleFirst32 val tuple)) => (ADDL val (Select0 <t> tuple))

```

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(Select1 (AddTupleFirst32 _ tuple)) => (Select1 tuple)
(Select0 <t> (AddTupleFirst64 val tuple)) => (ADDQ val (Select0 <t> tuple))
(Select1 (AddTupleFirst64 _
tuple)) => (Select1 tuple)

// Atomic compare and swap.
(AtomicCompareAndSwap32 ptr old new_ mem) => (CMPXCHGLlock ptr old new_ mem)
(AtomicCompareAndSwap64 ptr old new_ mem) => (CMPXCHGQlock ptr old new_ mem)

// Atomic memory updates.
(AtomicAnd8 ptr val mem) => (ANDBlock ptr val mem)
(AtomicAnd32 ptr val mem) => (ANDLlock ptr val mem)
(AtomicOr8 ptr val mem) => (ORBlock ptr val mem)
(AtomicOr32 ptr val mem) => (ORLlock ptr val mem)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// *****
// Above: lowering rules
// Below: optimizations
// *****
// TODO: Should the optimizations be a separate pass?

// Fold boolean tests into blocks
(NE (TESTB (SETL cmp) (SETL
cmp)) yes no) => (LT cmp yes no)
(NE (TESTB (SETLE cmp) (SETLE cmp)) yes no) => (LE cmp yes no)
(NE (TESTB (SETG cmp) (SETG cmp)) yes no) => (GT cmp yes no)
(NE (TESTB (SETGE cmp) (SETGE cmp)) yes no) => (GE cmp yes no)
(NE (TESTB (SETEQ cmp) (SETEQ cmp)) yes no) => (EQ cmp yes no)
(NE (TESTB (SETNE cmp) (SETNE cmp)) yes no) => (NE cmp yes no)
(NE (TESTB (SETB cmp) (SETB cmp)) yes no) => (ULT cmp yes no)
(NE (TESTB (SETBE cmp) (SETBE cmp)) yes no) => (ULE cmp yes no)
(NE (TESTB (SETA cmp) (SETA cmp)) yes no) => (UGT cmp yes no)
(NE (TESTB (SETAE cmp) (SETAE cmp)) yes no) => (UGE cmp yes no)
(NE (TESTB (SETO cmp) (SETO cmp)) yes no) => (OS cmp yes no)

// Unsigned comparisons to 0/1
(ULT (TEST(Q|L|W|B) x x) yes no) => (First no yes)
(UGE (TEST(Q|L|W|B) x x) yes no) => (First yes no)
(SETB (TEST(Q|L|W|B) x x)) => (ConstBool [false])
(SETAE (TEST(Q|L|W|B) x x)) => (ConstBool [true])

```

```

// x & 1 != 0 -> x & 1
(SETNE (TEST(B|W)const [1] x)) => (AND(L|L)const [1] x)
(SETB (BT(L|Q)const
[0] x)) => (AND(L|Q)const [1] x)

// Recognize bit tests: a&(1<<b) != 0 for b suitably bounded
// Note that BTx instructions use the carry bit, so we need to convert tests for zero flag
// into tests for carry flags.
// ULT and SETB check the carry flag; they are identical to CS and SETCS. Same, mutatis
// mutandis, for UGE and SETAE, and CC and SETCC.
((NE|EQ) (TESTL (SHLL (MOVLconst [1] x) y)) => ((ULT|UGE) (BTL x y))
((NE|EQ) (TESTQ (SHLQ (MOVQconst [1] x) y)) => ((ULT|UGE) (BTQ x y))
((NE|EQ) (TESTL (SHLXL (MOVLconst [1] x) y)) => ((ULT|UGE) (BTL x y))
((NE|EQ) (TESTQ (SHLXQ (MOVQconst [1] x) y)) => ((ULT|UGE) (BTQ x y))
((NE|EQ) (TESTLconst [c] x)) && isUInt32PowerOfTwo(int64(c))
=> ((ULT|UGE) (BTLconst [int8(log32(c))] x))
((NE|EQ) (TESTQconst [c] x)) && isUInt64PowerOfTwo(int64(c))
=> ((ULT|UGE) (BTQconst [int8(log32(c))] x))
((NE|EQ) (TESTQ (MOVQconst [c] x)) && isUInt64PowerOfTwo(c))
=> ((ULT|UGE) (BTQconst [int8(log64(c))] x))
(SET(NE|EQ) (TESTL (SHLL
(MOVLconst [1] x) y)) => (SET(B|AE) (BTL x y))
(SET(NE|EQ) (TESTQ (SHLQ (MOVQconst [1] x) y)) => (SET(B|AE) (BTQ x y))
(SET(NE|EQ) (TESTL (SHLXL (MOVLconst [1] x) y)) => (SET(B|AE) (BTL x y))
(SET(NE|EQ) (TESTQ (SHLXQ (MOVQconst [1] x) y)) => (SET(B|AE) (BTQ x y))
(SET(NE|EQ) (TESTLconst [c] x)) && isUInt32PowerOfTwo(int64(c))
=> (SET(B|AE) (BTLconst [int8(log32(c))] x))
(SET(NE|EQ) (TESTQconst [c] x)) && isUInt64PowerOfTwo(int64(c))
=> (SET(B|AE) (BTQconst [int8(log32(c))] x))
(SET(NE|EQ) (TESTQ (MOVQconst [c] x)) && isUInt64PowerOfTwo(c))
=> (SET(B|AE) (BTQconst [int8(log64(c))] x))
// SET..store variant
(SET(NE|EQ)store [off] {sym} ptr (TESTL (SHLL (MOVLconst [1] x) y) mem)
=> (SET(B|AE)store [off] {sym} ptr (BTL x y) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTQ (SHLQ (MOVQconst [1] x) y) mem)
=> (SET(B|AE)store [off] {sym} ptr (BTQ x y) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTL (SHLXL (MOVLconst [1] x) y) mem)
=> (SET(B|AE)store [off] {sym}
ptr (BTL x y) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTQ (SHLXQ (MOVQconst [1] x) y) mem)
=> (SET(B|AE)store [off] {sym} ptr (BTQ x y) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTLconst [c] x) mem) && isUInt32PowerOfTwo(int64(c))
=> (SET(B|AE)store [off] {sym} ptr (BTLconst [int8(log32(c))] x) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTQconst [c] x) mem) && isUInt64PowerOfTwo(int64(c))
=> (SET(B|AE)store [off] {sym} ptr (BTQconst [int8(log32(c))] x) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTQ (MOVQconst [c] x) mem) && isUInt64PowerOfTwo(c))
=> (SET(B|AE)store [off] {sym} ptr (BTQconst [int8(log64(c))] x) mem)

```

```

// Handle bit-testing in the form (a>>b)&1 != 0 by building the above rules
// and further combining shifts.
(BT(Q|L)const [c] (SHRQconst [d] x)) && (c+d)<64 => (BTQconst [c+d] x)
(BT(Q|L)const [c] (SHLQconst [d] x)) && c>d => (BT(Q|L)const [c-d] x)
(BT(Q|L)const [0] s:(SHRQ x y)) => (BTQ y x)
(BT(Q|L)const [0] s:(SHRXQ x y)) => (BTQ y x)
(BTLconst
 [c] (SHRLconst [d] x)) && (c+d)<32 => (BTLconst [c+d] x)
(BTLconst [c] (SHLLconst [d] x)) && c>d => (BTLconst [c-d] x)
(BTLconst [0] s:(SHR(L|XL) x y)) => (BTL y x)

// Rewrite a & 1 != 1 into a & 1 == 0.
// Among other things, this lets us turn (a>>b)&1 != 1 into a bit test.
(SET(NE|EQ) (CMPLconst [1] s:(ANDLconst [1] _))) => (SET(EQ|NE) (CMPLconst [0] s))
(SET(NE|EQ)store [off] {sym} ptr (CMPLconst [1] s:(ANDLconst [1] _) mem) => (SET(EQ|NE)store [off] {sym}
ptr (CMPLconst [0] s) mem)
(SET(NE|EQ) (CMPQconst [1] s:(ANDQconst [1] _))) => (SET(EQ|NE) (CMPQconst [0] s))
(SET(NE|EQ)store [off] {sym} ptr (CMPQconst [1] s:(ANDQconst [1] _) mem) => (SET(EQ|NE)store [off] {sym}
ptr (CMPQconst [0] s) mem)

// Recognize bit setting (a |= 1<<b) and toggling (a ^= 1<<b)
(OR(Q|L) (SHL(Q|L) (MOV(Q|L)const [1] y) x)) => (BTS(Q|L) x y)
(XOR(Q|L) (SHL(Q|L) (MOV(Q|L)const [1] y) x)) => (BTC(Q|L) x y)
(OR(Q|L) (SHLX(Q|L) (MOV(Q|L)const [1] y) x)) => (BTS(Q|L) x y)
(XOR(Q|L) (SHLX(Q|L) (MOV(Q|L)const
 [1] y) x)) => (BTC(Q|L) x y)

// Convert ORconst into BTS, if the code gets smaller, with boundary being
// (ORL $40,AX is 3 bytes, ORL $80,AX is 6 bytes).
((ORQ|XORQ)const [c] x) && isUInt64PowerOfTwo(int64(c)) && uint64(c) >= 128
=> (BT(S|C)Qconst [int8(log32(c))] x)
((ORL|XORL)const [c] x) && isUInt32PowerOfTwo(int64(c)) && uint64(c) >= 128
=> (BT(S|C)Lconst [int8(log32(c))] x)
((ORQ|XORQ) (MOVQconst [c] x) && isUInt64PowerOfTwo(c) && uint64(c) >= 128
=> (BT(S|C)Qconst [int8(log64(c))] x)
((ORL|XORL) (MOVLconst [c] x) && isUInt32PowerOfTwo(int64(c)) && uint64(c) >= 128
=> (BT(S|C)Lconst [int8(log32(c))] x)

// Recognize bit clearing: a ^= 1<<b
(AND(Q|L) (NOT(Q|L) (SHL(Q|L) (MOV(Q|L)const [1] y) x)) => (BTR(Q|L) x y)
(ANDN(Q|L) x (SHL(Q|L) (MOV(Q|L)const [1] y))) => (BTR(Q|L) x y)
(AND(Q|L) (NOT(Q|L) (SHLX(Q|L) (MOV(Q|L)const [1] y) x)) => (BTR(Q|L) x y)
(ANDN(Q|L) x (SHLX(Q|L) (MOV(Q|L)const [1] y))) => (BTR(Q|L) x y)
(ANDQconst [c] x) && isUInt64PowerOfTwo(int64(^c))
&& uint64(^c) >= 128
=> (BTRQconst [int8(log32(^c))] x)
(ANDLconst [c] x) && isUInt32PowerOfTwo(int64(^c)) && uint64(^c) >= 128
=> (BTRLconst [int8(log32(^c))] x)

```

```

(ANDQ (MOVQconst [c] x) && isUInt64PowerOfTwo(^c) && uint64(^c) >= 128
=> (BTRQconst [int8(log64(^c))] x)
(ANDL (MOVLconst [c] x) && isUInt32PowerOfTwo(int64(^c)) && uint64(^c) >= 128
=> (BTRLconst [int8(log32(^c))] x)

// Special-case bit patterns on first/last bit.
// generic.rules changes ANDs of high-part/low-part masks into a couple of shifts,
// for instance:
// x & 0xFFFF0000 -> (x >> 16) << 16
// x & 0x80000000 -> (x >> 31) << 31
//
// In case the mask is just one bit (like second example above), it conflicts
// with the above rules to detect bit-testing / bit-clearing of first/last bit.
// We thus special-case them, by detecting the shift patterns.

// Special case resetting first/last bit
(SHL(L|Q)const [1] (SHR(L|Q)const [1] x))
=> (BTR(L|Q)const [0] x)
(SHRLconst [1] (SHLLconst
[1] x))
=> (BTRLconst [31] x)
(SHRQconst [1] (SHLQconst [1] x))
=> (BTRQconst [63] x)

// Special case testing first/last bit (with double-shift generated by generic.rules)
((SETNE|SETEQ|NE|EQ) (TESTQ z1:(SHLQconst [63] (SHRQconst [63] x)) z2)) && z1==z2
=> ((SETB|SETAE|ULT|UGE) (BTQconst [63] x))
((SETNE|SETEQ|NE|EQ) (TESTL z1:(SHLLconst [31] (SHRQconst [31] x)) z2)) && z1==z2
=> ((SETB|SETAE|ULT|UGE) (BTQconst [31] x))
(SET(NE|EQ)store [off] {sym} ptr (TESTQ z1:(SHLQconst [63] (SHRQconst [63] x)) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTQconst [63] x) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTL z1:(SHLLconst [31] (SHRLconst [31] x)) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTLconst [31] x) mem)

((SETNE|SETEQ|NE|EQ) (TESTQ z1:(SHRQconst [63] (SHLQconst [63] x)) z2)) && z1==z2
=> ((SETB|SETAE|ULT|UGE) (BTQconst [0] x))
((SETNE|SETEQ|NE|EQ) (TESTL z1:(SHRLconst [31] (SHLLconst [31] x)) z2)) && z1==z2
=> ((SETB|SETAE|ULT|UGE) (BTLconst
[0] x))
(SET(NE|EQ)store [off] {sym} ptr (TESTQ z1:(SHRQconst [63] (SHLQconst [63] x)) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTQconst [0] x) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTL z1:(SHRLconst [31] (SHLLconst [31] x)) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTLconst [0] x) mem)

// Special-case manually testing last bit with "a>>63 != 0" (without "&1")
((SETNE|SETEQ|NE|EQ) (TESTQ z1:(SHRQconst [63] x) z2)) && z1==z2
=> ((SETB|SETAE|ULT|UGE) (BTQconst [63] x))
((SETNE|SETEQ|NE|EQ) (TESTL z1:(SHRLconst [31] x) z2)) && z1==z2

```

```

=> ((SETB|SETAE|ULT|UGE) (BTLconst [31] x))
(SET(NE|EQ)store [off] {sym} ptr (TESTQ z1:(SHRQconst [63] x) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTQconst [63] x) mem)
(SET(NE|EQ)store [off] {sym} ptr (TESTL z1:(SHRLconst [31] x) z2) mem) && z1==z2
=> (SET(B|AE)store [off] {sym} ptr (BTLconst [31] x) mem)

// Fold combinations of bit ops on same bit. An example is math.Copysign(c,-1)
(BTS(Q|L)const
[c] (BTR(Q|L)const [c] x)) => (BTS(Q|L)const [c] x)
(BTS(Q|L)const [c] (BTC(Q|L)const [c] x)) => (BTS(Q|L)const [c] x)
(BTR(Q|L)const [c] (BTS(Q|L)const [c] x)) => (BTR(Q|L)const [c] x)
(BTR(Q|L)const [c] (BTC(Q|L)const [c] x)) => (BTR(Q|L)const [c] x)

// Fold boolean negation into SETcc.
(XORLconst [1] (SETNE x)) => (SETEQ x)
(XORLconst [1] (SETEQ x)) => (SETNE x)
(XORLconst [1] (SETL x)) => (SETGE x)
(XORLconst [1] (SETGE x)) => (SETL x)
(XORLconst [1] (SETLE x)) => (SETG x)
(XORLconst [1] (SETG x)) => (SETLE x)
(XORLconst [1] (SETB x)) => (SETAE x)
(XORLconst [1] (SETAE x)) => (SETB x)
(XORLconst [1] (SETBE x)) => (SETA x)
(XORLconst [1] (SETA x)) => (SETBE x)

// Special case for floating point - LF/LEF not generated
(NE (TESTB (SETGF cmp) (SETGF cmp)) yes no) => (UGT cmp yes no)
(NE (TESTB (SETGEF cmp) (SETGEF cmp)) yes no) => (UGE cmp yes no)
(NE (TESTB (SETEQF cmp) (SETEQF cmp)) yes no) => (EQF cmp yes no)
(NE (TESTB (SETNEF cmp) (SETNEF cmp)) yes
no) => (NEF cmp yes no)

// Disabled because it interferes with the pattern match above and makes worse code.
// (SETNEF x) => (ORQ (SETNE <typ.Int8> x) (SETNAN <typ.Int8> x))
// (SETEQF x) => (ANDQ (SETEQ <typ.Int8> x) (SETORD <typ.Int8> x))

// fold constants into instructions
(ADDQ x (MOVQconst [c])) && is32Bit(c) => (ADDQconst [int32(c)] x)
(ADDQ x (MOVLconst [c])) => (ADDQconst [c] x)
(ADDL x (MOVLconst [c])) => (ADDLconst [c] x)

(SUBQ x (MOVQconst [c])) && is32Bit(c) => (SUBQconst x [int32(c)])
(SUBQ (MOVQconst [c] x) && is32Bit(c) => (NEGQ (SUBQconst <v.Type> x [int32(c)]))
(SUBL x (MOVLconst [c])) => (SUBLconst x [c])
(SUBL (MOVLconst [c] x) => (NEGL (SUBLconst <v.Type> x [c]))

(MULQ x (MOVQconst [c])) && is32Bit(c) => (MULQconst [int32(c)] x)
(MULL x (MOVLconst [c])) => (MULLconst [c] x)

```



(ANDQ x (MOVQconst [c])) && is32Bit(c) => (ANDQconst [int32(c)] x)

(ANDL x (MOVLconst [c])) => (ANDLconst [c] x)

(AND(L|Q)const [c] (AND(L|Q)const [d] x)) => (AND(L|Q)const [c & d] x)

(XOR(L|Q)const

[c] (XOR(L|Q)const [d] x)) => (XOR(L|Q)const [c ^ d] x)

(OR(L|Q)const [c] (OR(L|Q)const [d] x)) => (OR(L|Q)const [c | d] x)

(BTRLconst [c] (ANDLconst [d] x)) => (ANDLconst [d &^ (1<<uint32(c))] x)

(ANDLconst [c] (BTRLconst [d] x)) => (ANDLconst [c &^ (1<<uint32(d))] x)

(BTRLconst [c] (BTRLconst [d] x)) => (ANDLconst [^(1<<uint32(c) | 1<<uint32(d))] x)

(BTCLconst [c] (XORLconst [d] x)) => (XORLconst [d ^ 1<<uint32(c)] x)

(XORLconst [c] (BTCLconst [d] x)) => (XORLconst [c ^ 1<<uint32(d)] x)

(BTCLconst [c] (BTCLconst [d] x)) => (XORLconst [1<<uint32(c) | 1<<uint32(d)] x)

(BTSLconst [c] (ORLconst [d] x)) => (ORLconst [d | 1<<uint32(c)] x)

(ORLconst [c] (BTSLconst [d] x)) => (ORLconst [c | 1<<uint32(d)] x)

(BTSLconst [c] (BTSLconst [d] x)) => (ORLconst [1<<uint32(c) | 1<<uint32(d)] x)

(BTRQconst [c] (ANDQconst [d] x)) && is32Bit(int64(d) &^ (1<<uint32(c))) => (ANDQconst [d &^ (1<<uint32(c))] x)

(ANDQconst [c] (BTRQconst [d] x)) && is32Bit(int64(c) &^ (1<<uint32(d)))

=> (ANDQconst [c &^ (1<<uint32(d))] x)

(BTRQconst [c] (BTRQconst [d] x)) && is32Bit(^ (1<<uint32(c) | 1<<uint32(d))) => (ANDQconst [^(1<<uint32(c) | 1<<uint32(d))] x)

(BTCQconst [c] (XORQconst [d] x)) && is32Bit(int64(d) ^ 1<<uint32(c)) => (XORQconst [d ^ 1<<uint32(c)] x)

(XORQconst [c] (BTCQconst [d] x)) && is32Bit(int64(c) ^ 1<<uint32(d)) => (XORQconst [c ^ 1<<uint32(d)] x)

(BTCQconst [c] (BTCQconst [d] x)) && is32Bit(1<<uint32(c) ^ 1<<uint32(d)) => (XORQconst [1<<uint32(c) ^ 1<<uint32(d)] x)

(BTSQconst [c] (ORQconst [d] x)) && is32Bit(int64(d) | 1<<uint32(c)) => (ORQconst [d | 1<<uint32(c)] x)

(ORQconst [c] (BTSQconst [d] x)) && is32Bit(int64(c) | 1<<uint32(d)) => (ORQconst [c | 1<<uint32(d)] x)

(BTSQconst [c] (BTSQconst [d] x)) && is32Bit(1<<uint32(c) | 1<<uint32(d)) => (ORQconst [1<<uint32(c) | 1<<uint32(d)] x)

(MULLconst [c] (MULLconst [d] x)) => (MULLconst [c \* d] x)

(MULQconst [c] (MULQconst [d] x)) && is32Bit(int64(c)\*int64(d)) => (MULQconst [c \* d] x)

(ORQ x (MOVQconst [c])) && is32Bit(c) => (ORQconst [int32(c)] x)

(ORQ x (MOVLconst [c])) => (ORQconst [c] x)

(ORL x (MOVLconst [c])) => (ORLconst [c] x)

(XORQ x (MOVQconst [c])) && is32Bit(c) => (XORQconst [int32(c)] x)

(XORL x (MOVLconst [c])) => (XORLconst [c] x)

(SHLQ x (MOV(Q|L)const [c])) => (SHLQconst [int8(c&63)] x)

(SHLL x (MOV(Q|L)const [c])) => (SHLLconst [int8(c&31)] x)

(SHLXQ x (MOV(Q|L)const [c])) => (SHLQconst [int8(c&63)] x)

(SHLXL x (MOV(Q|L)const [c])) => (SHLLconst [int8(c&31)] x)

(SHRQ x (MOV(Q|L)const [c])) => (SHRQconst [int8(c&63)] x)

(SHRL x (MOV(Q|L)const [c])) => (SHRLconst [int8(c&31)] x)

(SHRW x (MOV(Q|L)const [c])) && c&31 < 16 => (SHRWconst [int8(c&31)] x)

(SHRW \_ (MOV(Q|L)const [c])) && c&31 >= 16 => (MOVLconst [0])

(SHRB x (MOV(Q|L)const [c])) && c&31 < 8 => (SHRBconst [int8(c&31)] x)

(SHRB \_ (MOV(Q|L)const [c])) && c&31 >= 8 => (MOVLconst [0])

(SHRXQ x (MOV(Q|L)const [c])) => (SHRQconst [int8(c&63)] x)

(SHRXL x (MOV(Q|L)const [c])) => (SHRLconst

[int8(c&31)] x)

(SARQ x (MOV(Q|L)const [c])) => (SARQconst [int8(c&63)] x)

(SARL x (MOV(Q|L)const [c])) => (SARLconst [int8(c&31)] x)

(SARW x (MOV(Q|L)const [c])) => (SARWconst [int8(min(int64(c)&31,15))] x)

(SARB x (MOV(Q|L)const [c])) => (SARBconst [int8(min(int64(c)&31,7))] x)

(SARXQ x (MOV(Q|L)const [c])) => (SARQconst [int8(c&63)] x)

(SARXL x (MOV(Q|L)const [c])) => (SARLconst [int8(c&31)] x)

// Operations which don't affect the low 6/5 bits of the shift amount are NOPs.

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (ADDQconst [c] y)) && c & 63 == 0 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x y)

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGQ <t> (ADDQconst [c] y))) && c & 63 == 0 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGQ <t> y))

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (ANDQconst [c] y)) && c & 63 == 63 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x y)

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGQ <t> (ANDQconst [c] y))) && c & 63 == 63 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGQ <t> y))

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL)

x (ADDQconst [c] y)) && c & 31 == 0 => ((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x y)

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGQ <t> (ADDQconst [c] y))) && c & 31 == 0 =>

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGQ <t> y))

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (ANDQconst [c] y)) && c & 31 == 31 =>

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x y)

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGQ <t> (ANDQconst [c] y))) && c & 31 == 31 =>

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGQ <t> y))

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (ADDLconst [c] y)) && c & 63 == 0 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x y)

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGL <t> (ADDLconst [c] y))) && c & 63 == 0 =>

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGL <t> y))

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (ANDLconst [c] y)) && c & 63 == 63 =>

```

((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x y)
((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ) x (NEGL <t> (ANDLconst [c] y))) && c & 63 == 63 =>
((SHLQ|SHRQ|SARQ|SHLXQ|SHRXQ|SARXQ)
x (NEGL <t> y))

((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (ADDLconst [c] y)) && c & 31 == 0 =>
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x y)
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGL <t> (ADDLconst [c] y))) && c & 31 == 0 =>
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGL <t> y))
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (ANDLconst [c] y)) && c & 31 == 31 =>
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x y)
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGL <t> (ANDLconst [c] y))) && c & 31 == 31 =>
((SHLL|SHRL|SARL|SHLXL|SHRXL|SARXL) x (NEGL <t> y))

// Constant rotate instructions
((ADDQ|ORQ|XORQ) (SHLQconst x [c]) (SHRQconst x [d])) && d==64-c => (ROLQconst x [c])
((ADDL|ORL|XORL) (SHLLconst x [c]) (SHRLconst x [d])) && d==32-c => (ROLLconst x [c])

((ADDL|ORL|XORL) <t> (SHLLconst x [c]) (SHRWconst x [d])) && d==16-c && c < 16 && t.Size() == 2 =>
(ROLWconst x [c])
((ADDL|ORL|XORL) <t> (SHLLconst x [c]) (SHRBconst x [d])) && d==8-c && c < 8 && t.Size() == 1 =>
(ROLBconst x [c])

(ROLQconst [c] (ROLQconst
[d] x)) => (ROLQconst [(c+d)&63] x)
(ROLLconst [c] (ROLLconst [d] x)) => (ROLLconst [(c+d)&31] x)
(ROLWconst [c] (ROLWconst [d] x)) => (ROLWconst [(c+d)&15] x)
(ROLBconst [c] (ROLBconst [d] x)) => (ROLBconst [(c+d)& 7] x)

(RotateLeft8 ...) => (ROLB ...)
(RotateLeft16 ...) => (ROLW ...)
(RotateLeft32 ...) => (ROLL ...)
(RotateLeft64 ...) => (ROLQ ...)

// Non-constant rotates.
// We want to issue a rotate when the Go source contains code like
//   y &= 63
//   x << y | x >> (64-y)
// The shift rules above convert << to SHLx and >> to SHRx.
// SHRx converts its shift argument from 64-y to -y.
// A tricky situation occurs when y==0. Then the original code would be:
//   x << 0 | x >> 64
// But x >> 64 is 0, not x. So there's an additional mask that is ANDed in
// to force the second term to 0. We don't need that mask, but we must match
// it in order to strip it out.
(ORQ (SHLQ x y) (ANDQ (SHRQ x (NEG(Q|L) y)) (SBBQcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const

```

```

y [63] [-64]) [64])))) => (ROLQ x y)
(ORQ (SHRQ x y) (ANDQ (SHLQ x (NEG(Q|L) y)) (SBBQcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [63] [-64]) [64])))) => (RORQ x y)
(ORQ (SHLXQ x y) (ANDQ (SHRXQ x (NEG(Q|L) y)) (SBBQcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [63] [-64]) [64])))) => (ROLQ x y)
(ORQ (SHRXQ x y) (ANDQ (SHLXQ x (NEG(Q|L) y)) (SBBQcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [63] [-64]) [64])))) => (RORQ x y)

(ORL (SHLL x y) (ANDL (SHRL x (NEG(Q|L) y)) (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [31] [-32]) [32])))) => (ROLL x y)
(ORL (SHRL x y) (ANDL (SHLL x (NEG(Q|L) y)) (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [31] [-32]) [32])))) => (RORL x y)
(ORL (SHLXL x y) (ANDL (SHRXL x (NEG(Q|L) y)) (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L)
(ADD(Q|L)const (AND(Q|L)const y [31] [-32]) [32])))) => (ROLL x y)
(ORL (SHRXL x y) (ANDL (SHLXL x (NEG(Q|L)
y)) (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [31] [-32]) [32])))) =>
(RORL x y)

// Help with rotate detection
(CMPQconst (NEGQ (ADDQconst [-16] (ANDQconst [15] _))) [32]) => (FlagLT_ULT)
(CMPQconst (NEGQ (ADDQconst [-8] (ANDQconst [7] _))) [32]) => (FlagLT_ULT)

(ORL (SHLL x (AND(Q|L)const y [15]))
  (ANDL (SHRW x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16])))
    (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16])) [16]))))
  && v.Type.Size() == 2
  => (ROLW x y)
(ORL (SHRW x (AND(Q|L)const y [15]))
  (SHLL x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16]))))
  && v.Type.Size() == 2
  => (RORW x y)
(ORL (SHLXL x (AND(Q|L)const y [15]))
  (ANDL (SHRW x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16])))
    (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16])) [16]))))
  && v.Type.Size() == 2
  => (ROLW x y)
(ORL (SHRW x (AND(Q|L)const
y [15]))
  (SHLXL x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [15] [-16]))))
  && v.Type.Size() == 2
  => (RORW x y)

(ORL (SHLL x (AND(Q|L)const y [7]))
  (ANDL (SHRB x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [7] [-8]))))
    (SBBLcarrymask (CMP(Q|L)const (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [7] [-8])) [8]))))
  && v.Type.Size() == 1
  => (ROLB x y)
(ORL (SHRB x (AND(Q|L)const y [7]))

```

```

    (SHLL x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [ 7]) [ -8])))
    && v.Type.Size() == 1
    => (RORB x y)
(ORL (SHLXL x (AND(Q|L)const y [ 7]))
    (ANDL (SHRB x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [ 7]) [ -8])))
        (SBBLCarrymask (CMP(Q|L)const (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [ 7]) [ -8])) [ 8])))
    && v.Type.Size() == 1
    => (ROLB x y)
(ORL (SHRB x (AND(Q|L)const y [ 7]))
    (SHLXL x (NEG(Q|L) (ADD(Q|L)const (AND(Q|L)const y [ 7]) [ -8])))
    && v.Type.Size() == 1
    => (RORB x y)

```

// rotate left negative = rotate right

```

(ROLQ x (NEG(Q|L) y))
=> (RORQ x y)
(ROLL x (NEG(Q|L) y)) => (RORL x y)
(ROLW x (NEG(Q|L) y)) => (RORW x y)
(ROLB x (NEG(Q|L) y)) => (RORB x y)

```

// rotate right negative = rotate left

```

(RORQ x (NEG(Q|L) y)) => (ROLQ x y)
(RORL x (NEG(Q|L) y)) => (ROLL x y)
(RORW x (NEG(Q|L) y)) => (ROLW x y)
(RORB x (NEG(Q|L) y)) => (ROLB x y)

```

// rotate by constants

```

(ROLQ x (MOV(Q|L)const [c])) => (ROLQconst [int8(c&63)] x)
(ROLL x (MOV(Q|L)const [c])) => (ROLLconst [int8(c&31)] x)
(ROLW x (MOV(Q|L)const [c])) => (ROLWconst [int8(c&15)] x)
(ROLB x (MOV(Q|L)const [c])) => (ROLBconst [int8(c&7)] x)

```

```

(RORQ x (MOV(Q|L)const [c])) => (ROLQconst [int8((-c)&63)] x)
(RORL x (MOV(Q|L)const [c])) => (ROLLconst [int8((-c)&31)] x)
(RORW x (MOV(Q|L)const [c])) => (ROLWconst [int8((-c)&15)] x)
(RORB x (MOV(Q|L)const [c])) => (ROLBconst [int8((-c)&7)] x)

```

// Constant shift simplifications

```

((SHLQ|SHRQ|SARQ)const x [0]) => x
((SHLL|SHRL|SARL)const x [0]) => x
((SHRW|SARW)const x [0]) => x
((SHRB|SARB)const x
 [0]) => x
((ROLQ|ROLL|ROLW|ROLB)const x [0]) => x

```

// Multi-register shifts

```

(ORQ (SH(R|L)Q lo bits) (SH(L|R)Q hi (NEGQ bits))) => (SH(R|L)DQ lo hi bits)
(ORQ (SH(R|L)XQ lo bits) (SH(L|R)XQ hi (NEGQ bits))) => (SH(R|L)DQ lo hi bits)

```

```

// Note: the word and byte shifts keep the low 5 bits (not the low 4 or 3 bits)
// because the x86 instructions are defined to use all 5 bits of the shift even
// for the small shifts. I don't think we'll ever generate a weird shift (e.g.
// (SHRW x (MOVLconst [24])), but just in case.

(CMPQ x (MOVQconst [c])) && is32Bit(c) => (CMPQconst x [int32(c)])
(CMPQ (MOVQconst [c] x) && is32Bit(c) => (InvertFlags (CMPQconst x [int32(c)]))
(CMPL x (MOVLconst [c])) => (CMPLconst x [c])
(CMPL (MOVLconst [c] x) => (InvertFlags (CMPLconst x [c]))
(CMPW x (MOVLconst [c])) => (CMPWconst x [int16(c)])
(CMPW (MOVLconst [c] x) => (InvertFlags (CMPWconst x [int16(c)]))
(CMPB x (MOVLconst [c])) => (CMPBconst x [int8(c)])
(CMPB (MOVLconst [c] x) => (InvertFlags (CMPBconst x
[int8(c)]))

// Canonicalize the order of arguments to comparisons - helps with CSE.
(CMP(Q|L|W|B) x y) && canonLessThan(x,y) => (InvertFlags (CMP(Q|L|W|B) y x))

// Using MOVZX instead of AND is cheaper.
(AND(Q|L)const [ 0xFF] x) => (MOVBQZX x)
(AND(Q|L)const [0xFFFF] x) => (MOVWQZX x)
// This rule is currently invalid because 0xFFFFFFFF is not representable by a signed int32.
// Commenting out for now, because it also can't trigger because of the is32bit guard on the
// ANDQconst lowering-rule, above, prevents 0xFFFFFFFF from matching (for the same reason)
// Using an alternate form of this rule segfaults some binaries because of
// adverse interactions with other passes.
((ANDQconst [0xFFFFFFFF] x) => (MOVLQZX x))

// strength reduction
// Assumes that the following costs from https://gmpilib.org/~tege/x86-timing.pdf:
// 1 - addq, shlq, leaq, negq, subq
// 3 - imulq
// This limits the rewrites to two instructions.
// Note that negq always operates in-place,
// which can require
// a register-register move
// to preserve the original value,
// so it must be used with care.
(MUL(Q|L)const [-9] x) => (NEG(Q|L) (LEA(Q|L)8 <v.Type> x x))
(MUL(Q|L)const [-5] x) => (NEG(Q|L) (LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [-3] x) => (NEG(Q|L) (LEA(Q|L)2 <v.Type> x x))
(MUL(Q|L)const [-1] x) => (NEG(Q|L) x)
(MUL(Q|L)const [ 0] _) => (MOV(Q|L)const [0])
(MUL(Q|L)const [ 1] x) => x
(MUL(Q|L)const [ 3] x) => (LEA(Q|L)2 x x)
(MUL(Q|L)const [ 5] x) => (LEA(Q|L)4 x x)
(MUL(Q|L)const [ 7] x) => (LEA(Q|L)2 x (LEA(Q|L)2 <v.Type> x x))

```

```

(MUL(Q|L)const [ 9] x) => (LEA(Q|L)8 x x)
(MUL(Q|L)const [11] x) => (LEA(Q|L)2 x (LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [13] x) => (LEA(Q|L)4 x (LEA(Q|L)2 <v.Type> x x))
(MUL(Q|L)const [19] x) => (LEA(Q|L)2 x (LEA(Q|L)8 <v.Type> x x))
(MUL(Q|L)const [21] x) => (LEA(Q|L)4 x (LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [25] x) => (LEA(Q|L)8 x (LEA(Q|L)2 <v.Type> x x))
(MUL(Q|L)const [27] x) => (LEA(Q|L)8 (LEA(Q|L)2 <v.Type> x x) (LEA(Q|L)2 <v.Type> x x))
(MUL(Q|L)const
 [37] x) => (LEA(Q|L)4 x (LEA(Q|L)8 <v.Type> x x))
(MUL(Q|L)const [41] x) => (LEA(Q|L)8 x (LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [45] x) => (LEA(Q|L)8 (LEA(Q|L)4 <v.Type> x x) (LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [73] x) => (LEA(Q|L)8 x (LEA(Q|L)8 <v.Type> x x))
(MUL(Q|L)const [81] x) => (LEA(Q|L)8 (LEA(Q|L)8 <v.Type> x x) (LEA(Q|L)8 <v.Type> x x))

(MUL(Q|L)const [c] x) && isPowerOfTwo64(int64(c)+1) && c >= 15 => (SUB(Q|L) (SHL(Q|L)const <v.Type>
[int8(log64(int64(c)+1))] x) x)
(MUL(Q|L)const [c] x) && isPowerOfTwo32(c-1) && c >= 17 => (LEA(Q|L)1 (SHL(Q|L)const <v.Type>
[int8(log32(c-1))] x) x)
(MUL(Q|L)const [c] x) && isPowerOfTwo32(c-2) && c >= 34 => (LEA(Q|L)2 (SHL(Q|L)const <v.Type>
[int8(log32(c-2))] x) x)
(MUL(Q|L)const [c] x) && isPowerOfTwo32(c-4) && c >= 68 => (LEA(Q|L)4 (SHL(Q|L)const <v.Type>
[int8(log32(c-4))] x) x)
(MUL(Q|L)const [c] x) && isPowerOfTwo32(c-8) && c >= 136 => (LEA(Q|L)8 (SHL(Q|L)const <v.Type>
[int8(log32(c-8))] x) x)
(MUL(Q|L)const
 [c] x) && c%3 == 0 && isPowerOfTwo32(c/3) => (SHL(Q|L)const [int8(log32(c/3))] (LEA(Q|L)2 <v.Type> x x))
(MUL(Q|L)const [c] x) && c%5 == 0 && isPowerOfTwo32(c/5) => (SHL(Q|L)const [int8(log32(c/5))]
(LEA(Q|L)4 <v.Type> x x))
(MUL(Q|L)const [c] x) && c%9 == 0 && isPowerOfTwo32(c/9) => (SHL(Q|L)const [int8(log32(c/9))]
(LEA(Q|L)8 <v.Type> x x))

// combine add/shift into LEAQ/LEAL
(ADD(L|Q) x (SHL(L|Q)const [3] y)) => (LEA(L|Q)8 x y)
(ADD(L|Q) x (SHL(L|Q)const [2] y)) => (LEA(L|Q)4 x y)
(ADD(L|Q) x (SHL(L|Q)const [1] y)) => (LEA(L|Q)2 x y)
(ADD(L|Q) x (ADD(L|Q) y y)) => (LEA(L|Q)2 x y)
(ADD(L|Q) x (ADD(L|Q) x y)) => (LEA(L|Q)2 y x)

// combine ADDQ/ADDQconst into LEAQ1/LEAL1
(ADD(Q|L)const [c] (ADD(Q|L) x y)) => (LEA(Q|L)1 [c] x y)
(ADD(Q|L) (ADD(Q|L)const [c] x) y) => (LEA(Q|L)1 [c] x y)
(ADD(Q|L)const [c] (SHL(Q|L)const [1] x)) => (LEA(Q|L)1 [c] x x)

// fold ADDQ/ADDL into LEAQ/LEAL
(ADD(Q|L)const [c] (LEA(Q|L) [d] {s} x)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L) [c+d]
{s} x)
(LEA(Q|L) [c] {s} (ADD(Q|L)const [d] x)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L) [c+d] {s} x)
(LEA(Q|L) [c] {s} (ADD(Q|L) x y)) && x.Op != OpSB && y.Op != OpSB => (LEA(Q|L)1 [c] {s} x y)

```

(ADD(Q|L) x (LEA(Q|L) [c] {s} y)) && x.Op != OpSB && y.Op != OpSB => (LEA(Q|L)1 [c] {s} x y)

// fold ADDQconst/ADDLconst into LEAQx/LEALx

(ADD(Q|L)const [c] (LEA(Q|L)1 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L)1 [c+d] {s} x y)

(ADD(Q|L)const [c] (LEA(Q|L)2 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L)2 [c+d] {s} x y)

(ADD(Q|L)const [c] (LEA(Q|L)4 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L)4 [c+d] {s} x y)

(ADD(Q|L)const [c] (LEA(Q|L)8 [d] {s} x y)) && is32Bit(int64(c)+int64(d)) => (LEA(Q|L)8 [c+d] {s} x y)

(LEA(Q|L)1 [c] {s} (ADD(Q|L)const [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEA(Q|L)1 [c+d] {s} x y)

(LEA(Q|L)2 [c] {s} (ADD(Q|L)const [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEA(Q|L)2 [c+d] {s} x y)

(LEA(Q|L)2

[c] {s} x (ADD(Q|L)const [d] y)) && is32Bit(int64(c)+2\*int64(d)) && y.Op != OpSB => (LEA(Q|L)2 [c+2\*d] {s} x y)

(LEA(Q|L)4 [c] {s} (ADD(Q|L)const [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEA(Q|L)4 [c+d] {s} x y)

(LEA(Q|L)4 [c] {s} x (ADD(Q|L)const [d] y)) && is32Bit(int64(c)+4\*int64(d)) && y.Op != OpSB => (LEA(Q|L)4 [c+4\*d] {s} x y)

(LEA(Q|L)8 [c] {s} (ADD(Q|L)const [d] x) y) && is32Bit(int64(c)+int64(d)) && x.Op != OpSB => (LEA(Q|L)8 [c+d] {s} x y)

(LEA(Q|L)8 [c] {s} x (ADD(Q|L)const [d] y)) && is32Bit(int64(c)+8\*int64(d)) && y.Op != OpSB => (LEA(Q|L)8 [c+8\*d] {s} x y)

// fold shifts into LEAQx/LEALx

(LEA(Q|L)1 [c] {s} x (SHL(Q|L)const [1] y)) => (LEA(Q|L)2 [c] {s} x y)

(LEA(Q|L)1 [c] {s} x (SHL(Q|L)const [2] y)) => (LEA(Q|L)4 [c] {s} x y)

(LEA(Q|L)1 [c] {s} x (SHL(Q|L)const [3] y)) => (LEA(Q|L)8 [c] {s} x y)

(LEA(Q|L)2 [c] {s} x (SHL(Q|L)const [1] y)) => (LEA(Q|L)4 [c] {s} x y)

(LEA(Q|L)2 [c] {s} x (SHL(Q|L)const [2] y)) => (LEA(Q|L)8 [c] {s} x y)

(LEA(Q|L)4

[c] {s} x (SHL(Q|L)const [1] y)) => (LEA(Q|L)8 [c] {s} x y)

// reverse ordering of compare instruction

(SETL (InvertFlags x)) => (SETG x)

(SETG (InvertFlags x)) => (SETL x)

(SETB (InvertFlags x)) => (SETA x)

(SETA (InvertFlags x)) => (SETB x)

(SETLE (InvertFlags x)) => (SETGE x)

(SETGE (InvertFlags x)) => (SETLE x)

(SETBE (InvertFlags x)) => (SETAE x)

(SETAE (InvertFlags x)) => (SETBE x)

(SETEQ (InvertFlags x)) => (SETEQ x)

(SETNE (InvertFlags x)) => (SETNE x)

(SETLstore [off] {sym} ptr (InvertFlags x) mem) => (SETGstore [off] {sym} ptr x mem)

(SETGstore [off] {sym} ptr (InvertFlags x) mem) => (SETLstore [off] {sym} ptr x mem)

(SETBstore [off] {sym} ptr (InvertFlags x) mem) => (SETAstore [off] {sym} ptr x mem)

(SETAstore [off] {sym} ptr (InvertFlags x) mem) => (SETBstore [off] {sym} ptr x mem)



```

(SETLEstore [off] {sym} ptr (InvertFlags x) mem) => (SETGEstore [off] {sym} ptr x mem)
(SETGEstore [off] {sym} ptr (InvertFlags x) mem) => (SETLEstore [off] {sym} ptr x mem)
(SETBEstore [off]
{sym} ptr (InvertFlags x) mem) => (SETAEstore [off] {sym} ptr x mem)
(SETAEstore [off] {sym} ptr (InvertFlags x) mem) => (SETBEstore [off] {sym} ptr x mem)
(SETEQstore [off] {sym} ptr (InvertFlags x) mem) => (SETEQstore [off] {sym} ptr x mem)
(SETNEstore [off] {sym} ptr (InvertFlags x) mem) => (SETNEstore [off] {sym} ptr x mem)

// sign extended loads
// Note: The combined instruction must end up in the same block
// as the original load. If not, we end up making a value with
// memory type live in two different blocks, which can lead to
// multiple memory values alive simultaneously.
// Make sure we don't combine these ops if the load has another use.
// This prevents a single load from being split into multiple loads
// which then might return different values. See test/atomicload.go.
(MOVBQ SX x:(MOV Bload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBQ SXload
<v.Type> [off] {sym} ptr mem)
(MOVBQ SX x:(MOV Wload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) =>
  @x.Block (MOVBQ SXload <v.Type> [off] {sym} ptr mem)
(MOVBQ SX x:(MOV Lload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBQ SXload
<v.Type> [off] {sym} ptr mem)
(MOVBQ SX x:(MOV Qload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVBQ SXload
<v.Type> [off] {sym} ptr mem)
(MOVBQ ZX x:(MOV Bload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Bload
<v.Type> [off] {sym} ptr mem)
(MOVBQ ZX x:(MOV Wload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Bload
<v.Type> [off] {sym} ptr mem)
(MOVBQ ZX x:(MOV Lload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Bload
<v.Type> [off] {sym} ptr mem)
(MOVBQ ZX x:(MOV Qload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Bload
<v.Type> [off] {sym} ptr mem)
(MOVWQ SX x:(MOV Wload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVWQ SXload <v.Type> [off] {sym} ptr mem)
(MOVWQ SX x:(MOV Lload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x)
=> @x.Block (MOVBQ SXload <v.Type> [off] {sym} ptr mem)
(MOVWQ SX x:(MOV Qload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block
(MOVWQ SXload <v.Type> [off] {sym} ptr mem)
(MOVWQ ZX x:(MOV Wload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Wload
<v.Type> [off] {sym} ptr mem)
(MOVWQ ZX x:(MOV Lload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Wload
<v.Type> [off] {sym} ptr mem)
(MOVWQ ZX x:(MOV Qload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOV Wload
<v.Type> [off] {sym} ptr mem)
(MOVLQ SX x:(MOV Lload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVLQ SXload
<v.Type> [off] {sym} ptr mem)
(MOVLQ SX x:(MOV Qload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVLQ SXload
<v.Type> [off] {sym} ptr mem)

```

```
(MOVLQZX x:(MOVLload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVLload
<v.Type> [off] {sym} ptr mem)
(MOVLQZX x:(MOVQload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x)
=> @x.Block (MOVLload <v.Type> [off] {sym} ptr mem)
```

```
(MOVLQZX x) && zeroUpper32Bits(x,3) => x
(MOVWQZX x) && zeroUpper48Bits(x,3) => x
(MOVBQZX x) && zeroUpper56Bits(x,3) => x
```

```
// replace load from same location as preceding store with zero/sign extension (or copy in case of full width)
(MOVBload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBQZX x)
(MOVWload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVWQZX x)
(MOVLload [off] {sym} ptr (MOVLstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVLQZX x)
(MOVQload [off] {sym} ptr (MOVQstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => x
(MOVBQSXload [off] {sym} ptr (MOVBstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVBQSX x)
(MOVWQSXload [off] {sym} ptr (MOVWstore [off2] {sym2} ptr2
x _)) && sym == sym2 && off == off2 && isSamePtr(ptr, ptr2) => (MOVWQSX x)
(MOVLQSXload [off] {sym} ptr (MOVLstore [off2] {sym2} ptr2 x _)) && sym == sym2 && off == off2 &&
isSamePtr(ptr, ptr2) => (MOVLQSX x)
```

```
// Fold extensions and ANDs together.
```

```
(MOVBQZX (ANDLconst [c] x)) => (ANDLconst [c & 0xff] x)
(MOVWQZX (ANDLconst [c] x)) => (ANDLconst [c & 0xffff] x)
(MOVLQZX (ANDLconst [c] x)) => (ANDLconst [c] x)
(MOVBQSX (ANDLconst [c] x)) && c & 0x80 == 0 => (ANDLconst [c & 0x7f] x)
(MOVWQSX (ANDLconst [c] x)) && c & 0x8000 == 0 => (ANDLconst [c & 0x7fff] x)
(MOVLQSX (ANDLconst [c] x)) && uint32(c) & 0x80000000 == 0 => (ANDLconst [c & 0x7fffffff] x)
```

```
// Don't extend before storing
```

```
(MOVLstore [off] {sym} ptr (MOVLQSX x) mem) => (MOVLstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWQSX x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBQSX x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVLstore [off] {sym} ptr (MOVLQZX x) mem) => (MOVLstore [off] {sym}
ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWQZX x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBQZX x) mem) => (MOVBstore [off] {sym} ptr x mem)
```

```
// fold constants into memory operations
```

```
// Note that this is not always a good idea because if not all the uses of
```

```
// the ADDQconst get eliminated, we still have to compute the ADDQconst and we now
```

```
// have potentially two live values (ptr and (ADDQconst [off] ptr)) instead of one.
```

```
// Nevertheless, let's do it!
```

```
(MOV(Q|L|W|B|SS|SD|O)load [off1] {sym} (ADDQconst [off2] ptr) mem) && is32Bit(int64(off1)+int64(off2)) =>
```

```

(MOV(Q|L|W|B|SS|SD|O)load [off1+off2] {sym} ptr mem)
(MOV(Q|L|W|B|SS|SD|O)store [off1] {sym} (ADDQconst [off2] ptr) val mem) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOV(Q|L|W|B|SS|SD|O)store [off1+off2] {sym} ptr val mem)
(SET(L|G|B|A|LE|GE|BE|AE|EQ|NE)store [off1] {sym} (ADDQconst [off2] base) val mem) &&
is32Bit(int64(off1)+int64(off2)) =>
(SET(L|G|B|A|LE|GE|BE|AE|EQ|NE)store [off1+off2] {sym}
base val mem)
((ADD|SUB|AND|OR|XOR)Qload [off1] {sym} val (ADDQconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|AND|OR|XOR)Qload [off1+off2] {sym} val base mem)
((ADD|SUB|AND|OR|XOR)Lload [off1] {sym} val (ADDQconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|AND|OR|XOR)Lload [off1+off2] {sym} val base mem)
(CMP(Q|L|W|B)load [off1] {sym} (ADDQconst [off2] base) val mem) && is32Bit(int64(off1)+int64(off2)) =>
(CMP(Q|L|W|B)load [off1+off2] {sym} base val mem)
(CMP(Q|L|W|B)constload [valoff1] {sym} (ADDQconst [off2] base) mem) &&
ValAndOff(valoff1).canAdd32(off2) =>
(CMP(Q|L|W|B)constload [ValAndOff(valoff1).addOffset32(off2)] {sym} base mem)

((ADD|SUB|MUL|DIV)SSload [off1] {sym} val (ADDQconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|MUL|DIV)SSload [off1+off2] {sym} val base mem)
((ADD|SUB|MUL|DIV)SDload [off1] {sym} val (ADDQconst [off2] base) mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|MUL|DIV)SDload
[off1+off2] {sym} val base mem)
((ADD|AND|OR|XOR)Qconstmodify [valoff1] {sym} (ADDQconst [off2] base) mem) &&
ValAndOff(valoff1).canAdd32(off2) =>
((ADD|AND|OR|XOR)Qconstmodify [ValAndOff(valoff1).addOffset32(off2)] {sym} base mem)
((ADD|AND|OR|XOR)Lconstmodify [valoff1] {sym} (ADDQconst [off2] base) mem) &&
ValAndOff(valoff1).canAdd32(off2) =>
((ADD|AND|OR|XOR)Lconstmodify [ValAndOff(valoff1).addOffset32(off2)] {sym} base mem)
((ADD|SUB|AND|OR|XOR)Qmodify [off1] {sym} (ADDQconst [off2] base) val mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|AND|OR|XOR)Qmodify [off1+off2] {sym} base val mem)
((ADD|SUB|AND|OR|XOR)Lmodify [off1] {sym} (ADDQconst [off2] base) val mem) &&
is32Bit(int64(off1)+int64(off2)) =>
((ADD|SUB|AND|OR|XOR)Lmodify [off1+off2] {sym} base val mem)

// Fold constants into stores.
(MOVQstore [off] {sym} ptr (MOVQconst [c] mem) && validVal(c) =>
(MOVQstoreconst [makeValAndOff(int32(c),off)] {sym} ptr mem)
(MOVLstore [off] {sym} ptr (MOV(L|Q)const [c]
mem) =>
(MOVLstoreconst [makeValAndOff(int32(c),off)] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOV(L|Q)const [c] mem) =>
(MOVWstoreconst [makeValAndOff(int32(int16(c)),off)] {sym} ptr mem)

```

```

(MOVBstore [off] {sym} ptr (MOV(L|Q)const [c] mem) =>
(MOVBstoreconst [makeValAndOff(int32(int8(c)),off)] {sym} ptr mem)

// Fold address offsets into constant stores.
(MOV(Q|L|W|B|O)storeconst [sc] {s} (ADDQconst [off] ptr) mem) && ValAndOff(sc).canAdd32(off) =>
(MOV(Q|L|W|B|O)storeconst [ValAndOff(sc).addOffset32(off)] {s} ptr mem)

// We need to fold LEAQ into the MOVx ops so that the live variable analysis knows
// what variables are being read/written by the ops.
(MOV(Q|L|W|B|SS|SD|O|BQ|SX|WQ|SX|LQ|SX)load [off1] {sym1} (LEAQ [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
(MOV(Q|L|W|B|SS|SD|O|BQ|SX|WQ|SX|LQ|SX)load [off1+off2] {mergeSym(sym1,sym2)} base) mem)
(MOV(Q|L|W|B|SS|SD|O)store [off1] {sym1} (LEAQ [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2))
&& canMergeSym(sym1, sym2) =>
(MOV(Q|L|W|B|SS|SD|O)store [off1+off2] {mergeSym(sym1,sym2)} base) val mem)
(MOV(Q|L|W|B|O)storeconst [sc] {sym1} (LEAQ [off] {sym2} ptr) mem) && canMergeSym(sym1, sym2) &&
ValAndOff(sc).canAdd32(off) =>
(MOV(Q|L|W|B|O)storeconst [ValAndOff(sc).addOffset32(off)] {mergeSym(sym1, sym2)} ptr) mem)
(SET(L|G|B|A|LE|GE|BE|AE|EQ|NE)store [off1] {sym1} (LEAQ [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
(SET(L|G|B|A|LE|GE|BE|AE|EQ|NE)store [off1+off2] {mergeSym(sym1,sym2)} base) val mem)
((ADD|SUB|AND|OR|XOR)Qload [off1] {sym1} val (LEAQ [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|AND|OR|XOR)Qload [off1+off2] {mergeSym(sym1,sym2)} val) base mem)
((ADD|SUB|AND|OR|XOR)Lload [off1] {sym1} val (LEAQ [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|AND|OR|XOR)Lload [off1+off2] {mergeSym(sym1,sym2)}
val) base mem)
(CMP(Q|L|W|B)load [off1] {sym1} (LEAQ [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
(CMP(Q|L|W|B)load [off1+off2] {mergeSym(sym1,sym2)} base) val mem)
(CMP(Q|L|W|B)constload [valoff1] {sym1} (LEAQ [off2] {sym2} base) mem)
&& ValAndOff(valoff1).canAdd32(off2) && canMergeSym(sym1, sym2) =>
(CMP(Q|L|W|B)constload [ValAndOff(valoff1).addOffset32(off2)] {mergeSym(sym1,sym2)} base) mem)

((ADD|SUB|MUL|DIV)SSload [off1] {sym1} val (LEAQ [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|MUL|DIV)SSload [off1+off2] {mergeSym(sym1,sym2)} val) base mem)
((ADD|SUB|MUL|DIV)SDload [off1] {sym1} val (LEAQ [off2] {sym2} base) mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|MUL|DIV)SDload [off1+off2] {mergeSym(sym1,sym2)} val) base mem)
((ADD|AND|OR|XOR)Qconstmodify [valoff1] {sym1} (LEAQ [off2] {sym2} base) mem)
&& ValAndOff(valoff1).canAdd32(off2)
&& canMergeSym(sym1, sym2) =>
((ADD|AND|OR|XOR)Qconstmodify [ValAndOff(valoff1).addOffset32(off2)] {mergeSym(sym1,sym2)} base
mem)
((ADD|AND|OR|XOR)Lconstmodify [valoff1] {sym1} (LEAQ [off2] {sym2} base) mem)

```

```

&& ValAndOff(valoff1).canAdd32(off2) && canMergeSym(sym1, sym2) =>
((ADD|AND|OR|XOR)Lconstmodify [ValAndOff(valoff1).addOffset32(off2)] {mergeSym(sym1,sym2)} base
mem)
((ADD|SUB|AND|OR|XOR)Qmodify [off1] {sym1} (LEAQ [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|AND|OR|XOR)Qmodify [off1+off2] {mergeSym(sym1,sym2)} base val mem)
((ADD|SUB|AND|OR|XOR)Lmodify [off1] {sym1} (LEAQ [off2] {sym2} base) val mem)
&& is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>
((ADD|SUB|AND|OR|XOR)Lmodify [off1+off2] {mergeSym(sym1,sym2)} base val mem)

// fold LEAQs together
(LEAQ [off1] {sym1} (LEAQ [off2] {sym2} x) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
  (LEAQ [off1+off2] {mergeSym(sym1,sym2)}
  x)

// LEAQ into LEAQ1
(LEAQ1 [off1] {sym1} (LEAQ [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
  (LEAQ1 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAQ1 into LEAQ
(LEAQ [off1] {sym1} (LEAQ1 [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
  (LEAQ1 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAQ into LEAQ[248]
(LEAQ2 [off1] {sym1} (LEAQ [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
  (LEAQ2 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAQ4 [off1] {sym1} (LEAQ [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
  (LEAQ4 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAQ8 [off1] {sym1} (LEAQ [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) && x.Op != OpSB =>
  (LEAQ8 [off1+off2] {mergeSym(sym1,sym2)} x y)

// LEAQ[248] into LEAQ
(LEAQ
[off1] {sym1} (LEAQ2 [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2)
=>
  (LEAQ2 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAQ [off1] {sym1} (LEAQ4 [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
  (LEAQ4 [off1+off2] {mergeSym(sym1,sym2)} x y)
(LEAQ [off1] {sym1} (LEAQ8 [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
  (LEAQ8 [off1+off2] {mergeSym(sym1,sym2)} x y)

```

```

// LEAQ[1248] into LEAQ[1248]. Only some such merges are possible.
(LEAQ1 [off1] {sym1} x (LEAQ1 [off2] {sym2} y y)) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
    (LEAQ2 [off1+off2] {mergeSym(sym1, sym2)} x y)
(LEAQ1 [off1] {sym1} x (LEAQ1 [off2] {sym2} x y)) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
    (LEAQ2 [off1+off2] {mergeSym(sym1, sym2)} y x)
(LEAQ2 [off1] {sym1} x (LEAQ1 [off2] {sym2} y y)) && is32Bit(int64(off1)+2*int64(off2)) && sym2 == nil
=>
    (LEAQ4 [off1+2*off2] {sym1} x y)
(LEAQ4 [off1] {sym1} x (LEAQ1 [off2] {sym2} y y)) && is32Bit(int64(off1)+4*int64(off2)) && sym2 == nil =>
    (LEAQ8 [off1+4*off2] {sym1} x y)
// TODO: more?

// Lower LEAQ2/4/8 when the offset is a constant
(LEAQ2 [off] {sym} x (MOV(Q)Lconst [scale])) && is32Bit(int64(off)+int64(scale)*2) =>
    (LEAQ [off+int32(scale)*2] {sym} x)
(LEAQ4 [off] {sym} x (MOV(Q)Lconst [scale])) && is32Bit(int64(off)+int64(scale)*4) =>
    (LEAQ [off+int32(scale)*4] {sym} x)
(LEAQ8 [off] {sym} x (MOV(Q)Lconst [scale])) && is32Bit(int64(off)+int64(scale)*8) =>
    (LEAQ [off+int32(scale)*8] {sym} x)

// Absorb InvertFlags into branches.
(LT (InvertFlags cmp) yes no) => (GT cmp yes no)
(GT (InvertFlags cmp) yes no) => (LT cmp yes no)
(LE (InvertFlags cmp) yes no) => (GE cmp yes no)
(GE (InvertFlags cmp) yes no) => (LE cmp yes no)
(ULT (InvertFlags cmp) yes no) => (UGT cmp yes no)
(UGT (InvertFlags cmp) yes no) => (ULT cmp yes no)
(ULE (InvertFlags cmp) yes no) => (UGE
cmp yes no)
(UGE (InvertFlags cmp) yes no) => (ULE cmp yes no)
(EQ (InvertFlags cmp) yes no) => (EQ cmp yes no)
(NE (InvertFlags cmp) yes no) => (NE cmp yes no)

// Constant comparisons.
(CMPQconst (MOVQconst [x]) [y]) && x==int64(y) => (FlagEQ)
(CMPQconst (MOVQconst [x]) [y]) && x<int64(y) && uint64(x)<uint64(int64(y)) => (FlagLT_ULT)
(CMPQconst (MOVQconst [x]) [y]) && x<int64(y) && uint64(x)>uint64(int64(y)) => (FlagLT_UGT)
(CMPQconst (MOVQconst [x]) [y]) && x>int64(y) && uint64(x)<uint64(int64(y)) => (FlagGT_ULT)
(CMPQconst (MOVQconst [x]) [y]) && x>int64(y) && uint64(x)>uint64(int64(y)) => (FlagGT_UGT)
(CMPLconst (MOVLconst [x]) [y]) && x==y => (FlagEQ)
(CMPLconst (MOVLconst [x]) [y]) && x<y && uint32(x)<uint32(y) => (FlagLT_ULT)
(CMPLconst (MOVLconst [x]) [y]) && x<y && uint32(x)>uint32(y) => (FlagLT_UGT)
(CMPLconst (MOVLconst [x]) [y]) && x>y && uint32(x)<uint32(y) => (FlagGT_ULT)
(CMPLconst (MOVLconst [x]) [y]) && x>y && uint32(x)>uint32(y) => (FlagGT_UGT)
(CMPWconst (MOVLconst

```

```

[x] [y] && int16(x)==y => (FlagEQ)
(CMPWconst (MOVLconst [x] [y]) && int16(x)<y && uint16(x)<uint16(y) => (FlagLT_ULT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)<y && uint16(x)>uint16(y) => (FlagLT_UGT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)>y && uint16(x)<uint16(y) => (FlagGT_ULT)
(CMPWconst (MOVLconst [x] [y]) && int16(x)>y && uint16(x)>uint16(y) => (FlagGT_UGT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)==y => (FlagEQ)
(CMPBconst (MOVLconst [x] [y]) && int8(x)<y && uint8(x)<uint8(y) => (FlagLT_ULT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)<y && uint8(x)>uint8(y) => (FlagLT_UGT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)>y && uint8(x)<uint8(y) => (FlagGT_ULT)
(CMPBconst (MOVLconst [x] [y]) && int8(x)>y && uint8(x)>uint8(y) => (FlagGT_UGT)

// CMPQconst requires a 32 bit const, but we can still constant-fold 64 bit consts.
// In theory this applies to any of the simplifications above,
// but CMPQ is the only one I've actually seen occur.
(CMPQ (MOVQconst [x]) (MOVQconst [y]))
&& x==y => (FlagEQ)
(CMPQ (MOVQconst [x]) (MOVQconst [y])) && x<y && uint64(x)<uint64(y) => (FlagLT_ULT)
(CMPQ (MOVQconst [x]) (MOVQconst [y])) && x<y && uint64(x)>uint64(y) => (FlagLT_UGT)
(CMPQ (MOVQconst [x]) (MOVQconst [y])) && x>y && uint64(x)<uint64(y) => (FlagGT_ULT)
(CMPQ (MOVQconst [x]) (MOVQconst [y])) && x>y && uint64(x)>uint64(y) => (FlagGT_UGT)

// Other known comparisons.
(CMPQconst (MOVBQZX _) [c]) && 0xFF < c => (FlagLT_ULT)
(CMPQconst (MOVWQZX _) [c]) && 0xFFFF < c => (FlagLT_ULT)
(CMPLconst (SHRLconst _ [c] [n]) && 0 <= n && 0 < c && c <= 32 && (1<<uint64(32-c)) <= uint64(n) =>
(FlagLT_ULT)
(CMPQconst (SHRQconst _ [c] [n]) && 0 <= n && 0 < c && c <= 64 && (1<<uint64(64-c)) <= uint64(n) =>
(FlagLT_ULT)
(CMPQconst (ANDQconst _ [m] [n]) && 0 <= m && m < n => (FlagLT_ULT)
(CMPQconst (ANDLconst _ [m] [n]) && 0 <= m && m < n => (FlagLT_ULT)
(CMPLconst (ANDLconst _ [m] [n]) && 0 <= m && m < n => (FlagLT_ULT)
(CMPWconst (ANDLconst _ [m] [n]) && 0 <= int16(m) && int16(m)
< n => (FlagLT_ULT)
(CMPBconst (ANDLconst _ [m] [n]) && 0 <= int8(m) && int8(m) < n => (FlagLT_ULT)

// TESTQ c c sets flags like CMPQ c 0.
(TESTQconst [c] (MOVQconst [d])) && int64(c) == d && c == 0 => (FlagEQ)
(TESTLconst [c] (MOVLconst [c])) && c == 0 => (FlagEQ)
(TESTQconst [c] (MOVQconst [d])) && int64(c) == d && c < 0 => (FlagLT_UGT)
(TESTLconst [c] (MOVLconst [c])) && c < 0 => (FlagLT_UGT)
(TESTQconst [c] (MOVQconst [d])) && int64(c) == d && c > 0 => (FlagGT_UGT)
(TESTLconst [c] (MOVLconst [c])) && c > 0 => (FlagGT_UGT)

// TODO: DIVxU also.

// Absorb flag constants into SBB ops.
(SBBQcarrymask (FlagEQ)) => (MOVQconst [0])
(SBBQcarrymask (FlagLT_ULT)) => (MOVQconst [-1])

```

```

(SBBQcarrymask (FlagLT_UGT)) => (MOVQconst [0])
(SBBQcarrymask (FlagGT_ULT)) => (MOVQconst [-1])
(SBBQcarrymask (FlagGT_UGT)) => (MOVQconst [0])
(SBBLcarrymask (FlagEQ)) => (MOVLconst [0])
(SBBLcarrymask (FlagLT_ULT)) => (MOVLconst [-1])
(SBBLcarrymask (FlagLT_UGT)) => (MOVLconst [0])
(SBBLcarrymask
(FlagGT_ULT)) => (MOVLconst [-1])
(SBBLcarrymask (FlagGT_UGT)) => (MOVLconst [0])

// Absorb flag constants into branches.
((EQ|LE|GE|ULE|UGE) (FlagEQ) yes no) => (First yes no)
((NE|LT|GT|ULT|UGT) (FlagEQ) yes no) => (First no yes)
((NE|LT|LE|ULT|ULE) (FlagLT_ULT) yes no) => (First yes no)
((EQ|GT|GE|UGT|UGE) (FlagLT_ULT) yes no) => (First no yes)
((NE|LT|LE|UGT|UGE) (FlagLT_UGT) yes no) => (First yes no)
((EQ|GT|GE|ULT|ULE) (FlagLT_UGT) yes no) => (First no yes)
((NE|GT|GE|ULT|ULE) (FlagGT_ULT) yes no) => (First yes no)
((EQ|LT|LE|UGT|UGE) (FlagGT_ULT) yes no) => (First no yes)
((NE|GT|GE|UGT|UGE) (FlagGT_UGT) yes no) => (First yes no)
((EQ|LT|LE|ULT|ULE) (FlagGT_UGT) yes no) => (First no yes)

// Absorb flag constants into SETxx ops.
((SETEQ|SETLE|SETGE|SETBE|SETAE) (FlagEQ)) => (MOVLconst [1])
((SETNE|SETL|SETG|SETB|SETA) (FlagEQ)) => (MOVLconst [0])
((SETNE|SETL|SETLE|SETB|SETBE) (FlagLT_ULT)) => (MOVLconst [1])
((SETEQ|SETG|SETGE|SETA|SETAE) (FlagLT_ULT))
=> (MOVLconst [0])
((SETNE|SETL|SETLE|SETA|SETAE) (FlagLT_UGT)) => (MOVLconst [1])
((SETEQ|SETG|SETGE|SETB|SETBE) (FlagLT_UGT)) => (MOVLconst [0])
((SETNE|SETG|SETGE|SETB|SETBE) (FlagGT_ULT)) => (MOVLconst [1])
((SETEQ|SETL|SETLE|SETA|SETAE) (FlagGT_ULT)) => (MOVLconst [0])
((SETNE|SETG|SETGE|SETA|SETAE) (FlagGT_UGT)) => (MOVLconst [1])
((SETEQ|SETL|SETLE|SETB|SETBE) (FlagGT_UGT)) => (MOVLconst [0])

(SETEQstore [off] {sym} ptr (FlagEQ) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])
mem)
(SETEQstore [off] {sym} ptr (FlagLT_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])
mem)
(SETEQstore [off] {sym} ptr (FlagLT_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])
mem)
(SETEQstore [off] {sym} ptr (FlagGT_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])
mem)
(SETEQstore [off] {sym} ptr (FlagGT_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])
mem)

(SETNEstore [off] {sym} ptr

```



(FlagEQ mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETNEstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETNEstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETNEstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETNEstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)

(SETLstore [off] {sym} ptr (FlagEQ mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETLstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETLstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETLstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETLstore [off] {sym} ptr (FlagGT\_UGT) mem)  
 => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)

(SETLEstore [off] {sym} ptr (FlagEQ mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETLEstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETLEstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETLEstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETLEstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)

(SETGstore [off] {sym} ptr (FlagEQ mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETGstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETGstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETGstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETGstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)

(SETGEstore [off] {sym} ptr (FlagEQ mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1]) mem)  
 (SETGEstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)  
 (SETGEstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0]) mem)

mem)  
 (SETGEstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETGEstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)

(SETBstore [off] {sym} ptr (FlagEQ) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETBstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETBstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst  
 <typ.UInt8> [0]) mem)  
 (SETBstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETBstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)

(SETBEstore [off] {sym} ptr (FlagEQ) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETBEstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETBEstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETBEstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETBEstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)

(SETAstore [off] {sym} ptr (FlagEQ) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETAstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8>  
 [0]) mem)  
 (SETAstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETAstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETAstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)

(SETAEstore [off] {sym} ptr (FlagEQ) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETAEstore [off] {sym} ptr (FlagLT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETAEstore [off] {sym} ptr (FlagLT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])  
 mem)  
 (SETAEstore [off] {sym} ptr (FlagGT\_ULT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [0])  
 mem)  
 (SETAEstore [off] {sym} ptr (FlagGT\_UGT) mem) => (MOVBstore [off] {sym} ptr (MOVLconst <typ.UInt8> [1])

mem)

```
// Remove redundant *const ops
(ADDQconst [0] x) => x
(ADDLconst [c] x) && c==0 => x
(SUBQconst [0] x)
=> x
(SUBLconst [c] x) && c==0 => x
(ANDQconst [0] _) => (MOVQconst [0])
(ANDLconst [c] _) && c==0 => (MOVLconst [0])
(ANDQconst [-1] x) => x
(ANDLconst [c] x) && c==-1 => x
(ORQconst [0] x) => x
(ORLconst [c] x) && c==0 => x
(ORQconst [-1] _) => (MOVQconst [-1])
(ORLconst [c] _) && c==-1 => (MOVLconst [-1])
(XORQconst [0] x) => x
(XORLconst [c] x) && c==0 => x
// TODO: since we got rid of the W/B versions, we might miss
// things like (ANDLconst [0x100] x) which were formerly
// (ANDBconst [0] x). Probably doesn't happen very often.
// If we cared, we might do:
// (ANDLconst <t> [c] x) && t.Size()==1 && int8(x)==0 -> (MOVLconst [0])

// Remove redundant ops
// Not in generic rules, because they may appear after lowering e. g. Slicemask
(NEG(Q|L) (NEG(Q|L) x)) => x
(NEG(Q|L) s:(SUB(Q|L) x y)) && s.Uses == 1 => (SUB(Q|L) y x)

// Convert constant subtracts to constant adds
(SUBQconst [c] x) && c != -(1<<31) => (ADDQconst [-c]
x)
(SUBLconst [c] x) => (ADDLconst [-c] x)

// generic constant folding
// TODO: more of this
(ADDQconst [c] (MOVQconst [d])) => (MOVQconst [int64(c)+d])
(ADDLconst [c] (MOVLconst [d])) => (MOVLconst [c+d])
(ADDQconst [c] (ADDQconst [d] x)) && is32Bit(int64(c)+int64(d)) => (ADDQconst [c+d] x)
(ADDLconst [c] (ADDLconst [d] x)) => (ADDLconst [c+d] x)
(SUBQconst (MOVQconst [d]) [c]) => (MOVQconst [d-int64(c)])
(SUBQconst (SUBQconst x [d]) [c]) && is32Bit(int64(-c)-int64(d)) => (ADDQconst [-c-d] x)
(SARQconst [c] (MOVQconst [d])) => (MOVQconst [d>>uint64(c)])
(SARLconst [c] (MOVQconst [d])) => (MOVQconst [int64(int32(d))>>uint64(c)])
(SARWconst [c] (MOVQconst [d])) => (MOVQconst [int64(int16(d))>>uint64(c)])
(SARBconst [c] (MOVQconst [d])) => (MOVQconst [int64(int8(d))>>uint64(c)])
(NEGQ (MOVQconst [c])) => (MOVQconst [-c])
(NEGL (MOVLconst [c])) => (MOVLconst [-c])
```

```

(MULQconst [c] (MOVQconst [d])) => (MOVQconst [int64(c)*d])
(MULLconst [c] (MOVLconst [d])) => (MOVLconst [c*d])
(ANDQconst [c]
 (MOVQconst [d])) => (MOVQconst [int64(c)&d])
(ANDLconst [c] (MOVLconst [d])) => (MOVLconst [c&d])
(ORQconst [c] (MOVQconst [d])) => (MOVQconst [int64(c)|d])
(ORLconst [c] (MOVLconst [d])) => (MOVLconst [c|d])
(XORQconst [c] (MOVQconst [d])) => (MOVQconst [int64(c)^d])
(XORLconst [c] (MOVLconst [d])) => (MOVLconst [c^d])
(NOTQ (MOVQconst [c])) => (MOVQconst [^c])
(NOTL (MOVLconst [c])) => (MOVLconst [^c])
(BTSQconst [c] (MOVQconst [d])) => (MOVQconst [d|(1<<uint32(c))])
(BTSLconst [c] (MOVLconst [d])) => (MOVLconst [d|(1<<uint32(c))])
(BTRQconst [c] (MOVQconst [d])) => (MOVQconst [d^(1<<uint32(c))])
(BTRLconst [c] (MOVLconst [d])) => (MOVLconst [d^(1<<uint32(c))])
(BTCQconst [c] (MOVQconst [d])) => (MOVQconst [d^(1<<uint32(c))])
(BTCLconst [c] (MOVLconst [d])) => (MOVLconst [d^(1<<uint32(c))])

// If c or d doesn't fit into 32 bits, then we can't construct ORQconst,
// but we can still constant-fold.
// In theory this applies to any of the simplifications above,
// but ORQ is the only
// one I've actually seen occur.
(ORQ (MOVQconst [c]) (MOVQconst [d])) => (MOVQconst [c|d])

// generic simplifications
// TODO: more of this
(ADDQ x (NEGQ y)) => (SUBQ x y)
(ADDL x (NEGL y)) => (SUBL x y)
(SUBQ x x) => (MOVQconst [0])
(SUBL x x) => (MOVLconst [0])
(ANDQ x x) => x
(ANDL x x) => x
(ORQ x x) => x
(ORL x x) => x
(XORQ x x) => (MOVQconst [0])
(XORL x x) => (MOVLconst [0])

(SHLLconst [d] (MOVLconst [c])) => (MOVLconst [c << uint64(d)])
(SHLQconst [d] (MOVQconst [c])) => (MOVQconst [c << uint64(d)])
(SHLQconst [d] (MOVLconst [c])) => (MOVQconst [int64(c) << uint64(d)])

// Fold NEG into ADDconst/MULconst. Take care to keep c in 32 bit range.
(NEGQ (ADDQconst [c] (NEGQ x))) && c != -(1<<31) => (ADDQconst [-c] x)
(MULQconst [c] (NEGQ x)) && c != -(1<<31) => (MULQconst [-c] x)

// checking AND against 0.
(CMPQconst a:(ANDQ x y) [0]) && a.Uses == 1 => (TESTQ x y)

```

```

(CMPLconst a:(ANDL x y) [0]) && a.Uses == 1 => (TESTL x y)
(CMPWconst a:(ANDL x y) [0]) && a.Uses == 1 => (TESTW
x y)
(CMPBconst a:(ANDL x y) [0]) && a.Uses == 1 => (TESTB x y)
(CMPQconst a:(ANDQconst [c] x) [0]) && a.Uses == 1 => (TESTQconst [c] x)
(CMPLconst a:(ANDLconst [c] x) [0]) && a.Uses == 1 => (TESTLconst [c] x)
(CMPWconst a:(ANDLconst [c] x) [0]) && a.Uses == 1 => (TESTWconst [int16(c)] x)
(CMPBconst a:(ANDLconst [c] x) [0]) && a.Uses == 1 => (TESTBconst [int8(c)] x)

```

```
// Convert TESTx to TESTxconst if possible.
```

```

(TESTQ (MOVQconst [c] x) && is32Bit(c) => (TESTQconst [int32(c)] x)
(TESTL (MOVLconst [c] x) => (TESTLconst [c] x)
(TESTW (MOVLconst [c] x) => (TESTWconst [int16(c)] x)
(TESTB (MOVLconst [c] x) => (TESTBconst [int8(c)] x)

```

```
// TEST %reg,%reg is shorter than CMP
```

```

(CMPQconst x [0]) => (TESTQ x x)
(CMPLconst x [0]) => (TESTL x x)
(CMPWconst x [0]) => (TESTW x x)
(CMPBconst x [0]) => (TESTB x x)
(TESTQconst [-1] x) && x.Op != OpAMD64MOVQconst => (TESTQ x x)
(TESTLconst [-1] x) && x.Op != OpAMD64MOVLconst => (TESTL x x)
(TESTWconst [-1] x) && x.Op != OpAMD64MOVLconst => (TESTW x x)
(TESTBconst
[-1] x) && x.Op != OpAMD64MOVLconst => (TESTB x x)

```

```
// Convert LEAQ1 back to ADDQ if we can
```

```
(LEAQ1 [0] x y) && v.Aux == nil => (ADDQ x y)
```

```
// Combining byte loads into larger (unaligned) loads.
```

```
// There are many ways these combinations could occur. This is
// designed to match the way encoding/binary.LittleEndian does it.
```

```
// Little-endian loads
```

```

(OR(L|Q)          x0:(MOVBload [i0] {s} p mem)
  sh:(SHL(L|Q)const [8] x1:(MOVBload [i1] {s} p mem)))
&& i1 == i0+1
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVWload [i0] {s} p mem)

```

```

(OR(L|Q)          x0:(MOVBload [i] {s} p0 mem)
  sh:(SHL(L|Q)const [8] x1:(MOVBload [i] {s} p1 mem)))
&& x0.Uses == 1

```

```

&& x1.Uses == 1
&& sh.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVWload [i] {s} p0 mem)

(OR(L|Q)          x0:(MOVWload
[i0] {s} p mem)
  sh:(SHL(L|Q)const [16] x1:(MOVWload [i1] {s} p mem)))
&& i1 == i0+2
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVLload [i0] {s} p mem)

(OR(L|Q)          x0:(MOVWload [i] {s} p0 mem)
  sh:(SHL(L|Q)const [16] x1:(MOVWload [i] {s} p1 mem)))
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVLload [i] {s} p0 mem)

(ORQ             x0:(MOVLload [i0] {s} p mem)
  sh:(SHLQconst [32] x1:(MOVLload [i1] {s} p mem)))
&& i1 == i0+4
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVQload [i0] {s} p mem)

(ORQ             x0:(MOVLload [i] {s} p0 mem)
  sh:(SHLQconst [32] x1:(MOVLload [i] {s} p1 mem)))
&& x0.Uses == 1
&& x1.Uses ==
1
&& sh.Uses == 1
&& sequentialAddresses(p0, p1, 4)
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVQload [i] {s} p0 mem)

```

```

(OR(L|Q)
  s1:(SHL(L|Q)const [j1] x1:(MOVBload [i1] {s} p mem))
  or:(OR(L|Q)
    s0:(SHL(L|Q)const [j0] x0:(MOVBload [i0] {s} p mem))
  y))
&& i1 == i0+1
&& j1 == j0+8
&& j0 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR(L|Q) <v.Type> (SHL(L|Q)const <v.Type> [j0] (MOVWload [i0] {s} p mem)) y)

```

```

(OR(L|Q)
  s1:(SHL(L|Q)const [j1] x1:(MOVBload [i] {s} p1 mem))
  or:(OR(L|Q)
    s0:(SHL(L|Q)const [j0] x0:(MOVBload [i] {s} p0 mem))
  y))
&& j1 == j0+8
&& j0 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR(L|Q) <v.Type> (SHL(L|Q)const <v.Type> [j0] (MOVWload [i] {s} p0 mem)) y)

```

```

(ORQ
  s1:(SHLQconst [j1] x1:(MOVWload [i1] {s} p mem))
  or:(ORQ
    s0:(SHLQconst [j0] x0:(MOVWload [i0] {s} p mem))
  y))
&& i1 == i0+2
&& j1 == j0+16
&& j0 % 32 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1

```

```
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORQ <v.Type> (SHLQconst <v.Type> [j0] (MOVLload [i0] {s} p mem)) y)
```

```
(ORQ
  s1:(SHLQconst [j1] x1:(MOVWload [i] {s} p1 mem))
  or:(ORQ
    s0:(SHLQconst [j0] x0:(MOVWload [i] {s} p0 mem))
  y))
&& j1 == j0+16
&& j0 % 32 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORQ <v.Type> (SHLQconst <v.Type> [j0] (MOVLload [i] {s} p0 mem))
y)
```

```
// Big-endian loads
```

```
(OR(L|Q)
  x1:(MOVBload [i1] {s} p mem)
  sh:(SHL(L|Q)const [8] x0:(MOVBload [i0] {s} p mem)))
&& i1 == i0+1
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (ROLWconst <v.Type> [8] (MOVWload [i0] {s} p mem))
```

```
(OR(L|Q)
  x1:(MOVBload [i] {s} p1 mem)
  sh:(SHL(L|Q)const [8] x0:(MOVBload [i] {s} p0 mem)))
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (ROLWconst <v.Type> [8] (MOVWload [i] {s} p0 mem))
```

```
(OR(L|Q)
  r1:(ROLWconst [8] x1:(MOVWload [i1] {s} p mem))
```



```

    sh:(SHL(L|Q)const [16] r0:(ROLWconst [8] x0:(MOVWload [i0] {s} p mem))))
    && i1 == i0+2
    && x0.Uses == 1
    && x1.Uses == 1
    && r0.Uses == 1
    && r1.Uses == 1
    && sh.Uses == 1
    && mergePoint(b,x0,x1) != nil
    && clobber(x0, x1, r0, r1, sh)
    => @mergePoint(b,x0,x1) (BSWAPL <v.Type> (MOVLload [i0] {s} p mem))

```

(OR(L|Q)

```

    r1:(ROLWconst [8] x1:(MOVWload [i] {s} p1 mem))
    sh:(SHL(L|Q)const [16] r0:(ROLWconst [8] x0:(MOVWload [i] {s} p0 mem))))
    && x0.Uses == 1
    && x1.Uses == 1
    && r0.Uses == 1
    && r1.Uses == 1
    && sh.Uses == 1
    && sequentialAddresses(p0, p1, 2)
    && mergePoint(b,x0,x1) != nil
    && clobber(x0, x1, r0, r1, sh)
    => @mergePoint(b,x0,x1) (BSWAPL <v.Type> (MOVLload [i] {s} p0 mem))

```

(ORQ

```

    r1:(BSWAPL x1:(MOVLload [i1] {s} p mem))
    sh:(SHLQconst [32] r0:(BSWAPL x0:(MOVLload [i0] {s} p mem))))
    && i1 == i0+4
    && x0.Uses == 1
    && x1.Uses == 1
    && r0.Uses == 1
    && r1.Uses == 1
    && sh.Uses == 1
    && mergePoint(b,x0,x1) != nil
    && clobber(x0, x1, r0, r1, sh)
    => @mergePoint(b,x0,x1) (BSWAPQ <v.Type> (MOVQload [i0] {s} p mem))

```

(ORQ

```

    r1:(BSWAPL x1:(MOVLload [i] {s} p1 mem))
    sh:(SHLQconst [32]
    r0:(BSWAPL x0:(MOVLload [i] {s} p0 mem))))
    && x0.Uses == 1
    && x1.Uses == 1
    && r0.Uses == 1
    && r1.Uses == 1
    && sh.Uses == 1
    && sequentialAddresses(p0, p1, 4)
    && mergePoint(b,x0,x1) != nil

```

```

&& clobber(x0, x1, r0, r1, sh)
=> @mergePoint(b,x0,x1) (BSWAPQ <v.Type> (MOVQload [i] {s} p0 mem))

(OR(L|Q)
  s0:(SHL(L|Q)const [j0] x0:(MOVBload [i0] {s} p mem))
  or:(OR(L|Q)
    s1:(SHL(L|Q)const [j1] x1:(MOVBload [i1] {s} p mem))
  y))
&& i1 == i0+1
&& j1 == j0-8
&& j1 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR(L|Q) <v.Type> (SHL(L|Q)const <v.Type> [j1] (ROLWconst <typ.UInt16> [8]
(MOVWload [i0] {s} p mem))) y)

```

```

(OR(L|Q)
  s0:(SHL(L|Q)const [j0] x0:(MOVBload [i] {s} p0 mem))
  or:(OR(L|Q)
    s1:(SHL(L|Q)const [j1] x1:(MOVBload [i] {s} p1 mem))
  y))
&& j1 == j0-8
&& j1 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR(L|Q) <v.Type> (SHL(L|Q)const <v.Type> [j1] (ROLWconst <typ.UInt16> [8]
(MOVWload [i] {s} p0 mem))) y)

```

```

(ORQ
  s0:(SHLQconst [j0] r0:(ROLWconst [8] x0:(MOVWload [i0] {s} p mem)))
  or:(ORQ
    s1:(SHLQconst [j1] r1:(ROLWconst [8] x1:(MOVWload [i1] {s} p mem)))
  y))
&& i1 == i0+2
&& j1 == j0-16
&& j1 % 32 == 0
&& x0.Uses == 1

```

```

&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, r0, r1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORQ <v.Type> (SHLQconst <v.Type> [j1] (BSWAPL <typ.UInt32> (MOVLload
[i0] {s} p mem))) y)

```

```

(ORQ
  s0:(SHLQconst [j0] r0:(ROLWconst [8] x0:(MOVWload [i] {s} p0 mem)))
  or:(ORQ
    s1:(SHLQconst [j1] r1:(ROLWconst [8] x1:(MOVWload [i]
{s} p1 mem)))
  y))
&& j1 == j0-16
&& j1 % 32 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, r0, r1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORQ <v.Type> (SHLQconst <v.Type> [j1] (BSWAPL <typ.UInt32> (MOVLload [i]
{s} p0 mem))) y)

```

```

// Combine 2 byte stores + shift into rolw 8 + word store
(MOVBstore [i] {s} p w
x0:(MOVBstore [i-1] {s} p (SHRWconst [8] w) mem))
&& x0.Uses == 1
&& clobber(x0)
=> (MOVWstore [i-1] {s} p (ROLWconst <typ.UInt16> [8] w) mem)
(MOVBstore [i] {s} p1 w
x0:(MOVBstore [i] {s} p0 (SHRWconst [8] w) mem))
&& x0.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& clobber(x0)
=> (MOVWstore [i] {s} p0 (ROLWconst <typ.UInt16> [8] w) mem)

```

```

// Combine stores + shifts into bswap and larger (unaligned) stores
(MOVBstore [i] {s} p w
x2:(MOVBstore [i-1] {s} p (SHRLconst [8] w)

```

```

x1:(MOVBstore
[i-2] {s} p (SHRLconst [16] w)
x0:(MOVBstore [i-3] {s} p (SHRLconst [24] w mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& clobber(x0, x1, x2)
=> (MOVLstore [i-3] {s} p (BSWAPL <typ.UInt32> w) mem)
(MOVBstore [i] {s} p3 w
x2:(MOVBstore [i] {s} p2 (SHRLconst [8] w)
x1:(MOVBstore [i] {s} p1 (SHRLconst [16] w)
x0:(MOVBstore [i] {s} p0 (SHRLconst [24] w mem))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& sequentialAddresses(p1, p2, 1)
&& sequentialAddresses(p2, p3, 1)
&& clobber(x0, x1, x2)
=> (MOVLstore [i] {s} p0 (BSWAPL <typ.UInt32> w) mem)

```

```

(MOVBstore [i] {s} p w
x6:(MOVBstore [i-1] {s} p (SHRQconst [8] w)
x5:(MOVBstore [i-2] {s} p (SHRQconst [16] w)
x4:(MOVBstore [i-3] {s} p (SHRQconst [24] w)
x3:(MOVBstore [i-4] {s} p (SHRQconst [32] w)
x2:(MOVBstore [i-5] {s} p (SHRQconst [40] w)
x1:(MOVBstore [i-6] {s} p (SHRQconst [48] w)
x0:(MOVBstore [i-7] {s} p (SHRQconst [56] w mem))))))
&& x0.Uses == 1
&& x1.Uses == 1
&& x2.Uses == 1
&& x3.Uses == 1
&& x4.Uses == 1
&& x5.Uses == 1
&& x6.Uses == 1
&& clobber(x0, x1, x2, x3, x4, x5, x6)
=> (MOVQstore [i-7] {s} p (BSWAPQ <typ.UInt64> w) mem)
(MOVBstore [i] {s} p7 w
x6:(MOVBstore [i] {s} p6 (SHRQconst [8] w)
x5:(MOVBstore [i] {s} p5 (SHRQconst [16] w)
x4:(MOVBstore [i] {s} p4 (SHRQconst [24] w)
x3:(MOVBstore [i] {s} p3 (SHRQconst [32] w)
x2:(MOVBstore [i] {s} p2 (SHRQconst [40] w)
x1:(MOVBstore [i] {s} p1 (SHRQconst [48] w)
x0:(MOVBstore [i] {s} p0 (SHRQconst [56] w mem))))))
&& x0.Uses == 1
&& x1.Uses == 1

```

```

&& x2.Uses == 1
&& x3.Uses == 1
&& x4.Uses == 1
&& x5.Uses == 1
&& x6.Uses == 1
&& sequentialAddresses(p0, p1, 1)
&& sequentialAddresses(p1, p2, 1)
&& sequentialAddresses(p2, p3, 1)
&& sequentialAddresses(p3, p4, 1)
&& sequentialAddresses(p4, p5, 1)
&& sequentialAddresses(p5, p6, 1)
&& sequentialAddresses(p6, p7, 1)
&& clobber(x0, x1, x2, x3, x4, x5,
x6)
=> (MOVQstore [i] {s} p0 (BSWAPQ <typ.UInt64> w) mem)

// Combine constant stores into larger (unaligned) stores.
(MOVBstoreconst [c] {s} p x:(MOVBstoreconst [a] {s} p mem))
&& x.Uses == 1
&& a.Off() + 1 == c.Off()
&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val()&0xff | c.Val()<<8, a.Off())] {s} p mem)
(MOVBstoreconst [a] {s} p x:(MOVBstoreconst [c] {s} p mem))
&& x.Uses == 1
&& a.Off() + 1 == c.Off()
&& clobber(x)
=> (MOVWstoreconst [makeValAndOff(a.Val()&0xff | c.Val()<<8, a.Off())] {s} p mem)
(MOVWstoreconst [c] {s} p x:(MOVWstoreconst [a] {s} p mem))
&& x.Uses == 1
&& a.Off() + 2 == c.Off()
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val()&0xffff | c.Val()<<16, a.Off())] {s} p mem)
(MOVWstoreconst [a] {s} p x:(MOVWstoreconst [c] {s} p mem))
&& x.Uses == 1
&& a.Off() + 2 == c.Off()
&& clobber(x)
=> (MOVLstoreconst [makeValAndOff(a.Val()&0xffff | c.Val()<<16, a.Off())] {s} p mem)
(MOVLstoreconst [c] {s} p x:(MOVLstoreconst [a] {s}
p mem))
&& x.Uses == 1
&& a.Off() + 4 == c.Off()
&& clobber(x)
=> (MOVQstore [a.Off()] {s} p (MOVQconst [a.Val64()&0xffffffff | c.Val64()<<32]) mem)
(MOVLstoreconst [a] {s} p x:(MOVLstoreconst [c] {s} p mem))
&& x.Uses == 1
&& a.Off() + 4 == c.Off()
&& clobber(x)
=> (MOVQstore [a.Off()] {s} p (MOVQconst [a.Val64()&0xffffffff | c.Val64()<<32]) mem)

```

```

(MOVQstoreconst [c] {s} p x:(MOVQstoreconst [a] {s} p mem))
  && config.useSSE
  && x.Uses == 1
  && a.Off() + 8 == c.Off()
  && a.Val() == 0
  && c.Val() == 0
  && clobber(x)
=> (MOVQstoreconst [makeValAndOff(0,a.Off())] {s} p mem)
(MOVQstoreconst [a] {s} p x:(MOVQstoreconst [c] {s} p mem))
  && config.useSSE
  && x.Uses == 1
  && a.Off() + 8 == c.Off()
  && a.Val() == 0
  && c.Val() == 0
  && clobber(x)
=> (MOVQstoreconst [makeValAndOff(0,a.Off())] {s} p mem)

// Combine stores into larger (unaligned) stores. Little endian.
(MOVBstore [i] {s} p (SHR(W|L|Q)const [8] w) x:(MOVBstore [i-1] {s} p w mem))
  && x.Uses == 1
  &&
  clobber(x)
=> (MOVWstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p w x:(MOVBstore [i+1] {s} p (SHR(W|L|Q)const [8] w) mem))
  && x.Uses == 1
  && clobber(x)
=> (MOVWstore [i] {s} p w mem)
(MOVBstore [i] {s} p (SHR(L|Q)const [j] w) x:(MOVBstore [i-1] {s} p w0:(SHR(L|Q)const [j-8] w) mem))
  && x.Uses == 1
  && clobber(x)
=> (MOVWstore [i-1] {s} p w0 mem)
(MOVBstore [i] {s} p1 (SHR(W|L|Q)const [8] w) x:(MOVBstore [i] {s} p0 w mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 1)
  && clobber(x)
=> (MOVWstore [i] {s} p0 w mem)
(MOVBstore [i] {s} p0 w x:(MOVBstore [i] {s} p1 (SHR(W|L|Q)const [8] w) mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 1)
  && clobber(x)
=> (MOVWstore [i] {s} p0 w mem)
(MOVBstore [i] {s} p1 (SHR(L|Q)const [j] w) x:(MOVBstore [i] {s} p0 w0:(SHR(L|Q)const [j-8] w) mem))
  && x.Uses == 1
  && sequentialAddresses(p0, p1, 1)
  && clobber(x)
=> (MOVWstore [i] {s} p0 w0 mem)

(MOVWstore [i] {s} p (SHR(L|Q)const [16] w) x:(MOVWstore [i-2] {s} p w

```

```

mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVLstore [i-2] {s} p w mem)
(MOVWstore [i] {s} p (SHR(L|Q)const [j] w) x:(MOVWstore [i-2] {s} p w0:(SHR(L|Q)const [j-16] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVLstore [i-2] {s} p w0 mem)
(MOVWstore [i] {s} p1 (SHR(L|Q)const [16] w) x:(MOVWstore [i] {s} p0 w mem))
&& x.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& clobber(x)
=> (MOVLstore [i] {s} p0 w mem)
(MOVWstore [i] {s} p1 (SHR(L|Q)const [j] w) x:(MOVWstore [i] {s} p0 w0:(SHR(L|Q)const [j-16] w) mem))
&& x.Uses == 1
&& sequentialAddresses(p0, p1, 2)
&& clobber(x)
=> (MOVLstore [i] {s} p0 w0 mem)

(MOVLstore [i] {s} p (SHRQconst [32] w) x:(MOVLstore [i-4] {s} p w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVQstore [i-4] {s} p w mem)
(MOVLstore [i] {s} p (SHRQconst [j] w) x:(MOVLstore [i-4] {s} p w0:(SHRQconst [j-32] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVQstore [i-4] {s} p w0 mem)
(MOVLstore [i] {s} p1 (SHRQconst [32] w) x:(MOVLstore [i] {s} p0
w mem))
&& x.Uses == 1
&& sequentialAddresses(p0, p1, 4)
&& clobber(x)
=> (MOVQstore [i] {s} p0 w mem)
(MOVLstore [i] {s} p1 (SHRQconst [j] w) x:(MOVLstore [i] {s} p0 w0:(SHRQconst [j-32] w) mem))
&& x.Uses == 1
&& sequentialAddresses(p0, p1, 4)
&& clobber(x)
=> (MOVQstore [i] {s} p0 w0 mem)

(MOVBstore [7] {s} p1 (SHRQconst [56] w)
x1:(MOVWstore [5] {s} p1 (SHRQconst [40] w)
x2:(MOVLstore [1] {s} p1 (SHRQconst [8] w)
x3:(MOVBstore [0] {s} p1 w mem))))
&& x1.Uses == 1
&& x2.Uses == 1
&& x3.Uses == 1
&& clobber(x1, x2, x3)
=> (MOVQstore {s} p1 w mem)

```

```

(MOVBstore [i] {s} p
x1:(MOVBload [j] {s2} p2 mem)
  mem2:(MOVBstore [i-1] {s} p
    x2:(MOVBload [j-1] {s2} p2 mem) mem))
&& x1.Uses == 1
&& x2.Uses == 1
&& mem2.Uses == 1
&& clobber(x1, x2, mem2)
=> (MOVWstore [i-1] {s} p (MOVWload [j-1] {s2} p2 mem) mem)

```

```

(MOVWstore [i] {s} p
x1:(MOVWload [j] {s2} p2 mem)
  mem2:(MOVWstore [i-2] {s} p
    x2:(MOVWload [j-2] {s2} p2 mem) mem))
&&
x1.Uses == 1
&& x2.Uses == 1
&& mem2.Uses == 1
&& clobber(x1, x2, mem2)
=> (MOVLstore [i-2] {s} p (MOVLload [j-2] {s2} p2 mem) mem)

```

```

(MOVLstore [i] {s} p
x1:(MOVLload [j] {s2} p2 mem)
  mem2:(MOVLstore [i-4] {s} p
    x2:(MOVLload [j-4] {s2} p2 mem) mem))
&& x1.Uses == 1
&& x2.Uses == 1
&& mem2.Uses == 1
&& clobber(x1, x2, mem2)
=> (MOVQstore [i-4] {s} p (MOVQload [j-4] {s2} p2 mem) mem)

```

```

// Merge load and op
// TODO: add indexed variants?
((ADD|SUB|AND|OR|XOR)Q x l:(MOVQload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|SUB|AND|OR|XOR)Qload x [off] {sym} ptr mem)
((ADD|SUB|AND|OR|XOR)L x l:(MOVLload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|SUB|AND|OR|XOR)Lload x [off] {sym} ptr mem)
((ADD|SUB|MUL|DIV)SD x l:(MOVSDload [off] {sym} ptr mem)) && canMergeLoadClobber(v, l, x) &&
clobber(l) => ((ADD|SUB|MUL|DIV)SDload x [off] {sym} ptr mem)
((ADD|SUB|MUL|DIV)SS x l:(MOVSSload [off] {sym} ptr mem)) &&
canMergeLoadClobber(v, l, x) && clobber(l) => ((ADD|SUB|MUL|DIV)SSload x [off] {sym} ptr mem)
(MOVLstore {sym} [off] ptr y:((ADD|AND|OR|XOR)Lload x [off] {sym} ptr mem) mem) && y.Uses==1 &&
clobber(y) => ((ADD|AND|OR|XOR)Lmodify [off] {sym} ptr x mem)
(MOVLstore {sym} [off] ptr y:((ADD|SUB|AND|OR|XOR)L l:(MOVLload [off] {sym} ptr mem) x) mem) &&
y.Uses==1 && l.Uses==1 && clobber(y, l) =>
((ADD|SUB|AND|OR|XOR)Lmodify [off] {sym} ptr x mem)
(MOVQstore {sym} [off] ptr y:((ADD|AND|OR|XOR)Qload x [off] {sym} ptr mem) mem) && y.Uses==1 &&

```



```

clobber(y) => ((ADD|AND|OR|XOR)Qmodify [off] {sym} ptr x mem)
(MOVQstore {sym} [off] ptr y:((ADD|SUB|AND|OR|XOR)Q 1:(MOVQload [off] {sym} ptr mem) x) mem) &&
y.Uses==1 && 1.Uses==1 && clobber(y, 1) =>
((ADD|SUB|AND|OR|XOR)Qmodify [off] {sym} ptr x mem)

// Merge ADDQconst and LEAQ into atomic loads.
(MOV(Q|L|B)atomicload [off1] {sym} (ADDQconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(MOV(Q|L|B)atomicload [off1+off2] {sym} ptr mem)
(MOV(Q|L|B)atomicload
[off1] {sym1} (LEAQ [off2] {sym2} ptr mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1,
sym2) =>
(MOV(Q|L|B)atomicload [off1+off2] {mergeSym(sym1, sym2)} ptr mem)

// Merge ADDQconst and LEAQ into atomic stores.
(XCHGQ [off1] {sym} val (ADDQconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(XCHGQ [off1+off2] {sym} val ptr mem)
(XCHGQ [off1] {sym1} val (LEAQ [off2] {sym2} ptr mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) && ptr.Op != OpSB =>
(XCHGQ [off1+off2] {mergeSym(sym1, sym2)} val ptr mem)
(XCHGL [off1] {sym} val (ADDQconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(XCHGL [off1+off2] {sym} val ptr mem)
(XCHGL [off1] {sym1} val (LEAQ [off2] {sym2} ptr mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) && ptr.Op != OpSB =>
(XCHGL [off1+off2] {mergeSym(sym1, sym2)} val ptr mem)

// Merge ADDQconst into atomic adds.
// TODO: merging LEAQ doesn't work, assembler doesn't like the resulting
instructions.
(XADDQlock [off1] {sym} val (ADDQconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(XADDQlock [off1+off2] {sym} val ptr mem)
(XADDLlock [off1] {sym} val (ADDQconst [off2] ptr mem) && is32Bit(int64(off1)+int64(off2)) =>
(XADDLlock [off1+off2] {sym} val ptr mem)

// Merge ADDQconst into atomic compare and swaps.
// TODO: merging LEAQ doesn't work, assembler doesn't like the resulting instructions.
(CMPXCHGQlock [off1] {sym} (ADDQconst [off2] ptr) old new_ mem) && is32Bit(int64(off1)+int64(off2)) =>
(CMPXCHGQlock [off1+off2] {sym} ptr old new_ mem)
(CMPXCHGLlock [off1] {sym} (ADDQconst [off2] ptr) old new_ mem) && is32Bit(int64(off1)+int64(off2)) =>
(CMPXCHGLlock [off1+off2] {sym} ptr old new_ mem)

// We don't need the conditional move if we know the arg of BSF is not zero.
(CMOVQEQ x_ (Select1 (BS(F|R)Q (ORQconst [c] _)))) && c != 0 => x
// Extension is unnecessary for trailing zeros.
(BSFQ (ORQconst <t> [1<<8] (MOVBQZX x))) => (BSFQ (ORQconst <t> [1<<8]
x))
(BSFQ (ORQconst <t> [1<<16] (MOVWQZX x))) => (BSFQ (ORQconst <t> [1<<16] x))

// Redundant sign/zero extensions

```

```

// Note: see issue 21963. We have to make sure we use the right type on
// the resulting extension (the outer type, not the inner type).
(MOVLQ SX (MOVLQ SX x)) => (MOVLQ SX x)
(MOVWQ SX (MOVWQ SX x)) => (MOVWQ SX x)
(MOVBQ SX (MOVBQ SX x)) => (MOVBQ SX x)
(MOVWQ SX (MOVWQ SX x)) => (MOVWQ SX x)
(MOVWQ SX (MOVBQ SX x)) => (MOVBQ SX x)
(MOVBQ SX (MOVBQ SX x)) => (MOVBQ SX x)
(MOVLQ ZX (MOVLQ ZX x)) => (MOVLQ ZX x)
(MOVLQ ZX (MOVWQ ZX x)) => (MOVWQ ZX x)
(MOVLQ ZX (MOVBQ ZX x)) => (MOVBQ ZX x)
(MOVWQ ZX (MOVWQ ZX x)) => (MOVWQ ZX x)
(MOVWQ ZX (MOVBQ ZX x)) => (MOVBQ ZX x)
(MOVBQ ZX (MOVBQ ZX x)) => (MOVBQ ZX x)

(MOVQstore [off] {sym} ptr a:((ADD|AND|OR|XOR)Qconst [c] l:(MOVQload [off] {sym} ptr2 mem)) mem)
&& isSamePtr(ptr, ptr2) && a.Uses == 1 && l.Uses == 1 && clobber(l, a) =>
((ADD|AND|OR|XOR)Qconstmodify {sym} [makeValAndOff(int32(c),off)] ptr mem)
(MOVLstore [off] {sym} ptr a:((ADD|AND|OR|XOR)Lconst
[c] l:(MOVLload [off] {sym} ptr2 mem)) mem)
&& isSamePtr(ptr, ptr2) && a.Uses == 1 && l.Uses == 1 && clobber(l, a) =>
((ADD|AND|OR|XOR)Lconstmodify {sym} [makeValAndOff(int32(c),off)] ptr mem)

// float <-> int register moves, with no conversion.
// These come up when compiling math.{Float{32,64}bits,Float{32,64}frombits}.
(MOVQload [off] {sym} ptr (MOVSDstore [off] {sym} ptr val _)) => (MOVQf2i val)
(MOVLload [off] {sym} ptr (MOVSSstore [off] {sym} ptr val _)) => (MOVLf2i val)
(MOVSDload [off] {sym} ptr (MOVQstore [off] {sym} ptr val _)) => (MOVQi2f val)
(MOVSSload [off] {sym} ptr (MOVLstore [off] {sym} ptr val _)) => (MOVLi2f val)

// Other load-like ops.
(ADDQload x [off] {sym} ptr (MOVSDstore [off] {sym} ptr y _)) => (ADDQ x (MOVQf2i y))
(ADDLload x [off] {sym} ptr (MOVSSstore [off] {sym} ptr y _)) => (ADDL x (MOVLf2i y))
(SUBQload x [off] {sym} ptr (MOVSDstore [off] {sym} ptr y _)) => (SUBQ x (MOVQf2i y))
(SUBLload x [off] {sym} ptr (MOVSSstore [off] {sym} ptr y _)) => (SUBL
x (MOVLf2i y))
(ANDQload x [off] {sym} ptr (MOVSDstore [off] {sym} ptr y _)) => (ANDQ x (MOVQf2i y))
(ANDLload x [off] {sym} ptr (MOVSSstore [off] {sym} ptr y _)) => (ANDL x (MOVLf2i y))
(ORQload x [off] {sym} ptr (MOVSDstore [off] {sym} ptr y _)) => (ORQ x (MOVQf2i y))
(ORLload x [off] {sym} ptr (MOVSSstore [off] {sym} ptr y _)) => (ORL x (MOVLf2i y))
(XORQload x [off] {sym} ptr (MOVSDstore [off] {sym} ptr y _)) => (XORQ x (MOVQf2i y))
(XORLload x [off] {sym} ptr (MOVSSstore [off] {sym} ptr y _)) => (XORL x (MOVLf2i y))

(ADDSDload x [off] {sym} ptr (MOVQstore [off] {sym} ptr y _)) => (ADDSD x (MOVQi2f y))
(ADDSSload x [off] {sym} ptr (MOVLstore [off] {sym} ptr y _)) => (ADDSS x (MOVLi2f y))
(SUBSDload x [off] {sym} ptr (MOVQstore [off] {sym} ptr y _)) => (SUBSD x (MOVQi2f y))
(SUBSSload x [off] {sym} ptr (MOVLstore [off] {sym} ptr y _)) => (SUBSS x (MOVLi2f y))
(MULSDload x [off] {sym} ptr (MOVQstore [off] {sym} ptr y _)) => (MULSD x (MOVQi2f y))

```

```

(MULSSload x [off] {sym} ptr (MOVLstore
[off] {sym} ptr y _)) => (MULSS x (MOVLi2f y))

// Redirect stores to use the other register set.
(MOVQstore [off] {sym} ptr (MOVQf2i val) mem) => (MOVSDstore [off] {sym} ptr val mem)
(MOVLstore [off] {sym} ptr (MOVLf2i val) mem) => (MOVSSstore [off] {sym} ptr val mem)
(MOVSDstore [off] {sym} ptr (MOVQi2f val) mem) => (MOVQstore [off] {sym} ptr val mem)
(MOVSSstore [off] {sym} ptr (MOVLi2f val) mem) => (MOVLstore [off] {sym} ptr val mem)

// Load args directly into the register class where it will be used.
// We do this by just modifying the type of the Arg.
(MOVQf2i <t> (Arg <u> [off] {sym})) && t.Size() == u.Size() => @b.Func.Entry (Arg <t> [off] {sym})
(MOVLf2i <t> (Arg <u> [off] {sym})) && t.Size() == u.Size() => @b.Func.Entry (Arg <t> [off] {sym})
(MOVQi2f <t> (Arg <u> [off] {sym})) && t.Size() == u.Size() => @b.Func.Entry (Arg <t> [off] {sym})
(MOVLi2f <t> (Arg <u> [off] {sym})) && t.Size() == u.Size() => @b.Func.Entry (Arg <t> [off] {sym})

// LEAQ is rematerializeable,
so this helps to avoid register spill.
// See issue 22947 for details
(ADD(Q|L)const [off] x:(SP)) => (LEA(Q|L) [off] x)

// HMULx is commutative, but its first argument must go in AX.
// If possible, put a rematerializeable value in the first argument slot,
// to reduce the odds that another value will be have to spilled
// specifically to free up AX.
(HMUL(Q|L) x y) && !x.rematerializeable() && y.rematerializeable() => (HMUL(Q|L) y x)
(HMUL(Q|L)U x y) && !x.rematerializeable() && y.rematerializeable() => (HMUL(Q|L)U y x)

// Fold loads into compares
// Note: these may be undone by the flagalloc pass.
(CMP(Q|L|W|B) l:(MOV(Q|L|W|B)load {sym} [off] ptr mem) x) && canMergeLoad(v, l) && clobber(l) =>
(CMP(Q|L|W|B)load {sym} [off] ptr x mem)
(CMP(Q|L|W|B) x l:(MOV(Q|L|W|B)load {sym} [off] ptr mem)) && canMergeLoad(v, l) && clobber(l) =>
(InvertFlags (CMP(Q|L|W|B)load {sym} [off] ptr x mem))

(CMP(Q|L)const l:(MOV(Q|L)load {sym} [off] ptr mem) [c])
&& l.Uses == 1
&& clobber(l) =>
@l.Block
(CMP(Q|L)constload {sym} [makeValAndOff(c,off)] ptr mem)
(CMP(W|B)const l:(MOV(W|B)load {sym} [off] ptr mem) [c])
&& l.Uses == 1
&& clobber(l) =>
@l.Block (CMP(W|B)constload {sym} [makeValAndOff(int32(c),off)] ptr mem)

(CMPQload {sym} [off] ptr (MOVQconst [c]) mem) && validVal(c) => (CMPQconstload {sym}
[makeValAndOff(int32(c),off)] ptr mem)
(CMPLload {sym} [off] ptr (MOVLconst [c]) mem) => (CMPLconstload {sym} [makeValAndOff(c,off)] ptr mem)

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```

(CMPWload {sym} [off] ptr (MOVLconst [c] mem) => (CMPWconstload {sym}
[makeValAndOff(int32(int16(c)),off)] ptr mem)
(CMPBload {sym} [off] ptr (MOVLconst [c] mem) => (CMPBconstload {sym}
[makeValAndOff(int32(int8(c)),off)] ptr mem)

(TEST(Q|L|W|B) 1:(MOV(Q|L|W|B)load {sym} [off] ptr mem) l2)
  && 1 == 12
  && 1.Uses == 2
  && clobber(1) =>
  @1.Block (CMP(Q|L|W|B)constload {sym} [makeValAndOff(0, off)] ptr mem)

// Convert ANDload to MOVload when we can do the AND in a containing TEST op.
// Only do when it's within the same block,
// so we don't have flags live across basic block boundaries.
// See issue 44228.
(TEST(Q|L) a:(AND(Q|L)load [off] {sym} x ptr mem) a) && a.Uses == 2 && a.Block == v.Block && clobber(a)
=> (TEST(Q|L) (MOV(Q|L)load <a.Type> [off] {sym} ptr mem) x)

(MOVBload [off] {sym} (SB) _) && symIsRO(sym) => (MOVLconst [int32(read8(sym, int64(off)))]))
(MOVWload [off] {sym} (SB) _) && symIsRO(sym) => (MOVLconst [int32(read16(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVLload [off] {sym} (SB) _) && symIsRO(sym) => (MOVQconst [int64(read32(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVQload [off] {sym} (SB) _) && symIsRO(sym) => (MOVQconst [int64(read64(sym, int64(off),
config.ctx.Arch.ByteOrder))])
(MOVQstore [dstOff] {dstSym} ptr (MOVQload [srcOff] {srcSym} (SB) _) mem) && symIsRO(srcSym) =>
(MOVQstore [dstOff+8] {dstSym} ptr (MOVQconst [int64(read64(srcSym, int64(srcOff)+8,
config.ctx.Arch.ByteOrder))])
(MOVQstore [dstOff] {dstSym} ptr (MOVQconst [int64(read64(srcSym, int64(srcOff),
config.ctx.Arch.ByteOrder))]) mem))

// Arch-specific inlining for small or disjoint runtime.memmove
// Match post-lowering calls, memory version.
(SelectN [0] call:(CALLstatic {sym} s1:(MOVQstoreconst _ [sc] s2:(MOVQstore _ src s3:(MOVQstore _ dst
mem))))))
  && sc.Val64() >= 0
  && isSameCall(sym, "runtime.memmove")
  && s1.Uses == 1 && s2.Uses == 1 && s3.Uses == 1
  && isInlinableMemmove(dst, src, sc.Val64(), config)
  && clobber(s1, s2, s3, call)
  => (Move [sc.Val64()] dst src mem)

// Match post-lowering calls, register version.
(SelectN [0] call:(CALLstatic {sym} dst src (MOVQconst [sz] mem))
  && sz >= 0
  && isSameCall(sym, "runtime.memmove")
  && call.Uses == 1
  && isInlinableMemmove(dst, src, sz, config)

```

```

&& clobber(call)
=> (Move [sz] dst src mem)

// Prefetch instructions
(PrefetchCache ...) => (PrefetchT0 ...)
(PrefetchCacheStreamed ...) => (PrefetchNTA ...)

// CPUID feature: BMI1.
(AND(Q|L) x (NOT(Q|L) y))    && buildcfg.GOAMD64 >= 3 => (ANDN(Q|L) x y)
(AND(Q|L) x
 (NEG(Q|L) x))    && buildcfg.GOAMD64 >= 3 => (BLSI(Q|L) x)
(XOR(Q|L) x (ADD(Q|L)const [-1] x)) && buildcfg.GOAMD64 >= 3 => (BLSMSK(Q|L) x)
(AND(Q|L) x (ADD(Q|L)const [-1] x)) && buildcfg.GOAMD64 >= 3 => (BLSR(Q|L) x)

(BSWAP(Q|L) (BSWAP(Q|L) p)) => p

// CPUID feature: MOVBE.
(MOV(Q|L)store [i] {s} p x:(BSWAP(Q|L) w) mem) && x.Uses == 1 && buildcfg.GOAMD64 >= 3 =>
(MOVBE(Q|L)store [i] {s} p w mem)
(MOVBE(Q|L)store [i] {s} p x:(BSWAP(Q|L) w) mem) && x.Uses == 1                => (MOV(Q|L)store [i]
{s} p w mem)
(BSWAP(Q|L) x:(MOV(Q|L)load [i] {s} p mem)) && x.Uses == 1 && buildcfg.GOAMD64 >= 3 => @x.Block
(MOVBE(Q|L)load [i] {s} p mem)
(BSWAP(Q|L) x:(MOVBE(Q|L)load [i] {s} p mem)) && x.Uses == 1                => @x.Block
(MOV(Q|L)load [i] {s} p mem)
(MOVWstore [i] {s} p x:(ROLWconst [8] w) mem) && x.Uses == 1 && buildcfg.GOAMD64 >= 3 =>
(MOVBEWstore [i] {s} p w mem)
(MOVBEWstore [i] {s} p x:(ROLWconst [8] w) mem) && x.Uses == 1 => (MOVWstore [i] {s}
p w mem)

(ORQ          x0:(MOVBELload [i0] {s} p mem)
 sh:(SHLQconst [32] x1:(MOVBELload [i1] {s} p mem)))
&& i0 == i1+4
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVBEQload [i1] {s} p mem)

(ORQ          x0:(MOVBELload [i] {s} p0 mem)
 sh:(SHLQconst [32] x1:(MOVBELload [i] {s} p1 mem)))
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& sequentialAddresses(p1, p0, 4)
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)

```

=> @mergePoint(b,x0,x1) (MOVBEQload [i] {s} p1 mem)

(SARX(Q|L) l:(MOV(Q|L)load [off] {sym} ptr mem) x) && canMergeLoad(v, l) && clobber(l) =>  
(SARX(Q|L)load [off] {sym} ptr x mem)  
(SHLX(Q|L) l:(MOV(Q|L)load [off] {sym} ptr mem) x) && canMergeLoad(v, l) && clobber(l) =>  
(SHLX(Q|L)load [off] {sym} ptr x mem)  
(SHRX(Q|L) l:(MOV(Q|L)load [off] {sym} ptr mem) x) && canMergeLoad(v, l) && clobber(l) =>  
(SHRX(Q|L)load [off] {sym} ptr x mem)

((SHL|SHR|SAR)XQload  
[off] {sym} ptr (MOVQconst [c] mem) => ((SHL|SHR|SAR)Qconst [int8(c&63)] (MOVQload [off] {sym} ptr  
mem))  
((SHL|SHR|SAR)XQload [off] {sym} ptr (MOVLconst [c] mem) => ((SHL|SHR|SAR)Qconst [int8(c&63)]  
(MOVQload [off] {sym} ptr mem))  
((SHL|SHR|SAR)XLload [off] {sym} ptr (MOVLconst [c] mem) => ((SHL|SHR|SAR)Lconst [int8(c&31)]  
(MOVLload [off] {sym} ptr mem))

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/AMD64.rules

No license file was found, but licenses were detected in source scan.

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(Add(Ptr|64|32|16|8) ...) => (ADDV ...)

(Add(32|64)F ...) => (ADD(F|D) ...)

(Sub(Ptr|64|32|16|8) ...) => (SUBV ...)

(Sub(32|64)F ...) => (SUB(F|D) ...)

(Mul(64|32|16|8) x y) => (Select1 (MULVU x y))

(Mul(32|64)F ...) => (MUL(F|D) ...)

(Mul64uhilo ...) => (MULVU ...)

(Select0 (Mul64uover x y)) => (Select1 <typ.UInt64> (MULVU x y))

(Select1 (Mul64uover x y)) => (SGTU <typ.Bool> (Select0 <typ.UInt64> (MULVU x y)) (MOVVconst  
<typ.UInt64> [0]))

(Hmul64 x y) => (Select0 (MULV x y))

(Hmul64u x y) => (Select0 (MULVU x y))

(Hmul32 x y) => (SRAVconst (Select1 <typ.Int64> (MULV (SignExt32to64 x) (SignExt32to64 y))) [32])

(Hmul32u x y) => (SRLVconst (Select1 <typ.UInt64> (MULVU (ZeroExt32to64 x) (ZeroExt32to64 y))) [32])

(Div64 x y) => (Select1 (DIVV x y))

(Div64u x y)

=> (Select1 (DIVVU x y))

(Div32 x y) => (Select1 (DIVV (SignExt32to64 x) (SignExt32to64 y)))

(Div32u x y) => (Select1 (DIVVU (ZeroExt32to64 x) (ZeroExt32to64 y)))

(Div16 x y) => (Select1 (DIVV (SignExt16to64 x) (SignExt16to64 y)))  
 (Div16u x y) => (Select1 (DIVVU (ZeroExt16to64 x) (ZeroExt16to64 y)))  
 (Div8 x y) => (Select1 (DIVV (SignExt8to64 x) (SignExt8to64 y)))  
 (Div8u x y) => (Select1 (DIVVU (ZeroExt8to64 x) (ZeroExt8to64 y)))  
 (Div(32|64)F ...) => (DIV(F|D) ...)

(Mod64 x y) => (Select0 (DIVV x y))  
 (Mod64u x y) => (Select0 (DIVVU x y))  
 (Mod32 x y) => (Select0 (DIVV (SignExt32to64 x) (SignExt32to64 y)))  
 (Mod32u x y) => (Select0 (DIVVU (ZeroExt32to64 x) (ZeroExt32to64 y)))  
 (Mod16 x y) => (Select0 (DIVV (SignExt16to64 x) (SignExt16to64 y)))  
 (Mod16u x y) => (Select0 (DIVVU (ZeroExt16to64 x) (ZeroExt16to64 y)))  
 (Mod8 x y) => (Select0 (DIVV (SignExt8to64 x) (SignExt8to64 y)))  
 (Mod8u x y) => (Select0 (DIVVU (ZeroExt8to64 x) (ZeroExt8to64 y)))

// (x + y) / 2 with x>=y => (x - y) / 2 + y

(Avg64u  
 <t> x y) => (ADDV (SRLVconst <t> (SUBV <t> x y) [1]) y)

(And(64|32|16|8) ...) => (AND ...)  
 (Or(64|32|16|8) ...) => (OR ...)  
 (Xor(64|32|16|8) ...) => (XOR ...)

// shifts

// hardware instruction uses only the low 6 bits of the shift  
 // we compare to 64 to ensure Go semantics for large shifts

(Lsh64x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))  
 (Lsh64x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV  
 <t> x (ZeroExt32to64 y)))  
 (Lsh64x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV  
 <t> x (ZeroExt16to64 y)))  
 (Lsh64x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t>  
 x (ZeroExt8to64 y)))

(Lsh32x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))  
 (Lsh32x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV  
 <t> x (ZeroExt32to64 y)))  
 (Lsh32x16 <t>  
 x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV <t> x  
 (ZeroExt16to64 y)))  
 (Lsh32x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t>  
 x (ZeroExt8to64 y)))

(Lsh16x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))  
 (Lsh16x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV  
 <t> x (ZeroExt32to64 y)))  
 (Lsh16x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV  
 <t> x (ZeroExt16to64 y)))

(Lsh16x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t> x (ZeroExt8to64 y)))

(Lsh8x64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SLLV <t> x y))

(Lsh8x32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SLLV <t> x (ZeroExt32to64 y)))

(Lsh8x16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SLLV <t> x (ZeroExt16to64 y)))

(Lsh8x8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SLLV <t> x (ZeroExt8to64 y)))

(Rsh64Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> x y))

(Rsh64Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> x (ZeroExt32to64 y)))

(Rsh64Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> x (ZeroExt16to64 y)))

(Rsh64Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> x (ZeroExt8to64 y)))

(Rsh32Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt32to64 x) y))

(Rsh32Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt32to64 y)))

(Rsh32Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt16to64 y)))

(Rsh32Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> (ZeroExt32to64 x) (ZeroExt8to64 y)))

(Rsh16Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt16to64 x) y))

(Rsh16Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> (ZeroExt16to64 x) (ZeroExt32to64 y)))

(Rsh16Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> (ZeroExt16to64 x) (ZeroExt16to64 y)))

(Rsh16Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> (ZeroExt16to64 x) (ZeroExt8to64 y)))

(Rsh8Ux64 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) y)) (SRLV <t> (ZeroExt8to64 x) y))

(Rsh8Ux32 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt32to64 y))) (SRLV <t> (ZeroExt8to64 x) (ZeroExt32to64 y)))

(Rsh8Ux16 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt16to64 y))) (SRLV <t> (ZeroExt8to64 x) (ZeroExt16to64 y)))

(Rsh8Ux8 <t> x y) => (AND (NEGV <t> (SGTU (MOVVconst <typ.UInt64> [64]) (ZeroExt8to64 y))) (SRLV <t> (ZeroExt8to64 x) (ZeroExt8to64 y)))



```

(Rsh64x64 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64> [63]))) y))
(Rsh64x32 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst <typ.UInt64>
[63]))) (ZeroExt32to64 y)))
(Rsh64x16 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst <typ.UInt64>
[63]))) (ZeroExt16to64 y)))
(Rsh64x8 <t> x y) => (SRAV x (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst <typ.UInt64> [63])))
(ZeroExt8to64 y)))

(Rsh32x64 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64>
[63]))) y))
(Rsh32x32 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt32to64 y)))
(Rsh32x16 <t> x y) => (SRAV (SignExt32to64
x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst <typ.UInt64> [63]))) (ZeroExt16to64 y)))
(Rsh32x8 <t> x y) => (SRAV (SignExt32to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt8to64 y)))

(Rsh16x64 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64>
[63]))) y))
(Rsh16x32 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt32to64 y)))
(Rsh16x16 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt16to64 y)))
(Rsh16x8 <t> x y) => (SRAV (SignExt16to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt8to64 y)))

(Rsh8x64 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU y (MOVVconst <typ.UInt64> [63])))
y))
(Rsh8x32 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt32to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt32to64
y)))
(Rsh8x16 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt16to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt16to64 y)))
(Rsh8x8 <t> x y) => (SRAV (SignExt8to64 x) (OR <t> (NEGV <t> (SGTU (ZeroExt8to64 y) (MOVVconst
<typ.UInt64> [63]))) (ZeroExt8to64 y)))

// rotates
(RotateLeft8 <t> x (MOVVconst [c])) => (Or8 (Lsh8x64 <t> x (MOVVconst [c&7])) (Rsh8Ux64 <t> x
(MOVVconst [-c&7])))
(RotateLeft16 <t> x (MOVVconst [c])) => (Or16 (Lsh16x64 <t> x (MOVVconst [c&15])) (Rsh16Ux64 <t> x
(MOVVconst [-c&15])))
(RotateLeft32 <t> x (MOVVconst [c])) => (Or32 (Lsh32x64 <t> x (MOVVconst [c&31])) (Rsh32Ux64 <t> x
(MOVVconst [-c&31])))
(RotateLeft64 <t> x (MOVVconst [c])) => (Or64 (Lsh64x64 <t> x (MOVVconst [c&63])) (Rsh64Ux64 <t> x
(MOVVconst [-c&63])))

// unary ops
(Neg(64|32|16|8) ...) => (NEGV ...)

```

```

(Neg(32|64)F ...) => (NEG(F|D) ...)

(Com(64|32|16|8) x) => (NOR (MOVVconst [0]) x)

(Sqrt ...) => (SQRTD ...)
(Sqrt32 ...) => (SQRTF ...)

// boolean ops -- booleans are
// represented with 0=false, 1=true
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(EqB x y) => (XOR (MOVVconst [1]) (XOR <typ.Bool> x y))
(NeqB ...) => (XOR ...)
(Not x) => (XORconst [1] x)

// constants
(Const(64|32|16|8) [val]) => (MOVVconst [int64(val)])
(Const(32|64)F [val]) => (MOV(F|D)const [float64(val)])
(ConstNil) => (MOVVconst [0])
(ConstBool [t]) => (MOVVconst [int64(b2i(t))])

(Slicemask <t> x) => (SRAVconst (NEGV <t> x) [63])

// truncations
// Because we ignore high parts of registers, truncates are just copies.
(Trunc16to8 ...) => (Copy ...)
(Trunc32to8 ...) => (Copy ...)
(Trunc32to16 ...) => (Copy ...)
(Trunc64to8 ...) => (Copy ...)
(Trunc64to16 ...) => (Copy ...)
(Trunc64to32 ...) => (Copy ...)

// Zero-/Sign-extensions
(ZeroExt8to16 ...) => (MOVBUreg ...)
(ZeroExt8to32 ...) => (MOVBUreg ...)
(ZeroExt16to32 ...) => (MOVHUreg ...)
(ZeroExt8to64 ...) => (MOVBUreg ...)
(ZeroExt16to64 ...) => (MOVHUreg ...)
(ZeroExt32to64 ...) => (MOVWUreg ...)

(SignExt8to16 ...) => (MOVBreg
...)
(SignExt8to32 ...) => (MOVBreg ...)
(SignExt16to32 ...) => (MOVHreg ...)
(SignExt8to64 ...) => (MOVBreg ...)
(SignExt16to64 ...) => (MOVHreg ...)
(SignExt32to64 ...) => (MOVWreg ...)

```

```

// float <=> int conversion
(Cvt32to32F ...) => (MOVWF ...)
(Cvt32to64F ...) => (MOVWD ...)
(Cvt64to32F ...) => (MOVVF ...)
(Cvt64to64F ...) => (MOVVD ...)
(Cvt32Fto32 ...) => (TRUNCFW ...)
(Cvt64Fto32 ...) => (TRUNCDW ...)
(Cvt32Fto64 ...) => (TRUNCFV ...)
(Cvt64Fto64 ...) => (TRUNCDV ...)
(Cvt32Fto64F ...) => (MOVFD ...)
(Cvt64Fto32F ...) => (MOVDF ...)

(CvtBoolToUInt8 ...) => (Copy ...)

(Round(32|64)F ...) => (Copy ...)

// comparisons
(Eq8 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt8to64 x) (ZeroExt8to64 y)))
(Eq16 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt16to64 x) (ZeroExt16to64 y)))
(Eq32 x y) => (SGTU (MOVVconst [1]) (XOR (ZeroExt32to64 x) (ZeroExt32to64 y)))
(Eq64 x y) => (SGTU (MOVVconst [1]) (XOR x y))
(EqPtr x y) => (SGTU (MOVVconst [1]) (XOR x y))
(Eq(32|64)F x y) => (FPFlagTrue (CMPEQ(F|D)
x y))

(Neq8 x y) => (SGTU (XOR (ZeroExt8to64 x) (ZeroExt8to64 y)) (MOVVconst [0]))
(Neq16 x y) => (SGTU (XOR (ZeroExt16to32 x) (ZeroExt16to64 y)) (MOVVconst [0]))
(Neq32 x y) => (SGTU (XOR (ZeroExt32to64 x) (ZeroExt32to64 y)) (MOVVconst [0]))
(Neq64 x y) => (SGTU (XOR x y) (MOVVconst [0]))
(NeqPtr x y) => (SGTU (XOR x y) (MOVVconst [0]))
(Neq(32|64)F x y) => (FPFlagFalse (CMPEQ(F|D) x y))

(Less8 x y) => (SGT (SignExt8to64 y) (SignExt8to64 x))
(Less16 x y) => (SGT (SignExt16to64 y) (SignExt16to64 x))
(Less32 x y) => (SGT (SignExt32to64 y) (SignExt32to64 x))
(Less64 x y) => (SGT y x)
(Less(32|64)F x y) => (FPFlagTrue (CMPGT(F|D) y x)) // reverse operands to work around NaN

(Less8U x y) => (SGTU (ZeroExt8to64 y) (ZeroExt8to64 x))
(Less16U x y) => (SGTU (ZeroExt16to64 y) (ZeroExt16to64 x))
(Less32U x y) => (SGTU (ZeroExt32to64 y) (ZeroExt32to64 x))
(Less64U x y) => (SGTU y x)

(Leq8 x y) => (XOR (MOVVconst [1]) (SGT (SignExt8to64 x) (SignExt8to64 y)))
(Leq16 x y) => (XOR
(MOVVconst [1]) (SGT (SignExt16to64 x) (SignExt16to64 y)))
(Leq32 x y) => (XOR (MOVVconst [1]) (SGT (SignExt32to64 x) (SignExt32to64 y)))
(Leq64 x y) => (XOR (MOVVconst [1]) (SGT x y))

```

```
(Leq(32|64)F x y) => (FPFlagTrue (CMPGE(F|D) y x)) // reverse operands to work around NaN
```

```
(Leq8U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt8to64 x) (ZeroExt8to64 y)))
```

```
(Leq16U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt16to64 x) (ZeroExt16to64 y)))
```

```
(Leq32U x y) => (XOR (MOVVconst [1]) (SGTU (ZeroExt32to64 x) (ZeroExt32to64 y)))
```

```
(Leq64U x y) => (XOR (MOVVconst [1]) (SGTU x y))
```

```
(OffPtr [off] ptr:(SP)) => (MOVVaddr [int32(off)] ptr)
```

```
(OffPtr [off] ptr) => (ADDVconst [off] ptr)
```

```
(Addr {sym} base) => (MOVVaddr {sym} base)
```

```
(LocalAddr {sym} base _) => (MOVVaddr {sym} base)
```

```
// loads
```

```
(Load <T> ptr mem) && t.IsBoolean() => (MOVBUload ptr mem)
```

```
(Load <T> ptr mem) && (is8BitInt(t) && isSigned(t)) => (MOVBlload ptr mem)
```

```
(Load <T> ptr mem) && (is8BitInt(t) && !isSigned(t)) => (MOVBUload ptr mem)
```

```
(Load <T> ptr mem) &&
```

```
(is16BitInt(t) && isSigned(t)) => (MOVHload ptr mem)
```

```
(Load <T> ptr mem) && (is16BitInt(t) && !isSigned(t)) => (MOVHUload ptr mem)
```

```
(Load <T> ptr mem) && (is32BitInt(t) && isSigned(t)) => (MOVWload ptr mem)
```

```
(Load <T> ptr mem) && (is32BitInt(t) && !isSigned(t)) => (MOVWUload ptr mem)
```

```
(Load <T> ptr mem) && (is64BitInt(t) || isPtr(t)) => (MOVVload ptr mem)
```

```
(Load <T> ptr mem) && is32BitFloat(t) => (MOVFlload ptr mem)
```

```
(Load <T> ptr mem) && is64BitFloat(t) => (MOVDload ptr mem)
```

```
// stores
```

```
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)
```

```
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
```

```
(Store {t} ptr val mem) && t.Size() == 4 && !is32BitFloat(val.Type) => (MOVWstore ptr val mem)
```

```
(Store {t} ptr val mem) && t.Size() == 8 && !is64BitFloat(val.Type) => (MOVVstore ptr val mem)
```

```
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (MOVFstore ptr val mem)
```

```
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (MOVDstore ptr val mem)
```

```
//
```

```
zeroing
```

```
(Zero [0] _ mem) => mem
```

```
(Zero [1] ptr mem) => (MOVBstore ptr (MOVVconst [0]) mem)
```

```
(Zero [2] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore ptr (MOVVconst [0]) mem)
```

```
(Zero [2] ptr mem) =>
```

```
(MOVBstore [1] ptr (MOVVconst [0])
```

```
(MOVBstore [0] ptr (MOVVconst [0]) mem))
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%4 == 0 =>
```

```
(MOVWstore ptr (MOVVconst [0]) mem)
```

```
(Zero [4] {t} ptr mem) && t.Alignment()%2 == 0 =>
```

```
(MOVHstore [2] ptr (MOVVconst [0])
```

```
(MOVHstore [0] ptr (MOVVconst [0]) mem))
```

```

(Zero [4] ptr mem) =>
(MOVBstore [3] ptr (MOVVconst [0])
 (MOVBstore [2] ptr (MOVVconst [0])
  (MOVBstore [1] ptr (MOVVconst [0])
   (MOVBstore [0] ptr (MOVVconst [0] mem))))
(Zero [8] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVVstore ptr (MOVVconst [0] mem)
(Zero [8] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [4] ptr (MOVVconst [0])
 (MOVWstore [0] ptr (MOVVconst [0] mem))
(Zero [8] {t} ptr mem) && t.Alignment()%2 == 0 =>
(MOVHstore [6] ptr (MOVVconst [0])
 (MOVHstore [4] ptr
 (MOVVconst [0])
 (MOVHstore [2] ptr (MOVVconst [0])
  (MOVHstore [0] ptr (MOVVconst [0] mem))))

(Zero [3] ptr mem) =>
(MOVBstore [2] ptr (MOVVconst [0])
 (MOVBstore [1] ptr (MOVVconst [0])
  (MOVBstore [0] ptr (MOVVconst [0] mem))))
(Zero [6] {t} ptr mem) && t.Alignment()%2 == 0 =>
(MOVHstore [4] ptr (MOVVconst [0])
 (MOVHstore [2] ptr (MOVVconst [0])
  (MOVHstore [0] ptr (MOVVconst [0] mem))))
(Zero [12] {t} ptr mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8] ptr (MOVVconst [0])
 (MOVWstore [4] ptr (MOVVconst [0])
  (MOVWstore [0] ptr (MOVVconst [0] mem))))
(Zero [16] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVVstore [8] ptr (MOVVconst [0])
 (MOVVstore [0] ptr (MOVVconst [0] mem))
(Zero [24] {t} ptr mem) && t.Alignment()%8 == 0 =>
(MOVVstore [16] ptr (MOVVconst [0])
 (MOVVstore [8] ptr (MOVVconst [0])
  (MOVVstore [0] ptr (MOVVconst [0] mem))))

// medium zeroing uses a duff device
// 8, and 128 are magic constants, see runtime/mkduff.go
(Zero [s] {t} ptr mem)
&&
s%8 == 0 && s > 24 && s <= 8*128
&& t.Alignment()%8 == 0 && !config.noDuffDevice =>
(DUFFZERO [8 * (128 - s/8)] ptr mem)

// large or unaligned zeroing uses a loop
(Zero [s] {t} ptr mem)
&& (s > 8*128 || config.noDuffDevice) || t.Alignment()%8 != 0 =>

```

```

(LoweredZero [t.Alignment()
ptr
(ADDVconst <ptr.Type> ptr [s-moveSize(t.Alignment(), config)]
mem)

// moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBload src mem) mem)
(Move [2] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore dst (MOVHload src mem) mem)
(Move [2] dst src mem) =>
(MOVBstore [1] dst (MOVBload [1] src mem)
(MOVBstore dst (MOVBload src mem) mem))
(Move [4] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore dst (MOVWload src mem) mem)
(Move [4] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [2] dst (MOVHload [2] src mem)
(MOVHstore dst (MOVHload src mem) mem))
(Move [4] dst src mem) =>
(MOVBstore [3] dst (MOVBload [3] src mem)
(MOVBstore [2] dst (MOVBload
[2] src mem)
(MOVBstore [1] dst (MOVBload [1] src mem)
(MOVBstore dst (MOVBload src mem) mem))))
(Move [8] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVVstore dst (MOVVload src mem) mem)
(Move [8] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore [4] dst (MOVWload [4] src mem)
(MOVWstore dst (MOVWload src mem) mem))
(Move [8] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [6] dst (MOVHload [6] src mem)
(MOVHstore [4] dst (MOVHload [4] src mem)
(MOVHstore [2] dst (MOVHload [2] src mem)
(MOVHstore dst (MOVHload src mem) mem))))

(Move [3] dst src mem) =>
(MOVBstore [2] dst (MOVBload [2] src mem)
(MOVBstore [1] dst (MOVBload [1] src mem)
(MOVBstore dst (MOVBload src mem) mem)))
(Move [6] {t} dst src mem) && t.Alignment()%2 == 0 =>
(MOVHstore [4] dst (MOVHload [4] src mem)
(MOVHstore [2] dst (MOVHload [2] src mem)
(MOVHstore dst (MOVHload src mem) mem)))
(Move [12] {t} dst src mem) && t.Alignment()%4 == 0 =>
(MOVWstore [8] dst (MOVWload
[8] src mem)
(MOVWstore [4] dst (MOVWload [4] src mem)
(MOVWstore dst (MOVWload src mem) mem)))

```

```

(Move [16] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVVstore [8] dst (MOVVload [8] src mem)
 (MOVVstore dst (MOVVload src mem) mem))
(Move [24] {t} dst src mem) && t.Alignment()%8 == 0 =>
(MOVVstore [16] dst (MOVVload [16] src mem)
 (MOVVstore [8] dst (MOVVload [8] src mem)
 (MOVVstore dst (MOVVload src mem) mem)))

// medium move uses a duff device
(Move [s] {t} dst src mem)
&& s%8 == 0 && s >= 24 && s <= 8*128 && t.Alignment()%8 == 0
&& !config.noDuffDevice && logLargeCopy(v, s) =>
(DUFFCOPY [16 * (128 - s/8)] dst src mem)
// 16 and 128 are magic constants. 16 is the number of bytes to encode:
// MOVV (R1), R23
// ADDV $8, R1
// MOVV R23, (R2)
// ADDV $8, R2
// and 128 is the number of such blocks. See runtime/duff_mips64.s:duffcopy.

// large or unaligned move uses a loop
(Move [s] {t} dst src mem)
&& s > 24 && logLargeCopy(v, s) || t.Alignment()%8 != 0 =>
(LoweredMove
 [t.Alignment()]
 dst
 src
 (ADDVconst <src.Type> src [s-moveSize(t.Alignment(), config)])
 mem)

// calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// atomic intrinsics
(AtomicLoad(8|32|64) ...) => (LoweredAtomicLoad(8|32|64) ...)
(AtomicLoadPtr ...) => (LoweredAtomicLoad64 ...)

(AtomicStore(8|32|64) ...) => (LoweredAtomicStore(8|32|64) ...)
(AtomicStorePtrNoWB ...) => (LoweredAtomicStore64 ...)

(AtomicExchange(32|64) ...) => (LoweredAtomicExchange(32|64) ...)

(AtomicAdd(32|64) ...) => (LoweredAtomicAdd(32|64) ...)

(AtomicCompareAndSwap32 ptr old new mem) => (LoweredAtomicCas32 ptr (SignExt32to64 old) new mem)

```

```

(AtomicCompareAndSwap64 ...) => (LoweredAtomicCas64 ...)

// checks
(NotNilCheck ...) => (LoweredNotNilCheck ...)
(IsNotNil ptr) => (SGTU ptr (MOVVconst [0]))
(IsInBounds idx len) => (SGTU len idx)
(IsSliceInBounds idx len) => (XOR (MOVVconst [1]) (SGTU idx len))

//
pseudo-ops
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)

(If cond yes no) => (NE cond yes no)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// Optimizations

// Absorb boolean tests into block
(NE (FPFlagTrue cmp) yes no) => (FPT cmp yes no)
(NE (FPFlagFalse cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagTrue cmp) yes no) => (FPF cmp yes no)
(EQ (FPFlagFalse cmp) yes no) => (FPT cmp yes no)
(NE (XORconst [1] cmp:(SGT _ _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTU _ _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTconst _)) yes no) => (EQ cmp yes no)
(NE (XORconst [1] cmp:(SGTUconst _)) yes no) =>
(EQ cmp yes no)
(EQ (XORconst [1] cmp:(SGT _ _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTU _ _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTconst _)) yes no) => (NE cmp yes no)
(EQ (XORconst [1] cmp:(SGTUconst _)) yes no) => (NE cmp yes no)
(NE (SGTUconst [1] x) yes no) => (EQ x yes no)
(EQ (SGTUconst [1] x) yes no) => (NE x yes no)
(NE (SGTU x (MOVVconst [0])) yes no) => (NE x yes no)
(EQ (SGTU x (MOVVconst [0])) yes no) => (EQ x yes no)
(NE (SGTconst [0] x) yes no) => (LTZ x yes no)
(EQ (SGTconst [0] x) yes no) => (GEZ x yes no)
(NE (SGT x (MOVVconst [0])) yes no) => (GTZ x yes no)
(EQ (SGT x (MOVVconst [0])) yes no) => (LEZ x yes no)

```



```

// fold offset into address
(ADDVconst [off1] (MOVVaddr [off2] {sym} ptr)) && is32Bit(off1+int64(off2)) => (MOVVaddr
[int32(off1)+int32(off2)] {sym} ptr)

// fold address into load/store
(MOVBload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBload
[off1+int32(off2)] {sym} ptr mem)
(MOVBUload [off1]
{sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBUload [off1+int32(off2)] {sym} ptr
mem)
(MOVHload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVHload
[off1+int32(off2)] {sym} ptr mem)
(MOVHUload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVHUload
[off1+int32(off2)] {sym} ptr mem)
(MOVWload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVWload
[off1+int32(off2)] {sym} ptr mem)
(MOVWUload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVWUload
[off1+int32(off2)] {sym} ptr mem)
(MOVVload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVVload
[off1+int32(off2)] {sym} ptr mem)
(MOVFload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVFload
[off1+int32(off2)] {sym} ptr mem)
(MOVDload [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVDload
[off1+int32(off2)]
{sym} ptr mem)

(MOVBstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVBstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVHstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVHstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVWstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVWstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVVstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVVstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVFstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVFstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVDstore [off1] {sym} (ADDVconst [off2] ptr) val mem) && is32Bit(int64(off1)+off2) => (MOVDstore
[off1+int32(off2)] {sym} ptr val mem)
(MOVBstorezero [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVBstorezero
[off1+int32(off2)] {sym} ptr mem)
(MOVHstorezero [off1]
{sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVHstorezero [off1+int32(off2)] {sym}
ptr mem)
(MOVWstorezero [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVWstorezero
[off1+int32(off2)] {sym} ptr mem)
(MOVVstorezero [off1] {sym} (ADDVconst [off2] ptr) mem) && is32Bit(int64(off1)+off2) => (MOVVstorezero
[off1+int32(off2)] {sym} ptr mem)

```



```

(MOVBstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVBstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVHstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVHstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVWstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVWstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)
(MOVVstorezero [off1] {sym1} (MOVVaddr [off2] {sym2} ptr mem) && canMergeSym(sym1,sym2) &&
is32Bit(int64(off1)+int64(off2)) =>
(MOVVstorezero [off1+int32(off2)] {mergeSym(sym1,sym2)} ptr mem)

(LoweredAtomicStore(32|64)
ptr (MOVVconst [0]) mem) => (LoweredAtomicStorezero(32|64) ptr mem)
(LoweredAtomicAdd32 ptr (MOVVconst [c]) mem) && is32Bit(c) => (LoweredAtomicAddconst32 [int32(c)] ptr
mem)
(LoweredAtomicAdd64 ptr (MOVVconst [c]) mem) && is32Bit(c) => (LoweredAtomicAddconst64 [c] ptr mem)

// don't extend after proper load
(MOVBreg x:(MOVBload __)) => (MOVVreg x)
(MOVBUreg x:(MOVBULoad __)) => (MOVVreg x)
(MOVHreg x:(MOVBload __)) => (MOVVreg x)
(MOVHreg x:(MOVBULoad __)) => (MOVVreg x)
(MOVHreg x:(MOVHload __)) => (MOVVreg x)
(MOVHreg x:(MOVBULoad __)) => (MOVVreg x)
(MOVHUreg x:(MOVHULoad __)) => (MOVVreg x)
(MOVHUreg x:(MOVHULoad __)) => (MOVVreg x)
(MOVWreg x:(MOVBload __)) => (MOVVreg x)
(MOVWreg x:(MOVBULoad __)) => (MOVVreg x)
(MOVWreg x:(MOVHload __)) => (MOVVreg x)
(MOVWreg x:(MOVHULoad __)) => (MOVVreg x)
(MOVWreg x:(MOVWload __)) => (MOVVreg x)
(MOVWUreg x:(MOVBULoad __)) => (MOVVreg x)
(MOVWUreg x:(MOVHULoad __)) => (MOVVreg x)
(MOVWUreg x:(MOVWULoad __)) => (MOVVreg x)

// fold double extensions
(MOVBreg
x:(MOVBreg __)) => (MOVVreg x)
(MOVBUreg x:(MOVBUreg __)) => (MOVVreg x)
(MOVHreg x:(MOVBreg __)) => (MOVVreg x)
(MOVHreg x:(MOVBUreg __)) => (MOVVreg x)
(MOVHreg x:(MOVHreg __)) => (MOVVreg x)
(MOVHUreg x:(MOVBUreg __)) => (MOVVreg x)
(MOVHUreg x:(MOVHUreg __)) => (MOVVreg x)
(MOVWreg x:(MOVBreg __)) => (MOVVreg x)
(MOVWreg x:(MOVBUreg __)) => (MOVVreg x)
(MOVWreg x:(MOVHreg __)) => (MOVVreg x)

```

```

(MOVWreg x:(MOVWreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVBUreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVHUreg _)) => (MOVVreg x)
(MOVWUreg x:(MOVWUreg _)) => (MOVVreg x)

// don't extend before store
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVWreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVBstore
[off] {sym} ptr (MOVWUreg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOVWUreg x) mem) => (MOVWstore [off] {sym} ptr x mem)

// if a register move has only 1 use, just use the same register without emitting instruction
// MOVVnop doesn't emit instruction, only for ensuring the type.
(MOVVreg x) && x.Uses == 1 => (MOVVnop x)

// fold constant into arithmetic ops
(ADDV x (MOVVconst [c])) && is32Bit(c) => (ADDVconst [c] x)
(SUBV x (MOVVconst [c])) && is32Bit(c) => (SUBVconst [c] x)
(AND x (MOVVconst [c])) && is32Bit(c) => (ANDconst [c] x)
(OR x (MOVVconst
[c])) && is32Bit(c) => (ORconst [c] x)
(XOR x (MOVVconst [c])) && is32Bit(c) => (XORconst [c] x)
(NOR x (MOVVconst [c])) && is32Bit(c) => (NORconst [c] x)

(SLLV _ (MOVVconst [c])) && uint64(c)>=64 => (MOVVconst [0])
(SRLV _ (MOVVconst [c])) && uint64(c)>=64 => (MOVVconst [0])
(SRAV x (MOVVconst [c])) && uint64(c)>=64 => (SRAVconst x [63])
(SLLV x (MOVVconst [c])) => (SLLVconst x [c])
(SRLV x (MOVVconst [c])) => (SRLVconst x [c])
(SRAV x (MOVVconst [c])) => (SRAVconst x [c])

(SGT (MOVVconst [c] x) && is32Bit(c) => (SGTconst [c] x)
(SGTU (MOVVconst [c] x) && is32Bit(c) => (SGTUconst [c] x)

// mul by constant
(Select1 (MULVU x (MOVVconst [-1]))) => (NEGV x)
(Select1 (MULVU _ (MOVVconst [0]))) => (MOVVconst [0])
(Select1 (MULVU x (MOVVconst [1]))) => x
(Select1 (MULVU x (MOVVconst [c])) && isPowerOfTwo64(c) => (SLLVconst [log64(c)] x)

```

```

// div by constant
(Select1 (DIVVU x (MOVVconst [1]))) => x
(Select1 (DIVVU x (MOVVconst [c]))) && isPowerOfTwo64(c) => (SRLVconst [log64(c)]
x)
(Select0 (DIVVU _ (MOVVconst [1]))) => (MOVVconst [0]) // mod
(Select0 (DIVVU x (MOVVconst [c]))) && isPowerOfTwo64(c) => (ANDconst [c-1] x) // mod

// generic simplifications
(ADDV x (NEGV y)) => (SUBV x y)
(SUBV x x) => (MOVVconst [0])
(SUBV (MOVVconst [0]) x) => (NEGV x)
(AND x x) => x
(OR x x) => x
(XOR x x) => (MOVVconst [0])

// remove redundant *const ops
(ADDVconst [0] x) => x
(SUBVconst [0] x) => x
(ANDconst [0] _) => (MOVVconst [0])
(ANDconst [-1] x) => x
(ORconst [0] x) => x
(ORconst [-1] _) => (MOVVconst [-1])
(XORconst [0] x) => x
(XORconst [-1] x) => (NORconst [0] x)

// generic constant folding
(ADDVconst [c] (MOVVconst [d])) => (MOVVconst [c+d])
(ADDVconst [c] (ADDVconst [d] x)) && is32Bit(c+d) => (ADDVconst [c+d] x)
(ADDVconst [c] (SUBVconst [d] x)) && is32Bit(c-d) => (ADDVconst [c-d] x)
(SUBVconst [c] (MOVVconst [d])) => (MOVVconst [d-c])
(SUBVconst [c] (SUBVconst [d] x)) && is32Bit(-c-d) => (ADDVconst [-c-d] x)
(SUBVconst [c] (ADDVconst
[d] x)) && is32Bit(-c+d) => (ADDVconst [-c+d] x)
(SLLVconst [c] (MOVVconst [d])) => (MOVVconst [d<<uint64(c)])
(SRLVconst [c] (MOVVconst [d])) => (MOVVconst [int64(uint64(d)>>uint64(c))])
(SRAVconst [c] (MOVVconst [d])) => (MOVVconst [d>>uint64(c)])
(Select1 (MULVU (MOVVconst [c]) (MOVVconst [d]))) => (MOVVconst [c*d])
(Select1 (DIVV (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [c/d])
(Select1 (DIVVU (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [int64(uint64(c)/uint64(d))])
(Select0 (DIVV (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [c%d]) // mod
(Select0 (DIVVU (MOVVconst [c]) (MOVVconst [d]))) && d != 0 => (MOVVconst [int64(uint64(c)%uint64(d))])
// mod
(ANDconst [c] (MOVVconst [d])) => (MOVVconst [c&d])
(ANDconst [c] (ANDconst [d] x)) => (ANDconst [c&d] x)
(ORconst [c] (MOVVconst [d])) => (MOVVconst [c|d])
(ORconst [c] (ORconst [d] x)) && is32Bit(c|d) => (ORconst [c|d] x)
(XORconst [c] (MOVVconst [d])) => (MOVVconst [c^d])

```

```

(XORconst
[c] (XORconst [d] x)) && is32Bit(c^d) => (XORconst [c^d] x)
(NORconst [c] (MOVVconst [d])) => (MOVVconst [^(c|d)])
(NEGV (MOVVconst [c])) => (MOVVconst [-c])
(MOVBreg (MOVVconst [c])) => (MOVVconst [int64(int8(c))])
(MOVBUreg (MOVVconst [c])) => (MOVVconst [int64(uint8(c))])
(MOVHreg (MOVVconst [c])) => (MOVVconst [int64(int16(c))])
(MOVHUreg (MOVVconst [c])) => (MOVVconst [int64(uint16(c))])
(MOVWreg (MOVVconst [c])) => (MOVVconst [int64(int32(c))])
(MOVWUreg (MOVVconst [c])) => (MOVVconst [int64(uint32(c))])
(MOVVreg (MOVVconst [c])) => (MOVVconst [c])

// constant comparisons
(SGTconst [c] (MOVVconst [d])) && c>d => (MOVVconst [1])
(SGTconst [c] (MOVVconst [d])) && c<=d => (MOVVconst [0])
(SGTUconst [c] (MOVVconst [d])) && uint64(c)>uint64(d) => (MOVVconst [1])
(SGTUconst [c] (MOVVconst [d])) && uint64(c)<=uint64(d) => (MOVVconst [0])

// other known comparisons
(SGTconst [c] (MOVBreg _)) && 0x7f < c => (MOVVconst [1])
(SGTconst [c] (MOVBreg _)) && c <= -0x80 => (MOVVconst [0])
(SGTconst
[c] (MOVBUreg _)) && 0xff < c => (MOVVconst [1])
(SGTconst [c] (MOVBUreg _)) && c < 0 => (MOVVconst [0])
(SGTUconst [c] (MOVBUreg _)) && 0xff < uint64(c) => (MOVVconst [1])
(SGTconst [c] (MOVHreg _)) && 0x7fff < c => (MOVVconst [1])
(SGTconst [c] (MOVHreg _)) && c <= -0x8000 => (MOVVconst [0])
(SGTconst [c] (MOVHUreg _)) && 0xffff < c => (MOVVconst [1])
(SGTconst [c] (MOVHUreg _)) && c < 0 => (MOVVconst [0])
(SGTUconst [c] (MOVHUreg _)) && 0xffff < uint64(c) => (MOVVconst [1])
(SGTconst [c] (MOVWUreg _)) && c < 0 => (MOVVconst [0])
(SGTconst [c] (ANDconst [m] _)) && 0 <= m && m < c => (MOVVconst [1])
(SGTUconst [c] (ANDconst [m] _)) && uint64(m) < uint64(c) => (MOVVconst [1])
(SGTconst [c] (SRLVconst _ [d])) && 0 <= c && 0 < d && d <= 63 && 0xffffffffffffffff>>uint64(d) < uint64(c)
=> (MOVVconst [1])
(SGTUconst [c] (SRLVconst _ [d])) && 0 < d && d <= 63 && 0xffffffffffffffff>>uint64(d) < uint64(c) =>
(MOVVconst [1])

// absorb constants into branches
(EQ (MOVVconst [0])
yes no) => (First yes no)
(EQ (MOVVconst [c]) yes no) && c != 0 => (First no yes)
(NE (MOVVconst [0]) yes no) => (First no yes)
(NE (MOVVconst [c]) yes no) && c != 0 => (First yes no)
(LTZ (MOVVconst [c]) yes no) && c < 0 => (First yes no)
(LTZ (MOVVconst [c]) yes no) && c >= 0 => (First no yes)
(LEZ (MOVVconst [c]) yes no) && c <= 0 => (First yes no)
(LEZ (MOVVconst [c]) yes no) && c > 0 => (First no yes)

```

(GTZ (MOVVconst [c]) yes no) && c > 0 => (First yes no)  
(GTZ (MOVVconst [c]) yes no) && c <= 0 => (First no yes)  
(GEZ (MOVVconst [c]) yes no) && c >= 0 => (First yes no)  
(GEZ (MOVVconst [c]) yes no) && c < 0 => (First no yes)

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/LOONG64.rules  
No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/amd64/ssa.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/printer.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/cse\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/sizeof\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/dumper\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/rewrite\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/mips/galign.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/lca.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/arm64/ssa.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/phi\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/riscv64/galign.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/typecheck/builtin\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/lca\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/s390x/ssa.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/test/testdata/flowgraph\_generator1.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/tokens.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/fixdebugs\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/importer/testdata/issue15920.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/syntax/printer\_test.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/types/alg.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/ARM64Ops.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/386Ops.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/noder/lex\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/importer/testdata/p.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/writebarrier.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/likelyadjust.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/riscv64/ggen.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/test/iface\_test.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/PPC64Ops.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/loopreschedchecks.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-

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zip/compile/internal/importer/testdata/versions/test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/stackframe.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/conversions1.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/magic.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/decls4.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/dumper.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/s390x/galign.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/parser.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/riscv64/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/namedReturn_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/copyelim_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/noder/noder.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/gen/arithConstGen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/shortcircuit_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/dec64Ops.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/sizeof_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/ARMOps.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/testdata/a.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/mips/ggen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ppc64/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/checkbce.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/mkbuiltin.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/scanner.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/float_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/trim.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/source.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/s390x/ggen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/sqrtConst_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/mips64/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/object_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/testdata/b.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/RISCV64Ops.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/phiopt.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/shortcircuit.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/arm/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/MIPS64Ops.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/riscv64/gsubr.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/dupLoad_test.go
*

```



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/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/nodes.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/shift_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/trace.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/mips/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/prove.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/MIPSOps.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/reflectdata/alg.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/test/testdata/gen/constFoldGen.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/scanner_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/dwarfgen/scope_test.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/S390XOps.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/divconst_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/sizes_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/syntax.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssagen/phi.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/writebarrier_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/x86/ssa.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/parser_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/base/timings.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/zcse.go
No license file was found, but licenses were detected in source scan.

```

```

// Copyright 2015 The Go Authors. All rights reserved.
// Use of this source code is governed by a BSD-style
// license that can be found in the LICENSE file.

```

```

// Simplifications that apply to all backend architectures. As an example, this
// Go source code
//
// y := 0 * x
//
// can be translated into y := 0 without losing any information, which saves a
// pointless multiplication instruction. Other .rules files in this directory
// (for example AMD64.rules) contain rules specific to the architecture in the
// filename. The rules here apply to every architecture.
//
// The code for parsing this file lives in rulegen.go; this file generates
// ssa/rewritegeneric.go.

```

```

// values are specified using the following format:
// (op <type> [auxint] {aux} arg0 arg1 ...)
// the type, aux, and auxint fields are optional
// on the matching side
// - the type, aux, and auxint fields must match if they are specified.
// - the first

```

```

occurrence of a variable defines that variable. Subsequent
// uses must match (be == to) the first use.
// - v is defined to be the value matched.
// - an additional conditional can be provided after the match pattern with "&&".
// on the generated side
// - the type of the top-level expression is the same as the one on the left-hand side.
// - the type of any subexpressions must be specified explicitly (or
// be specified in the op's type field).
// - auxint will be 0 if not specified.
// - aux will be nil if not specified.

// blocks are specified using the following format:
// (kind controlvalue succ0 succ1 ...)
// controlvalue must be "nil" or a value expression
// succ* fields must be variables
// For now, the generated successors must be a permutation of the matched successors.

// constant folding
(Trunc16to8 (Const16 [c])) => (Const8 [int8(c)])
(Trunc32to8 (Const32 [c])) => (Const8 [int8(c)])
(Trunc32to16 (Const32 [c])) => (Const16 [int16(c)])
(Trunc64to8
 (Const64 [c])) => (Const8 [int8(c)])
(Trunc64to16 (Const64 [c])) => (Const16 [int16(c)])
(Trunc64to32 (Const64 [c])) => (Const32 [int32(c)])
(Cvt64Fto32F (Const64F [c])) => (Const32F [float32(c)])
(Cvt32Fto64F (Const32F [c])) => (Const64F [float64(c)])
(Cvt32to32F (Const32 [c])) => (Const32F [float32(c)])
(Cvt32to64F (Const32 [c])) => (Const64F [float64(c)])
(Cvt64to32F (Const64 [c])) => (Const32F [float32(c)])
(Cvt64to64F (Const64 [c])) => (Const64F [float64(c)])
(Cvt32Fto32 (Const32F [c])) => (Const32 [int32(c)])
(Cvt32Fto64 (Const32F [c])) => (Const64 [int64(c)])
(Cvt64Fto32 (Const64F [c])) => (Const32 [int32(c)])
(Cvt64Fto64 (Const64F [c])) => (Const64 [int64(c)])
(Round32F x:(Const32F)) => x
(Round64F x:(Const64F)) => x
(CvtBoolToUInt8 (ConstBool [false])) => (Const8 [0])
(CvtBoolToUInt8 (ConstBool [true])) => (Const8 [1])

(Trunc16to8 (ZeroExt8to16 x)) => x
(Trunc32to8 (ZeroExt8to32 x)) => x
(Trunc32to16 (ZeroExt8to32 x)) => (ZeroExt8to16 x)
(Trunc32to16
 (ZeroExt16to32 x)) => x
(Trunc64to8 (ZeroExt8to64 x)) => x
(Trunc64to16 (ZeroExt8to64 x)) => (ZeroExt8to16 x)
(Trunc64to16 (ZeroExt16to64 x)) => x

```

(Trunc64to32 (ZeroExt8to64 x)) => (ZeroExt8to32 x)  
 (Trunc64to32 (ZeroExt16to64 x)) => (ZeroExt16to32 x)  
 (Trunc64to32 (ZeroExt32to64 x)) => x  
 (Trunc16to8 (SignExt8to16 x)) => x  
 (Trunc32to8 (SignExt8to32 x)) => x  
 (Trunc32to16 (SignExt8to32 x)) => (SignExt8to16 x)  
 (Trunc32to16 (SignExt16to32 x)) => x  
 (Trunc64to8 (SignExt8to64 x)) => x  
 (Trunc64to16 (SignExt8to64 x)) => (SignExt8to16 x)  
 (Trunc64to16 (SignExt16to64 x)) => x  
 (Trunc64to32 (SignExt8to64 x)) => (SignExt8to32 x)  
 (Trunc64to32 (SignExt16to64 x)) => (SignExt16to32 x)  
 (Trunc64to32 (SignExt32to64 x)) => x

(ZeroExt8to16 (Const8 [c])) => (Const16 [int16(uint8(c))])  
 (ZeroExt8to32 (Const8 [c])) => (Const32 [int32(uint8(c))])  
 (ZeroExt8to64 (Const8 [c])) => (Const64 [int64(uint8(c))])  
 (ZeroExt16to32 (Const16 [c])) => (Const32 [int32(uint16(c))])  
 (ZeroExt16to64  
 (Const16 [c])) => (Const64 [int64(uint16(c))])  
 (ZeroExt32to64 (Const32 [c])) => (Const64 [int64(uint32(c))])  
 (SignExt8to16 (Const8 [c])) => (Const16 [int16(c)])  
 (SignExt8to32 (Const8 [c])) => (Const32 [int32(c)])  
 (SignExt8to64 (Const8 [c])) => (Const64 [int64(c)])  
 (SignExt16to32 (Const16 [c])) => (Const32 [int32(c)])  
 (SignExt16to64 (Const16 [c])) => (Const64 [int64(c)])  
 (SignExt32to64 (Const32 [c])) => (Const64 [int64(c)])

(Neg8 (Const8 [c])) => (Const8 [-c])  
 (Neg16 (Const16 [c])) => (Const16 [-c])  
 (Neg32 (Const32 [c])) => (Const32 [-c])  
 (Neg64 (Const64 [c])) => (Const64 [-c])  
 (Neg32F (Const32F [c])) && c != 0 => (Const32F [-c])  
 (Neg64F (Const64F [c])) && c != 0 => (Const64F [-c])

(Add8 (Const8 [c]) (Const8 [d])) => (Const8 [c+d])  
 (Add16 (Const16 [c]) (Const16 [d])) => (Const16 [c+d])  
 (Add32 (Const32 [c]) (Const32 [d])) => (Const32 [c+d])  
 (Add64 (Const64 [c]) (Const64 [d])) => (Const64 [c+d])  
 (Add32F (Const32F [c]) (Const32F [d])) && c+d == c+d  
 => (Const32F [c+d])  
 (Add64F (Const64F [c]) (Const64F [d])) && c+d == c+d => (Const64F [c+d])  
 (AddPtr <t> x (Const64 [c])) => (OffPtr <t> x [c])  
 (AddPtr <t> x (Const32 [c])) => (OffPtr <t> x [int64(c)])

(Sub8 (Const8 [c]) (Const8 [d])) => (Const8 [c-d])  
 (Sub16 (Const16 [c]) (Const16 [d])) => (Const16 [c-d])  
 (Sub32 (Const32 [c]) (Const32 [d])) => (Const32 [c-d])

(Sub64 (Const64 [c]) (Const64 [d])) => (Const64 [c-d])  
(Sub32F (Const32F [c]) (Const32F [d])) && c-d == c-d => (Const32F [c-d])  
(Sub64F (Const64F [c]) (Const64F [d])) && c-d == c-d => (Const64F [c-d])

(Mul8 (Const8 [c]) (Const8 [d])) => (Const8 [c\*d])  
(Mul16 (Const16 [c]) (Const16 [d])) => (Const16 [c\*d])  
(Mul32 (Const32 [c]) (Const32 [d])) => (Const32 [c\*d])  
(Mul64 (Const64 [c]) (Const64 [d])) => (Const64 [c\*d])  
(Mul32F (Const32F [c]) (Const32F [d])) && c\*d == c\*d => (Const32F [c\*d])  
(Mul64F (Const64F [c]) (Const64F [d])) && c\*d == c\*d => (Const64F [c\*d])

(And8 (Const8 [c]) (Const8 [d])) =>  
(Const8 [c&d])  
(And16 (Const16 [c]) (Const16 [d])) => (Const16 [c&d])  
(And32 (Const32 [c]) (Const32 [d])) => (Const32 [c&d])  
(And64 (Const64 [c]) (Const64 [d])) => (Const64 [c&d])

(Or8 (Const8 [c]) (Const8 [d])) => (Const8 [c|d])  
(Or16 (Const16 [c]) (Const16 [d])) => (Const16 [c|d])  
(Or32 (Const32 [c]) (Const32 [d])) => (Const32 [c|d])  
(Or64 (Const64 [c]) (Const64 [d])) => (Const64 [c|d])

(Xor8 (Const8 [c]) (Const8 [d])) => (Const8 [c^d])  
(Xor16 (Const16 [c]) (Const16 [d])) => (Const16 [c^d])  
(Xor32 (Const32 [c]) (Const32 [d])) => (Const32 [c^d])  
(Xor64 (Const64 [c]) (Const64 [d])) => (Const64 [c^d])

(Ctz64 (Const64 [c])) && config.PtrSize == 4 => (Const32 [int32(ntz64(c))])  
(Ctz32 (Const32 [c])) && config.PtrSize == 4 => (Const32 [int32(ntz32(c))])  
(Ctz16 (Const16 [c])) && config.PtrSize == 4 => (Const32 [int32(ntz16(c))])  
(Ctz8 (Const8 [c])) && config.PtrSize == 4 => (Const32 [int32(ntz8(c))])

(Ctz64 (Const64 [c])) && config.PtrSize ==  
8 => (Const64 [int64(ntz64(c))])  
(Ctz32 (Const32 [c])) && config.PtrSize == 8 => (Const64 [int64(ntz32(c))])  
(Ctz16 (Const16 [c])) && config.PtrSize == 8 => (Const64 [int64(ntz16(c))])  
(Ctz8 (Const8 [c])) && config.PtrSize == 8 => (Const64 [int64(ntz8(c))])

(Div8 (Const8 [c]) (Const8 [d])) && d != 0 => (Const8 [c/d])  
(Div16 (Const16 [c]) (Const16 [d])) && d != 0 => (Const16 [c/d])  
(Div32 (Const32 [c]) (Const32 [d])) && d != 0 => (Const32 [c/d])  
(Div64 (Const64 [c]) (Const64 [d])) && d != 0 => (Const64 [c/d])  
(Div8u (Const8 [c]) (Const8 [d])) && d != 0 => (Const8 [int8(uint8(c)/uint8(d))])  
(Div16u (Const16 [c]) (Const16 [d])) && d != 0 => (Const16 [int16(uint16(c)/uint16(d))])  
(Div32u (Const32 [c]) (Const32 [d])) && d != 0 => (Const32 [int32(uint32(c)/uint32(d))])  
(Div64u (Const64 [c]) (Const64 [d])) && d != 0 => (Const64 [int64(uint64(c)/uint64(d))])  
(Div32F (Const32F [c]) (Const32F [d])) && c/d == c/d => (Const32F [c/d])  
(Div64F (Const64F [c]) (Const64F [d]))

```

&& c/d == c/d => (Const64F [c/d])
(Select0 (Div128u (Const64 [0]) lo y)) => (Div64u lo y)
(Select1 (Div128u (Const64 [0]) lo y)) => (Mod64u lo y)

(Not (ConstBool [c])) => (ConstBool ![c])

// Convert x * 1 to x.
(Mul(8|16|32|64) (Const(8|16|32|64) [1]) x) => x

// Convert x * -1 to -x.
(Mul(8|16|32|64) (Const(8|16|32|64) [-1]) x) => (Neg(8|16|32|64) x)

// Convert multiplication by a power of two to a shift.
(Mul8 <t> n (Const8 [c])) && isPowerOfTwo8(c) => (Lsh8x64 <t> n (Const64 <typ.UInt64> [log8(c)]))
(Mul16 <t> n (Const16 [c])) && isPowerOfTwo16(c) => (Lsh16x64 <t> n (Const64 <typ.UInt64> [log16(c)]))
(Mul32 <t> n (Const32 [c])) && isPowerOfTwo32(c) => (Lsh32x64 <t> n (Const64 <typ.UInt64> [log32(c)]))
(Mul64 <t> n (Const64 [c])) && isPowerOfTwo64(c) => (Lsh64x64 <t> n (Const64 <typ.UInt64> [log64(c)]))
(Mul8 <t> n (Const8 [c])) && t.IsSigned() && isPowerOfTwo8(-c) => (Neg8 (Lsh8x64 <t> n (Const64
<typ.UInt64> [log8(-c)])))
(Mul16 <t> n (Const16 [c])) && t.IsSigned()
&& isPowerOfTwo16(-c) => (Neg16 (Lsh16x64 <t> n (Const64 <typ.UInt64> [log16(-c)])))
(Mul32 <t> n (Const32 [c])) && t.IsSigned() && isPowerOfTwo32(-c) => (Neg32 (Lsh32x64 <t> n (Const64
<typ.UInt64> [log32(-c)])))
(Mul64 <t> n (Const64 [c])) && t.IsSigned() && isPowerOfTwo64(-c) => (Neg64 (Lsh64x64 <t> n (Const64
<typ.UInt64> [log64(-c)])))

(Mod8 (Const8 [c]) (Const8 [d])) && d != 0 => (Const8 [c % d])
(Mod16 (Const16 [c]) (Const16 [d])) && d != 0 => (Const16 [c % d])
(Mod32 (Const32 [c]) (Const32 [d])) && d != 0 => (Const32 [c % d])
(Mod64 (Const64 [c]) (Const64 [d])) && d != 0 => (Const64 [c % d])

(Mod8u (Const8 [c]) (Const8 [d])) && d != 0 => (Const8 [int8(uint8(c) % uint8(d))])
(Mod16u (Const16 [c]) (Const16 [d])) && d != 0 => (Const16 [int16(uint16(c) % uint16(d))])
(Mod32u (Const32 [c]) (Const32 [d])) && d != 0 => (Const32 [int32(uint32(c) % uint32(d))])
(Mod64u (Const64 [c]) (Const64 [d])) && d != 0 => (Const64 [int64(uint64(c) % uint64(d))])

(Lsh64x64 (Const64 [c])
(Const64 [d])) => (Const64 [c << uint64(d)])
(Rsh64x64 (Const64 [c]) (Const64 [d])) => (Const64 [c >> uint64(d)])
(Rsh64Ux64 (Const64 [c]) (Const64 [d])) => (Const64 [int64(uint64(c) >> uint64(d))])
(Lsh32x64 (Const32 [c]) (Const64 [d])) => (Const32 [c << uint64(d)])
(Rsh32x64 (Const32 [c]) (Const64 [d])) => (Const32 [c >> uint64(d)])
(Rsh32Ux64 (Const32 [c]) (Const64 [d])) => (Const32 [int32(uint32(c) >> uint64(d))])
(Lsh16x64 (Const16 [c]) (Const64 [d])) => (Const16 [c << uint64(d)])
(Rsh16x64 (Const16 [c]) (Const64 [d])) => (Const16 [c >> uint64(d)])
(Rsh16Ux64 (Const16 [c]) (Const64 [d])) => (Const16 [int16(uint16(c) >> uint64(d))])
(Lsh8x64 (Const8 [c]) (Const64 [d])) => (Const8 [c << uint64(d)])
(Rsh8x64 (Const8 [c]) (Const64 [d])) => (Const8 [c >> uint64(d)])

```

```

(Rsh8Ux64 (Const8 [c]) (Const64 [d])) => (Const8 [int8(uint8(c) >> uint64(d))])

// Fold IsInBounds when the range of the index cannot exceed the limit.
(IsInBounds (ZeroExt8to32 _) (Const32 [c])) && (1 << 8) <= c => (ConstBool [true])
(IsInBounds (ZeroExt8to64 _) (Const64 [c])) && (1 << 8) <= c => (ConstBool [true])
(IsInBounds (ZeroExt16to32 _) (Const32 [c])) && (1 << 16) <= c => (ConstBool [true])
(IsInBounds (ZeroExt16to64 _) (Const64 [c])) && (1 << 16) <= c => (ConstBool [true])
(IsInBounds x x) => (ConstBool [false])
(IsInBounds (And8 (Const8 [c]) _) (Const8 [d])) && 0 <= c && c < d => (ConstBool [true])
(IsInBounds (ZeroExt8to16 (And8 (Const8 [c]) _)) (Const16 [d])) && 0 <= c && int16(c) < d => (ConstBool [true])
(IsInBounds (ZeroExt8to32 (And8 (Const8 [c]) _)) (Const32 [d])) && 0 <= c && int32(c) < d => (ConstBool [true])
(IsInBounds (ZeroExt8to64 (And8 (Const8 [c]) _)) (Const64 [d])) && 0 <= c && int64(c) < d => (ConstBool [true])
(IsInBounds (And16 (Const16 [c]) _) (Const16 [d])) && 0 <= c && c < d => (ConstBool [true])
(IsInBounds (ZeroExt16to32 (And16 (Const16 [c]) _)) (Const32 [d])) && 0 <= c && int32(c) < d => (ConstBool [true])
(IsInBounds (ZeroExt16to64 (And16 (Const16 [c]) _)) (Const64 [d])) && 0 <= c && int64(c) < d => (ConstBool [true])
(IsInBounds (And32 (Const32 [c]) _) (Const32 [d])) && 0 <= c && c < d => (ConstBool [true])
(IsInBounds (ZeroExt32to64 (And32 (Const32 [c]) _)) (Const64 [d])) && 0 <= c && int64(c) < d => (ConstBool [true])
(IsInBounds (And64 (Const64 [c]) _) (Const64 [d])) && 0 <= c && c < d => (ConstBool [true])
(IsInBounds (Const32 [c]) (Const32 [d])) => (ConstBool [0 <= c && c < d])
(IsInBounds (Const64 [c]) (Const64 [d])) => (ConstBool [0 <= c && c < d])
// (Mod64u x y) is always between 0 (inclusive) and y (exclusive).
(IsInBounds (Mod32u _ y) y) => (ConstBool [true])
(IsInBounds (Mod64u _ y) y) => (ConstBool [true])
// Right shifting an unsigned number limits its value.
(IsInBounds (ZeroExt8to64 (Rsh8Ux64 _ (Const64 [c]))) (Const64 [d])) && 0 < c && c < 8 && 1<<uint( 8-c)-1 < d => (ConstBool [true])
(IsInBounds (ZeroExt8to32 (Rsh8Ux64 _ (Const64 [c]))) (Const32 [d])) && 0 < c && c < 8 && 1<<uint( 8-c)-1 < d => (ConstBool [true])
(IsInBounds (ZeroExt8to16 (Rsh8Ux64 _ (Const64 [c]))) (Const16 [d])) && 0 < c && c < 8 && 1<<uint( 8-c)-1 < d => (ConstBool [true])
(IsInBounds (Rsh8Ux64 _ (Const64 [c])) (Const64 [d])) && 0 < c && c < 8 && 1<<uint( 8-c)-1 < d => (ConstBool [true])
(IsInBounds (ZeroExt16to64 (Rsh16Ux64 _ (Const64 [c]))) (Const64 [d])) && 0 < c && c < 16 && 1<<uint(16-c)-1 < d => (ConstBool [true])
(IsInBounds (ZeroExt16to32 (Rsh16Ux64 _ (Const64 [c]))) (Const64 [d])) && 0 < c && c < 16 && 1<<uint(16-c)-1 < d => (ConstBool [true])
(IsInBounds (Rsh16Ux64 _ (Const64 [c])) (Const64 [d])) && 0 < c && c < 16 && 1<<uint(16-c)-1 < d => (ConstBool [true])
(IsInBounds (ZeroExt32to64 (Rsh32Ux64 _ (Const64 [c]))) (Const64 [d])) && 0 < c && c < 32 && 1<<uint(32-c)-1 < d => (ConstBool [true])
(IsInBounds (Rsh32Ux64 _ (Const64 [c])) (Const64 [d])) && 0 < c && c < 32 && 1<<uint(32-c)-1 < d => (ConstBool [true])

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< d => (ConstBool [true])
(IsInBounds (Rsh64Ux64 _ (Const64 [c])) (Const64 [d])) && 0 < c && c < 64 && 1 << uint(64-c)-1 < d
=> (ConstBool [true])

(IsSliceInBounds x x) => (ConstBool [true])
(IsSliceInBounds (And32 (Const32 [c]) _) (Const32 [d])) && 0 <= c && c <= d => (ConstBool [true])
(IsSliceInBounds (And64 (Const64 [c]) _) (Const64 [d])) && 0 <= c && c <= d => (ConstBool [true])
(IsSliceInBounds (Const32 [0]) _) => (ConstBool [true])
(IsSliceInBounds (Const64 [0]) _) => (ConstBool [true])
(IsSliceInBounds (Const32 [c]) (Const32 [d])) => (ConstBool [0 <= c && c <= d])
(IsSliceInBounds (Const64 [c]) (Const64 [d])) => (ConstBool [0 <= c && c <= d])
(IsSliceInBounds (SliceLen x) (SliceCap x)) => (ConstBool [true])

(Eq(64|32|16|8) x x) => (ConstBool [true])
(EqB (ConstBool [c]) (ConstBool [d])) => (ConstBool [c == d])
(EqB (ConstBool [false]) x) => (Not x)
(EqB (ConstBool [true]) x) => x

(NotEq(64|32|16|8) x x) => (ConstBool [false])
(NotEqB (ConstBool [c]) (ConstBool
[d])) => (ConstBool [c != d])
(NotEqB (ConstBool [false]) x) => x
(NotEqB (ConstBool [true]) x) => (Not x)
(NotEqB (Not x) (Not y)) => (NotEqB x y)

(Eq64 (Const64 <t> [c]) (Add64 (Const64 <t> [d]) x)) => (Eq64 (Const64 <t> [c-d]) x)
(Eq32 (Const32 <t> [c]) (Add32 (Const32 <t> [d]) x)) => (Eq32 (Const32 <t> [c-d]) x)
(Eq16 (Const16 <t> [c]) (Add16 (Const16 <t> [d]) x)) => (Eq16 (Const16 <t> [c-d]) x)
(Eq8 (Const8 <t> [c]) (Add8 (Const8 <t> [d]) x)) => (Eq8 (Const8 <t> [c-d]) x)

(NotEq64 (Const64 <t> [c]) (Add64 (Const64 <t> [d]) x)) => (NotEq64 (Const64 <t> [c-d]) x)
(NotEq32 (Const32 <t> [c]) (Add32 (Const32 <t> [d]) x)) => (NotEq32 (Const32 <t> [c-d]) x)
(NotEq16 (Const16 <t> [c]) (Add16 (Const16 <t> [d]) x)) => (NotEq16 (Const16 <t> [c-d]) x)
(NotEq8 (Const8 <t> [c]) (Add8 (Const8 <t> [d]) x)) => (NotEq8 (Const8 <t> [c-d]) x)

// signed integer range: ( c <= x && x (<|<=) d ) -> ( unsigned(x-c) (<|<=) unsigned(d-c) )
(AndB (Leq64 (Const64 [c]) x) ((Less|Leq)64 x (Const64 [d]))) && d >= c =>
((Less|Leq)64U (Sub64 <x.Type> x (Const64 <x.Type> [c])) (Const64 <x.Type> [d-c]))
(AndB (Leq32 (Const32 [c]) x) ((Less|Leq)32 x (Const32 [d]))) && d >= c => ((Less|Leq)32U (Sub32 <x.Type> x
(Const32 <x.Type> [c])) (Const32 <x.Type> [d-c]))
(AndB (Leq16 (Const16 [c]) x) ((Less|Leq)16 x (Const16 [d]))) && d >= c => ((Less|Leq)16U (Sub16 <x.Type> x
(Const16 <x.Type> [c])) (Const16 <x.Type> [d-c]))
(AndB (Leq8 (Const8 [c]) x) ((Less|Leq)8 x (Const8 [d]))) && d >= c => ((Less|Leq)8U (Sub8 <x.Type> x
(Const8 <x.Type> [c])) (Const8 <x.Type> [d-c]))

// signed integer range: ( c < x && x (<|<=) d ) -> ( unsigned(x-(c+1)) (<|<=) unsigned(d-(c+1)) )
(AndB (Less64 (Const64 [c]) x) ((Less|Leq)64 x (Const64 [d]))) && d >= c+1 && c+1 > c => ((Less|Leq)64U
(Sub64 <x.Type> x (Const64 <x.Type> [c+1])) (Const64 <x.Type> [d-c-1]))

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(AndB (Less32 (Const32 [c]) x) ((Less|Leq)32 x (Const32 [d]))) && d >= c+1 && c+1 > c => ((Less|Leq)32U
(Sub32 <x.Type> x (Const32 <x.Type> [c+1])) (Const32 <x.Type>
[d-c-1]))
(AndB (Less16 (Const16 [c]) x) ((Less|Leq)16 x (Const16 [d]))) && d >= c+1 && c+1 > c => ((Less|Leq)16U
(Sub16 <x.Type> x (Const16 <x.Type> [c+1])) (Const16 <x.Type> [d-c-1]))
(AndB (Less8 (Const8 [c]) x) ((Less|Leq)8 x (Const8 [d]))) && d >= c+1 && c+1 > c => ((Less|Leq)8U (Sub8
<x.Type> x (Const8 <x.Type> [c+1])) (Const8 <x.Type> [d-c-1]))

// unsigned integer range: ( c <= x && x (<|<=) d ) -> ( x-c (<|<=) d-c )
(AndB (Leq64U (Const64 [c]) x) ((Less|Leq)64U x (Const64 [d]))) && uint64(d) >= uint64(c) => ((Less|Leq)64U
(Sub64 <x.Type> x (Const64 <x.Type> [c])) (Const64 <x.Type> [d-c]))
(AndB (Leq32U (Const32 [c]) x) ((Less|Leq)32U x (Const32 [d]))) && uint32(d) >= uint32(c) => ((Less|Leq)32U
(Sub32 <x.Type> x (Const32 <x.Type> [c])) (Const32 <x.Type> [d-c]))
(AndB (Leq16U (Const16 [c]) x) ((Less|Leq)16U x (Const16 [d]))) && uint16(d) >= uint16(c) => ((Less|Leq)16U
(Sub16 <x.Type> x (Const16 <x.Type> [c])) (Const16 <x.Type> [d-c]))
(AndB (Leq8U (Const8 [c]) x) ((Less|Leq)8U
x (Const8 [d]))) && uint8(d) >= uint8(c) => ((Less|Leq)8U (Sub8 <x.Type> x (Const8 <x.Type> [c])) (Const8
<x.Type> [d-c]))

// unsigned integer range: ( c < x && x (<|<=) d ) -> ( x-(c+1) (<|<=) d-(c+1) )
(AndB (Less64U (Const64 [c]) x) ((Less|Leq)64U x (Const64 [d]))) && uint64(d) >= uint64(c+1) && uint64(c+1)
> uint64(c) => ((Less|Leq)64U (Sub64 <x.Type> x (Const64 <x.Type> [c+1])) (Const64 <x.Type> [d-c-1]))
(AndB (Less32U (Const32 [c]) x) ((Less|Leq)32U x (Const32 [d]))) && uint32(d) >= uint32(c+1) && uint32(c+1)
> uint32(c) => ((Less|Leq)32U (Sub32 <x.Type> x (Const32 <x.Type> [c+1])) (Const32 <x.Type> [d-c-1]))
(AndB (Less16U (Const16 [c]) x) ((Less|Leq)16U x (Const16 [d]))) && uint16(d) >= uint16(c+1) && uint16(c+1)
> uint16(c) => ((Less|Leq)16U (Sub16 <x.Type> x (Const16 <x.Type> [c+1])) (Const16 <x.Type> [d-c-1]))
(AndB (Less8U (Const8 [c]) x) ((Less|Leq)8U x (Const8 [d]))) && uint8(d) >= uint8(c+1) && uint8(c+1) >
uint8(c) => ((Less|Leq)8U (Sub8 <x.Type>
x (Const8 <x.Type> [c+1])) (Const8 <x.Type> [d-c-1]))

// signed integer range: ( c (<|<=) x || x < d ) -> ( unsigned(c-d) (<|<=) unsigned(x-d) )
(OrB ((Less|Leq)64 (Const64 [c]) x) (Less64 x (Const64 [d]))) && c >= d => ((Less|Leq)64U (Const64 <x.Type>
[c-d]) (Sub64 <x.Type> x (Const64 <x.Type> [d])))
(OrB ((Less|Leq)32 (Const32 [c]) x) (Less32 x (Const32 [d]))) && c >= d => ((Less|Leq)32U (Const32 <x.Type>
[c-d]) (Sub32 <x.Type> x (Const32 <x.Type> [d])))
(OrB ((Less|Leq)16 (Const16 [c]) x) (Less16 x (Const16 [d]))) && c >= d => ((Less|Leq)16U (Const16 <x.Type>
[c-d]) (Sub16 <x.Type> x (Const16 <x.Type> [d])))
(OrB ((Less|Leq)8 (Const8 [c]) x) (Less8 x (Const8 [d]))) && c >= d => ((Less|Leq)8U (Const8 <x.Type> [c-d])
(Sub8 <x.Type> x (Const8 <x.Type> [d])))

// signed integer range: ( c (<|<=) x || x <= d ) -> ( unsigned(c-(d+1)) (<|<=) unsigned(x-(d+1)) )
(OrB ((Less|Leq)64 (Const64 [c]) x) (Leq64 x (Const64 [d]))) && c >= d+1 && d+1 > d => ((Less|Leq)64U
(Const64
<x.Type> [c-d-1]) (Sub64 <x.Type> x (Const64 <x.Type> [d+1])))
(OrB ((Less|Leq)32 (Const32 [c]) x) (Leq32 x (Const32 [d]))) && c >= d+1 && d+1 > d => ((Less|Leq)32U
(Const32 <x.Type> [c-d-1]) (Sub32 <x.Type> x (Const32 <x.Type> [d+1])))
(OrB ((Less|Leq)16 (Const16 [c]) x) (Leq16 x (Const16 [d]))) && c >= d+1 && d+1 > d => ((Less|Leq)16U
(Const16 <x.Type> [c-d-1]) (Sub16 <x.Type> x (Const16 <x.Type> [d+1])))

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(OrB ((Less|Leq)8 (Const8 [c] x) (Leq8 x (Const8 [d]))) && c >= d+1 && d+1 > d => ((Less|Leq)8U (Const8
<x.Type> [c-d-1]) (Sub8 <x.Type> x (Const8 <x.Type> [d+1])))

// unsigned integer range: ( c (<|<=) x || x < d ) -> ( c-d (<|<=) x-d )
(OrB ((Less|Leq)64U (Const64 [c] x) (Less64U x (Const64 [d]))) && uint64(c) >= uint64(d) => ((Less|Leq)64U
(Const64 <x.Type> [c-d]) (Sub64 <x.Type> x (Const64 <x.Type> [d])))
(OrB ((Less|Leq)32U (Const32 [c] x) (Less32U x (Const32 [d]))) && uint32(c) >= uint32(d) => ((Less|Leq)32U
(Const32 <x.Type> [c-d]) (Sub32 <x.Type> x (Const32 <x.Type>
[d])))
(OrB ((Less|Leq)16U (Const16 [c] x) (Less16U x (Const16 [d]))) && uint16(c) >= uint16(d) => ((Less|Leq)16U
(Const16 <x.Type> [c-d]) (Sub16 <x.Type> x (Const16 <x.Type> [d])))
(OrB ((Less|Leq)8U (Const8 [c] x) (Less8U x (Const8 [d]))) && uint8(c) >= uint8(d) => ((Less|Leq)8U
(Const8 <x.Type> [c-d]) (Sub8 <x.Type> x (Const8 <x.Type> [d])))

// unsigned integer range: ( c (<|<=) x || x <= d ) -> ( c-(d+1) (<|<=) x-(d+1) )
(OrB ((Less|Leq)64U (Const64 [c] x) (Leq64U x (Const64 [d]))) && uint64(c) >= uint64(d+1) && uint64(d+1) >
uint64(d) => ((Less|Leq)64U (Const64 <x.Type> [c-d-1]) (Sub64 <x.Type> x (Const64 <x.Type> [d+1])))
(OrB ((Less|Leq)32U (Const32 [c] x) (Leq32U x (Const32 [d]))) && uint32(c) >= uint32(d+1) && uint32(d+1) >
uint32(d) => ((Less|Leq)32U (Const32 <x.Type> [c-d-1]) (Sub32 <x.Type> x (Const32 <x.Type> [d+1])))
(OrB ((Less|Leq)16U (Const16 [c] x) (Leq16U x (Const16 [d]))) && uint16(c) >= uint16(d+1) && uint16(d+1) >
uint16(d) => ((Less|Leq)16U (Const16
<x.Type> [c-d-1]) (Sub16 <x.Type> x (Const16 <x.Type> [d+1])))
(OrB ((Less|Leq)8U (Const8 [c] x) (Leq8U x (Const8 [d]))) && uint8(c) >= uint8(d+1) && uint8(d+1) >
uint8(d) => ((Less|Leq)8U (Const8 <x.Type> [c-d-1]) (Sub8 <x.Type> x (Const8 <x.Type> [d+1])))

// Canonicalize x-const to x+(-const)
(Sub64 x (Const64 <t> [c])) && x.Op != OpConst64 => (Add64 (Const64 <t> [-c] x)
(Sub32 x (Const32 <t> [c])) && x.Op != OpConst32 => (Add32 (Const32 <t> [-c] x)
(Sub16 x (Const16 <t> [c])) && x.Op != OpConst16 => (Add16 (Const16 <t> [-c] x)
(Sub8 x (Const8 <t> [c])) && x.Op != OpConst8 => (Add8 (Const8 <t> [-c] x)

// fold negation into comparison operators
(Not (Eq(64|32|16|8|B|Ptr|64F|32F) x y)) => (Neq(64|32|16|8|B|Ptr|64F|32F) x y)
(Not (Neq(64|32|16|8|B|Ptr|64F|32F) x y)) => (Eq(64|32|16|8|B|Ptr|64F|32F) x y)

(Not (Less(64|32|16|8) x y)) => (Leq(64|32|16|8) y x)
(Not (Less(64|32|16|8)U x y)) => (Leq(64|32|16|8)U y x)
(Not (Leq(64|32|16|8) x y)) => (Less(64|32|16|8)
y x)
(Not (Leq(64|32|16|8)U x y)) => (Less(64|32|16|8)U y x)

// Distribute multiplication c * (d+x) -> c*d + c*x. Useful for:
// a[i].b = ...; a[i+1].b = ...
(Mul64 (Const64 <t> [c]) (Add64 <t> (Const64 <t> [d]) x)) =>
(Add64 (Const64 <t> [c*d]) (Mul64 <t> (Const64 <t> [c]) x))
(Mul32 (Const32 <t> [c]) (Add32 <t> (Const32 <t> [d]) x)) =>
(Add32 (Const32 <t> [c*d]) (Mul32 <t> (Const32 <t> [c]) x))

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// Rewrite x*y ± x*z to x*(y±z)
(Add(64|32|16|8) <t> (Mul(64|32|16|8) x y) (Mul(64|32|16|8) x z))
=> (Mul(64|32|16|8) x (Add(64|32|16|8) <t> y z))
(Sub(64|32|16|8) <t> (Mul(64|32|16|8) x y) (Mul(64|32|16|8) x z))
=> (Mul(64|32|16|8) x (Sub(64|32|16|8) <t> y z))

// rewrite shifts of 8/16/32 bit consts into 64 bit consts to reduce
// the number of the other rewrite rules for const shifts
(Lsh64x32 <t> x (Const32 [c])) => (Lsh64x64 x (Const64 <t> [int64(uint32(c))]))
(Lsh64x16 <t> x (Const16 [c])) => (Lsh64x64 x (Const64 <t> [int64(uint16(c))]))
(Lsh64x8 <t> x (Const8 [c]))
=> (Lsh64x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh64x32 <t> x (Const32 [c])) => (Rsh64x64 x (Const64 <t> [int64(uint32(c))]))
(Rsh64x16 <t> x (Const16 [c])) => (Rsh64x64 x (Const64 <t> [int64(uint16(c))]))
(Rsh64x8 <t> x (Const8 [c])) => (Rsh64x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh64Ux32 <t> x (Const32 [c])) => (Rsh64Ux64 x (Const64 <t> [int64(uint32(c))]))
(Rsh64Ux16 <t> x (Const16 [c])) => (Rsh64Ux64 x (Const64 <t> [int64(uint16(c))]))
(Rsh64Ux8 <t> x (Const8 [c])) => (Rsh64Ux64 x (Const64 <t> [int64(uint8(c))]))

(Lsh32x32 <t> x (Const32 [c])) => (Lsh32x64 x (Const64 <t> [int64(uint32(c))]))
(Lsh32x16 <t> x (Const16 [c])) => (Lsh32x64 x (Const64 <t> [int64(uint16(c))]))
(Lsh32x8 <t> x (Const8 [c])) => (Lsh32x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh32x32 <t> x (Const32 [c])) => (Rsh32x64 x (Const64 <t> [int64(uint32(c))]))
(Rsh32x16 <t> x (Const16 [c])) => (Rsh32x64 x (Const64 <t> [int64(uint16(c))]))
(Rsh32x8 <t> x (Const8 [c])) => (Rsh32x64 x (Const64
<t> [int64(uint8(c))]))
(Rsh32Ux32 <t> x (Const32 [c])) => (Rsh32Ux64 x (Const64 <t> [int64(uint32(c))]))
(Rsh32Ux16 <t> x (Const16 [c])) => (Rsh32Ux64 x (Const64 <t> [int64(uint16(c))]))
(Rsh32Ux8 <t> x (Const8 [c])) => (Rsh32Ux64 x (Const64 <t> [int64(uint8(c))]))

(Lsh16x32 <t> x (Const32 [c])) => (Lsh16x64 x (Const64 <t> [int64(uint32(c))]))
(Lsh16x16 <t> x (Const16 [c])) => (Lsh16x64 x (Const64 <t> [int64(uint16(c))]))
(Lsh16x8 <t> x (Const8 [c])) => (Lsh16x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh16x32 <t> x (Const32 [c])) => (Rsh16x64 x (Const64 <t> [int64(uint32(c))]))
(Rsh16x16 <t> x (Const16 [c])) => (Rsh16x64 x (Const64 <t> [int64(uint16(c))]))
(Rsh16x8 <t> x (Const8 [c])) => (Rsh16x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh16Ux32 <t> x (Const32 [c])) => (Rsh16Ux64 x (Const64 <t> [int64(uint32(c))]))
(Rsh16Ux16 <t> x (Const16 [c])) => (Rsh16Ux64 x (Const64 <t> [int64(uint16(c))]))
(Rsh16Ux8 <t> x (Const8 [c])) => (Rsh16Ux64 x (Const64 <t> [int64(uint8(c))]))

(Lsh8x32
<t> x (Const32 [c])) => (Lsh8x64 x (Const64 <t> [int64(uint32(c))]))
(Lsh8x16 <t> x (Const16 [c])) => (Lsh8x64 x (Const64 <t> [int64(uint16(c))]))
(Lsh8x8 <t> x (Const8 [c])) => (Lsh8x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh8x32 <t> x (Const32 [c])) => (Rsh8x64 x (Const64 <t> [int64(uint32(c))]))
(Rsh8x16 <t> x (Const16 [c])) => (Rsh8x64 x (Const64 <t> [int64(uint16(c))]))
(Rsh8x8 <t> x (Const8 [c])) => (Rsh8x64 x (Const64 <t> [int64(uint8(c))]))
(Rsh8Ux32 <t> x (Const32 [c])) => (Rsh8Ux64 x (Const64 <t> [int64(uint32(c))]))

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(Rsh8Ux16 <t> x (Const16 [c])) => (Rsh8Ux64 x (Const64 <t> [int64(uint16(c))]))
(Rsh8Ux8 <t> x (Const8 [c])) => (Rsh8Ux64 x (Const64 <t> [int64(uint8(c))]))

// shifts by zero
(Lsh(64|32|16|8)x64 x (Const64 [0])) => x
(Rsh(64|32|16|8)x64 x (Const64 [0])) => x
(Rsh(64|32|16|8)Ux64 x (Const64 [0])) => x

// rotates by multiples of register width
(RotateLeft64 x (Const64 [c])) && c%64 == 0 => x
(RotateLeft32 x (Const32 [c]))
&& c%32 == 0 => x
(RotateLeft16 x (Const16 [c])) && c%16 == 0 => x
(RotateLeft8 x (Const8 [c])) && c%8 == 0 => x

// zero shifted
(Lsh64x(64|32|16|8) (Const64 [0]) _) => (Const64 [0])
(Rsh64x(64|32|16|8) (Const64 [0]) _) => (Const64 [0])
(Rsh64Ux(64|32|16|8) (Const64 [0]) _) => (Const64 [0])
(Lsh32x(64|32|16|8) (Const32 [0]) _) => (Const32 [0])
(Rsh32x(64|32|16|8) (Const32 [0]) _) => (Const32 [0])
(Rsh32Ux(64|32|16|8) (Const32 [0]) _) => (Const32 [0])
(Lsh16x(64|32|16|8) (Const16 [0]) _) => (Const16 [0])
(Rsh16x(64|32|16|8) (Const16 [0]) _) => (Const16 [0])
(Rsh16Ux(64|32|16|8) (Const16 [0]) _) => (Const16 [0])
(Lsh8x(64|32|16|8) (Const8 [0]) _) => (Const8 [0])
(Rsh8x(64|32|16|8) (Const8 [0]) _) => (Const8 [0])
(Rsh8Ux(64|32|16|8) (Const8 [0]) _) => (Const8 [0])

// large left shifts of all values, and right shifts of unsigned values
((Lsh64|Rsh64U)x64 _ (Const64 [c])) && uint64(c) >= 64 => (Const64 [0])
((Lsh32|Rsh32U)x64 _ (Const64 [c])) && uint64(c) >= 32 => (Const32
[0])
((Lsh16|Rsh16U)x64 _ (Const64 [c])) && uint64(c) >= 16 => (Const16 [0])
((Lsh8|Rsh8U)x64 _ (Const64 [c])) && uint64(c) >= 8 => (Const8 [0])

// combine const shifts
(Lsh64x64 <t> (Lsh64x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Lsh64x64 x (Const64 <t> [c+d]))
(Lsh32x64 <t> (Lsh32x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Lsh32x64 x (Const64 <t> [c+d]))
(Lsh16x64 <t> (Lsh16x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Lsh16x64 x (Const64 <t> [c+d]))
(Lsh8x64 <t> (Lsh8x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Lsh8x64 x (Const64 <t> [c+d]))

(Rsh64x64 <t> (Rsh64x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh64x64 x (Const64 <t> [c+d]))
(Rsh32x64 <t> (Rsh32x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh32x64 x (Const64 <t> [c+d]))
(Rsh16x64 <t> (Rsh16x64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh16x64 x (Const64 <t> [c+d]))
(Rsh8x64 <t> (Rsh8x64 x (Const64 [c])) (Const64 [d]))
&& !uaddOvf(c,d) => (Rsh8x64 x (Const64 <t> [c+d]))

```

```

(Rsh64Ux64 <t> (Rsh64Ux64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh64Ux64 x (Const64 <t>
[c+d]))
(Rsh32Ux64 <t> (Rsh32Ux64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh32Ux64 x (Const64 <t>
[c+d]))
(Rsh16Ux64 <t> (Rsh16Ux64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh16Ux64 x (Const64 <t>
[c+d]))
(Rsh8Ux64 <t> (Rsh8Ux64 x (Const64 [c])) (Const64 [d])) && !uaddOvf(c,d) => (Rsh8Ux64 x (Const64 <t>
[c+d]))

```

```

// Remove signed right shift before an unsigned right shift that extracts the sign bit.

```

```

(Rsh8Ux64 (Rsh8x64 x _) (Const64 <t> [7] )) => (Rsh8Ux64 x (Const64 <t> [7] ))
(Rsh16Ux64 (Rsh16x64 x _) (Const64 <t> [15])) => (Rsh16Ux64 x (Const64 <t> [15]))
(Rsh32Ux64 (Rsh32x64 x _) (Const64 <t> [31])) => (Rsh32Ux64 x (Const64 <t> [31]))
(Rsh64Ux64 (Rsh64x64 x _) (Const64 <t> [63])) => (Rsh64Ux64 x (Const64 <t> [63]))

```

```

// ((x >> c1) << c2) >> c3

```

```

(Rsh(64|32|16|8)Ux64 (Lsh(64|32|16|8)x64 (Rsh(64|32|16|8)Ux64
x (Const64 [c1])) (Const64 [c2])) (Const64 [c3]))
&& uint64(c1) >= uint64(c2) && uint64(c3) >= uint64(c2) && !uaddOvf(c1-c2, c3)
=> (Rsh(64|32|16|8)Ux64 x (Const64 <typ.UInt64> [c1-c2+c3]))

```

```

// ((x << c1) >> c2) << c3

```

```

(Lsh(64|32|16|8)x64 (Rsh(64|32|16|8)Ux64 (Lsh(64|32|16|8)x64 x (Const64 [c1])) (Const64 [c2])) (Const64 [c3]))
&& uint64(c1) >= uint64(c2) && uint64(c3) >= uint64(c2) && !uaddOvf(c1-c2, c3)
=> (Lsh(64|32|16|8)x64 x (Const64 <typ.UInt64> [c1-c2+c3]))

```

```

// (x >> c) & uppermask = 0

```

```

(And64 (Const64 [m]) (Rsh64Ux64 _ (Const64 [c])) && c >= int64(64-ntz64(m)) => (Const64 [0])
(And32 (Const32 [m]) (Rsh32Ux64 _ (Const64 [c])) && c >= int64(32-ntz32(m)) => (Const32 [0])
(And16 (Const16 [m]) (Rsh16Ux64 _ (Const64 [c])) && c >= int64(16-ntz16(m)) => (Const16 [0])
(And8 (Const8 [m]) (Rsh8Ux64 _ (Const64 [c])) && c >= int64(8-ntz8(m)) => (Const8 [0])

```

```

// (x << c) & lowermask = 0

```

```

(And64 (Const64 [m]) (Lsh64x64 _ (Const64 [c])) && c >= int64(64-nlz64(m)) =>
(Const64 [0])
(And32 (Const32 [m]) (Lsh32x64 _ (Const64 [c])) && c >= int64(32-nlz32(m)) => (Const32 [0])
(And16 (Const16 [m]) (Lsh16x64 _ (Const64 [c])) && c >= int64(16-nlz16(m)) => (Const16 [0])
(And8 (Const8 [m]) (Lsh8x64 _ (Const64 [c])) && c >= int64(8-nlz8(m)) => (Const8 [0])

```

```

// replace shifts with zero extensions

```

```

(Rsh16Ux64 (Lsh16x64 x (Const64 [8])) (Const64 [8])) => (ZeroExt8to16 (Trunc16to8 <typ.UInt8> x))
(Rsh32Ux64 (Lsh32x64 x (Const64 [24])) (Const64 [24])) => (ZeroExt8to32 (Trunc32to8 <typ.UInt8> x))
(Rsh64Ux64 (Lsh64x64 x (Const64 [56])) (Const64 [56])) => (ZeroExt8to64 (Trunc64to8 <typ.UInt8> x))
(Rsh32Ux64 (Lsh32x64 x (Const64 [16])) (Const64 [16])) => (ZeroExt16to32 (Trunc32to16 <typ.UInt16> x))
(Rsh64Ux64 (Lsh64x64 x (Const64 [48])) (Const64 [48])) => (ZeroExt16to64 (Trunc64to16 <typ.UInt16> x))
(Rsh64Ux64 (Lsh64x64 x (Const64 [32])) (Const64 [32])) => (ZeroExt32to64 (Trunc64to32 <typ.UInt32> x))

```

```

// replace shifts with sign extensions

```

```

(Rsh16x64
(Lsh16x64 x (Const64 [8])) (Const64 [8])) => (SignExt8to16 (Trunc16to8 <typ.Int8> x))
(Rsh32x64 (Lsh32x64 x (Const64 [24])) (Const64 [24])) => (SignExt8to32 (Trunc32to8 <typ.Int8> x))
(Rsh64x64 (Lsh64x64 x (Const64 [56])) (Const64 [56])) => (SignExt8to64 (Trunc64to8 <typ.Int8> x))
(Rsh32x64 (Lsh32x64 x (Const64 [16])) (Const64 [16])) => (SignExt16to32 (Trunc32to16 <typ.Int16> x))
(Rsh64x64 (Lsh64x64 x (Const64 [48])) (Const64 [48])) => (SignExt16to64 (Trunc64to16 <typ.Int16> x))
(Rsh64x64 (Lsh64x64 x (Const64 [32])) (Const64 [32])) => (SignExt32to64 (Trunc64to32 <typ.Int32> x))

// constant comparisons
(Eq(64|32|16|8) (Const(64|32|16|8) [c]) (Const(64|32|16|8) [d])) => (ConstBool [c == d])
(Neq(64|32|16|8) (Const(64|32|16|8) [c]) (Const(64|32|16|8) [d])) => (ConstBool [c != d])
(Less(64|32|16|8) (Const(64|32|16|8) [c]) (Const(64|32|16|8) [d])) => (ConstBool [c < d])
(Leq(64|32|16|8) (Const(64|32|16|8) [c]) (Const(64|32|16|8) [d])) => (ConstBool [c <= d])

(Less64U (Const64
[c]) (Const64 [d])) => (ConstBool [uint64(c) < uint64(d)])
(Less32U (Const32 [c]) (Const32 [d])) => (ConstBool [uint32(c) < uint32(d)])
(Less16U (Const16 [c]) (Const16 [d])) => (ConstBool [uint16(c) < uint16(d)])
(Less8U (Const8 [c]) (Const8 [d])) => (ConstBool [uint8(c) < uint8(d)])

(Leq64U (Const64 [c]) (Const64 [d])) => (ConstBool [uint64(c) <= uint64(d)])
(Leq32U (Const32 [c]) (Const32 [d])) => (ConstBool [uint32(c) <= uint32(d)])
(Leq16U (Const16 [c]) (Const16 [d])) => (ConstBool [uint16(c) <= uint16(d)])
(Leq8U (Const8 [c]) (Const8 [d])) => (ConstBool [uint8(c) <= uint8(d)])

(Leq8 (Const8 [0]) (And8 _ (Const8 [c]))) && c >= 0 => (ConstBool [true])
(Leq16 (Const16 [0]) (And16 _ (Const16 [c]))) && c >= 0 => (ConstBool [true])
(Leq32 (Const32 [0]) (And32 _ (Const32 [c]))) && c >= 0 => (ConstBool [true])
(Leq64 (Const64 [0]) (And64 _ (Const64 [c]))) && c >= 0 => (ConstBool [true])

(Leq8 (Const8 [0]) (Rsh8Ux64 _ (Const64 [c]))) && c > 0 => (ConstBool [true])
(Leq16
(Const16 [0]) (Rsh16Ux64 _ (Const64 [c]))) && c > 0 => (ConstBool [true])
(Leq32 (Const32 [0]) (Rsh32Ux64 _ (Const64 [c]))) && c > 0 => (ConstBool [true])
(Leq64 (Const64 [0]) (Rsh64Ux64 _ (Const64 [c]))) && c > 0 => (ConstBool [true])

(Less(64|32|16|8) (Const(64|32|16|8) <t> [0]) x) && isNonNegative(x) => (Neq(64|32|16|8) (Const(64|32|16|8) <t>
[0]) x)
(Less(64|32|16|8) x (Const(64|32|16|8) <t> [1])) && isNonNegative(x) => (Eq(64|32|16|8) (Const(64|32|16|8) <t>
[0]) x)

// constant floating point comparisons
(Eq32F (Const32F [c]) (Const32F [d])) => (ConstBool [c == d])
(Eq64F (Const64F [c]) (Const64F [d])) => (ConstBool [c == d])
(Neq32F (Const32F [c]) (Const32F [d])) => (ConstBool [c != d])
(Neq64F (Const64F [c]) (Const64F [d])) => (ConstBool [c != d])
(Less32F (Const32F [c]) (Const32F [d])) => (ConstBool [c < d])
(Less64F (Const64F [c]) (Const64F [d])) => (ConstBool [c < d])

```

```

(Leq32F (Const32F [c]) (Const32F [d])) => (ConstBool [c <= d])
(Leq64F (Const64F [c]) (Const64F
[d])) => (ConstBool [c <= d])

// simplifications
(Or(64|32|16|8) x x) => x
(Or(64|32|16|8) (Const(64|32|16|8) [0]) x) => x
(Or(64|32|16|8) (Const(64|32|16|8) [-1]) _) => (Const(64|32|16|8) [-1])
(Or(64|32|16|8) (Com(64|32|16|8) x) x) => (Const(64|32|16|8) [-1])

(And(64|32|16|8) x x) => x
(And(64|32|16|8) (Const(64|32|16|8) [-1]) x) => x
(And(64|32|16|8) (Const(64|32|16|8) [0]) _) => (Const(64|32|16|8) [0])
(And(64|32|16|8) (Com(64|32|16|8) x) x) => (Const(64|32|16|8) [0])

(Xor(64|32|16|8) x x) => (Const(64|32|16|8) [0])
(Xor(64|32|16|8) (Const(64|32|16|8) [0]) x) => x
(Xor(64|32|16|8) (Com(64|32|16|8) x) x) => (Const(64|32|16|8) [-1])

(Add(64|32|16|8) (Const(64|32|16|8) [0]) x) => x
(Sub(64|32|16|8) x x) => (Const(64|32|16|8) [0])
(Mul(64|32|16|8) (Const(64|32|16|8) [0]) _) => (Const(64|32|16|8) [0])

(Com(64|32|16|8) (Com(64|32|16|8) x)) => x
(Com(64|32|16|8) (Const(64|32|16|8) [c])) => (Const(64|32|16|8) [^c])

(Neg(64|32|16|8) (Sub(64|32|16|8) x y)) => (Sub(64|32|16|8)
y x)
(Add(64|32|16|8) x (Neg(64|32|16|8) y)) => (Sub(64|32|16|8) x y)

(Xor(64|32|16|8) (Const(64|32|16|8) [-1]) x) => (Com(64|32|16|8) x)

(Sub(64|32|16|8) (Neg(64|32|16|8) x) (Com(64|32|16|8) x)) => (Const(64|32|16|8) [1])
(Sub(64|32|16|8) (Com(64|32|16|8) x) (Neg(64|32|16|8) x)) => (Const(64|32|16|8) [-1])
(Add(64|32|16|8) (Com(64|32|16|8) x) x) => (Const(64|32|16|8) [-1])

// ^(x-1) == ^x+1 == -x
(Add(64|32|16|8) (Const(64|32|16|8) [1]) (Com(64|32|16|8) x)) => (Neg(64|32|16|8) x)
(Com(64|32|16|8) (Add(64|32|16|8) (Const(64|32|16|8) [-1]) x)) => (Neg(64|32|16|8) x)

// -(-x) == x
(Neg(64|32|16|8) (Neg(64|32|16|8) x)) => x

// -^x == x+1
(Neg(64|32|16|8) <t> (Com(64|32|16|8) x)) => (Add(64|32|16|8) (Const(64|32|16|8) <t> [1]) x)

(And(64|32|16|8) x (And(64|32|16|8) x y)) => (And(64|32|16|8) x y)
(Or(64|32|16|8) x (Or(64|32|16|8) x y)) => (Or(64|32|16|8) x y)

```

```

(Xor(64|32|16|8) x (Xor(64|32|16|8) x y)) => y

// Unsigned comparisons to zero.
(Less(64U|32U|16U|8U)
 _ (Const(64|32|16|8) [0])) => (ConstBool [false])
(Leq(64U|32U|16U|8U) (Const(64|32|16|8) [0]) _) => (ConstBool [true])

// Ands clear bits. Ors set bits.
// If a subsequent Or will set all the bits
// that an And cleared, we can skip the And.
// This happens in bitmasking code like:
// x ^= 3 << shift // clear two old bits
// x |= v << shift // set two new bits
// when shift is a small constant and v ends up a constant 3.
(Or8 (And8 x (Const8 [c2])) (Const8 <t> [c1])) && ^ (c1 | c2) == 0 => (Or8 (Const8 <t> [c1]) x)
(Or16 (And16 x (Const16 [c2])) (Const16 <t> [c1])) && ^ (c1 | c2) == 0 => (Or16 (Const16 <t> [c1]) x)
(Or32 (And32 x (Const32 [c2])) (Const32 <t> [c1])) && ^ (c1 | c2) == 0 => (Or32 (Const32 <t> [c1]) x)
(Or64 (And64 x (Const64 [c2])) (Const64 <t> [c1])) && ^ (c1 | c2) == 0 => (Or64 (Const64 <t> [c1]) x)

(Trunc64to8 (And64 (Const64 [y]) x)) && y&0xFF == 0xFF => (Trunc64to8 x)
(Trunc64to16 (And64 (Const64 [y]) x)) && y&0xFFFF == 0xFFFF => (Trunc64to16 x)
(Trunc64to32
 (And64 (Const64 [y]) x)) && y&0xFFFFFFFF == 0xFFFFFFFF => (Trunc64to32 x)
(Trunc32to8 (And32 (Const32 [y]) x)) && y&0xFF == 0xFF => (Trunc32to8 x)
(Trunc32to16 (And32 (Const32 [y]) x)) && y&0xFFFF == 0xFFFF => (Trunc32to16 x)
(Trunc16to8 (And16 (Const16 [y]) x)) && y&0xFF == 0xFF => (Trunc16to8 x)

(ZeroExt8to64 (Trunc64to8 x:(Rsh64Ux64 _ (Const64 [s]))) && s >= 56 => x
(ZeroExt16to64 (Trunc64to16 x:(Rsh64Ux64 _ (Const64 [s]))) && s >= 48 => x
(ZeroExt32to64 (Trunc64to32 x:(Rsh64Ux64 _ (Const64 [s]))) && s >= 32 => x
(ZeroExt8to32 (Trunc32to8 x:(Rsh32Ux64 _ (Const64 [s]))) && s >= 24 => x
(ZeroExt16to32 (Trunc32to16 x:(Rsh32Ux64 _ (Const64 [s]))) && s >= 16 => x
(ZeroExt8to16 (Trunc16to8 x:(Rsh16Ux64 _ (Const64 [s]))) && s >= 8 => x

(SignExt8to64 (Trunc64to8 x:(Rsh64x64 _ (Const64 [s]))) && s >= 56 => x
(SignExt16to64 (Trunc64to16 x:(Rsh64x64 _ (Const64 [s]))) && s >= 48 => x
(SignExt32to64 (Trunc64to32 x:(Rsh64x64 _ (Const64 [s]))) && s >= 32 => x
(SignExt8to32
 (Trunc32to8 x:(Rsh32x64 _ (Const64 [s]))) && s >= 24 => x
(SignExt16to32 (Trunc32to16 x:(Rsh32x64 _ (Const64 [s]))) && s >= 16 => x
(SignExt8to16 (Trunc16to8 x:(Rsh16x64 _ (Const64 [s]))) && s >= 8 => x

(Slicemask (Const32 [x])) && x > 0 => (Const32 [-1])
(Slicemask (Const32 [0])) => (Const32 [0])
(Slicemask (Const64 [x])) && x > 0 => (Const64 [-1])
(Slicemask (Const64 [0])) => (Const64 [0])

// simplifications often used for lengths. e.g. len(s[i:i+5])==5

```

```

(Sub(64|32|16|8) (Add(64|32|16|8) x y) x) => y
(Sub(64|32|16|8) (Add(64|32|16|8) x y) y) => x
(Sub(64|32|16|8) (Sub(64|32|16|8) x y) x) => (Neg(64|32|16|8) y)
(Sub(64|32|16|8) x (Add(64|32|16|8) x y)) => (Neg(64|32|16|8) y)
(Add(64|32|16|8) x (Sub(64|32|16|8) y x)) => y
(Add(64|32|16|8) x (Add(64|32|16|8) y (Sub(64|32|16|8) z x))) => (Add(64|32|16|8) y z)

// basic phi simplifications
(Phi (Const8 [c]) (Const8 [c])) => (Const8 [c])
(Phi (Const16 [c]) (Const16 [c])) => (Const16 [c])
(Phi (Const32
[c]) (Const32 [c])) => (Const32 [c])
(Phi (Const64 [c]) (Const64 [c])) => (Const64 [c])

// slice and interface comparisons
// The frontend ensures that we can only compare against nil,
// so we need only compare the first word (interface type or slice ptr).
(EqInter x y) => (EqPtr (ITab x) (ITab y))
(NeqInter x y) => (NeqPtr (ITab x) (ITab y))
(EqSlice x y) => (EqPtr (SlicePtr x) (SlicePtr y))
(NeqSlice x y) => (NeqPtr (SlicePtr x) (SlicePtr y))

// Load of store of same address, with compatibly typed value and same size
(Load <t1> p1 (Store {t2} p2 x _))
&& isSamePtr(p1, p2)
&& t1.Compare(x.Type) == types.CMPEq
&& t1.Size() == t2.Size()
=> x
(Load <t1> p1 (Store {t2} p2 _ (Store {t3} p3 x _)))
&& isSamePtr(p1, p3)
&& t1.Compare(x.Type) == types.CMPEq
&& t1.Size() == t2.Size()
&& disjoint(p3, t3.Size(), p2, t2.Size())
=> x
(Load <t1> p1 (Store {t2} p2 _ (Store {t3} p3 _ (Store {t4} p4 x _))))
&& isSamePtr(p1, p4)
&& t1.Compare(x.Type) == types.CMPEq
&& t1.Size() == t2.Size()
&&
disjoint(p4, t4.Size(), p2, t2.Size())
&& disjoint(p4, t4.Size(), p3, t3.Size())
=> x
(Load <t1> p1 (Store {t2} p2 _ (Store {t3} p3 _ (Store {t4} p4 _ (Store {t5} p5 x _))))
&& isSamePtr(p1, p5)
&& t1.Compare(x.Type) == types.CMPEq
&& t1.Size() == t2.Size()
&& disjoint(p5, t5.Size(), p2, t2.Size())
&& disjoint(p5, t5.Size(), p3, t3.Size())

```



```

&& disjoint(p5, t5.Size(), p4, t4.Size())
=> x

// Pass constants through math.Float{32,64}bits and math.Float{32,64}frombits
  (Load <t1> p1 (Store {t2} p2 (Const64 [x] _)) && isSamePtr(p1,p2) && sizeof(t2) == 8 && is64BitFloat(t1)
&& !math.IsNaN(math.Float64frombits(uint64(x))) => (Const64F [math.Float64frombits(uint64(x))])
  (Load <t1> p1 (Store {t2} p2 (Const32 [x] _)) && isSamePtr(p1,p2) && sizeof(t2) == 4 && is32BitFloat(t1)
&& !math.IsNaN(float64(math.Float32frombits(uint32(x)))) => (Const32F [math.Float32frombits(uint32(x))])
(Load <t1> p1 (Store {t2} p2 (Const64F [x] _)) && isSamePtr(p1,p2) && sizeof(t2)
== 8 && is64BitInt(t1) => (Const64 [int64(math.Float64bits(x))])
(Load <t1> p1 (Store {t2} p2 (Const32F [x] _)) && isSamePtr(p1,p2) && sizeof(t2) == 4 && is32BitInt(t1) =>
(Const32 [int32(math.Float32bits(x))])

// Float Loads up to Zeros so they can be constant folded.
(Load <t1> op:(OffPtr [o1] p1)
(Store {t2} p2 _
 mem:(Zero [n] p3 _))
&& o1 >= 0 && o1+t1.Size() <= n && isSamePtr(p1, p3)
&& fe.CanSSA(t1)
&& disjoint(op, t1.Size(), p2, t2.Size())
=> @mem.Block (Load <t1> (OffPtr <op.Type> [o1] p3) mem)
(Load <t1> op:(OffPtr [o1] p1)
(Store {t2} p2 _
(Store {t3} p3 _
 mem:(Zero [n] p4 _))))
&& o1 >= 0 && o1+t1.Size() <= n && isSamePtr(p1, p4)
&& fe.CanSSA(t1)
&& disjoint(op, t1.Size(), p2, t2.Size())
&& disjoint(op, t1.Size(), p3, t3.Size())
=> @mem.Block (Load <t1> (OffPtr <op.Type> [o1] p4) mem)
(Load <t1> op:(OffPtr [o1] p1)
(Store {t2} p2 _
(Store {t3} p3 _
(Store {t4} p4 _
 mem:(Zero [n] p5 _))))
&& o1 >= 0 && o1+t1.Size() <= n && isSamePtr(p1,
p5)
&& fe.CanSSA(t1)
&& disjoint(op, t1.Size(), p2, t2.Size())
&& disjoint(op, t1.Size(), p3, t3.Size())
&& disjoint(op, t1.Size(), p4, t4.Size())
=> @mem.Block (Load <t1> (OffPtr <op.Type> [o1] p5) mem)
(Load <t1> op:(OffPtr [o1] p1)
(Store {t2} p2 _
(Store {t3} p3 _
(Store {t4} p4 _
(Store {t5} p5 _
 mem:(Zero [n] p6 _))))))

```

```

&& o1 >= 0 && o1+t1.Size() <= n && isSamePtr(p1, p6)
&& fe.CanSSA(t1)
&& disjoint(op, t1.Size(), p2, t2.Size())
&& disjoint(op, t1.Size(), p3, t3.Size())
&& disjoint(op, t1.Size(), p4, t4.Size())
&& disjoint(op, t1.Size(), p5, t5.Size())
=> @mem.Block (Load <t1> (OffPtr <op.Type> [o1] p6) mem)

// Zero to Load forwarding.
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& t1.IsBoolean()
&& isSamePtr(p1, p2)
&& n >= o + 1
=> (ConstBool [false])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is8BitInt(t1)
&& isSamePtr(p1, p2)
&& n >= o + 1
=> (Const8 [0])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is16BitInt(t1)
&& isSamePtr(p1,
p2)
&& n >= o + 2
=> (Const16 [0])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is32BitInt(t1)
&& isSamePtr(p1, p2)
&& n >= o + 4
=> (Const32 [0])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is64BitInt(t1)
&& isSamePtr(p1, p2)
&& n >= o + 8
=> (Const64 [0])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is32BitFloat(t1)
&& isSamePtr(p1, p2)
&& n >= o + 4
=> (Const32F [0])
(Load <t1> (OffPtr [o] p1) (Zero [n] p2 _))
&& is64BitFloat(t1)
&& isSamePtr(p1, p2)
&& n >= o + 8
=> (Const64F [0])

// Eliminate stores of values that have just been loaded from the same location.
// We also handle the common case where there are some intermediate stores.

```

```

(Store {t1} p1 (Load <t2> p2 mem) mem)
  && isSamePtr(p1, p2)
  && t2.Size() == t1.Size()
=> mem
(Store {t1} p1 (Load <t2> p2 oldmem) mem:(Store {t3} p3 _ oldmem))
  && isSamePtr(p1, p2)
  && t2.Size() == t1.Size()
  && disjoint(p1, t1.Size(), p3, t3.Size())
=> mem
(Store {t1} p1 (Load <t2> p2 oldmem) mem:(Store {t3} p3 _ (Store
  {t4} p4 _ oldmem)))
  && isSamePtr(p1, p2)
  && t2.Size() == t1.Size()
  && disjoint(p1, t1.Size(), p3, t3.Size())
  && disjoint(p1, t1.Size(), p4, t4.Size())
=> mem
(Store {t1} p1 (Load <t2> p2 oldmem) mem:(Store {t3} p3 _ (Store {t4} p4 _ (Store {t5} p5 _ oldmem))))
  && isSamePtr(p1, p2)
  && t2.Size() == t1.Size()
  && disjoint(p1, t1.Size(), p3, t3.Size())
  && disjoint(p1, t1.Size(), p4, t4.Size())
  && disjoint(p1, t1.Size(), p5, t5.Size())
=> mem

// Don't Store zeros to cleared variables.
(Store {t} (OffPtr [o] p1) x mem:(Zero [n] p2 _))
  && isConstZero(x)
  && o >= 0 && t.Size() + o <= n && isSamePtr(p1, p2)
=> mem
(Store {t1} op:(OffPtr [o1] p1) x mem:(Store {t2} p2 _ (Zero [n] p3 _)))
  && isConstZero(x)
  && o1 >= 0 && t1.Size() + o1 <= n && isSamePtr(p1, p3)
  && disjoint(op, t1.Size(), p2, t2.Size())
=> mem
(Store {t1} op:(OffPtr [o1] p1) x mem:(Store {t2} p2 _ (Store {t3} p3 _ (Zero [n] p4 _))))
  && isConstZero(x)
  && o1 >= 0 && t1.Size() + o1 <= n && isSamePtr(p1, p4)
  && disjoint(op,
  t1.Size(), p2, t2.Size())
  && disjoint(op, t1.Size(), p3, t3.Size())
=> mem
(Store {t1} op:(OffPtr [o1] p1) x mem:(Store {t2} p2 _ (Store {t3} p3 _ (Store {t4} p4 _ (Zero [n] p5 _)))))
  && isConstZero(x)
  && o1 >= 0 && t1.Size() + o1 <= n && isSamePtr(p1, p5)
  && disjoint(op, t1.Size(), p2, t2.Size())
  && disjoint(op, t1.Size(), p3, t3.Size())
  && disjoint(op, t1.Size(), p4, t4.Size())
=> mem

```

```

// Collapse OffPtr
(OffPtr (OffPtr p [y]) [x]) => (OffPtr p [x+y])
(OffPtr p [0]) && v.Type.Compare(p.Type) == types.CMPeq => p

// indexing operations
// Note: bounds check has already been done
(PtrIndex <t> ptr idx) && config.PtrSize == 4 && is32Bit(t.Elem().Size()) => (AddPtr ptr (Mul32 <typ.Int> idx
(Const32 <typ.Int> [int32(t.Elem().Size())]))
(PtrIndex <t> ptr idx) && config.PtrSize == 8 => (AddPtr ptr (Mul64 <typ.Int> idx (Const64 <typ.Int>
[t.Elem().Size()])))

// struct operations
(StructSelect (StructMake1 x)) => x
(StructSelect [0] (StructMake2 x _)) => x
(StructSelect
 [1] (StructMake2 _ x)) => x
(StructSelect [0] (StructMake3 x _ _)) => x
(StructSelect [1] (StructMake3 _ x _)) => x
(StructSelect [2] (StructMake3 _ _ x)) => x
(StructSelect [0] (StructMake4 x _ _ _)) => x
(StructSelect [1] (StructMake4 _ x _ _)) => x
(StructSelect [2] (StructMake4 _ _ x _)) => x
(StructSelect [3] (StructMake4 _ _ _ x)) => x

(Load <t> _ _) && t.IsStruct() && t.NumFields() == 0 && fe.CanSSA(t) =>
(StructMake0)
(Load <t> ptr mem) && t.IsStruct() && t.NumFields() == 1 && fe.CanSSA(t) =>
(StructMake1
 (Load <t.FieldType(0)> (OffPtr <t.FieldType(0).PtrTo()> [0] ptr mem))
(Load <t> ptr mem) && t.IsStruct() && t.NumFields() == 2 && fe.CanSSA(t) =>
(StructMake2
 (Load <t.FieldType(0)> (OffPtr <t.FieldType(0).PtrTo()> [0] ptr mem)
 (Load <t.FieldType(1)> (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] ptr mem))
(Load <t> ptr mem) && t.IsStruct() && t.NumFields() == 3 && fe.CanSSA(t) =>
(StructMake3
 (Load <t.FieldType(0)> (OffPtr <t.FieldType(0).PtrTo()>
 [0] ptr mem)
 (Load <t.FieldType(1)> (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] ptr mem)
 (Load <t.FieldType(2)> (OffPtr <t.FieldType(2).PtrTo()> [t.FieldOff(2)] ptr mem))
(Load <t> ptr mem) && t.IsStruct() && t.NumFields() == 4 && fe.CanSSA(t) =>
(StructMake4
 (Load <t.FieldType(0)> (OffPtr <t.FieldType(0).PtrTo()> [0] ptr mem)
 (Load <t.FieldType(1)> (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] ptr mem)
 (Load <t.FieldType(2)> (OffPtr <t.FieldType(2).PtrTo()> [t.FieldOff(2)] ptr mem)
 (Load <t.FieldType(3)> (OffPtr <t.FieldType(3).PtrTo()> [t.FieldOff(3)] ptr mem))

(StructSelect [i] x:(Load <t> ptr mem)) && !fe.CanSSA(t) =>

```

```
@x.Block (Load <v.Type> (OffPtr <v.Type.PtrTo()> [t.FieldOff(int(i))] ptr) mem)
```

```
(Store _ (StructMake0 mem) => mem  
(Store dst (StructMake1 <t> f0) mem) =>  
(Store {t.FieldType(0)} (OffPtr <t.FieldType(0).PtrTo()> [0] dst) f0 mem)  
(Store dst (StructMake2 <t> f0 f1) mem) =>  
(Store {t.FieldType(1)}  
  (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] dst)  
  f1  
(Store {t.FieldType(0)}  
  (OffPtr <t.FieldType(0).PtrTo()> [0] dst)  
  f0 mem))  
(Store dst (StructMake3 <t> f0 f1 f2) mem) =>  
(Store {t.FieldType(2)}  
  (OffPtr <t.FieldType(2).PtrTo()> [t.FieldOff(2)] dst)  
  f2  
(Store {t.FieldType(1)}  
  (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] dst)  
  f1  
(Store {t.FieldType(0)}  
  (OffPtr <t.FieldType(0).PtrTo()> [0] dst)  
  f0 mem)))  
(Store dst (StructMake4 <t> f0 f1 f2 f3) mem) =>  
(Store {t.FieldType(3)}  
  (OffPtr <t.FieldType(3).PtrTo()> [t.FieldOff(3)] dst)  
  f3  
(Store {t.FieldType(2)}  
  (OffPtr <t.FieldType(2).PtrTo()> [t.FieldOff(2)] dst)  
  f2  
(Store {t.FieldType(1)}  
  (OffPtr <t.FieldType(1).PtrTo()> [t.FieldOff(1)] dst)  
  f1  
(Store {t.FieldType(0)}  
  (OffPtr <t.FieldType(0).PtrTo()> [0] dst)  
  f0 mem))))
```

```
// Putting struct{*byte} and similar into direct  
interfaces.
```

```
(IMake _typ (StructMake1 val)) => (IMake _typ val)  
(StructSelect [0] (IData x)) => (IData x)
```

```
// un-SSAable values use mem->mem copies  
(Store {t} dst (Load src mem) mem) && !fe.CanSSA(t) =>  
(Move {t} [t.Size()] dst src mem)  
(Store {t} dst (Load src mem) (VarDef {x} mem)) && !fe.CanSSA(t) =>  
(Move {t} [t.Size()] dst src (VarDef {x} mem))
```

```
// array ops
```

```

(ArraySelect (ArrayMake1 x)) => x

(Load <t> _ _) && t.IsArray() && t.NumElem() == 0 =>
(ArrayMake0)

(Load <t> ptr mem) && t.IsArray() && t.NumElem() == 1 && fe.CanSSA(t) =>
(ArrayMake1 (Load <t.Elem()> ptr mem))

(Store _ (ArrayMake0) mem) => mem
(Store dst (ArrayMake1 e) mem) => (Store {e.Type} dst e mem)

// Putting [1]*byte and similar into direct interfaces.
(IMake _typ (ArrayMake1 val)) => (IMake _typ val)
(ArraySelect [0] (IData x)) => (IData x)

// string ops
// Decomposing StringMake and lowering of StringPtr and StringLen
// happens in a later pass, dec, so that these operations are available
// to other passes
for optimizations.
(StringPtr (StringMake (Addr <t> {s} base) _)) => (Addr <t> {s} base)
(StringLen (StringMake _ (Const64 <t> [c]))) => (Const64 <t> [c])
(ConstString {str}) && config.PtrSize == 4 && str == "" =>
(StringMake (ConstNil) (Const32 <typ.Int> [0]))
(ConstString {str}) && config.PtrSize == 8 && str == "" =>
(StringMake (ConstNil) (Const64 <typ.Int> [0]))
(ConstString {str}) && config.PtrSize == 4 && str != "" =>
(StringMake
  (Addr <typ.BytePtr> {fe.StringData(str)})
  (SB))
  (Const32 <typ.Int> [int32(len(str))]))
(ConstString {str}) && config.PtrSize == 8 && str != "" =>
(StringMake
  (Addr <typ.BytePtr> {fe.StringData(str)})
  (SB))
  (Const64 <typ.Int> [int64(len(str))]))

// slice ops
// Only a few slice rules are provided here. See dec.rules for
// a more comprehensive set.
(SliceLen (SliceMake _ (Const64 <t> [c]) _)) => (Const64 <t> [c])
(SliceCap (SliceMake _ _ (Const64 <t> [c]))) => (Const64 <t> [c])
(SliceLen (SliceMake _ (Const32 <t> [c])
  _)) => (Const32 <t> [c])
(SliceCap (SliceMake _ _ (Const32 <t> [c]))) => (Const32 <t> [c])
(SlicePtr (SliceMake (SlicePtr x) _ _)) => (SlicePtr x)
(SliceLen (SliceMake _ (SliceLen x) _)) => (SliceLen x)
(SliceCap (SliceMake _ _ (SliceCap x))) => (SliceCap x)

```

```

(SliceCap (SliceMake _ _ (SliceLen x))) => (SliceLen x)
(ConstSlice) && config.PtrSize == 4 =>
(SliceMake
  (ConstNil <v.Type.Elem().PtrTo(>))
  (Const32 <typ.Int> [0])
  (Const32 <typ.Int> [0]))
(ConstSlice) && config.PtrSize == 8 =>
(SliceMake
  (ConstNil <v.Type.Elem().PtrTo(>))
  (Const64 <typ.Int> [0])
  (Const64 <typ.Int> [0]))

// interface ops
(ConstInterface) =>
(IMake
  (ConstNil <typ.Uintptr>)
  (ConstNil <typ.BytePtr>))

(NilCheck (GetG mem) mem) => mem

(If (Not cond) yes no) => (If cond no yes)
(If (ConstBool [c]) yes no) && c => (First yes no)
(If (ConstBool [c]) yes no) && !c => (First no yes)

// Get rid of Convert ops for pointer arithmetic on unsafe.Pointer.
(Convert (Add(64|32) (Convert ptr
  mem) off) mem) => (AddPtr ptr off)
(Convert (Convert ptr mem) mem) => ptr

// strength reduction of divide by a constant.
// See ../magic.go for a detailed description of these algorithms.

// Unsigned divide by power of 2. Strength reduce to a shift.
(Div8u n (Const8 [c])) && isPowerOfTwo8(c) => (Rsh8Ux64 n (Const64 <typ.UInt64> [log8(c))))
(Div16u n (Const16 [c])) && isPowerOfTwo16(c) => (Rsh16Ux64 n (Const64 <typ.UInt64> [log16(c))))
(Div32u n (Const32 [c])) && isPowerOfTwo32(c) => (Rsh32Ux64 n (Const64 <typ.UInt64> [log32(c))))
(Div64u n (Const64 [c])) && isPowerOfTwo64(c) => (Rsh64Ux64 n (Const64 <typ.UInt64> [log64(c))))
(Div64u n (Const64 [-1<<63])) => (Rsh64Ux64 n (Const64 <typ.UInt64> [63]))

// Signed non-negative divide by power of 2.
(Div8 n (Const8 [c])) && isNonNegative(n) && isPowerOfTwo8(c) => (Rsh8Ux64 n (Const64 <typ.UInt64>
[log8(c))))
(Div16 n (Const16 [c])) && isNonNegative(n) && isPowerOfTwo16(c) => (Rsh16Ux64 n (Const64 <typ.UInt64>
[log16(c))))
(Div32
  n (Const32 [c])) && isNonNegative(n) && isPowerOfTwo32(c) => (Rsh32Ux64 n (Const64 <typ.UInt64>
[log32(c))))
(Div64 n (Const64 [c])) && isNonNegative(n) && isPowerOfTwo64(c) => (Rsh64Ux64 n (Const64 <typ.UInt64>

```

```

[log64(c)])
(Div64 n (Const64 [-1<<63])) && isNonNegative(n)          => (Const64 [0])

// Unsigned divide, not a power of 2. Strength reduce to a multiply.
// For 8-bit divides, we just do a direct 9-bit by 8-bit multiply.
(Div8u x (Const8 [c])) && umagicOK8(c) =>
(Trunc32to8
 (Rsh32Ux64 <typ.UInt32>
  (Mul32 <typ.UInt32>
   (Const32 <typ.UInt32> [int32(1<<8+umagic8(c).m)])
   (ZeroExt8to32 x))
  (Const64 <typ.UInt64> [8+umagic8(c).s])))

// For 16-bit divides on 64-bit machines, we do a direct 17-bit by 16-bit multiply.
(Div16u x (Const16 [c])) && umagicOK16(c) && config.RegSize == 8 =>
(Trunc64to16
 (Rsh64Ux64 <typ.UInt64>
  (Mul64 <typ.UInt64>
   (Const64 <typ.UInt64> [int64(1<<16+umagic16(c).m)])
   (ZeroExt16to64
    x))
  (Const64 <typ.UInt64> [16+umagic16(c).s])))

// For 16-bit divides on 32-bit machines
(Div16u x (Const16 [c])) && umagicOK16(c) && config.RegSize == 4 && umagic16(c).m&1 == 0 =>
(Trunc32to16
 (Rsh32Ux64 <typ.UInt32>
  (Mul32 <typ.UInt32>
   (Const32 <typ.UInt32> [int32(1<<15+umagic16(c).m/2)])
   (ZeroExt16to32 x))
  (Const64 <typ.UInt64> [16+umagic16(c).s-1])))
(Div16u x (Const16 [c])) && umagicOK16(c) && config.RegSize == 4 && c&1 == 0 =>
(Trunc32to16
 (Rsh32Ux64 <typ.UInt32>
  (Mul32 <typ.UInt32>
   (Const32 <typ.UInt32> [int32(1<<15+(umagic16(c).m+1)/2)])
   (Rsh32Ux64 <typ.UInt32> (ZeroExt16to32 x) (Const64 <typ.UInt64> [1])))
  (Const64 <typ.UInt64> [16+umagic16(c).s-2])))
(Div16u x (Const16 [c])) && umagicOK16(c) && config.RegSize == 4 && config.useAvg =>
(Trunc32to16
 (Rsh32Ux64 <typ.UInt32>
  (Avg32u
   (Lsh32x64 <typ.UInt32> (ZeroExt16to32 x) (Const64 <typ.UInt64> [16]))
   (Mul32 <typ.UInt32>
    (Const32 <typ.UInt32> [int32(umagic16(c).m)])
    (ZeroExt16to32 x)))
  (Const64 <typ.UInt64> [16+umagic16(c).s-1])))

```



```

// For 32-bit divides on 32-bit machines
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 4 && umagic32(c).m&1 == 0 &&
config.useHmul =>
(Rsh32Ux64 <typ.UInt32>
(Hmul32u <typ.UInt32>
(Const32 <typ.UInt32> [int32(1<<31+umagic32(c).m/2)])
x)
(Const64 <typ.UInt64> [umagic32(c).s-1]))
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 4 && c&1 == 0 && config.useHmul =>
(Rsh32Ux64 <typ.UInt32>
(Hmul32u <typ.UInt32>
(Const32 <typ.UInt32> [int32(1<<31+(umagic32(c).m+1)/2)])
(Rsh32Ux64 <typ.UInt32> x (Const64 <typ.UInt64> [1])))
(Const64 <typ.UInt64> [umagic32(c).s-2]))
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 4 && config.useAvg && config.useHmul =>
(Rsh32Ux64 <typ.UInt32>
(Avg32u
x
(Hmul32u <typ.UInt32>
(Const32 <typ.UInt32> [int32(umagic32(c).m)])
x))
(Const64 <typ.UInt64> [umagic32(c).s-1]))

// For 32-bit divides on 64-bit machines
// We'll use a regular (non-hi) multiply for this case.
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 8 && umagic32(c).m&1 == 0 =>
(Trunc64to32
(Rsh64Ux64 <typ.UInt64>
(Mul64 <typ.UInt64>
(Const64 <typ.UInt64> [int64(1<<31+umagic32(c).m/2)])
(ZeroExt32to64 x))
(Const64 <typ.UInt64> [32+umagic32(c).s-1])))
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 8 && c&1 == 0 =>
(Trunc64to32
(Rsh64Ux64 <typ.UInt64>
(Mul64 <typ.UInt64>
(Const64 <typ.UInt64> [int64(1<<31+(umagic32(c).m+1)/2)])
(Rsh64Ux64 <typ.UInt64> (ZeroExt32to64 x) (Const64 <typ.UInt64> [1])))
(Const64 <typ.UInt64> [32+umagic32(c).s-2])))
(Div32u x (Const32 [c])) && umagicOK32(c) && config.RegSize == 8 && config.useAvg =>
(Trunc64to32
(Rsh64Ux64 <typ.UInt64>
(Avg64u
(Lsh64x64 <typ.UInt64> (ZeroExt32to64
x) (Const64 <typ.UInt64> [32])))
(Mul64 <typ.UInt64>
(Const64 <typ.UInt32> [int64(umagic32(c).m)])
(ZeroExt32to64 x)))

```

```

(Const64 <typ.UInt64> [32+umagic32(c).s-1]))

// For unsigned 64-bit divides on 32-bit machines,
// if the constant fits in 16 bits (so that the last term
// fits in 32 bits), convert to three 32-bit divides by a constant.
//
// If  $1 \ll 32 = Q * c + R$ 
// and  $x = hi \ll 32 + lo$ 
//
// Then  $x = (hi/c*c + hi\%c) \ll 32 + lo$ 
//  $= hi/c*c \ll 32 + hi\%c \ll 32 + lo$ 
//  $= hi/c*c \ll 32 + (hi\%c)*(Q*c+R) + lo/c*c + lo\%c$ 
//  $= hi/c*c \ll 32 + (hi\%c)*Q*c + lo/c*c + (hi\%c*R+lo\%c)$ 
// and  $x / c = (hi/c) \ll 32 + (hi\%c)*Q + lo/c + (hi\%c*R+lo\%c)/c$ 
(Div64u x (Const64 [c])) && c > 0 && c <= 0xFFFF && umagicOK32(int32(c)) && config.RegSize == 4 &&
config.useHmul =>
(Add64
(Add64 <typ.UInt64>
(Add64 <typ.UInt64>
(Lsh64x64 <typ.UInt64>
(ZeroExt32to64
(Div32u <typ.UInt32>
(Trunc64to32 <typ.UInt32> (Rsh64Ux64
<typ.UInt64> x (Const64 <typ.UInt64> [32])))
(Const32 <typ.UInt32> [int32(c))))
(Const64 <typ.UInt64> [32]))
(ZeroExt32to64 (Div32u <typ.UInt32> (Trunc64to32 <typ.UInt32> x) (Const32 <typ.UInt32> [int32(c))]))))
(Mul64 <typ.UInt64>
(ZeroExt32to64 <typ.UInt64>
(Mod32u <typ.UInt32>
(Trunc64to32 <typ.UInt32> (Rsh64Ux64 <typ.UInt64> x (Const64 <typ.UInt64> [32])))
(Const32 <typ.UInt32> [int32(c))]))
(Const64 <typ.UInt64> [int64((1<<32)/c))]))
(ZeroExt32to64
(Div32u <typ.UInt32>
(Add32 <typ.UInt32>
(Mod32u <typ.UInt32> (Trunc64to32 <typ.UInt32> x) (Const32 <typ.UInt32> [int32(c))]))
(Mul32 <typ.UInt32>
(Mod32u <typ.UInt32>
(Trunc64to32 <typ.UInt32> (Rsh64Ux64 <typ.UInt64> x (Const64 <typ.UInt64> [32])))
(Const32 <typ.UInt32> [int32(c))]))
(Const32 <typ.UInt32> [int32((1<<32)%c))]))

(Const32 <typ.UInt32> [int32(c))]))

// For 64-bit divides on 64-bit machines
// (64-bit divides on 32-bit machines are lowered to a runtime call by the walk pass.)
(Div64u x (Const64 [c])) && umagicOK64(c) && config.RegSize == 8 && umagic64(c).m&1 == 0 &&

```

```

config.useHmul =>
(Rsh64Ux64 <typ.UInt64>
  (Hmul64u <typ.UInt64>
    (Const64 <typ.UInt64> [int64(1<<63+umagic64(c).m/2)])
    x)
  (Const64 <typ.UInt64> [umagic64(c).s-1]))
(Div64u x (Const64 [c])) && umagicOK64(c) && config.RegSize == 8 && c&1 == 0 && config.useHmul =>
(Rsh64Ux64 <typ.UInt64>
  (Hmul64u <typ.UInt64>
    (Const64 <typ.UInt64> [int64(1<<63+(umagic64(c).m+1)/2)])
    (Rsh64Ux64 <typ.UInt64> x (Const64 <typ.UInt64> [1])))
  (Const64 <typ.UInt64> [umagic64(c).s-2]))
(Div64u x (Const64 [c])) && umagicOK64(c) && config.RegSize == 8 && config.useAvg && config.useHmul =>
(Rsh64Ux64 <typ.UInt64>
  (Avg64u
    x
    (Hmul64u <typ.UInt64>
      (Const64 <typ.UInt64> [int64(umagic64(c).m)])

      x))
  (Const64 <typ.UInt64> [umagic64(c).s-1]))

```

// Signed divide by a negative constant. Rewrite to divide by a positive constant.

```

(Div8 <t> n (Const8 [c])) && c < 0 && c != -1<<7 => (Neg8 (Div8 <t> n (Const8 <t> [-c])))
(Div16 <t> n (Const16 [c])) && c < 0 && c != -1<<15 => (Neg16 (Div16 <t> n (Const16 <t> [-c])))
(Div32 <t> n (Const32 [c])) && c < 0 && c != -1<<31 => (Neg32 (Div32 <t> n (Const32 <t> [-c])))
(Div64 <t> n (Const64 [c])) && c < 0 && c != -1<<63 => (Neg64 (Div64 <t> n (Const64 <t> [-c])))

```

// Dividing by the most-negative number. Result is always 0 except

// if the input is also the most-negative number.

// We can detect that using the sign bit of x & -x.

```

(Div8 <t> x (Const8 [-1<<7 ])) => (Rsh8Ux64 (And8 <t> x (Neg8 <t> x)) (Const64 <typ.UInt64> [7 ]))
(Div16 <t> x (Const16 [-1<<15 ])) => (Rsh16Ux64 (And16 <t> x (Neg16 <t> x)) (Const64 <typ.UInt64> [15 ]))
(Div32 <t> x (Const32 [-1<<31 ])) => (Rsh32Ux64 (And32 <t> x (Neg32 <t> x)) (Const64 <typ.UInt64>
[31 ]))
(Div64 <t> x (Const64 [-1<<63 ])) => (Rsh64Ux64 (And64 <t> x (Neg64 <t> x)) (Const64 <typ.UInt64> [63 ]))

```

// Signed divide by power of 2.

// n / c = n >> log(c) if n >= 0

// = (n+c-1) >> log(c) if n < 0

// We conditionally add c-1 by adding n>>63>>(64-log(c)) (first shift signed, second shift unsigned).

```

(Div8 <t> n (Const8 [c])) && isPowerOfTwo8(c) =>
(Rsh8x64
  (Add8 <t> n (Rsh8Ux64 <t> (Rsh8x64 <t> n (Const64 <typ.UInt64> [ 7 ])) (Const64 <typ.UInt64> [int64( 8-
log8(c))]))
  (Const64 <typ.UInt64> [int64(log8(c))]))
(Div16 <t> n (Const16 [c])) && isPowerOfTwo16(c) =>
(Rsh16x64

```

```

(Add16 <t> n (Rsh16Ux64 <t> (Rsh16x64 <t> n (Const64 <typ.UInt64> [15])) (Const64 <typ.UInt64> [int64(16-
log16(c))]))))
(Const64 <typ.UInt64> [int64(log16(c))])
(Div32 <t> n (Const32 [c])) && isPowerOfTwo32(c) =>
(Rsh32x64
(Add32 <t> n (Rsh32Ux64 <t> (Rsh32x64 <t> n (Const64 <typ.UInt64> [31])) (Const64 <typ.UInt64> [int64(32-
log32(c))]))))
(Const64 <typ.UInt64> [int64(log32(c))])
(Div64
<t> n (Const64 [c])) && isPowerOfTwo64(c) =>
(Rsh64x64
(Add64 <t> n (Rsh64Ux64 <t> (Rsh64x64 <t> n (Const64 <typ.UInt64> [63])) (Const64 <typ.UInt64> [int64(64-
log64(c))]))))
(Const64 <typ.UInt64> [int64(log64(c))])

// Signed divide, not a power of 2. Strength reduce to a multiply.
(Div8 <t> x (Const8 [c])) && smagicOK8(c) =>
(Sub8 <t>
(Rsh32x64 <t>
(Mul32 <typ.UInt32>
(Const32 <typ.UInt32> [int32(smagic8(c).m)])
(SignExt8to32 x)
(Const64 <typ.UInt64> [8+smagic8(c).s]))
(Rsh32x64 <t>
(SignExt8to32 x)
(Const64 <typ.UInt64> [31])))
(Div16 <t> x (Const16 [c])) && smagicOK16(c) =>
(Sub16 <t>
(Rsh32x64 <t>
(Mul32 <typ.UInt32>
(Const32 <typ.UInt32> [int32(smagic16(c).m)])
(SignExt16to32 x)
(Const64 <typ.UInt64> [16+smagic16(c).s]))
(Rsh32x64 <t>
(SignExt16to32 x)
(Const64 <typ.UInt64> [31])))
(Div32 <t> x (Const32 [c])) && smagicOK32(c) && config.RegSize
== 8 =>
(Sub32 <t>
(Rsh64x64 <t>
(Mul64 <typ.UInt64>
(Const64 <typ.UInt64> [int64(smagic32(c).m)])
(SignExt32to64 x)
(Const64 <typ.UInt64> [32+smagic32(c).s]))
(Rsh64x64 <t>
(SignExt32to64 x)
(Const64 <typ.UInt64> [63])))
(Div32 <t> x (Const32 [c])) && smagicOK32(c) && config.RegSize == 4 && smagic32(c).m&1 == 0 &&

```

```

config.useHmul =>
(Sub32 <t>
(Rsh32x64 <t>
(Hmul32 <t>
(Const32 <typ.UInt32> [int32(smagic32(c).m/2)])
x)
(Const64 <typ.UInt64> [smagic32(c).s-1]))
(Rsh32x64 <t>
x
(Const64 <typ.UInt64> [31])))
(Div32 <t> x (Const32 [c])) && smagicOK32(c) && config.RegSize == 4 && smagic32(c).m&1 != 0 &&
config.useHmul =>
(Sub32 <t>
(Rsh32x64 <t>
(Add32 <t>
(Hmul32 <t>
(Const32 <typ.UInt32> [int32(smagic32(c).m)])
x)
x)
(Const64 <typ.UInt64> [smagic32(c).s]))
(Rsh32x64 <t>
x
(Const64 <typ.UInt64> [31])))
(Div64 <t> x (Const64
[c])) && smagicOK64(c) && smagic64(c).m&1 == 0 && config.useHmul =>
(Sub64 <t>
(Rsh64x64 <t>
(Hmul64 <t>
(Const64 <typ.UInt64> [int64(smagic64(c).m/2)])
x)
(Const64 <typ.UInt64> [smagic64(c).s-1]))
(Rsh64x64 <t>
x
(Const64 <typ.UInt64> [63])))
(Div64 <t> x (Const64 [c])) && smagicOK64(c) && smagic64(c).m&1 != 0 && config.useHmul =>
(Sub64 <t>
(Rsh64x64 <t>
(Add64 <t>
(Hmul64 <t>
(Const64 <typ.UInt64> [int64(smagic64(c).m)])
x)
x)
(Const64 <typ.UInt64> [smagic64(c).s]))
(Rsh64x64 <t>
x
(Const64 <typ.UInt64> [63])))

```

// Unsigned mod by power of 2 constant.

```

(Mod8u <t> n (Const8 [c])) && isPowerOfTwo8(c) => (And8 n (Const8 <t> [c-1]))
(Mod16u <t> n (Const16 [c])) && isPowerOfTwo16(c) => (And16 n (Const16 <t> [c-1]))
(Mod32u <t> n (Const32 [c])) && isPowerOfTwo32(c) => (And32 n (Const32 <t> [c-1]))
(Mod64u <t> n (Const64 [c])) && isPowerOfTwo64(c) => (And64 n (Const64
<t> [c-1]))
(Mod64u <t> n (Const64 [-1<<63]))          => (And64 n (Const64 <t> [1<<63-1]))

// Signed non-negative mod by power of 2 constant.
(Mod8 <t> n (Const8 [c])) && isNonNegative(n) && isPowerOfTwo8(c) => (And8 n (Const8 <t> [c-1]))
(Mod16 <t> n (Const16 [c])) && isNonNegative(n) && isPowerOfTwo16(c) => (And16 n (Const16 <t> [c-1]))
(Mod32 <t> n (Const32 [c])) && isNonNegative(n) && isPowerOfTwo32(c) => (And32 n (Const32 <t> [c-1]))
(Mod64 <t> n (Const64 [c])) && isNonNegative(n) && isPowerOfTwo64(c) => (And64 n (Const64 <t> [c-1]))
(Mod64 n (Const64 [-1<<63])) && isNonNegative(n)          => n

// Signed mod by negative constant.
(Mod8 <t> n (Const8 [c])) && c < 0 && c != -1<<7 => (Mod8 <t> n (Const8 <t> [-c]))
(Mod16 <t> n (Const16 [c])) && c < 0 && c != -1<<15 => (Mod16 <t> n (Const16 <t> [-c]))
(Mod32 <t> n (Const32 [c])) && c < 0 && c != -1<<31 => (Mod32 <t> n (Const32 <t> [-c]))
(Mod64 <t> n (Const64 [c])) && c < 0 && c != -1<<63 => (Mod64 <t>
n (Const64 <t> [-c]))

// All other mods by constants, do A%B = A-(A/B*B).
// This implements % with two * and a bunch of ancillary ops.
// One of the * is free if the user's code also computes A/B.
(Mod8 <t> x (Const8 [c])) && x.Op != OpConst8 && (c > 0 || c == -1<<7)
=> (Sub8 x (Mul8 <t> (Div8 <t> x (Const8 <t> [c])) (Const8 <t> [c])))
(Mod16 <t> x (Const16 [c])) && x.Op != OpConst16 && (c > 0 || c == -1<<15)
=> (Sub16 x (Mul16 <t> (Div16 <t> x (Const16 <t> [c])) (Const16 <t> [c])))
(Mod32 <t> x (Const32 [c])) && x.Op != OpConst32 && (c > 0 || c == -1<<31)
=> (Sub32 x (Mul32 <t> (Div32 <t> x (Const32 <t> [c])) (Const32 <t> [c])))
(Mod64 <t> x (Const64 [c])) && x.Op != OpConst64 && (c > 0 || c == -1<<63)
=> (Sub64 x (Mul64 <t> (Div64 <t> x (Const64 <t> [c])) (Const64 <t> [c])))
(Mod8u <t> x (Const8 [c])) && x.Op != OpConst8 && c > 0 && umagicOK8(c)
=> (Sub8 x (Mul8 <t> (Div8u <t> x (Const8 <t> [c])) (Const8 <t> [c])))
(Mod16u <t> x (Const16 [c])) &&
x.Op != OpConst16 && c > 0 && umagicOK16(c)
=> (Sub16 x (Mul16 <t> (Div16u <t> x (Const16 <t> [c])) (Const16 <t> [c])))
(Mod32u <t> x (Const32 [c])) && x.Op != OpConst32 && c > 0 && umagicOK32(c)
=> (Sub32 x (Mul32 <t> (Div32u <t> x (Const32 <t> [c])) (Const32 <t> [c])))
(Mod64u <t> x (Const64 [c])) && x.Op != OpConst64 && c > 0 && umagicOK64(c)
=> (Sub64 x (Mul64 <t> (Div64u <t> x (Const64 <t> [c])) (Const64 <t> [c])))

// For architectures without rotates on less than 32-bits, promote these checks to 32-bit.
(Eq8 (Mod8u x (Const8 [c])) (Const8 [0])) && x.Op != OpConst8 && udivisibleOK8(c) &&
!hasSmallRotate(config) =>
(Eq32 (Mod32u <typ.UInt32> (ZeroExt8to32 <typ.UInt32> x) (Const32 <typ.UInt32> [int32(uint8(c))])) (Const32
<typ.UInt32> [0]))
(Eq16 (Mod16u x (Const16 [c])) (Const16 [0])) && x.Op != OpConst16 && udivisibleOK16(c) &&

```

```

!hasSmallRotate(config) =>
(Eq32 (Mod32u <typ.UInt32> (ZeroExt16to32 <typ.UInt32> x) (Const32 <typ.UInt32> [int32(uint16(c))]))
(Const32 <typ.UInt32>
[0]))
(Eq8 (Mod8 x (Const8 [c])) (Const8 [0])) && x.Op != OpConst8 && sdivisibleOK8(c) &&
!hasSmallRotate(config) =>
(Eq32 (Mod32 <typ.Int32> (SignExt8to32 <typ.Int32> x) (Const32 <typ.Int32> [int32(c)])) (Const32 <typ.Int32>
[0]))
(Eq16 (Mod16 x (Const16 [c])) (Const16 [0])) && x.Op != OpConst16 && sdivisibleOK16(c) &&
!hasSmallRotate(config) =>
(Eq32 (Mod32 <typ.Int32> (SignExt16to32 <typ.Int32> x) (Const32 <typ.Int32> [int32(c)])) (Const32 <typ.Int32>
[0]))

```

```

// Divisibility checks x%c == 0 convert to multiply and rotate.
// Note, x%c == 0 is rewritten as x == c*(x/c) during the opt pass
// where (x/c) is performed using multiplication with magic constants.
// To rewrite x%c == 0 requires pattern matching the rewritten expression
// and checking that the division by the same constant wasn't already calculated.
// This check is made by counting uses of the magic constant multiplication.
// Note that if there were an intermediate opt pass, this rule could be applied
// directly
on the Div op and magic division rewrites could be delayed to late opt.

```

```

// Unsigned divisibility checks convert to multiply and rotate.

```

```

(Eq8 x (Mul8 (Const8 [c])
(Trunc32to8
(Rsh32Ux64
mul:(Mul32
(Const32 [m])
(ZeroExt8to32 x)
(Const64 [s])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(1<<8+umagic8(c).m) && s == 8+umagic8(c).s
&& x.Op != OpConst8 && udivisibleOK8(c)
=> (Leq8U
(RotateLeft8 <typ.UInt8>
(Mul8 <typ.UInt8>
(Const8 <typ.UInt8> [int8(udivisible8(c).m)])
x)
(Const8 <typ.UInt8> [int8(8-udivisible8(c).k)])
)
(Const8 <typ.UInt8> [int8(udivisible8(c).max)])
)

```

```

(Eq16 x (Mul16 (Const16 [c])
(Trunc64to16

```

```

(Rsh64Ux64
  mul:(Mul64
    (Const64 [m])
    (ZeroExt16to64 x))
  (Const64 [s]))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(1<<16+umagic16(c).m) && s == 16+umagic16(c).s
&& x.Op != OpConst16 && udivisibleOK16(c)
=> (Leq16U
  (RotateLeft16
    <typ.UInt16>
    (Mul16 <typ.UInt16>
      (Const16 <typ.UInt16> [int16(udivisible16(c).m)])
      x)
    (Const16 <typ.UInt16> [int16(16-udivisible16(c).k)])
    )
  (Const16 <typ.UInt16> [int16(udivisible16(c).max)])
  )
)

(Eq16 x (Mul16 (Const16 [c])
  (Trunc32to16
    (Rsh32Ux64
      mul:(Mul32
        (Const32 [m])
        (ZeroExt16to32 x))
      (Const64 [s]))
    )
  )
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(1<<15+umagic16(c).m/2) && s == 16+umagic16(c).s-1
&& x.Op != OpConst16 && udivisibleOK16(c)
=> (Leq16U
  (RotateLeft16 <typ.UInt16>
    (Mul16 <typ.UInt16>
      (Const16 <typ.UInt16> [int16(udivisible16(c).m)])
      x)
    (Const16 <typ.UInt16> [int16(16-udivisible16(c).k)])
    )
  (Const16 <typ.UInt16> [int16(udivisible16(c).max)])
  )
)

(Eq16 x (Mul16 (Const16 [c])
  (Trunc32to16
    (Rsh32Ux64
      mul:(Mul32
        (Const32 [m])

```



```

    (Rsh32Ux64 (ZeroExt16to32 x) (Const64 [1])))
  (Const64 [s]))
)
)
&& v.Block.Func.pass.name
!= "opt" && mul.Uses == 1
&& m == int32(1<<15+(umagic16(c).m+1)/2) && s == 16+umagic16(c).s-2
&& x.Op != OpConst16 && udivisibleOK16(c)
=> (Leq16U
  (RotateLeft16 <typ.UInt16>
    (Mul16 <typ.UInt16>
      (Const16 <typ.UInt16> [int16(udivisible16(c).m)])
      x)
      (Const16 <typ.UInt16> [int16(16-udivisible16(c).k)])
    )
    (Const16 <typ.UInt16> [int16(udivisible16(c).max)])
  )
)

```

```

(Eq16 x (Mul16 (Const16 [c])
  (Trunc32to16
    (Rsh32Ux64
      (Avg32u
        (Lsh32x64 (ZeroExt16to32 x) (Const64 [16]))
        mul:(Mul32
          (Const32 [m])
          (ZeroExt16to32 x)))
        (Const64 [s]))
      )
    )
    && v.Block.Func.pass.name != "opt" && mul.Uses == 1
    && m == int32(umagic16(c).m) && s == 16+umagic16(c).s-1
    && x.Op != OpConst16 && udivisibleOK16(c)
  => (Leq16U
    (RotateLeft16 <typ.UInt16>
      (Mul16 <typ.UInt16>
        (Const16 <typ.UInt16> [int16(udivisible16(c).m)])
        x)
        (Const16 <typ.UInt16> [int16(16-udivisible16(c).k)])
      )
      (Const16 <typ.UInt16>
        [int16(udivisible16(c).max)])
    )
  )
)

```

```

(Eq32 x (Mul32 (Const32 [c])
  (Rsh32Ux64
    mul:(Hmul32u
      (Const32 [m])
      x)
    )
  )
)

```

```

(Const64 [s]))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(1<<31+umagic32(c).m/2) && s == umagic32(c).s-1
&& x.Op != OpConst32 && udivisibleOK32(c)
=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32 <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )
)

(Eq32 x (Mul32 (Const32 [c])
  (Rsh32Ux64
    mul:(Hmul32u
      (Const32 <typ.UInt32> [m])
      (Rsh32Ux64 x (Const64 [1])))
    (Const64 [s]))
  )
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(1<<31+(umagic32(c).m+1)/2) && s == umagic32(c).s-2
&& x.Op != OpConst32 && udivisibleOK32(c)
=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32
        <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )
)

(Eq32 x (Mul32 (Const32 [c])
  (Rsh32Ux64
    (Avg32u
      x
      mul:(Hmul32u
        (Const32 [m])
        x))
    (Const64 [s]))
  )
)
)

```

```

&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(umagic32(c).m) && s == umagic32(c).s-1
&& x.Op != OpConst32 && udivisibleOK32(c)
=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32 <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )

(Eq32 x (Mul32 (Const32 [c])
  (Trunc64to32
    (Rsh64Ux64
      mul:(Mul64
        (Const64 [m])
        (ZeroExt32to64 x))
      (Const64 [s])))
  )
)

&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(1<<<31+umagic32(c).m/2) && s == 32+umagic32(c).s-1
&& x.Op != OpConst32 && udivisibleOK32(c)
=> (Leq32U
  (RotateLeft32
<typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32 <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )
)

(Eq32 x (Mul32 (Const32 [c])
  (Trunc64to32
    (Rsh64Ux64
      mul:(Mul64
        (Const64 [m])
        (Rsh64Ux64 (ZeroExt32to64 x) (Const64 [1])))
      (Const64 [s])))
  )
)

&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(1<<<31+(umagic32(c).m+1)/2) && s == 32+umagic32(c).s-2
&& x.Op != OpConst32 && udivisibleOK32(c)

```

```

=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32 <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )

```

```

(Eq32 x (Mul32 (Const32 [c])
  (Trunc64to32
    (Rsh64Ux64
      (Avg64u
        (Lsh64x64 (ZeroExt32to64 x) (Const64 [32]))
        mul:(Mul64
          (Const64 [m])

          (ZeroExt32to64 x)))
        (Const64 [s])))
    )
  )

```

```

&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(umagic32(c).m) && s == 32+umagic32(c).s-1
&& x.Op != OpConst32 && udivisibleOK32(c)

```

```

=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Mul32 <typ.UInt32>
      (Const32 <typ.UInt32> [int32(udivisible32(c).m)])
      x)
      (Const32 <typ.UInt32> [int32(32-udivisible32(c).k)])
    )
    (Const32 <typ.UInt32> [int32(udivisible32(c).max)])
  )

```

```

(Eq64 x (Mul64 (Const64 [c])
  (Rsh64Ux64
    mul:(Hmul64u
      (Const64 [m])
      x)
      (Const64 [s]))
    )
  )

```

```

) && v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(1<<(63+umagic64(c).m/2) && s == umagic64(c).s-1
&& x.Op != OpConst64 && udivisibleOK64(c)

```

```

=> (Leq64U
  (RotateLeft64 <typ.UInt64>
    (Mul64 <typ.UInt64>

```

```

    (Const64 <typ.UInt64> [int64(udivisible64(c).m)])
    x)
    (Const64 <typ.UInt64> [64-udivisible64(c).k])
    )
    (Const64 <typ.UInt64> [int64(udivisible64(c).max)])
    )
(Eq64 x (Mul64 (Const64 [c])
(Rsh64Ux64
mul:(Hmul64u
  (Const64
[m])
  (Rsh64Ux64 x (Const64 [1])))
(Const64 [s]))
)
) && v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(1<<63+(umagic64(c).m+1)/2) && s == umagic64(c).s-2
&& x.Op != OpConst64 && udivisibleOK64(c)
=> (Leq64U
  (RotateLeft64 <typ.UInt64>
  (Mul64 <typ.UInt64>
  (Const64 <typ.UInt64> [int64(udivisible64(c).m)])
  x)
  (Const64 <typ.UInt64> [64-udivisible64(c).k])
  )
  (Const64 <typ.UInt64> [int64(udivisible64(c).max)])
  )
(Eq64 x (Mul64 (Const64 [c])
(Rsh64Ux64
(Avg64u
  x
  mul:(Hmul64u
  (Const64 [m])
  x))
(Const64 [s]))
)
) && v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(umagic64(c).m) && s == umagic64(c).s-1
&& x.Op != OpConst64 && udivisibleOK64(c)
=> (Leq64U
  (RotateLeft64 <typ.UInt64>
  (Mul64 <typ.UInt64>
  (Const64 <typ.UInt64> [int64(udivisible64(c).m)])
  x)
  (Const64 <typ.UInt64> [64-udivisible64(c).k])
  )
  (Const64 <typ.UInt64> [int64(udivisible64(c).max)])
  )
)

```

```

//
Signed divisibility checks convert to multiply, add and rotate.
(Eq8 x (Mul8 (Const8 [c])
(Sub8
(Rsh32x64
mul:(Mul32
(Const32 [m])
(SignExt8to32 x))
(Const64 [s]))
(Rsh32x64
(SignExt8to32 x)
(Const64 [31])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(smagic8(c).m) && s == 8+smagic8(c).s
&& x.Op != OpConst8 && sdivisibleOK8(c)
=> (Leq8U
(RotateLeft8 <typ.UInt8>
(Add8 <typ.UInt8>
(Mul8 <typ.UInt8>
(Const8 <typ.UInt8> [int8(sdivisible8(c).m)])
x)
(Const8 <typ.UInt8> [int8(sdivisible8(c).a)])
)
(Const8 <typ.UInt8> [int8(8-sdivisible8(c).k)])
)
(Const8 <typ.UInt8> [int8(sdivisible8(c).max)])
)

(Eq16 x (Mul16 (Const16 [c])
(Sub16
(Rsh32x64
mul:(Mul32
(Const32 [m])
(SignExt16to32 x))
(Const64 [s]))
(Rsh32x64
(SignExt16to32 x)
(Const64 [31])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(smagic16(c).m) && s == 16+smagic16(c).s
&& x.Op != OpConst16 && sdivisibleOK16(c)
=> (Leq16U
(RotateLeft16 <typ.UInt16>
(Add16 <typ.UInt16>

```

```

(Mul16 <typ.UInt16>
  (Const16 <typ.UInt16> [int16(sdivisible16(c).m)])
  x)
(Const16 <typ.UInt16> [int16(sdivisible16(c).a)])
)
(Const16 <typ.UInt16> [int16(16-sdivisible16(c).k)])
)
(Const16 <typ.UInt16> [int16(sdivisible16(c).max)])
)

(Eq32 x (Mul32 (Const32 [c])
(Sub32
  (Rsh64x64
    mul:(Mul64
      (Const64 [m])
      (SignExt32to64 x))
      (Const64 [s])))
  (Rsh64x64
    (SignExt32to64 x)
    (Const64 [63])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(smagic32(c).m) && s == 32+smagic32(c).s
&& x.Op != OpConst32 && sdivisibleOK32(c)
=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Add32 <typ.UInt32>
      (Mul32 <typ.UInt32>
        (Const32 <typ.UInt32> [int32(sdivisible32(c).m)])
        x)
        (Const32 <typ.UInt32> [int32(sdivisible32(c).a)])
      )
      (Const32
        <typ.UInt32> [int32(32-sdivisible32(c).k)])
      )
      (Const32 <typ.UInt32> [int32(sdivisible32(c).max)])
    )
  )

(Eq32 x (Mul32 (Const32 [c])
(Sub32
  (Rsh32x64
    mul:(Hmul32
      (Const32 [m])
      x)
      (Const64 [s])))
  (Rsh32x64
    x

```

```

    (Const64 [31]))
  )
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(smagic32(c).m/2) && s == smagic32(c).s-1
&& x.Op != OpConst32 && sdivisibleOK32(c)
=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Add32 <typ.UInt32>
      (Mul32 <typ.UInt32>
        (Const32 <typ.UInt32> [int32(sdivisible32(c).m)])
        x)
      (Const32 <typ.UInt32> [int32(sdivisible32(c).a)])
    )
    (Const32 <typ.UInt32> [int32(32-sdivisible32(c).k)])
  )
  (Const32 <typ.UInt32> [int32(sdivisible32(c).max)])
)

```

```
(Eq32 x (Mul32 (Const32 [c])
```

```

(Sub32
  (Rsh32x64
    (Add32
      mul:(Hmul32
        (Const32 [m])
        x)
      x)
    (Const64 [s]))
  (Rsh32x64
    x
    (Const64 [31]))
)
)

```

```

&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int32(smagic32(c).m) && s == smagic32(c).s
&& x.Op != OpConst32 && sdivisibleOK32(c)

```

```

=> (Leq32U
  (RotateLeft32 <typ.UInt32>
    (Add32 <typ.UInt32>
      (Mul32 <typ.UInt32>
        (Const32 <typ.UInt32> [int32(sdivisible32(c).m)])
        x)
      (Const32 <typ.UInt32> [int32(sdivisible32(c).a)])
    )
    (Const32 <typ.UInt32> [int32(32-sdivisible32(c).k)])
  )
  (Const32 <typ.UInt32> [int32(sdivisible32(c).max)])
)

```



```

(Eq64 x (Mul64 (Const64 [c])
(Sub64
(Rsh64x64
mul:(Hmul64
(Const64 [m])
x)
(Const64 [s])))
(Rsh64x64
x
(Const64 [63])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(smagic64(c).m/2) && s == smagic64(c).s-1
&& x.Op != OpConst64 && sdivisibleOK64(c)
=> (Leq64U
(RotateLeft64 <typ.UInt64>
(Add64 <typ.UInt64>
(Mul64 <typ.UInt64>
(Const64 <typ.UInt64> [int64(sdivisible64(c).m)])
x)
(Const64 <typ.UInt64>
[int64(sdivisible64(c).a)])
)
(Const64 <typ.UInt64> [64-sdivisible64(c).k])
)
(Const64 <typ.UInt64> [int64(sdivisible64(c).max)])
)
)

```

```

(Eq64 x (Mul64 (Const64 [c])
(Sub64
(Rsh64x64
(Add64
mul:(Hmul64
(Const64 [m])
x)
x)
(Const64 [s])))
(Rsh64x64
x
(Const64 [63])))
)
)
&& v.Block.Func.pass.name != "opt" && mul.Uses == 1
&& m == int64(smagic64(c).m) && s == smagic64(c).s
&& x.Op != OpConst64 && sdivisibleOK64(c)
=> (Leq64U

```

```

(RotateLeft64 <typ.UInt64>
(Add64 <typ.UInt64>
(Mul64 <typ.UInt64>
(Const64 <typ.UInt64> [int64(sdivisible64(c).m)])
x)
(Const64 <typ.UInt64> [int64(sdivisible64(c).a)])
)
(Const64 <typ.UInt64> [64-sdivisible64(c).k])
)
(Const64 <typ.UInt64> [int64(sdivisible64(c).max)])
)

// Divisibility check for signed integers for power of two constant are simple mask.
// However, we must match against the rewritten n%c == 0 -> n - c*(n/c) ==
0 -> n == c*(n/c)
// where n/c contains fixup code to handle signed n.
((Eq8|Neq8) n (Lsh8x64
(Rsh8x64
(Add8 <t> n (Rsh8Ux64 <t> (Rsh8x64 <t> n (Const64 <typ.UInt64> [ 7])) (Const64 <typ.UInt64> [kbar])))
(Const64 <typ.UInt64> [k]))
(Const64 <typ.UInt64> [k]))
) && k > 0 && k < 7 && kbar == 8 - k
=> ((Eq8|Neq8) (And8 <t> n (Const8 <t> [1<<uint(k)-1])) (Const8 <t> [0]))

((Eq16|Neq16) n (Lsh16x64
(Rsh16x64
(Add16 <t> n (Rsh16Ux64 <t> (Rsh16x64 <t> n (Const64 <typ.UInt64> [15])) (Const64 <typ.UInt64> [kbar])))
(Const64 <typ.UInt64> [k]))
(Const64 <typ.UInt64> [k]))
) && k > 0 && k < 15 && kbar == 16 - k
=> ((Eq16|Neq16) (And16 <t> n (Const16 <t> [1<<uint(k)-1])) (Const16 <t> [0]))

((Eq32|Neq32) n (Lsh32x64
(Rsh32x64
(Add32 <t> n (Rsh32Ux64 <t> (Rsh32x64 <t> n (Const64 <typ.UInt64> [31])) (Const64 <typ.UInt64> [kbar])))
(Const64 <typ.UInt64> [k]))
(Const64 <typ.UInt64> [k]))
) && k > 0 && k < 31 && kbar == 32 - k
=> ((Eq32|Neq32) (And32 <t> n (Const32
<t> [1<<uint(k)-1])) (Const32 <t> [0]))

((Eq64|Neq64) n (Lsh64x64
(Rsh64x64
(Add64 <t> n (Rsh64Ux64 <t> (Rsh64x64 <t> n (Const64 <typ.UInt64> [63])) (Const64 <typ.UInt64> [kbar])))
(Const64 <typ.UInt64> [k]))
(Const64 <typ.UInt64> [k]))
) && k > 0 && k < 63 && kbar == 64 - k
=> ((Eq64|Neq64) (And64 <t> n (Const64 <t> [1<<uint(k)-1])) (Const64 <t> [0]))

```

```
(Eq(8|16|32|64) s:(Sub(8|16|32|64) x y) (Const(8|16|32|64) [0])) && s.Uses == 1 => (Eq(8|16|32|64) x y)
(Neq(8|16|32|64) s:(Sub(8|16|32|64) x y) (Const(8|16|32|64) [0])) && s.Uses == 1 => (Neq(8|16|32|64) x y)
```

```
// Optimize bitsets
```

```
(Eq8 (And8 <t> x (Const8 <t> [y])) (Const8 <t> [y])) && oneBit8(y)
=> (Neq8 (And8 <t> x (Const8 <t> [y])) (Const8 <t> [0]))
(Eq16 (And16 <t> x (Const16 <t> [y])) (Const16 <t> [y])) && oneBit16(y)
=> (Neq16 (And16 <t> x (Const16 <t> [y])) (Const16 <t> [0]))
(Eq32 (And32 <t> x (Const32 <t> [y])) (Const32 <t> [y])) && oneBit32(y)
=> (Neq32 (And32 <t> x (Const32 <t> [y])) (Const32 <t>
[0]))
(Eq64 (And64 <t> x (Const64 <t> [y])) (Const64 <t> [y])) && oneBit64(y)
=> (Neq64 (And64 <t> x (Const64 <t> [y])) (Const64 <t> [0]))
(Neq8 (And8 <t> x (Const8 <t> [y])) (Const8 <t> [y])) && oneBit8(y)
=> (Eq8 (And8 <t> x (Const8 <t> [y])) (Const8 <t> [0]))
(Neq16 (And16 <t> x (Const16 <t> [y])) (Const16 <t> [y])) && oneBit16(y)
=> (Eq16 (And16 <t> x (Const16 <t> [y])) (Const16 <t> [0]))
(Neq32 (And32 <t> x (Const32 <t> [y])) (Const32 <t> [y])) && oneBit32(y)
=> (Eq32 (And32 <t> x (Const32 <t> [y])) (Const32 <t> [0]))
(Neq64 (And64 <t> x (Const64 <t> [y])) (Const64 <t> [y])) && oneBit64(y)
=> (Eq64 (And64 <t> x (Const64 <t> [y])) (Const64 <t> [0]))
```

```
// Reassociate expressions involving
```

```
// constants such that constants come first,
```

```
// exposing obvious constant-folding opportunities.
```

```
// Reassociate (op (op y C) x) to (op C (op x y)) or similar, where C
```

```
// is constant, which pushes constants to the outside
```

```
// of the expression. At that point, any constant-folding
```

```
// opportunities
```

```
should be obvious.
```

```
// Note: don't include AddPtr here! In order to maintain the
```

```
// invariant that pointers must stay within the pointed-to object,
```

```
// we can't pull part of a pointer computation above the AddPtr.
```

```
// See issue 37881.
```

```
// Note: we don't need to handle any (x-C) cases because we already rewrite
```

```
// (x-C) to (x+(-C)).
```

```
// x + (C + z) -> C + (x + z)
```

```
(Add64 (Add64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Add64 i (Add64 <t> z
x))
```

```
(Add32 (Add32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Add32 i (Add32 <t> z
x))
```

```
(Add16 (Add16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Add16 i (Add16 <t> z
x))
```

```
(Add8 (Add8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Add8 i (Add8 <t> z x))
```

```
// x + (C - z) -> C + (x - z)
```

```

(Add64 (Sub64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Add64 i (Sub64 <t> x
z))
(Add32 (Sub32 i:(Const32 <t>) z) x) && (z.Op != OpConst32
&& x.Op != OpConst32) => (Add32 i (Sub32 <t> x z))
(Add16 (Sub16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Add16 i (Sub16 <t> x
z))
(Add8 (Sub8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Add8 i (Sub8 <t> x z))

// x - (C - z) -> x + (z - C) -> (x + z) - C
(Sub64 x (Sub64 i:(Const64 <t>) z)) && (z.Op != OpConst64 && x.Op != OpConst64) => (Sub64 (Add64 <t> x z)
i)
(Sub32 x (Sub32 i:(Const32 <t>) z)) && (z.Op != OpConst32 && x.Op != OpConst32) => (Sub32 (Add32 <t> x z)
i)
(Sub16 x (Sub16 i:(Const16 <t>) z)) && (z.Op != OpConst16 && x.Op != OpConst16) => (Sub16 (Add16 <t> x z)
i)
(Sub8 x (Sub8 i:(Const8 <t>) z)) && (z.Op != OpConst8 && x.Op != OpConst8) => (Sub8 (Add8 <t> x z) i)

// x - (z + C) -> x + (-z - C) -> (x - z) - C
(Sub64 x (Add64 z i:(Const64 <t>))) && (z.Op != OpConst64 && x.Op != OpConst64) => (Sub64 (Sub64 <t> x z)
i)
(Sub32 x (Add32 z i:(Const32 <t>))) && (z.Op != OpConst32 && x.Op != OpConst32) => (Sub32 (Sub32
<t> x z) i)
(Sub16 x (Add16 z i:(Const16 <t>))) && (z.Op != OpConst16 && x.Op != OpConst16) => (Sub16 (Sub16 <t> x z)
i)
(Sub8 x (Add8 z i:(Const8 <t>))) && (z.Op != OpConst8 && x.Op != OpConst8) => (Sub8 (Sub8 <t> x z) i)

// (C - z) - x -> C - (z + x)
(Sub64 (Sub64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Sub64 i (Add64 <t> z
x))
(Sub32 (Sub32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Sub32 i (Add32 <t> z
x))
(Sub16 (Sub16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Sub16 i (Add16 <t> z
x))
(Sub8 (Sub8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Sub8 i (Add8 <t> z x))

// (z + C) - x -> C + (z - x)
(Sub64 (Add64 z i:(Const64 <t>)) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Add64 i (Sub64 <t> z
x))
(Sub32 (Add32 z i:(Const32 <t>)) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Add32 i (Sub32 <t> z
x))
(Sub16 (Add16 z i:(Const16 <t>)) x) && (z.Op != OpConst16
&& x.Op != OpConst16) => (Add16 i (Sub16 <t> z x))
(Sub8 (Add8 z i:(Const8 <t>)) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Add8 i (Sub8 <t> z x))

// x & (C & z) -> C & (x & z)
(And64 (And64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (And64 i (And64 <t> z
x))
(And32 (And32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (And32 i (And32 <t> z
x))

```

```

x))
(And16 (And16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (And16 i (And16 <t> z
x))
(And8 (And8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (And8 i (And8 <t> z x))

// x | (C | z) -> C | (x | z)
(Or64 (Or64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Or64 i (Or64 <t> z x))
(Or32 (Or32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Or32 i (Or32 <t> z x))
(Or16 (Or16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Or16 i (Or16 <t> z x))
(Or8 (Or8 i:(Const8
<t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Or8 i (Or8 <t> z x))

// x ^ (C ^ z) -> C ^ (x ^ z)
(Xor64 (Xor64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Xor64 i (Xor64 <t> z
x))
(Xor32 (Xor32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Xor32 i (Xor32 <t> z
x))
(Xor16 (Xor16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Xor16 i (Xor16 <t> z
x))
(Xor8 (Xor8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Xor8 i (Xor8 <t> z x))

// x * (D * z) = D * (x * z)
(Mul64 (Mul64 i:(Const64 <t>) z) x) && (z.Op != OpConst64 && x.Op != OpConst64) => (Mul64 i (Mul64 <t> x
z))
(Mul32 (Mul32 i:(Const32 <t>) z) x) && (z.Op != OpConst32 && x.Op != OpConst32) => (Mul32 i (Mul32 <t> x
z))
(Mul16 (Mul16 i:(Const16 <t>) z) x) && (z.Op != OpConst16 && x.Op != OpConst16) => (Mul16 i (Mul16 <t> x
z))
(Mul8 (Mul8 i:(Const8 <t>) z) x) && (z.Op != OpConst8 && x.Op != OpConst8) => (Mul8
i (Mul8 <t> x z))

// C + (D + x) -> (C + D) + x
(Add64 (Const64 <t> [c]) (Add64 (Const64 <t> [d]) x)) => (Add64 (Const64 <t> [c+d]) x)
(Add32 (Const32 <t> [c]) (Add32 (Const32 <t> [d]) x)) => (Add32 (Const32 <t> [c+d]) x)
(Add16 (Const16 <t> [c]) (Add16 (Const16 <t> [d]) x)) => (Add16 (Const16 <t> [c+d]) x)
(Add8 (Const8 <t> [c]) (Add8 (Const8 <t> [d]) x)) => (Add8 (Const8 <t> [c+d]) x)

// C + (D - x) -> (C + D) - x
(Add64 (Const64 <t> [c]) (Sub64 (Const64 <t> [d]) x)) => (Sub64 (Const64 <t> [c+d]) x)
(Add32 (Const32 <t> [c]) (Sub32 (Const32 <t> [d]) x)) => (Sub32 (Const32 <t> [c+d]) x)
(Add16 (Const16 <t> [c]) (Sub16 (Const16 <t> [d]) x)) => (Sub16 (Const16 <t> [c+d]) x)
(Add8 (Const8 <t> [c]) (Sub8 (Const8 <t> [d]) x)) => (Sub8 (Const8 <t> [c+d]) x)

// C - (D - x) -> (C - D) + x
(Sub64 (Const64 <t> [c]) (Sub64 (Const64 <t> [d]) x)) => (Add64 (Const64 <t> [c-d]) x)
(Sub32 (Const32 <t> [c]) (Sub32 (Const32 <t> [d]) x)) => (Add32 (Const32 <t> [c-d]) x)
(Sub16 (Const16 <t>

```

```

[c] (Sub16 (Const16 <t> [d] x)) => (Add16 (Const16 <t> [c-d] x)
(Sub8 (Const8 <t> [c]) (Sub8 (Const8 <t> [d] x)) => (Add8 (Const8 <t> [c-d] x)

// C - (D + x) -> (C - D) - x
(Sub64 (Const64 <t> [c]) (Add64 (Const64 <t> [d] x)) => (Sub64 (Const64 <t> [c-d] x)
(Sub32 (Const32 <t> [c]) (Add32 (Const32 <t> [d] x)) => (Sub32 (Const32 <t> [c-d] x)
(Sub16 (Const16 <t> [c]) (Add16 (Const16 <t> [d] x)) => (Sub16 (Const16 <t> [c-d] x)
(Sub8 (Const8 <t> [c]) (Add8 (Const8 <t> [d] x)) => (Sub8 (Const8 <t> [c-d] x)

// C & (D & x) -> (C & D) & x
(And64 (Const64 <t> [c]) (And64 (Const64 <t> [d] x)) => (And64 (Const64 <t> [c&d] x)
(And32 (Const32 <t> [c]) (And32 (Const32 <t> [d] x)) => (And32 (Const32 <t> [c&d] x)
(And16 (Const16 <t> [c]) (And16 (Const16 <t> [d] x)) => (And16 (Const16 <t> [c&d] x)
(And8 (Const8 <t> [c]) (And8 (Const8 <t> [d] x)) => (And8 (Const8 <t> [c&d] x)

// C | (D | x) -> (C | D) | x
(Or64 (Const64 <t> [c]) (Or64 (Const64 <t> [d] x)) =>
(Or64 (Const64 <t> [c|d] x)
(Or32 (Const32 <t> [c]) (Or32 (Const32 <t> [d] x)) => (Or32 (Const32 <t> [c|d] x)
(Or16 (Const16 <t> [c]) (Or16 (Const16 <t> [d] x)) => (Or16 (Const16 <t> [c|d] x)
(Or8 (Const8 <t> [c]) (Or8 (Const8 <t> [d] x)) => (Or8 (Const8 <t> [c|d] x)

// C ^ (D ^ x) -> (C ^ D) ^ x
(Xor64 (Const64 <t> [c]) (Xor64 (Const64 <t> [d] x)) => (Xor64 (Const64 <t> [c^d] x)
(Xor32 (Const32 <t> [c]) (Xor32 (Const32 <t> [d] x)) => (Xor32 (Const32 <t> [c^d] x)
(Xor16 (Const16 <t> [c]) (Xor16 (Const16 <t> [d] x)) => (Xor16 (Const16 <t> [c^d] x)
(Xor8 (Const8 <t> [c]) (Xor8 (Const8 <t> [d] x)) => (Xor8 (Const8 <t> [c^d] x)

// C * (D * x) = (C * D) * x
(Mul64 (Const64 <t> [c]) (Mul64 (Const64 <t> [d] x)) => (Mul64 (Const64 <t> [c*d] x)
(Mul32 (Const32 <t> [c]) (Mul32 (Const32 <t> [d] x)) => (Mul32 (Const32 <t> [c*d] x)
(Mul16 (Const16 <t> [c]) (Mul16 (Const16 <t> [d] x)) => (Mul16 (Const16 <t> [c*d] x)
(Mul8 (Const8 <t> [c]) (Mul8 (Const8 <t> [d]
x)) => (Mul8 (Const8 <t> [c*d] x)

// floating point optimizations
(Mul(32|64)F x (Const(32|64)F [1])) => x
(Mul32F x (Const32F [-1])) => (Neg32F x)
(Mul64F x (Const64F [-1])) => (Neg64F x)
(Mul32F x (Const32F [2])) => (Add32F x x)
(Mul64F x (Const64F [2])) => (Add64F x x)

(Div32F x (Const32F <t> [c])) && reciprocalExact32(c) => (Mul32F x (Const32F <t> [1/c]))
(Div64F x (Const64F <t> [c])) && reciprocalExact64(c) => (Mul64F x (Const64F <t> [1/c]))

// rewrite single-precision sqrt expression "float32(math.Sqrt(float64(x)))"
(Cvt64Fto32F sqrt0:(Sqrt (Cvt32Fto64F x))) && sqrt0.Uses==1 => (Sqrt32 x)

```

```
(Sqrt (Const64F [c])) && !math.IsNaN(math.Sqrt(c)) => (Const64F [math.Sqrt(c)])
```

```
// for rewriting results of some late-expanded rewrites (below)
```

```
(SelectN [0] (MakeResult x ____)) => x
```

```
(SelectN [1] (MakeResult x y ____)) => y
```

```
(SelectN [2] (MakeResult x y z ____)) => z
```

```
// for late-expanded calls, recognize newobject and remove zeroing and nilchecks
```

```
(Zero (SelectN [0] call:(StaticLECall _ _))
```

```
  mem:(SelectN [1] call))
```

```
&& isSameCall(call.Aux, "runtime.newobject")
```

```
=> mem
```

```
(Store (SelectN [0] call:(StaticLECall _ _)) x mem:(SelectN [1] call))
```

```
&& isConstZero(x)
```

```
&& isSameCall(call.Aux, "runtime.newobject")
```

```
=> mem
```

```
(Store (OffPtr (SelectN [0] call:(StaticLECall _ _))) x mem:(SelectN [1] call))
```

```
&& isConstZero(x)
```

```
&& isSameCall(call.Aux, "runtime.newobject")
```

```
=> mem
```

```
(NilCheck (SelectN [0] call:(StaticLECall _ _)) _)
```

```
&& isSameCall(call.Aux, "runtime.newobject")
```

```
&& warnRule(fe.Debug_checknil(), v, "removed nil check")
```

```
=> (Invalid)
```

```
(NilCheck (OffPtr (SelectN [0] call:(StaticLECall _ _))) _)
```

```
&& isSameCall(call.Aux, "runtime.newobject")
```

```
&& warnRule(fe.Debug_checknil(), v, "removed nil check")
```

```
=> (Invalid)
```

```
// for late-expanded calls, recognize memequal applied to a single constant byte
```

```
// Support is limited by 1, 2, 4, 8 byte sizes
```

```
(StaticLECall {callAux} sptr (Addr {scon} (SB)) (Const64 [1]) mem)
```

```
&& isSameCall(callAux, "runtime.memequal")
```

```
&& symIsRO(scon)
```

```
=> (MakeResult
```

```
  (Eq8 (Load <typ.Int8> sptr mem) (Const8 <typ.Int8> [int8(read8(scon,0))])) mem)
```

```
(StaticLECall {callAux} sptr (Addr {scon} (SB)) (Const64 [2]) mem)
```

```
&& isSameCall(callAux, "runtime.memequal")
```

```
&& symIsRO(scon)
```

```
&& canLoadUnaligned(config)
```

```
=> (MakeResult (Eq16 (Load <typ.Int16> sptr mem) (Const16 <typ.Int16>
```

```
  [int16(read16(scon,0,config.ctx.Arch.ByteOrder))])) mem)
```

```

(StaticLECall {callAux} sptr (Addr {scon} (SB)) (Const64 [4]) mem)
&& isSameCall(callAux, "runtime.memequal")
&& symIsRO(scon)
&& canLoadUnaligned(config)
=> (MakeResult (Eq32 (Load <typ.Int32> sptr mem) (Const32 <typ.Int32>
[int32(read32(scon,0,config.ctx.Arch.ByteOrder))])) mem)

```

```

(StaticLECall {callAux} sptr (Addr {scon} (SB)) (Const64 [8]) mem)
&& isSameCall(callAux, "runtime.memequal")
&& symIsRO(scon)
&& canLoadUnaligned(config) && config.PtrSize == 8
=> (MakeResult (Eq64 (Load <typ.Int64> sptr mem) (Const64 <typ.Int64>
[int64(read64(scon,0,config.ctx.Arch.ByteOrder))])) mem)

```

// Evaluate constant

address comparisons.

```

(EqPtr x x) => (ConstBool [true])
(NotEqPtr x x) => (ConstBool [false])
(EqPtr (Addr {x} _) (Addr {y} _)) => (ConstBool [x == y])
(EqPtr (Addr {x} _) (OffPtr [o] (Addr {y} _))) => (ConstBool [x == y && o == 0])
(EqPtr (OffPtr [o1] (Addr {x} _)) (OffPtr [o2] (Addr {y} _))) => (ConstBool [x == y && o1 == o2])
(NotEqPtr (Addr {x} _) (Addr {y} _)) => (ConstBool [x != y])
(NotEqPtr (Addr {x} _) (OffPtr [o] (Addr {y} _))) => (ConstBool [x != y || o != 0])
(NotEqPtr (OffPtr [o1] (Addr {x} _)) (OffPtr [o2] (Addr {y} _))) => (ConstBool [x != y || o1 != o2])
(EqPtr (LocalAddr {x} _) (LocalAddr {y} _)) => (ConstBool [x == y])
(EqPtr (LocalAddr {x} _) (OffPtr [o] (LocalAddr {y} _))) => (ConstBool [x == y && o == 0])
(EqPtr (OffPtr [o1] (LocalAddr {x} _)) (OffPtr [o2] (LocalAddr {y} _))) => (ConstBool [x == y && o1 == o2])
(NotEqPtr (LocalAddr {x} _) (LocalAddr {y} _)) => (ConstBool [x != y])
(NotEqPtr (LocalAddr {x} _) (OffPtr [o] (LocalAddr {y} _))) => (ConstBool
[x != y || o != 0])
(NotEqPtr (OffPtr [o1] (LocalAddr {x} _)) (OffPtr [o2] (LocalAddr {y} _))) => (ConstBool [x != y || o1 != o2])
(EqPtr (OffPtr [o1] p1) p2) && isSamePtr(p1, p2) => (ConstBool [o1 == 0])
(NotEqPtr (OffPtr [o1] p1) p2) && isSamePtr(p1, p2) => (ConstBool [o1 != 0])
(EqPtr (OffPtr [o1] p1) (OffPtr [o2] p2)) && isSamePtr(p1, p2) => (ConstBool [o1 == o2])
(NotEqPtr (OffPtr [o1] p1) (OffPtr [o2] p2)) && isSamePtr(p1, p2) => (ConstBool [o1 != o2])
(EqPtr (Const(32|64) [c]) (Const(32|64) [d])) => (ConstBool [c == d])
(NotEqPtr (Const(32|64) [c]) (Const(32|64) [d])) => (ConstBool [c != d])

```

```

(EqPtr (LocalAddr _) (Addr _)) => (ConstBool [false])
(EqPtr (OffPtr (LocalAddr _) (Addr _)) (Addr _)) => (ConstBool [false])
(EqPtr (LocalAddr _) (OffPtr (Addr _))) => (ConstBool [false])
(EqPtr (OffPtr (LocalAddr _) (OffPtr (Addr _))) (OffPtr (Addr _))) => (ConstBool [false])
(NotEqPtr (LocalAddr _) (Addr _)) => (ConstBool [true])
(NotEqPtr (OffPtr (LocalAddr _) (Addr _)) (Addr _)) => (ConstBool [true])
(NotEqPtr
(LocalAddr _) (OffPtr (Addr _))) => (ConstBool [true])
(NotEqPtr (OffPtr (LocalAddr _) (OffPtr (Addr _))) (OffPtr (Addr _))) => (ConstBool [true])

```



```

// Simplify address comparisons.
(EqPtr (AddPtr p1 o1) p2) && isSamePtr(p1, p2) => (Not (IsNotNil o1))
(NeqPtr (AddPtr p1 o1) p2) && isSamePtr(p1, p2) => (IsNotNil o1)
(EqPtr (Const(32|64) [0]) p) => (Not (IsNotNil p))
(NeqPtr (Const(32|64) [0]) p) => (IsNotNil p)
(EqPtr (ConstNil) p) => (Not (IsNotNil p))
(NeqPtr (ConstNil) p) => (IsNotNil p)

// Evaluate constant user nil checks.
(IsNotNil (ConstNil)) => (ConstBool [false])
(IsNotNil (Const(32|64) [c])) => (ConstBool [c != 0])
(IsNotNil (Addr _)) => (ConstBool [true])
(IsNotNil (LocalAddr _ _)) => (ConstBool [true])

// Inline small or disjoint runtime.memmove calls with constant length.
// See the comment in op Move in genericOps.go for discussion of the type.
//
// Note that we've lost any knowledge of the type and alignment requirements
// of the source and destination. We only know the size,
// and that the type
// contains no pointers.
// The type of the move is not necessarily v.Args[0].Type().Elem()!
// See issue 55122 for details.
//
// Because expand calls runs after prove, constants useful to this pattern may not appear.
// Both versions need to exist; the memory and register variants.
//
// Match post-expansion calls, memory version.
(SelectN [0] call:(StaticCall {sym} s1:(Store _ (Const(64|32) [sz]) s2:(Store _ src s3:(Store {t} _ dst mem))))
&& sz >= 0
&& isSameCall(sym, "runtime.memmove")
&& s1.Uses == 1 && s2.Uses == 1 && s3.Uses == 1
&& isInlinableMemmove(dst, src, int64(sz), config)
&& clobber(s1, s2, s3, call)
=> (Move {types.Types[types.TUINT8]} [int64(sz)] dst src mem)

// Match post-expansion calls, register version.
(SelectN [0] call:(StaticCall {sym} dst src (Const(64|32) [sz]) mem))
&& sz >= 0
&& call.Uses == 1 // this will exclude all calls with results
&& isSameCall(sym, "runtime.memmove")
&& isInlinableMemmove(dst, src, int64(sz), config)
&&
clobber(call)
=> (Move {types.Types[types.TUINT8]} [int64(sz)] dst src mem)

// Match pre-expansion calls.
(SelectN [0] call:(StaticLECall {sym} dst src (Const(64|32) [sz]) mem))

```

```

&& sz >= 0
&& call.Uses == 1 // this will exclude all calls with results
&& isSameCall(sym, "runtime.memmove")
&& isInlinableMemmove(dst, src, int64(sz), config)
&& clobber(call)
=> (Move {types.Types[types.TUINT8]} [int64(sz)] dst src mem)

// De-virtualize late-expanded interface calls into late-expanded static calls.
// Note that (ITab (IMake)) doesn't get rewritten until after the first opt pass,
// so this rule should trigger reliably.
// devirtLECall removes the first argument, adds the devirtualized symbol to the AuxCall, and changes the opcode
(InterLECall [argsize] {auxCall} (Load (OffPtr [off] (ITab (IMake (Addr {itab} (SB)) _)) _)) _)) &&
devirtLESym(v, auxCall, itab, off) !=
  nil => devirtLECall(v, devirtLESym(v, auxCall, itab, off))

// Move and Zero optimizations.
// Move source and
destination may overlap.

// Convert Moves into Zeros when the source is known to be zeros.
(Move {t} [n] dst1 src mem:(Zero {t} [n] dst2 _)) && isSamePtr(src, dst2)
=> (Zero {t} [n] dst1 mem)
(Move {t} [n] dst1 src mem:(VarDef (Zero {t} [n] dst0 _))) && isSamePtr(src, dst0)
=> (Zero {t} [n] dst1 mem)
(Move {t} [n] dst (Addr {sym} (SB)) mem) && symIsROZero(sym) => (Zero {t} [n] dst mem)

// Don't Store to variables that are about to be overwritten by Move/Zero.
(Zero {t1} [n] p1 store:(Store {t2} (OffPtr [o2] p2) _ mem))
&& isSamePtr(p1, p2) && store.Uses == 1
&& n >= o2 + t2.Size()
&& clobber(store)
=> (Zero {t1} [n] p1 mem)
(Move {t1} [n] dst1 src1 store:(Store {t2} op:(OffPtr [o2] dst2) _ mem))
&& isSamePtr(dst1, dst2) && store.Uses == 1
&& n >= o2 + t2.Size()
&& disjoint(src1, n, op, t2.Size())
&& clobber(store)
=> (Move {t1} [n] dst1 src1 mem)

// Don't Move to variables that are immediately completely overwritten.
(Zero {t} [n] dst1 move:(Move {t} [n] dst2 _ mem))
&&
move.Uses == 1
&& isSamePtr(dst1, dst2)
&& clobber(move)
=> (Zero {t} [n] dst1 mem)
(Move {t} [n] dst1 src1 move:(Move {t} [n] dst2 _ mem))
&& move.Uses == 1

```

```

&& isSamePtr(dst1, dst2) && disjoint(src1, n, dst2, n)
&& clobber(move)
=> (Move {t} [n] dst1 src1 mem)
(Zero {t} [n] dst1 vardef:(VarDef {x} move:(Move {t} [n] dst2 _ mem)))
&& move.Uses == 1 && vardef.Uses == 1
&& isSamePtr(dst1, dst2)
&& clobber(move, vardef)
=> (Zero {t} [n] dst1 (VarDef {x} mem))
(Move {t} [n] dst1 src1 vardef:(VarDef {x} move:(Move {t} [n] dst2 _ mem)))
&& move.Uses == 1 && vardef.Uses == 1
&& isSamePtr(dst1, dst2) && disjoint(src1, n, dst2, n)
&& clobber(move, vardef)
=> (Move {t} [n] dst1 src1 (VarDef {x} mem))
(Store {t1} op1:(OffPtr [o1] p1) d1
m2:(Store {t2} op2:(OffPtr [0] p2) d2
m3:(Move [n] p3 _ mem)))
&& m2.Uses == 1 && m3.Uses == 1
&& o1 == t2.Size()
&& n == t2.Size() + t1.Size()
&& isSamePtr(p1, p2) && isSamePtr(p2, p3)
&& clobber(m2, m3)
=> (Store {t1} op1 d1 (Store {t2}
op2 d2 mem))
(Store {t1} op1:(OffPtr [o1] p1) d1
m2:(Store {t2} op2:(OffPtr [o2] p2) d2
m3:(Store {t3} op3:(OffPtr [0] p3) d3
m4:(Move [n] p4 _ mem))))
&& m2.Uses == 1 && m3.Uses == 1 && m4.Uses == 1
&& o2 == t3.Size()
&& o1-o2 == t2.Size()
&& n == t3.Size() + t2.Size() + t1.Size()
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
&& clobber(m2, m3, m4)
=> (Store {t1} op1 d1 (Store {t2} op2 d2 (Store {t3} op3 d3 mem)))
(Store {t1} op1:(OffPtr [o1] p1) d1
m2:(Store {t2} op2:(OffPtr [o2] p2) d2
m3:(Store {t3} op3:(OffPtr [o3] p3) d3
m4:(Store {t4} op4:(OffPtr [0] p4) d4
m5:(Move [n] p5 _ mem))))
&& m2.Uses == 1 && m3.Uses == 1 && m4.Uses == 1 && m5.Uses == 1
&& o3 == t4.Size()
&& o2-o3 == t3.Size()
&& o1-o2 == t2.Size()
&& n == t4.Size() + t3.Size() + t2.Size() + t1.Size()
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
&& clobber(m2, m3, m4, m5)
=> (Store {t1} op1 d1 (Store {t2} op2 d2 (Store {t3} op3 d3 (Store

```

```

{t4} op4 d4 mem))))

// Don't Zero variables that are immediately completely overwritten
// before being accessed.
(Move {t} [n] dst1 src1 zero:(Zero {t} [n] dst2 mem))
  && zero.Uses == 1
  && isSamePtr(dst1, dst2) && disjoint(src1, n, dst2, n)
  && clobber(zero)
=> (Move {t} [n] dst1 src1 mem)
(Move {t} [n] dst1 src1 vardef:(VarDef {x} zero:(Zero {t} [n] dst2 mem)))
  && zero.Uses == 1 && vardef.Uses == 1
  && isSamePtr(dst1, dst2) && disjoint(src1, n, dst2, n)
  && clobber(zero, vardef)
=> (Move {t} [n] dst1 src1 (VarDef {x} mem))
(Store {t1} op1:(OffPtr [o1] p1) d1
 m2:(Store {t2} op2:(OffPtr [0] p2) d2
  m3:(Zero [n] p3 mem)))
  && m2.Uses == 1 && m3.Uses == 1
  && o1 == t2.Size()
  && n == t2.Size() + t1.Size()
  && isSamePtr(p1, p2) && isSamePtr(p2, p3)
  && clobber(m2, m3)
=> (Store {t1} op1 d1 (Store {t2} op2 d2 mem))
(Store {t1} op1:(OffPtr [o1] p1) d1
 m2:(Store {t2} op2:(OffPtr [o2] p2) d2
 m3:(Store {t3} op3:(OffPtr [0] p3) d3
  m4:(Zero [n] p4 mem))))
  && m2.Uses == 1 &&
  m3.Uses == 1 && m4.Uses == 1
  && o2 == t3.Size()
  && o1-o2 == t2.Size()
  && n == t3.Size() + t2.Size() + t1.Size()
  && isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
  && clobber(m2, m3, m4)
=> (Store {t1} op1 d1 (Store {t2} op2 d2 (Store {t3} op3 d3 mem)))
(Store {t1} op1:(OffPtr [o1] p1) d1
 m2:(Store {t2} op2:(OffPtr [o2] p2) d2
 m3:(Store {t3} op3:(OffPtr [o3] p3) d3
 m4:(Store {t4} op4:(OffPtr [0] p4) d4
  m5:(Zero [n] p5 mem))))
  && m2.Uses == 1 && m3.Uses == 1 && m4.Uses == 1 && m5.Uses == 1
  && o3 == t4.Size()
  && o2-o3 == t3.Size()
  && o1-o2 == t2.Size()
  && n == t4.Size() + t3.Size() + t2.Size() + t1.Size()
  && isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
  && clobber(m2, m3, m4, m5)
=> (Store {t1} op1 d1 (Store {t2} op2 d2 (Store {t3} op3 d3 (Store {t4} op4 d4 mem))))

```

```

// Don't Move from memory if the values are likely to already be
// in registers.
(Move {t1} [n] dst p1
 mem:(Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store
   {t3} op3:(OffPtr <tt3> [0] p3) d2 _)))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& o2 == t3.Size()
&& n == t2.Size() + t3.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [0] dst) d2 mem))
(Move {t1} [n] dst p1
 mem:(Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store {t3} op3:(OffPtr <tt3> [o3] p3) d2
   (Store {t4} op4:(OffPtr <tt4> [0] p4) d3 _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b, t4)
&& o3 == t4.Size()
&& o2-o3 == t3.Size()
&& n == t2.Size() + t3.Size() + t4.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [o3] dst) d2
   (Store {t4} (OffPtr <tt4> [0] dst) d3 mem)))
(Move {t1} [n]
 dst p1
 mem:(Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store {t3} op3:(OffPtr <tt3> [o3] p3) d2
   (Store {t4} op4:(OffPtr <tt4> [o4] p4) d3
    (Store {t5} op5:(OffPtr <tt5> [0] p5) d4 _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& t5.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b, t4)
&& registerizable(b, t5)

```

```

&& o4 == t5.Size()
&& o3-o4 == t4.Size()
&& o2-o3 == t3.Size()
&& n == t2.Size() + t3.Size() + t4.Size() + t5.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [o3] dst) d2
  (Store {t4} (OffPtr <tt4> [o4] dst) d3
  (Store {t5} (OffPtr <tt5> [0] dst) d4 mem))))

// Same thing but with VarDef in the middle.
(Move {t1} [n] dst p1
mem:(VarDef
  (Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store {t3} op3:(OffPtr <tt3> [0] p3) d2
  _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& o2 == t3.Size()
&& n == t2.Size() + t3.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [0] dst) d2 mem))
(Move {t1} [n] dst p1
mem:(VarDef
  (Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store {t3} op3:(OffPtr <tt3> [o3] p3) d2
  (Store {t4} op4:(OffPtr <tt4> [0] p4) d3 _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b, t4)
&& o3 == t4.Size()
&& o2-o3 == t3.Size()
&& n == t2.Size() + t3.Size() + t4.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [o3] dst) d2
  (Store {t4} (OffPtr <tt4> [0] dst) d3 mem)))
(Move {t1} [n] dst p1
mem:(VarDef
  (Store
  {t2} op2:(OffPtr <tt2> [o2] p2) d1
  (Store {t3} op3:(OffPtr <tt3> [o3] p3) d2
  (Store {t4} op4:(OffPtr <tt4> [o4] p4) d3

```

```

        (Store {t5} op5:(OffPtr <tt5> [0] p5) d4 _))))))
    && isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
    && t2.Alignment() <= t1.Alignment()
    && t3.Alignment() <= t1.Alignment()
    && t4.Alignment() <= t1.Alignment()
    && t5.Alignment() <= t1.Alignment()
    && registerizable(b, t2)
    && registerizable(b, t3)
    && registerizable(b, t4)
    && registerizable(b, t5)
    && o4 == t5.Size()
    && o3-o4 == t4.Size()
    && o2-o3 == t3.Size()
    && n == t2.Size() + t3.Size() + t4.Size() + t5.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Store {t3} (OffPtr <tt3> [o3] dst) d2
    (Store {t4} (OffPtr <tt4> [o4] dst) d3
    (Store {t5} (OffPtr <tt5> [0] dst) d4 mem))))

```

// Prefer to Zero and Store than to Move.

```

(Move {t1} [n] dst p1
mem:(Store {t2} op2:(OffPtr <tt2> [o2] p2) d1
    (Zero {t3} [n] p3 _)))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3)
&&
t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& n >= o2 + t2.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Zero {t1} [n] dst mem))
(Move {t1} [n] dst p1
mem:(Store {t2} (OffPtr <tt2> [o2] p2) d1
    (Store {t3} (OffPtr <tt3> [o3] p3) d2
    (Zero {t4} [n] p4 _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& n >= o2 + t2.Size()
&& n >= o3 + t3.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Store {t3} (OffPtr <tt3> [o3] dst) d2
    (Zero {t1} [n] dst mem)))
(Move {t1} [n] dst p1
mem:(Store {t2} (OffPtr <tt2> [o2] p2) d1

```

```

(Store {t3} (OffPtr <tt3> [o3] p3) d2
 (Store {t4} (OffPtr <tt4> [o4] p4) d3
  (Zero {t5} [n] p5 _))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
&& t2.Alignment() <= t1.Alignment()
&&
t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& t5.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b, t4)
&& n >= o2 + t2.Size()
&& n >= o3 + t3.Size()
&& n >= o4 + t4.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
 (Store {t3} (OffPtr <tt3> [o3] dst) d2
  (Store {t4} (OffPtr <tt4> [o4] dst) d3
   (Zero {t1} [n] dst mem))))
(Move {t1} [n] dst p1
 mem:(Store {t2} (OffPtr <tt2> [o2] p2) d1
 (Store {t3} (OffPtr <tt3> [o3] p3) d2
 (Store {t4} (OffPtr <tt4> [o4] p4) d3
 (Store {t5} (OffPtr <tt5> [o5] p5) d4
  (Zero {t6} [n] p6 _))))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5) && isSamePtr(p5, p6)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& t5.Alignment() <= t1.Alignment()
&& t6.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b,
t4)
&& registerizable(b, t5)
&& n >= o2 + t2.Size()
&& n >= o3 + t3.Size()
&& n >= o4 + t4.Size()
&& n >= o5 + t5.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
 (Store {t3} (OffPtr <tt3> [o3] dst) d2
  (Store {t4} (OffPtr <tt4> [o4] dst) d3
   (Store {t5} (OffPtr <tt5> [o5] dst) d4
    (Zero {t1} [n] dst mem))))))
(Move {t1} [n] dst p1
 mem:(VarDef
 (Store {t2} op2:(OffPtr <tt2> [o2] p2) d1

```



```

    (Zero {t3} [n] p3 _)))
    && isSamePtr(p1, p2) && isSamePtr(p2, p3)
    && t2.Alignment() <= t1.Alignment()
    && t3.Alignment() <= t1.Alignment()
    && registerizable(b, t2)
    && n >= o2 + t2.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Zero {t1} [n] dst mem))
(Move {t1} [n] dst p1
mem:(VarDef
    (Store {t2} (OffPtr <tt2> [o2] p2) d1
    (Store {t3} (OffPtr <tt3> [o3] p3) d2
    (Zero {t4} [n] p4 _))))
    && isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4)
    && t2.Alignment() <= t1.Alignment()
    && t3.Alignment() <= t1.Alignment()
    && t4.Alignment() <= t1.Alignment()
    &&
    registerizable(b, t2)
    && registerizable(b, t3)
    && n >= o2 + t2.Size()
    && n >= o3 + t3.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Store {t3} (OffPtr <tt3> [o3] dst) d2
    (Zero {t1} [n] dst mem)))
(Move {t1} [n] dst p1
mem:(VarDef
    (Store {t2} (OffPtr <tt2> [o2] p2) d1
    (Store {t3} (OffPtr <tt3> [o3] p3) d2
    (Store {t4} (OffPtr <tt4> [o4] p4) d3
    (Zero {t5} [n] p5 _))))
    && isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5)
    && t2.Alignment() <= t1.Alignment()
    && t3.Alignment() <= t1.Alignment()
    && t4.Alignment() <= t1.Alignment()
    && t5.Alignment() <= t1.Alignment()
    && registerizable(b, t2)
    && registerizable(b, t3)
    && registerizable(b, t4)
    && n >= o2 + t2.Size()
    && n >= o3 + t3.Size()
    && n >= o4 + t4.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
    (Store {t3} (OffPtr <tt3> [o3] dst) d2
    (Store {t4} (OffPtr <tt4> [o4] dst) d3
    (Zero {t1} [n] dst mem)))
(Move {t1} [n] dst p1
mem:(VarDef

```

```

(Store {t2} (OffPtr
<tt2> [o2] p2) d1
  (Store {t3} (OffPtr <tt3> [o3] p3) d2
    (Store {t4} (OffPtr <tt4> [o4] p4) d3
      (Store {t5} (OffPtr <tt5> [o5] p5) d4
        (Zero {t6} [n] p6 _))))))
&& isSamePtr(p1, p2) && isSamePtr(p2, p3) && isSamePtr(p3, p4) && isSamePtr(p4, p5) && isSamePtr(p5, p6)
&& t2.Alignment() <= t1.Alignment()
&& t3.Alignment() <= t1.Alignment()
&& t4.Alignment() <= t1.Alignment()
&& t5.Alignment() <= t1.Alignment()
&& t6.Alignment() <= t1.Alignment()
&& registerizable(b, t2)
&& registerizable(b, t3)
&& registerizable(b, t4)
&& registerizable(b, t5)
&& n >= o2 + t2.Size()
&& n >= o3 + t3.Size()
&& n >= o4 + t4.Size()
&& n >= o5 + t5.Size()
=> (Store {t2} (OffPtr <tt2> [o2] dst) d1
  (Store {t3} (OffPtr <tt3> [o3] dst) d2
    (Store {t4} (OffPtr <tt4> [o4] dst) d3
      (Store {t5} (OffPtr <tt5> [o5] dst) d4
        (Zero {t1} [n] dst mem))))))

(SelectN [0] call:(StaticLECall {sym} a x)) && needRaceCleanup(sym, call) && clobber(call) => x
(SelectN [0] call:(StaticLECall
  {sym} x)) && needRaceCleanup(sym, call) && clobber(call) => x

// Collapse moving A -> B -> C into just A -> C.
// Later passes (deadstore, elim unread auto) will remove the A -> B move, if possible.
// This happens most commonly when B is an autotmp inserted earlier
// during compilation to ensure correctness.
// Take care that overlapping moves are preserved.
// Restrict this optimization to the stack, to avoid duplicating loads from the heap;
// see CL 145208 for discussion.
(Move {t1} [s] dst tmp1 midmem:(Move {t2} [s] tmp2 src _))
&& t1.Compare(t2) == types.CMPeq
&& isSamePtr(tmp1, tmp2)
&& isStackPtr(src) && !isVolatile(src)
&& disjoint(src, s, tmp2, s)
&& (disjoint(src, s, dst, s) || isInlinableMemmove(dst, src, s, config))
=> (Move {t1} [s] dst src midmem)

// Same, but for large types that require VarDefs.
(Move {t1} [s] dst tmp1 midmem:(VarDef (Move {t2} [s] tmp2 src _)))
&& t1.Compare(t2) == types.CMPeq

```

```

&& isSamePtr(tmp1, tmp2)
&& isStackPtr(src) && !isVolatile(src)
&&
disjoint(src, s, tmp2, s)
&& (disjoint(src, s, dst, s) || isInlinableMemmove(dst, src, s, config))
=> (Move {t1} [s] dst src midmem)

// Don't zero the same bits twice.
(Zero {t} [s] dst1 zero:(Zero {t} [s] dst2 _)) && isSamePtr(dst1, dst2) => zero
(Zero {t} [s] dst1 vardef:(VarDef (Zero {t} [s] dst2 _))) && isSamePtr(dst1, dst2) => vardef

// Elide self-moves. This only happens rarely (e.g test/fixbugs/bug277.go).
// However, this rule is needed to prevent the previous rule from looping forever in such cases.
(Move dst src mem) && isSamePtr(dst, src) => mem

Found in path(s):
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/generic.rules
No license file was found, but licenses were detected in source scan.

// Copyright 2016 The Go Authors. All rights reserved.
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// Lowering arithmetic
(Add(64|Ptr) ...) => (ADD ...)
(Add(32|16|8) ...) => (ADDW ...)
(Add32F x y) => (Select0 (FADDS x y))
(Add64F x y) => (Select0 (FADD x y))

(Sub(64|Ptr) ...) => (SUB ...)
(Sub(32|16|8) ...) => (SUBW ...)
(Sub32F x y) => (Select0 (FSUBS x y))
(Sub64F x y) => (Select0 (FSUB x y))

(Mul64 ...) => (MULLD ...)
(Mul(32|16|8) ...) => (MULLW ...)
(Mul32F ...) => (FMULS ...)
(Mul64F ...) => (FMUL ...)
(Mul64uhilo ...) => (MLGR ...)

(Div32F ...) => (FDIVS ...)
(Div64F ...) => (FDIV ...)

(Div64 x y) => (DIVD x y)
(Div64u ...) => (DIVDU ...)
// DIVW/DIVWU has a 64-bit dividend and a 32-bit divisor,
// so a sign/zero extension of the dividend is required.
(Div32 x y) => (DIVW (MOVWreg x) y)

```

```

(Div32u x y) => (DIVWU (MOVWZreg x) y)
(Div16 x y) => (DIVW
  (MOVHreg x) (MOVHreg y))
(Div16u x y) => (DIVWU (MOVHZreg x) (MOVHZreg y))
(Div8 x y) => (DIVW (MOVBreg x) (MOVBreg y))
(Div8u x y) => (DIVWU (MOVBZreg x) (MOVBZreg y))

(Hmul(64|64u) ...) => (MULH(D|DU) ...)
(Hmul32 x y) => (SRDconst [32] (MULLD (MOVWreg x) (MOVWreg y)))
(Hmul32u x y) => (SRDconst [32] (MULLD (MOVWZreg x) (MOVWZreg y)))

(Mod64 x y) => (MODD x y)
(Mod64u ...) => (MODDU ...)
// MODW/MODWU has a 64-bit dividend and a 32-bit divisor,
// so a sign/zero extension of the dividend is required.
(Mod32 x y) => (MODW (MOVWreg x) y)
(Mod32u x y) => (MODWU (MOVWZreg x) y)
(Mod16 x y) => (MODW (MOVHreg x) (MOVHreg y))
(Mod16u x y) => (MODWU (MOVHZreg x) (MOVHZreg y))
(Mod8 x y) => (MODW (MOVBreg x) (MOVBreg y))
(Mod8u x y) => (MODWU (MOVBZreg x) (MOVBZreg y))

// (x + y) / 2 with x>=y -> (x - y) / 2 + y
(Avg64u <t> x y) => (ADD (SRDconst <t> (SUB <t> x y) [1]) y)

(And64 ...) => (AND ...)
(And(32|16|8) ...) => (ANDW ...)

(Or64 ...) => (OR ...)
(Or(32|16|8) ...)
=> (ORW ...)

(Xor64 ...) => (XOR ...)
(Xor(32|16|8) ...) => (XORW ...)

(Neg64 ...) => (NEG ...)
(Neg(32|16|8) ...) => (NEGW ...)
(Neg32F ...) => (FNEGS ...)
(Neg64F ...) => (FNEG ...)

(Com64 ...) => (NOT ...)
(Com(32|16|8) ...) => (NOTW ...)
(NOT x) => (XOR (MOVDconst [-1]) x)
(NOTW x) => (XORWconst [-1] x)

// Lowering boolean ops
(AndB ...) => (ANDW ...)
(OrB ...) => (ORW ...)

```

```

(Not x) => (XORWconst [1] x)

// Lowering pointer arithmetic
(OffPtr [off] ptr:(SP)) => (MOVDaddr [int32(off)] ptr)
(OffPtr [off] ptr) && is32Bit(off) => (ADDconst [int32(off)] ptr)
(OffPtr [off] ptr) => (ADD (MOVDconst [off]) ptr)

// TODO: optimize these cases?
(Ctz64NonZero ...) => (Ctz64 ...)
(Ctz32NonZero ...) => (Ctz32 ...)

// Ctz(x) = 64 - findLeftmostOne((x-1)&^x)
(Ctz64 <t> x) => (SUB (MOVDconst [64]) (FLOGR (AND <t> (SUBconst <t> [1] x) (NOT <t> x))))
(Ctz32 <t> x) => (SUB (MOVDconst [64]) (FLOGR (MOVWZreg (ANDW <t> (SUBWconst <t> [1] x) (NOTW
<t> x))))))

(BitLen64 x) => (SUB (MOVDconst [64]) (FLOGR
x))

// POPCNT treats the input register as a vector of 8 bytes, producing
// a population count for each individual byte. For inputs larger than
// a single byte we therefore need to sum the individual bytes produced
// by the POPCNT instruction. For example, the following instruction
// sequence could be used to calculate the population count of a 4-byte
// value:
//
//   MOVD  $0x12345678, R1 // R1=0x12345678 <-- input
//   POPCNT R1, R2      // R2=0x02030404
//   SRW   $16, R2, R3  // R3=0x00000203
//   ADDW  R2, R3, R4   // R4=0x02030607
//   SRW   $8, R4, R5   // R5=0x00020306
//   ADDW  R4, R5, R6   // R6=0x0205090d
//   MOVWZ R6, R7      // R7=0x0000000d <-- result is 13
//
(PopCount8 x) => (POPCNT (MOVWZreg x))
(PopCount16 x) => (MOVWZreg (SumBytes2 (POPCNT <typ.UInt16> x)))
(PopCount32 x) => (MOVWZreg (SumBytes4 (POPCNT <typ.UInt32> x)))
(PopCount64 x) => (MOVWZreg (SumBytes8 (POPCNT <typ.UInt64> x)))

// SumBytes{2,4,8} pseudo operations
sum the values of the rightmost
// 2, 4 or 8 bytes respectively. The result is a single byte however
// other bytes might contain junk so a zero extension is required if
// the desired output type is larger than 1 byte.
(SumBytes2 x) => (ADDW (SRWconst <typ.UInt8> x [8]) x)
(SumBytes4 x) => (SumBytes2 (ADDW <typ.UInt16> (SRWconst <typ.UInt16> x [16]) x))
(SumBytes8 x) => (SumBytes4 (ADDW <typ.UInt32> (SRDconst <typ.UInt32> x [32]) x))

```

```

(Bswap64 ...) => (MOVDBR ...)
(Bswap32 ...) => (MOVWBR ...)

// add with carry
(Select0 (Add64carry x y c))
=> (Select0 <typ.UInt64> (ADDE x y (Select1 <types.TypeFlags> (ADDCconst c [-1])))
(Select1 (Add64carry x y c))
=> (Select0 <typ.UInt64> (ADDE (MOVDconst [0]) (MOVDconst [0]) (Select1 <types.TypeFlags> (ADDE x y
(Select1 <types.TypeFlags> (ADDCconst c [-1]))))))

// subtract with borrow
(Select0 (Sub64borrow x y c))
=> (Select0 <typ.UInt64> (SUBE x y (Select1 <types.TypeFlags> (SUBC (MOVDconst [0]) c))))
(Select1 (Sub64borrow x y c))
=> (NEG (Select0 <typ.UInt64> (SUBE (MOVDconst [0]) (MOVDconst [0]) (Select1 <types.TypeFlags> (SUBE
x y (Select1 <types.TypeFlags> (SUBC (MOVDconst [0]) c))))))

// math package intrinsics
(Sqrt ...) => (FSQRT ...)
(Floor x) => (FIDBR [7] x)
(Ceil x) => (FIDBR [6] x)
(Trunc x) => (FIDBR [5] x)
(RoundToEven x) => (FIDBR [4] x)
(Round x) => (FIDBR [1] x)
(FMA x y z) => (FMADD z x y)

(Sqrt32 ...) => (FSQRTS ...)

// Atomic loads and stores.
// The SYNC instruction (fast-BCR-serialization) prevents store-load
// reordering. Other sequences of memory operations (load-load,
// store-store and load-store) are already guaranteed not to be reordered.
(AtomicLoad(8|32|Acq32|64|Ptr) ptr mem) => (MOV(BZ|WZ|WZ|D|D)atomicload ptr mem)
(AtomicStore(8|32|64|PtrNoWB) ptr val mem) => (SYNC (MOV(B|W|D|D)atomicstore ptr val mem))

// Store-release doesn't require store-load ordering.
(AtomicStoreRel32 ptr val mem) => (MOVWatomicstore ptr val mem)

// Atomic adds.
(AtomicAdd32
ptr val mem) => (AddTupleFirst32 val (LAA ptr val mem))
(AtomicAdd64 ptr val mem) => (AddTupleFirst64 val (LAAG ptr val mem))
(Select0 <t> (AddTupleFirst32 val tuple)) => (ADDW val (Select0 <t> tuple))
(Select1 (AddTupleFirst32 _ tuple)) => (Select1 tuple)
(Select0 <t> (AddTupleFirst64 val tuple)) => (ADD val (Select0 <t> tuple))
(Select1 (AddTupleFirst64 _ tuple)) => (Select1 tuple)

// Atomic exchanges.

```

```

(AtomicExchange32 ptr val mem) => (LoweredAtomicExchange32 ptr val mem)
(AtomicExchange64 ptr val mem) => (LoweredAtomicExchange64 ptr val mem)

// Atomic compare and swap.
(AtomicCompareAndSwap32 ptr old new_ mem) => (LoweredAtomicCas32 ptr old new_ mem)
(AtomicCompareAndSwap64 ptr old new_ mem) => (LoweredAtomicCas64 ptr old new_ mem)

// Atomic and: *(*uint8)(ptr) &= val
//
// Round pointer down to nearest word boundary and pad value with ones before
// applying atomic AND operation to target word.
//
// *(*uint32)(ptr &^ 3) &= rotateleft(uint32(val) | 0xffffffff00,
((3 << 3) ^ ((ptr & 3) << 3))
//
(AtomicAnd8 ptr val mem)
=> (LANfloor
  ptr
  (RLL <typ.UInt32>
    (ORWconst <typ.UInt32> val [-1<<8])
    (RXSBG <typ.UInt32> {s390x.NewRotateParams(59, 60, 3)} (MOVDconst [3<<3]) ptr))
  mem)

// Atomic or: *(*uint8)(ptr) |= val
//
// Round pointer down to nearest word boundary and pad value with zeros before
// applying atomic OR operation to target word.
//
// *(*uint32)(ptr &^ 3) |= uint32(val) << ((3 << 3) ^ ((ptr & 3) << 3))
//
(AtomicOr8 ptr val mem)
=> (LAOfloor
  ptr
  (SLW <typ.UInt32>
    (MOVBZreg <typ.UInt32> val)
    (RXSBG <typ.UInt32> {s390x.NewRotateParams(59, 60, 3)} (MOVDconst [3<<3]) ptr))
  mem)

(AtomicAnd32 ...) => (LAN ...)
(AtomicOr32 ...) => (LAO ...)

// Lowering extension
// Note: we always extend to 64 bits even though some ops don't need that many result bits.
(SignExt8to(16|32|64) ...) => (MOVBreg ...)
(SignExt16to(32|64) ...) => (MOVHreg ...)
(SignExt32to64
  ...) => (MOVWreg ...)

```

```

(ZeroExt8to(16|32|64) ...) => (MOVBZreg ...)
(ZeroExt16to(32|64) ...) => (MOVHZreg ...)
(ZeroExt32to64 ...) => (MOVWZreg ...)

(Slicemask <t> x) => (SRADconst (NEG <t> x) [63])

// Lowering truncation
// Because we ignore high parts of registers, truncates are just copies.
(Trunc(16|32|64)to8 ...) => (Copy ...)
(Trunc(32|64)to16 ...) => (Copy ...)
(Trunc64to32 ...) => (Copy ...)

// Lowering float <-> int
(Cvt32to32F ...) => (CEFBRA ...)
(Cvt32to64F ...) => (CDFBRA ...)
(Cvt64to32F ...) => (CEGBRA ...)
(Cvt64to64F ...) => (CDGBRA ...)

(Cvt32Fto32 ...) => (CFEBRA ...)
(Cvt32Fto64 ...) => (CGEBRA ...)
(Cvt64Fto32 ...) => (CFDBRA ...)
(Cvt64Fto64 ...) => (CGDBRA ...)

// Lowering float <-> uint
(Cvt32Uto32F ...) => (CELFBR ...)
(Cvt32Uto64F ...) => (CDLFBR ...)
(Cvt64Uto32F ...) => (CELGBR ...)
(Cvt64Uto64F ...) => (CDLGBR ...)

(Cvt32Fto32U ...) => (CLFEBR ...)
(Cvt32Fto64U ...) => (CLGEBR ...)
(Cvt64Fto32U ...) => (CLFDBR ...)
(Cvt64Fto64U ...) => (CLGDBR ...)

//
Lowering float32 <-> float64
(Cvt32Fto64F ...) => (LDEBR ...)
(Cvt64Fto32F ...) => (LEDBR ...)

(CvtBoolToUInt8 ...) => (Copy ...)

(Round(32|64)F ...) => (LoweredRound(32|64)F ...)

// Lowering shifts

// Lower bounded shifts first. No need to check shift value.
(Lsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SLD x y)
(Lsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)

```



```

(Lsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)
(Lsh8x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)
(Rsh64Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRD x y)
(Rsh32Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRW x y)
(Rsh16Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRW (MOVHZreg x) y)
(Rsh8Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRW (MOVBZreg x) y)
(Rsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAD x y)
(Rsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAW x y)
(Rsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAW (MOVHreg x) y)
(Rsh8x(64|32|16|8) x y) && shiftIsBounded(v)
=> (SRAW (MOVBreg x) y)

// Unsigned shifts need to return 0 if shift amount is >= width of shifted value.
// result = shift >= 64 ? 0 : arg << shift
(Lsh(64|32|16|8)x64 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SL(D|W|W|W) <t> x y) (MOVDconst [0])
(CMPUconst y [64]))
(Lsh(64|32|16|8)x32 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SL(D|W|W|W) <t> x y) (MOVDconst [0])
(CMPWUconst y [64]))
(Lsh(64|32|16|8)x16 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SL(D|W|W|W) <t> x y) (MOVDconst [0])
(CMPWUconst (MOVHZreg y) [64]))
(Lsh(64|32|16|8)x8 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SL(D|W|W|W) <t> x y) (MOVDconst [0])
(CMPWUconst (MOVBZreg y) [64]))

(Rsh(64|32)Ux64 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SR(D|W) <t> x y) (MOVDconst [0])
(CMPUconst y [64]))
(Rsh(64|32)Ux32 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SR(D|W) <t> x y) (MOVDconst [0])
(CMPWUconst y [64]))
(Rsh(64|32)Ux16 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SR(D|W) <t> x y) (MOVDconst
[0]) (CMPWUconst (MOVHZreg y) [64]))
(Rsh(64|32)Ux8 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SR(D|W) <t> x y) (MOVDconst [0])
(CMPWUconst (MOVBZreg y) [64]))

(Rsh(16|8)Ux64 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SRW <t> (MOV(H|B)Zreg x) y) (MOVDconst
[0]) (CMPUconst y [64]))
(Rsh(16|8)Ux32 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SRW <t> (MOV(H|B)Zreg x) y) (MOVDconst
[0]) (CMPWUconst y [64]))
(Rsh(16|8)Ux16 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SRW <t> (MOV(H|B)Zreg x) y) (MOVDconst
[0]) (CMPWUconst (MOVHZreg y) [64]))
(Rsh(16|8)Ux8 <t> x y) => (LOCGR {s390x.GreaterOrEqual} <t> (SRW <t> (MOV(H|B)Zreg x) y) (MOVDconst
[0]) (CMPWUconst (MOVBZreg y) [64]))

// Signed right shift needs to return 0/-1 if shift amount is >= width of shifted value.
// We implement this by setting the shift value to 63 (all ones) if the shift value is more than 63.
// result = arg >> (shift >= 64 ? 63 : shift)
(Rsh(64|32)x64 x y) => (SRA(D|W) x (LOCGR {s390x.GreaterOrEqual}
<y.Type> y (MOVDconst <y.Type> [63]) (CMPUconst y [64])))
(Rsh(64|32)x32 x y) => (SRA(D|W) x (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst <y.Type> [63])
(CMPWUconst y [64])))

```

```

(Rsh(64|32)x16 x y) => (SRA(D|W) x (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst <y.Type> [63])
(CMPWUconst (MOVHZreg y) [64])))
(Rsh(64|32)x8 x y) => (SRA(D|W) x (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst <y.Type> [63])
(CMPWUconst (MOVBZreg y) [64])))

(Rsh(16|8)x64 x y) => (SRAW (MOV(H|B)reg x) (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst
<y.Type> [63]) (CMPUconst y [64])))
(Rsh(16|8)x32 x y) => (SRAW (MOV(H|B)reg x) (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst
<y.Type> [63]) (CMPWUconst y [64])))
(Rsh(16|8)x16 x y) => (SRAW (MOV(H|B)reg x) (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst
<y.Type> [63]) (CMPWUconst (MOVHZreg y) [64])))
(Rsh(16|8)x8 x y) => (SRAW (MOV(H|B)reg x) (LOCGR {s390x.GreaterOrEqual} <y.Type> y (MOVDconst
<y.Type> [63]) (CMPWUconst (MOVBZreg
y) [64])))

// Lowering rotates
(RotateLeft8 <t> x (MOVDconst [c])) => (Or8 (Lsh8x64 <t> x (MOVDconst [c&7])) (Rsh8Ux64 <t> x
(MOVDconst [-c&7])))
(RotateLeft16 <t> x (MOVDconst [c])) => (Or16 (Lsh16x64 <t> x (MOVDconst [c&15])) (Rsh16Ux64 <t> x
(MOVDconst [-c&15])))
(RotateLeft32 ...) => (RLL ...)
(RotateLeft64 ...) => (RLLG ...)

// Lowering comparisons
(Less64 x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMP x y))
(Less32 x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPW x y))
(Less(16|8) x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPW (MOV(H|B)reg x)
(MOV(H|B)reg y)))
(Less64U x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPU x y))
(Less32U x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPWU x y))
(Less(16|8)U x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPWU (MOV(H|B)Zreg x)
(MOV(H|B)Zreg y)))
(Less64F x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst
[1]) (FCMP x y))
(Less32F x y) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (FCMPS x y))

(Leq64 x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMP x y))
(Leq32 x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPW x y))
(Leq(16|8) x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPW (MOV(H|B)reg
x) (MOV(H|B)reg y)))
(Leq64U x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPU x y))
(Leq32U x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPWU x y))
(Leq(16|8)U x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPWU
(MOV(H|B)Zreg x) (MOV(H|B)Zreg y)))
(Leq64F x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (FCMP x y))
(Leq32F x y) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (FCMPS x y))

(Eq(64|Ptr) x y) => (LOCGR {s390x.Equal} (MOVDconst [0]) (MOVDconst [1]) (CMP x y))

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(Eq32    x y) => (LOCGR
 {s390x.Equal} (MOVDconst [0]) (MOVDconst [1]) (CMPW x y))
(Eq(16|8|B) x y) => (LOCGR {s390x.Equal} (MOVDconst [0]) (MOVDconst [1]) (CMPW (MOV(H|B|B)reg x)
(MOV(H|B|B)reg y)))
(Eq64F   x y) => (LOCGR {s390x.Equal} (MOVDconst [0]) (MOVDconst [1]) (FCMP x y))
(Eq32F   x y) => (LOCGR {s390x.Equal} (MOVDconst [0]) (MOVDconst [1]) (FCMPS x y))

(Neq(64|Ptr) x y) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (CMP x y))
(Neq32   x y) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPW x y))
(Neq(16|8|B) x y) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPW (MOV(H|B|B)reg
x) (MOV(H|B|B)reg y)))
(Neq64F   x y) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (FCMP x y))
(Neq32F   x y) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (FCMPS x y))

// Lowering loads
(Load <tr> ptr mem) && (is64BitInt(t) || isPtr(t)) => (MOVDload ptr mem)
(Load <tr> ptr mem) && is32BitInt(t) && isSigned(t) => (MOVWload ptr mem)
(Load <tr>
 ptr mem) && is32BitInt(t) && !isSigned(t) => (MOVWZload ptr mem)
(Load <tr> ptr mem) && is16BitInt(t) && isSigned(t) => (MOVHload ptr mem)
(Load <tr> ptr mem) && is16BitInt(t) && !isSigned(t) => (MOVHZload ptr mem)
(Load <tr> ptr mem) && is8BitInt(t) && isSigned(t) => (MOVBload ptr mem)
(Load <tr> ptr mem) && (t.IsBoolean() || (is8BitInt(t) && !isSigned(t))) => (MOVBZload ptr mem)
(Load <tr> ptr mem) && is32BitFloat(t) => (FMOVSload ptr mem)
(Load <tr> ptr mem) && is64BitFloat(t) => (FMOVDload ptr mem)

// Lowering stores
// These more-specific FP versions of Store pattern should come first.
(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (FMOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitFloat(val.Type) => (FMOVSstore ptr val mem)

(Store {t} ptr val mem) && t.Size() == 8 => (MOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t}
 ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)

// Lowering moves

// Load and store for small copies.
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBZload src mem) mem)
(Move [2] dst src mem) => (MOVHstore dst (MOVHZload src mem) mem)
(Move [4] dst src mem) => (MOVWstore dst (MOVWZload src mem) mem)
(Move [8] dst src mem) => (MOVDstore dst (MOVDload src mem) mem)
(Move [16] dst src mem) =>
(MOVDstore [8] dst (MOVDload [8] src mem)
(MOVDstore dst (MOVDload src mem) mem))

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(Move [24] dst src mem) =>
  (MOVDstore [16] dst (MOVDload [16] src mem)
   (MOVDstore [8] dst (MOVDload [8] src mem)
    (MOVDstore dst (MOVDload src mem) mem)))
(Move [3] dst src mem) =>
  (MOVBstore [2] dst (MOVBZload [2] src mem)
   (MOVHstore dst (MOVHZload src mem) mem))
(Move [5] dst src mem) =>
  (MOVBstore [4] dst (MOVBZload [4] src mem)
   (MOVWstore dst (MOVWZload src mem) mem))
(Move [6] dst src mem) =>
  (MOVHstore [4] dst (MOVHZload [4] src mem)
   (MOVWstore
   dst (MOVWZload src mem) mem))
(Move [7] dst src mem) =>
  (MOVBstore [6] dst (MOVBZload [6] src mem)
   (MOVHstore [4] dst (MOVHZload [4] src mem)
   (MOVWstore dst (MOVWZload src mem) mem)))

// MVC for other moves. Use up to 4 instructions (sizes up to 1024 bytes).
(Move [s] dst src mem) && s > 0 && s <= 256 && logLargeCopy(v, s) =>
  (MVC [makeValAndOff(int32(s), 0)] dst src mem)
(Move [s] dst src mem) && s > 256 && s <= 512 && logLargeCopy(v, s) =>
  (MVC [makeValAndOff(int32(s)-256, 256)] dst src (MVC [makeValAndOff(256, 0)] dst src mem))
(Move [s] dst src mem) && s > 512 && s <= 768 && logLargeCopy(v, s) =>
  (MVC [makeValAndOff(int32(s)-512, 512)] dst src (MVC [makeValAndOff(256, 256)] dst src (MVC
  [makeValAndOff(256, 0)] dst src mem)))
(Move [s] dst src mem) && s > 768 && s <= 1024 && logLargeCopy(v, s) =>
  (MVC [makeValAndOff(int32(s)-768, 768)] dst src (MVC [makeValAndOff(256, 512)] dst src (MVC
  [makeValAndOff(256, 256)] dst src (MVC [makeValAndOff(256, 0)] dst src mem))))

//
Move more than 1024 bytes using a loop.
(Move [s] dst src mem) && s > 1024 && logLargeCopy(v, s) =>
  (LoweredMove [s%256] dst src (ADD <src.Type> src (MOVDconst [(s/256)*256])) mem)

// Lowering Zero instructions
(Zero [0] _ mem) => mem
(Zero [1] destptr mem) => (MOVBstoreconst [0] destptr mem)
(Zero [2] destptr mem) => (MOVHstoreconst [0] destptr mem)
(Zero [4] destptr mem) => (MOVWstoreconst [0] destptr mem)
(Zero [8] destptr mem) => (MOVDstoreconst [0] destptr mem)
(Zero [3] destptr mem) =>
  (MOVBstoreconst [makeValAndOff(0,2)] destptr
   (MOVHstoreconst [0] destptr mem))
(Zero [5] destptr mem) =>
  (MOVBstoreconst [makeValAndOff(0,4)] destptr
   (MOVWstoreconst [0] destptr mem))

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(Zero [6] destptr mem) =>
(MOVHstoreconst [makeValAndOff(0,4)] destptr
 (MOVWstoreconst [0] destptr mem))
(Zero [7] destptr mem) =>
(MOVWstoreconst [makeValAndOff(0,3)] destptr
 (MOVWstoreconst [0] destptr mem))

(Zero [s] destptr mem) && s > 0 && s <= 1024 =>
(CLEAR [makeValAndOff(int32(s), 0)] destptr
 mem)

// Zero more than 1024 bytes using a loop.
(Zero [s] destptr mem) && s > 1024 =>
(LoweredZero [s%256] destptr (ADDconst <destptr.Type> destptr [(int32(s)/256)*256]) mem)

// Lowering constants
(Const(64|32|16|8) [val]) => (MOVDconst [int64(val)])
(Const(32|64)F ...) => (FMOV(S|D)const ...)
(ConstNil) => (MOVDconst [0])
(ConstBool [t]) => (MOVDconst [b2i(t)])

// Lowering calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

// Miscellaneous
(IsNotNil p) => (LOCGR {s390x.NotEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPconst p [0]))
(IsInBounds idx len) => (LOCGR {s390x.Less} (MOVDconst [0]) (MOVDconst [1]) (CMPU idx len))
(IsSliceInBounds idx len) => (LOCGR {s390x.LessOrEqual} (MOVDconst [0]) (MOVDconst [1]) (CMPU idx len))
(NilCheck ...) => (LoweredNilCheck ...)
(GetG ...) => (LoweredGetG ...)
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP
 ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)
(Addr {sym} base) => (MOVDaddr {sym} base)
(LocalAddr {sym} base _) => (MOVDaddr {sym} base)
(ITab (Load ptr mem)) => (MOVDload ptr mem)

// block rewrites
(If cond yes no) => (CLIJ {s390x.LessOrGreater} (MOVBZreg <typ.Bool> cond) [0] yes no)

// Write barrier.
(WB ...) => (LoweredWB ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)

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(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// *****
// Above: lowering rules
// Below: optimizations
// *****
// TODO: Should the optimizations be a separate pass?

// Note: when removing unnecessary sign/zero extensions.
//
// After a value is spilled it is restored using a sign- or zero-extension
// to register-width as appropriate for its type. For example, a uint8 will
//
// be restored using a MOVBZ (llgc) instruction which will zero extend the
// 8-bit value to 64-bits.
//
// This is a hazard when folding sign- and zero-extensions since we need to
// ensure not only that the value in the argument register is correctly
// extended but also that it will still be correctly extended if it is
// spilled and restored.
//
// In general this means we need type checks when the RHS of a rule is an
// OpCopy (i.e. "... x:(...) ..." -> x").

// Merge double extensions.
(MOV(H|HZ)reg e:(MOV(B|BZ)reg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(W|WZ)reg e:(MOV(B|BZ)reg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(W|WZ)reg e:(MOV(H|HZ)reg x)) && clobberIfDead(e) => (MOV(H|HZ)reg x)

// Bypass redundant sign extensions.
(MOV(B|BZ)reg e:(MOVBreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(B|BZ)reg e:(MOVHreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(B|BZ)reg e:(MOVWreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(H|HZ)reg e:(MOVHreg x)) &&
clobberIfDead(e) => (MOV(H|HZ)reg x)
(MOV(H|HZ)reg e:(MOVWreg x)) && clobberIfDead(e) => (MOV(H|HZ)reg x)
(MOV(W|WZ)reg e:(MOVWreg x)) && clobberIfDead(e) => (MOV(W|WZ)reg x)

// Bypass redundant zero extensions.
(MOV(B|BZ)reg e:(MOVBZreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(B|BZ)reg e:(MOVHZreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(B|BZ)reg e:(MOVWZreg x)) && clobberIfDead(e) => (MOV(B|BZ)reg x)
(MOV(H|HZ)reg e:(MOVHZreg x)) && clobberIfDead(e) => (MOV(H|HZ)reg x)
(MOV(H|HZ)reg e:(MOVWZreg x)) && clobberIfDead(e) => (MOV(H|HZ)reg x)
(MOV(W|WZ)reg e:(MOVWZreg x)) && clobberIfDead(e) => (MOV(W|WZ)reg x)

// Remove zero extensions after zero extending load.

```

```

// Note: take care that if x is spilled it is restored correctly.
(MOV(B|H|W)Zreg x:(MOVBZload _ _)) && (!x.Type.IsSigned() || x.Type.Size() > 1) => x
(MOV(H|W)Zreg x:(MOVHZload _ _)) && (!x.Type.IsSigned() || x.Type.Size() > 2) => x
(MOVWZreg x:(MOVWZload _ _)) && (!x.Type.IsSigned() ||
x.Type.Size() > 4) => x

// Remove sign extensions after sign extending load.
// Note: take care that if x is spilled it is restored correctly.
(MOV(B|H|W)reg x:(MOVBload _ _)) && (x.Type.IsSigned() || x.Type.Size() == 8) => x
(MOV(H|W)reg x:(MOVHload _ _)) && (x.Type.IsSigned() || x.Type.Size() == 8) => x
(MOVWreg x:(MOVWload _ _)) && (x.Type.IsSigned() || x.Type.Size() == 8) => x

// Remove sign extensions after zero extending load.
// These type checks are probably unnecessary but do them anyway just in case.
(MOV(H|W)reg x:(MOVBZload _ _)) && (!x.Type.IsSigned() || x.Type.Size() > 1) => x
(MOVWreg x:(MOVHZload _ _)) && (!x.Type.IsSigned() || x.Type.Size() > 2) => x

// Fold sign and zero extensions into loads.
//
// Note: The combined instruction must end up in the same block
// as the original load. If not, we end up making a value with
// memory type live in two different blocks, which can lead to
// multiple memory values alive simultaneously.
//
//
// Make sure we don't combine these ops if the load has another use.
// This prevents a single load from being split into multiple loads
// which then might return different values. See test/atomicload.go.
(MOV(B|H|W)Zreg <t> x:(MOV(B|H|W)load [o] {s} p mem))
&& x.Uses == 1
&& clobber(x)
=> @x.Block (MOV(B|H|W)Zload <t> [o] {s} p mem)
(MOV(B|H|W)reg <t> x:(MOV(B|H|W)Zload [o] {s} p mem))
&& x.Uses == 1
&& clobber(x)
=> @x.Block (MOV(B|H|W)load <t> [o] {s} p mem)

// Remove zero extensions after argument load.
(MOVBZreg x:(Arg <t>)) && !t.IsSigned() && t.Size() == 1 => x
(MOVHZreg x:(Arg <t>)) && !t.IsSigned() && t.Size() <= 2 => x
(MOVWZreg x:(Arg <t>)) && !t.IsSigned() && t.Size() <= 4 => x

// Remove sign extensions after argument load.
(MOVBreg x:(Arg <t>)) && t.IsSigned() && t.Size() == 1 => x
(MOVHreg x:(Arg <t>)) && t.IsSigned() && t.Size() <= 2 => x
(MOVWreg x:(Arg <t>)) && t.IsSigned() && t.Size() <= 4 => x

// Fold zero extensions into constants.

```

```

(MOVBZreg (MOVDconst
[c])) => (MOVDconst [int64( uint8(c))])
(MOVHZreg (MOVDconst [c])) => (MOVDconst [int64(uint16(c))])
(MOVWZreg (MOVDconst [c])) => (MOVDconst [int64(uint32(c))])

// Fold sign extensions into constants.
(MOVBreg (MOVDconst [c])) => (MOVDconst [int64( int8(c))])
(MOVHreg (MOVDconst [c])) => (MOVDconst [int64(int16(c))])
(MOVWreg (MOVDconst [c])) => (MOVDconst [int64(int32(c))])

// Remove zero extension of conditional move.
// Note: only for MOVBZreg for now since it is added as part of 'if' statement lowering.
(MOVBZreg x:(LOCGR (MOVDconst [c]) (MOVDconst [d]) _))
&& int64(uint8(c)) == c
&& int64(uint8(d)) == d
&& (!x.Type.IsSigned() || x.Type.Size() > 1)
=> x

// Fold boolean tests into blocks.
// Note: this must match If statement lowering.
(CLIJ {s390x.LessOrGreater} (LOCGR {d} (MOVDconst [0]) (MOVDconst [x]) cmp) [0] yes no)
&& int32(x) != 0
=> (BRC {d} cmp yes no)

// Canonicalize BRC condition code mask by removing impossible conditions.
// Integer comparisons
cannot generate the unordered condition.
(BRC {c} x:((CMP|CMPW|CMPU|CMPWU) _ _) yes no) && c&s390x.Unordered != 0 => (BRC
{c&^s390x.Unordered} x yes no)
(BRC {c} x:((CMP|CMPW|CMPU|CMPWU)const _) yes no) && c&s390x.Unordered != 0 => (BRC
{c&^s390x.Unordered} x yes no)

// Compare-and-branch.
// Note: bit 3 (unordered) must not be set so we mask out s390x.Unordered.
(BRC {c} (CMP x y) yes no) => (CGRJ {c&^s390x.Unordered} x y yes no)
(BRC {c} (CMPW x y) yes no) => (CRJ {c&^s390x.Unordered} x y yes no)
(BRC {c} (CMPU x y) yes no) => (CLGRJ {c&^s390x.Unordered} x y yes no)
(BRC {c} (CMPWU x y) yes no) => (CLRJ {c&^s390x.Unordered} x y yes no)

// Compare-and-branch (immediate).
// Note: bit 3 (unordered) must not be set so we mask out s390x.Unordered.
(BRC {c} (CMPconst x [y]) yes no) && y == int32( int8(y)) => (CGIJ {c&^s390x.Unordered} x [ int8(y)] yes no)
(BRC {c} (CMPWconst x [y]) yes no) && y == int32( int8(y)) => (CIJ {c&^s390x.Unordered} x [ int8(y)] yes
no)
(BRC
{c} (CMPUconst x [y]) yes no) && y == int32(uint8(y)) => (CLGIJ {c&^s390x.Unordered} x [uint8(y)] yes no)
(BRC {c} (CMPWUconst x [y]) yes no) && y == int32(uint8(y)) => (CLIJ {c&^s390x.Unordered} x [uint8(y)] yes
no)

```



```

// Absorb immediate into compare-and-branch.
(C(R|GR)J {c} x (MOVDconst [y]) yes no) && is8Bit(y) => (C(I|GI)J {c} x [int8(y)] yes no)
(CL(R|GR)J {c} x (MOVDconst [y]) yes no) && isU8Bit(y) => (CL(I|GI)J {c} x [uint8(y)] yes no)
(C(R|GR)J {c} (MOVDconst [x]) y yes no) && is8Bit(x) => (C(I|GI)J {c.ReverseComparison() } y [int8(x)] yes
no)
(CL(R|GR)J {c} (MOVDconst [x]) y yes no) && isU8Bit(x) => (CL(I|GI)J {c.ReverseComparison() } y [uint8(x)]
yes no)

// Prefer comparison with immediate to compare-and-branch.
(CGRJ {c} x (MOVDconst [y]) yes no) && !is8Bit(y) && is32Bit(y) => (BRC {c} (CMPconst x [int32(y)]) yes
no)
(CRJ {c} x (MOVDconst [y]) yes no) && !is8Bit(y) && is32Bit(y) => (BRC {c} (CMPWconst x [int32(y)]) yes
no)
(CLGRJ {c} x (MOVDconst [y]) yes
no) && !isU8Bit(y) && isU32Bit(y) => (BRC {c} (CMPUconst x [int32(y)]) yes no)
(CLRJ {c} x (MOVDconst [y]) yes no) && !isU8Bit(y) && isU32Bit(y) => (BRC {c} (CMPWUconst x [int32(y)])
yes no)
(CGRJ {c} (MOVDconst [x]) y yes no) && !is8Bit(x) && is32Bit(x) => (BRC {c.ReverseComparison() }
(CMPconst y [int32(x)]) yes no)
(CRJ {c} (MOVDconst [x]) y yes no) && !is8Bit(x) && is32Bit(x) => (BRC {c.ReverseComparison() }
(CMPWconst y [int32(x)]) yes no)
(CLGRJ {c} (MOVDconst [x]) y yes no) && !isU8Bit(x) && isU32Bit(x) => (BRC {c.ReverseComparison() }
(CMPUconst y [int32(x)]) yes no)
(CLRJ {c} (MOVDconst [x]) y yes no) && !isU8Bit(x) && isU32Bit(x) => (BRC {c.ReverseComparison() }
(CMPWUconst y [int32(x)]) yes no)

// Absorb sign/zero extensions into 32-bit compare-and-branch.
(CIJ {c} (MOV(W|WZ)reg x) [y] yes no) => (CIJ {c} x [y] yes no)
(CLIJ {c} (MOV(W|WZ)reg x) [y] yes no) => (CLIJ {c} x [y] yes no)

// Bring out-of-range signed immediates into range by varying branch condition.
(BRC
{s390x.Less} (CMPconst x [128]) yes no) => (CGIJ {s390x.LessOrEqual} x [127] yes no)
(BRC {s390x.Less} (CMPWconst x [128]) yes no) => (CIJ {s390x.LessOrEqual} x [127] yes no)
(BRC {s390x.LessOrEqual} (CMPconst x [-129]) yes no) => (CGIJ {s390x.Less} x [-128] yes no)
(BRC {s390x.LessOrEqual} (CMPWconst x [-129]) yes no) => (CIJ {s390x.Less} x [-128] yes no)
(BRC {s390x.Greater} (CMPconst x [-129]) yes no) => (CGIJ {s390x.GreaterOrEqual} x [-128] yes no)
(BRC {s390x.Greater} (CMPWconst x [-129]) yes no) => (CIJ {s390x.GreaterOrEqual} x [-128] yes no)
(BRC {s390x.GreaterOrEqual} (CMPconst x [128]) yes no) => (CGIJ {s390x.Greater} x [127] yes no)
(BRC {s390x.GreaterOrEqual} (CMPWconst x [128]) yes no) => (CIJ {s390x.Greater} x [127] yes no)

// Bring out-of-range unsigned immediates into range by varying branch condition.
(BRC {s390x.Less} (CMP(WU|U)const x [256]) yes no) => (C(L|LG)IJ
{s390x.LessOrEqual} x [255] yes no)
(BRC {s390x.GreaterOrEqual} (CMP(WU|U)const x [256]) yes no) => (C(L|LG)IJ {s390x.Greater} x [255] yes
no)

```

```

// Bring out-of-range immediates into range by switching signedness (only == and !=).
(BRC {c} (CMPConst x [y]) yes no) && y == int32(uint8(y)) && (c == s390x.Equal || c == s390x.LessOrGreater)
=> (CLGIJ {c} x [uint8(y)] yes no)
(BRC {c} (CMPWConst x [y]) yes no) && y == int32(uint8(y)) && (c == s390x.Equal || c ==
s390x.LessOrGreater) => (CLIJ {c} x [uint8(y)] yes no)
(BRC {c} (CMPUConst x [y]) yes no) && y == int32(int8(y)) && (c == s390x.Equal || c == s390x.LessOrGreater)
=> (CGIJ {c} x [int8(y)] yes no)
(BRC {c} (CMPWUConst x [y]) yes no) && y == int32(int8(y)) && (c == s390x.Equal || c ==
s390x.LessOrGreater) => (CIJ {c} x [int8(y)] yes no)

// Fold constants into instructions.
(ADD x (MOVDConst [c])) && is32Bit(c) => (ADDConst [int32(c)] x)
(ADDW x (MOVDConst [c])) => (ADDWConst [int32(c)] x)

(SUB x (MOVDConst [c]))
&& is32Bit(c) => (SUBConst x [int32(c)])
(SUB (MOVDConst [c]) x) && is32Bit(c) => (NEG (SUBConst <v.Type> x [int32(c)]))
(SUBW x (MOVDConst [c])) => (SUBWConst x [int32(c)])
(SUBW (MOVDConst [c]) x) => (NEGW (SUBWConst <v.Type> x [int32(c)]))

(MULLD x (MOVDConst [c])) && is32Bit(c) => (MULLDConst [int32(c)] x)
(MULLW x (MOVDConst [c])) => (MULLWConst [int32(c)] x)

// NILF instructions leave the high 32 bits unchanged which is
// equivalent to the leftmost 32 bits being set.
// TODO(mundaym): modify the assembler to accept 64-bit values
// and use isU32Bit(^c).
(AND x (MOVDConst [c]))
&& s390x.NewRotateParams(0, 63, 0).OutMerge(uint64(c)) != nil
=> (RISBGZ x {*s390x.NewRotateParams(0, 63, 0).OutMerge(uint64(c))})
(AND x (MOVDConst [c]))
&& is32Bit(c)
&& c < 0
=> (ANDConst [c] x)
(AND x (MOVDConst [c]))
&& is32Bit(c)
&& c >= 0
=> (MOVWZreg (ANDWConst <typ.UInt32> [int32(c)] x))

(ANDW x (MOVDConst [c])) => (ANDWConst [int32(c)] x)

((AND|ANDW)Const [c] ((AND|ANDW)Const
[d] x)) => ((AND|ANDW)Const [c&d] x)

((OR|XOR) x (MOVDConst [c])) && isU32Bit(c) => ((OR|XOR)Const [c] x)
((OR|XOR)W x (MOVDConst [c])) => ((OR|XOR)WConst [int32(c)] x)

// Constant shifts.

```

```

(S(LD|RD|RAD) x (MOVDconst [c])) => (S(LD|RD|RAD)const x [uint8(c&63)])
(S(LW|RW|RAW) x (MOVDconst [c])) && c&32 == 0 => (S(LW|RW|RAW)const x [uint8(c&31)])
(S(LW|RW) _ (MOVDconst [c])) && c&32 != 0 => (MOVDconst [0])
(SRAW x (MOVDconst [c])) && c&32 != 0 => (SRAWconst x [31])

// Shifts only use the rightmost 6 bits of the shift value.
(S(LD|RD|RAD|LW|RW|RAW) x (RISBGZ y {r}))
&& r.Amount == 0
&& r.OutMask()&63 == 63
=> (S(LD|RD|RAD|LW|RW|RAW) x y)
(S(LD|RD|RAD|LW|RW|RAW) x (AND (MOVDconst [c]) y))
=> (S(LD|RD|RAD|LW|RW|RAW) x (ANDWconst <typ.UInt32> [int32(c&63)] y))
(S(LD|RD|RAD|LW|RW|RAW) x (ANDWconst [c] y)) && c&63 == 63
=> (S(LD|RD|RAD|LW|RW|RAW) x y)
(SLD x (MOV(W|H|B|WZ|HZ|BZ)reg y)) => (SLD x y)
(SRD x (MOV(W|H|B|WZ|HZ|BZ)reg y)) => (SRD x y)
(SRAD x (MOV(W|H|B|WZ|HZ|BZ)reg
y)) => (SRAD x y)
(SLW x (MOV(W|H|B|WZ|HZ|BZ)reg y)) => (SLW x y)
(SRW x (MOV(W|H|B|WZ|HZ|BZ)reg y)) => (SRW x y)
(SRAW x (MOV(W|H|B|WZ|HZ|BZ)reg y)) => (SRAW x y)

// Match rotate by constant.
(RLLG x (MOVDconst [c])) => (RISBGZ x {s390x.NewRotateParams(0, 63, uint8(c&63))})
(RLL x (MOVDconst [c])) => (RLLconst x [uint8(c&31)])

// Match rotate by constant pattern.
((ADD|OR|XOR) (SLDconst x [c]) (SRDconst x [64-c])) => (RISBGZ x {s390x.NewRotateParams(0, 63, c)})
((ADD|OR|XOR)W (SLWconst x [c]) (SRWconst x [32-c])) => (RLLconst x [c])

// Signed 64-bit comparison with immediate.
(CMP x (MOVDconst [c])) && is32Bit(c) => (CMPconst x [int32(c)])
(CMP (MOVDconst [c]) x) && is32Bit(c) => (InvertFlags (CMPconst x [int32(c)]))

// Unsigned 64-bit comparison with immediate.
(CMPU x (MOVDconst [c])) && isU32Bit(c) => (CMPUconst x [int32(c)])
(CMPU (MOVDconst [c]) x) && isU32Bit(c) => (InvertFlags (CMPUconst x [int32(c)]))

// Signed and unsigned 32-bit comparison with immediate.
(CMP(W|WU)
x (MOVDconst [c])) => (CMP(W|WU)const x [int32(c)])
(CMP(W|WU) (MOVDconst [c]) x) => (InvertFlags (CMP(W|WU)const x [int32(c)]))

// Match (x >> c) << d to 'rotate then insert selected bits [into zero]'.
(SLDconst (SRDconst x [c]) [d]) => (RISBGZ x {s390x.NewRotateParams(uint8(max8(0, int8(c-d))), 63-d,
uint8(int8(d-c)&63))})

// Match (x << c) >> d to 'rotate then insert selected bits [into zero]'.

```



```

(RISBGZ (SRDconst x [c]) {r}) && r.InMerge(^uint64(0)>>c) != nil => (RISBGZ x
{(*r.InMerge(^uint64(0)>>c)).RotateLeft(-c)})

// Absorb 'rotate then insert selected bits [into zero]' into left shift.
(SLDconst (RISBGZ
x {r}) [c])
&& s390x.NewRotateParams(0, 63-c, c).InMerge(r.OutMask()) != nil
=> (RISBGZ x {(*s390x.NewRotateParams(0, 63-c, c).InMerge(r.OutMask()))RotateLeft(r.Amount)})

// Absorb 'rotate then insert selected bits [into zero]' into right shift.
(SRDconst (RISBGZ x {r}) [c])
&& s390x.NewRotateParams(c, 63, -c&63).InMerge(r.OutMask()) != nil
=> (RISBGZ x {(*s390x.NewRotateParams(c, 63, -c&63).InMerge(r.OutMask()))RotateLeft(r.Amount)})

// Merge 'rotate then insert selected bits [into zero]' instructions together.
(RISBGZ (RISBGZ x {y}) {z})
&& z.InMerge(y.OutMask()) != nil
=> (RISBGZ x {(*z.InMerge(y.OutMask()))RotateLeft(y.Amount)})

// Convert RISBGZ into 64-bit shift (helps CSE).
(RISBGZ x {r}) && r.End == 63 && r.Start == -r.Amount&63 => (SRDconst x [-r.Amount&63])
(RISBGZ x {r}) && r.Start == 0 && r.End == 63-r.Amount => (SLDconst x [r.Amount])

// Optimize single bit isolation when it is known to be equivalent to
// the most significant bit due to mask produced
// by arithmetic shift.
// Simply isolate the most significant bit itself and place it in the
// correct position.
//
// Example: (int64(x) >> 63) & 0x8 -> RISBGZ $60, $60, $4, Rsrc, Rdst
(RISBGZ (SRADconst x [c]) {r})
&& r.Start == r.End // single bit selected
&& (r.Start+r.Amount)&63 <= c // equivalent to most significant bit of x
=> (RISBGZ x {s390x.NewRotateParams(r.Start, r.Start, -r.Start&63)})

// Canonicalize the order of arguments to comparisons - helps with CSE.
((CMP|CMPW|CMPU|CMPWU) x y) && canonLessThan(x,y) => (InvertFlags ((CMP|CMPW|CMPU|CMPWU) y
x))

// Use sign/zero extend instead of RISBGZ.
(RISBGZ x {r}) && r == s390x.NewRotateParams(56, 63, 0) => (MOVBZreg x)
(RISBGZ x {r}) && r == s390x.NewRotateParams(48, 63, 0) => (MOVHZreg x)
(RISBGZ x {r}) && r == s390x.NewRotateParams(32, 63, 0) => (MOVWZreg x)

// Use sign/zero extend instead of ANDW.
(ANDWconst [0x00ff] x) => (MOVBZreg x)
(ANDWconst [0xffff] x) => (MOVHZreg x)

```

```

// Strength reduce multiplication
// to the sum (or difference) of two powers of two.
//
// Examples:
// 5x -> 4x + 1x
// 10x -> 8x + 2x
// 120x -> 128x - 8x
// -120x -> 8x - 128x
//
// We know that the rightmost bit of any positive value, once isolated, must either
// be a power of 2 (because it is a single bit) or 0 (if the original value is 0).
// In all of these rules we use a rightmost bit calculation to determine one operand
// for the addition or subtraction. We then just need to calculate if the other
// operand is a valid power of 2 before we can match the rule.
//
// Notes:
// - the generic rules have already matched single powers of two so we ignore them here
// - isPowerOfTwo32 asserts that its argument is greater than 0
// - c&(c-1) = clear rightmost bit
// - c^(c-1) = isolate rightmost bit

// c = 2 + 2 => c - 2 = 2
(MULL(D|W)const <t> x [c]) && isPowerOfTwo32(c&(c-1))
=> ((ADD|ADDW) (SL(D|W)const <t> x [uint8(log32(c&(c-1))]))
    (SL(D|W)const <t> x [uint8(log32(c^(c-1))]))))

//
c = 2 - 2 => c + 2 = 2
(MULL(D|W)const <t> x [c]) && isPowerOfTwo32(c+(c^(c-1)))
=> ((SUB|SUBW) (SL(D|W)const <t> x [uint8(log32(c+(c^(c-1))]))))
    (SL(D|W)const <t> x [uint8(log32(c^(c-1))]))))

// c = 2 - 2 => -c + 2 = 2
(MULL(D|W)const <t> x [c]) && isPowerOfTwo32(-c+(-c^(c-1)))
=> ((SUB|SUBW) (SL(D|W)const <t> x [uint8(log32(-c+(-c^(c-1))]))))
    (SL(D|W)const <t> x [uint8(log32(-c+(-c^(c-1))]))))

// Fold ADD into MOVDaddr. Odd offsets from SB shouldn't be folded (LARL can't handle them).
(ADDconst [c] (MOVDaddr [d] {s} x:(SB))) && ((c+d)&1 == 0) && is32Bit(int64(c)+int64(d)) => (MOVDaddr
[c+d] {s} x)
(ADDconst [c] (MOVDaddr [d] {s} x)) && x.Op != OpSB && is20Bit(int64(c)+int64(d)) => (MOVDaddr [c+d]
{s} x)
(ADD idx (MOVDaddr [c] {s} ptr)) && ptr.Op != OpSB => (MOVDaddridx [c] {s} ptr idx)

// fold ADDconst into MOVDaddrx
(ADDconst [c] (MOVDaddridx [d] {s} x y)) && is20Bit(int64(c)+int64(d)) => (MOVDaddridx [c+d] {s} x y)
(MOVDaddridx

```

```

[c] {s} (ADDconst [d] x) y) && is20Bit(int64(c)+int64(d)) => (MOVDaddridx [c+d] {s} x y)
(MOVDaddridx [c] {s} x (ADDconst [d] y)) && is20Bit(int64(c)+int64(d)) => (MOVDaddridx [c+d] {s} x y)

// reverse ordering of compare instruction
(LOCGR {c} x y (InvertFlags cmp)) => (LOCGR {c.ReverseComparison()} x y cmp)

// replace load from same location as preceding store with copy
(MOVDload [off] {sym} ptr1 (MOVDstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => x
(MOVWload [off] {sym} ptr1 (MOVWstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVWreg x)
(MOVHload [off] {sym} ptr1 (MOVHstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVHreg x)
(MOVBload [off] {sym} ptr1 (MOVBstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVBreg x)
(MOVWZload [off] {sym} ptr1 (MOVWstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVWZreg x)
(MOVHZload [off] {sym} ptr1 (MOVHstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVHZreg x)
(MOVBZload
[off] {sym} ptr1 (MOVBstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (MOVBZreg x)
(MOVDload [off] {sym} ptr1 (FMOVDstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (LGDR x)
(FMOVDload [off] {sym} ptr1 (MOVDstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => (LDGR x)
(FMOVDload [off] {sym} ptr1 (FMOVDstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => x
(FMOVSload [off] {sym} ptr1 (FMOVSstore [off] {sym} ptr2 x _)) && isSamePtr(ptr1, ptr2) => x

// prefer FPR <-> GPR moves over combined load ops
(MULLDload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (MULLD x
(LGDR <t> y))
(ADDload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (ADD x
(LGDR <t> y))
(SUBload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (SUB x
(LGDR <t> y))
(ORload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (OR
x (LGDR <t> y))
(ANDload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (AND x
(LGDR <t> y))
(XORload <t> [off] {sym} x ptr1 (FMOVDstore [off] {sym} ptr2 y _)) && isSamePtr(ptr1, ptr2) => (XOR x
(LGDR <t> y))

// detect attempts to set/clear the sign bit
// may need to be reworked when NIHH/OIHH are added
(RISBGZ (LGDR <t> x) {r}) && r == s390x.NewRotateParams(1, 63, 0) => (LGDR <t> (LPDFR <x.Type> x))
(LDGR <t> (RISBGZ x {r})) && r == s390x.NewRotateParams(1, 63, 0) => (LPDFR (LDGR <t> x))
(OR (MOVDconst [-1<<63]) (LGDR <t> x)) => (LGDR <t> (LNDFR <x.Type> x))
(LDGR <t> (OR (MOVDconst [-1<<63]) x)) => (LNDFR (LDGR <t> x))

// detect attempts to set the sign bit with load
(LDGR <t> x:(ORload <t1> [off] {sym} (MOVDconst [-1<<63]) ptr mem)) && x.Uses == 1 && clobber(x) =>
@x.Block (LNDFR <t> (LDGR <t> (MOVDload <t1> [off] {sym} ptr mem)))

// detect copysign
(OR (RISBGZ (LGDR x) {r}) (LGDR (LPDFR <t> y)))
&& r == s390x.NewRotateParams(0,

```

```

0, 0)
=> (LGDR (CPSDR <t> y x))
(OR (RISBGZ (LGDR x) {r})) (MOVDconst [c]))
&& c >= 0
&& r == s390x.NewRotateParams(0, 0, 0)
=> (LGDR (CPSDR <x.Type> (FMOVDconst <x.Type> [math.Float64frombits(uint64(c))]) x))
(CPSDR y (FMOVDconst [c])) && !math.Signbit(c) => (LPDFR y)
(CPSDR y (FMOVDconst [c])) && math.Signbit(c) => (LNDFR y)

// absorb negations into set/clear sign bit
(FNEG (LPDFR x)) => (LNDFR x)
(FNEG (LNDFR x)) => (LPDFR x)
(FNEGS (LPDFR x)) => (LNDFR x)
(FNEGS (LNDFR x)) => (LPDFR x)

// no need to convert float32 to float64 to set/clear sign bit
(LEDDBR (LPDFR (LDEBR x))) => (LPDFR x)
(LEDDBR (LNDFR (LDEBR x))) => (LNDFR x)

// remove unnecessary FPR <-> GPR moves
(LDGR (LGDR x)) => x
(LGDR (LDGR x)) => x

// Don't extend before storing
(MOVWstore [off] {sym} ptr (MOVWreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBreg x) mem) => (MOVBstore [off] {sym} ptr
x mem)
(MOVWstore [off] {sym} ptr (MOVWZreg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOVHZreg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (MOVBZreg x) mem) => (MOVBstore [off] {sym} ptr x mem)

// Fold constants into memory operations.
// Note that this is not always a good idea because if not all the uses of
// the ADDconst get eliminated, we still have to compute the ADDconst and we now
// have potentially two live values (ptr and (ADDconst [off] ptr)) instead of one.
// Nevertheless, let's do it!
(MOVDload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVDload
[off1+off2] {sym} ptr mem)
(MOVWload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVWload
[off1+off2] {sym} ptr mem)
(MOVHload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVHload
[off1+off2] {sym} ptr mem)
(MOVBload [off1] {sym} (ADDconst [off2] ptr)
mem) && is20Bit(int64(off1)+int64(off2)) => (MOVBload [off1+off2] {sym} ptr mem)
(MOVWZload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVWZload
[off1+off2] {sym} ptr mem)
(MOVHZload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVHZload

```



[off1+off2] {sym} ptr mem)  
(MOVBZload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (MOVBZload  
[off1+off2] {sym} ptr mem)  
(FMOVSload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (FMOVSload  
[off1+off2] {sym} ptr mem)  
(FMOVDload [off1] {sym} (ADDconst [off2] ptr) mem) && is20Bit(int64(off1)+int64(off2)) => (FMOVDload  
[off1+off2] {sym} ptr mem)

(MOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) => (MOVDstore  
[off1+off2] {sym} ptr val mem)  
(MOVWstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) => (MOVWstore  
[off1+off2] {sym} ptr val  
mem)  
(MOVHstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) => (MOVHstore  
[off1+off2] {sym} ptr val mem)  
(MOVBstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) => (MOVBstore  
[off1+off2] {sym} ptr val mem)  
(FMOVSstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) => (FMOVSstore  
[off1+off2] {sym} ptr val mem)  
(FMOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is20Bit(int64(off1)+int64(off2)) =>  
(FMOVDstore [off1+off2] {sym} ptr val mem)

(ADDload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ADDload [off1+off2] {sym} x ptr mem)  
(ADDWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ADDWload [off1+off2] {sym} x ptr mem)  
(MULLDload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB &&  
is20Bit(int64(off1)+int64(off2)) => (MULLDload [off1+off2] {sym} x  
ptr mem)  
(MULLWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB &&  
is20Bit(int64(off1)+int64(off2)) => (MULLWload [off1+off2] {sym} x ptr mem)  
(SUBload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (SUBload [off1+off2] {sym} x ptr mem)  
(SUBWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (SUBWload [off1+off2] {sym} x ptr mem)

(ANDload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ANDload [off1+off2] {sym} x ptr mem)  
(ANDWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ANDWload [off1+off2] {sym} x ptr mem)  
(ORload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ORload [off1+off2] {sym} x ptr mem)  
(ORWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (ORWload [off1+off2] {sym} x ptr mem)  
(XORload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (XORload [off1+off2] {sym} x ptr mem)  
(XORWload [off1] {sym} x (ADDconst [off2] ptr) mem) && ptr.Op != OpSB && is20Bit(int64(off1)+int64(off2))  
=> (XORWload [off1+off2] {sym} x ptr mem)

```

// Fold constants into stores.
(MOVDstore [off] {sym} ptr (MOVDconst [c] mem) && is16Bit(c) && isU12Bit(int64(off)) && ptr.Op != OpSB
=>
(MOVDstoreconst [makeValAndOff(int32(c),off)] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVDconst [c] mem) && is16Bit(c) && isU12Bit(int64(off)) && ptr.Op != OpSB
=>
(MOVWstoreconst [makeValAndOff(int32(c),off)] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVDconst [c] mem) && isU12Bit(int64(off)) && ptr.Op != OpSB =>
(MOVHstoreconst [makeValAndOff(int32(int16(c)),off)] {sym} ptr mem)
(MOVBstore [off] {sym} ptr (MOVDconst [c] mem) && is20Bit(int64(off)) && ptr.Op != OpSB =>
(MOVBstoreconst
[makeValAndOff(int32(int8(c)),off)] {sym} ptr mem)

// Fold address offsets into constant stores.
(MOVDstoreconst [sc] {s} (ADDconst [off] ptr) mem) && isU12Bit(sc.Off64()+int64(off)) =>
(MOVDstoreconst [sc.addOffset32(off)] {s} ptr mem)
(MOVWstoreconst [sc] {s} (ADDconst [off] ptr) mem) && isU12Bit(sc.Off64()+int64(off)) =>
(MOVWstoreconst [sc.addOffset32(off)] {s} ptr mem)
(MOVHstoreconst [sc] {s} (ADDconst [off] ptr) mem) && isU12Bit(sc.Off64()+int64(off)) =>
(MOVHstoreconst [sc.addOffset32(off)] {s} ptr mem)
(MOVBstoreconst [sc] {s} (ADDconst [off] ptr) mem) && is20Bit(sc.Off64()+int64(off)) =>
(MOVBstoreconst [sc.addOffset32(off)] {s} ptr mem)

// Merge address calculations into loads and stores.
// Offsets from SB must not be merged into unaligned memory accesses because
// loads/stores using PC-relative addressing directly must be aligned to the
// size of the target.
(MOVDload [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1,
sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%8 == 0 && (off1+off2)%8 == 0)) =>
(MOVDload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVWZload [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2))
&& canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%4 == 0 &&
(off1+off2)%4 == 0)) =>
(MOVWZload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVHZload [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%2 == 0 &&
(off1+off2)%2 == 0)) =>
(MOVHZload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(MOVBZload [off1] {sym1} (MOVDaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>
(MOVBZload [off1+off2] {mergeSym(sym1,sym2)} base mem)
(FMOVSlod [off1] {sym1} (MOVDaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2))
&& canMergeSym(sym1, sym2) =>
(FMOVSlod [off1+off2] {mergeSym(sym1,sym2)} base mem)
(FMOVdload [off1] {sym1} (MOVDaddr [off2] {sym2} base) mem) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) =>

```

(FMOVDload [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOVWload [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%4 == 0 && (off1+off2)%4 == 0)) =>

(MOVWload [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOVHload [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%2 == 0 && (off1+off2)%2 == 0)) =>

(MOVHload [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOVBload [off1] {sym1} (MOVDaddr [off2] {sym2} base mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>

(MOVBload [off1+off2] {mergeSym(sym1,sym2)} base mem)

(MOVDstore

[off1] {sym1} (MOVDaddr <t> [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%8 == 0 && (off1+off2)%8 == 0)) =>

(MOVDstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(MOVWstore [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%4 == 0 && (off1+off2)%4 == 0)) =>

(MOVWstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(MOVHstore [off1] {sym1} (MOVDaddr <t> [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) && (base.Op != OpSB || (t.IsPtr() && t.Elem().Alignment()%2 == 0 && (off1+off2)%2 == 0)) =>

(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(MOVBstore [off1] {sym1} (MOVDaddr [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>

(MOVBstore [off1+off2]  
{mergeSym(sym1,sym2)} base val mem)

(FMOVStore [off1] {sym1} (MOVDaddr [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>

(FMOVStore [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(FMOVDstore [off1] {sym1} (MOVDaddr [off2] {sym2} base val mem) && is32Bit(int64(off1)+int64(off2)) && canMergeSym(sym1, sym2) =>

(FMOVDstore [off1+off2] {mergeSym(sym1,sym2)} base val mem)

(ADDload [o1] {s1} x (MOVDaddr [o2] {s2} ptr mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2)) && canMergeSym(s1, s2) => (ADDload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

(ADDWload [o1] {s1} x (MOVDaddr [o2] {s2} ptr mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2)) && canMergeSym(s1, s2) => (ADDWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

(MULLDload [o1] {s1} x (MOVDaddr [o2] {s2} ptr mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2)) && canMergeSym(s1, s2) => (MULLDload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

(MULLWload [o1] {s1} x (MOVDaddr [o2]  
{s2} ptr mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2)) && canMergeSym(s1, s2) => (MULLWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

(SUBload [o1] {s1} x (MOVDaddr [o2] {s2} ptr mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))

```

&& canMergeSym(s1, s2) => (SUBload [o1+o2] {mergeSym(s1, s2)} x ptr mem)
(SUBWload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (SUBWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

(ANDload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (ANDload [o1+o2] {mergeSym(s1, s2)} x ptr mem)
(ANDWload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (ANDWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)
(ORload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2)) &&
canMergeSym(s1, s2) => (ORload [o1+o2]
{mergeSym(s1, s2)} x ptr mem)
(ORWload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (ORWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)
(XORload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (XORload [o1+o2] {mergeSym(s1, s2)} x ptr mem)
(XORWload [o1] {s1} x (MOVDaddr [o2] {s2} ptr) mem) && ptr.Op != OpSB && is20Bit(int64(o1)+int64(o2))
&& canMergeSym(s1, s2) => (XORWload [o1+o2] {mergeSym(s1, s2)} x ptr mem)

// Cannot store constant to SB directly (no 'move relative long immediate' instructions).
(MOVDstoreconst [sc] {sym1} (MOVDaddr [off] {sym2} ptr) mem) && ptr.Op != OpSB &&
canMergeSym(sym1, sym2) && sc.canAdd32(off) =>
(MOVDstoreconst [sc.addOffset32(off)] {mergeSym(sym1, sym2)} ptr mem)
(MOVWstoreconst [sc] {sym1} (MOVDaddr [off] {sym2} ptr) mem) && ptr.Op != OpSB &&
canMergeSym(sym1, sym2) && sc.canAdd32(off) =>
(MOVWstoreconst
[sc.addOffset32(off)] {mergeSym(sym1, sym2)} ptr mem)
(MOVHstoreconst [sc] {sym1} (MOVDaddr [off] {sym2} ptr) mem) && ptr.Op != OpSB &&
canMergeSym(sym1, sym2) && sc.canAdd32(off) =>
(MOVHstoreconst [sc.addOffset32(off)] {mergeSym(sym1, sym2)} ptr mem)
(MOVBstoreconst [sc] {sym1} (MOVDaddr [off] {sym2} ptr) mem) && ptr.Op != OpSB && canMergeSym(sym1,
sym2) && sc.canAdd32(off) =>
(MOVBstoreconst [sc.addOffset32(off)] {mergeSym(sym1, sym2)} ptr mem)

// MOVDaddr into MOVDaddridx
(MOVDaddridx [off1] {sym1} (MOVDaddr [off2] {sym2} x) y) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) && x.Op != OpSB =>
(MOVDaddridx [off1+off2] {mergeSym(sym1,sym2)} x y)
(MOVDaddridx [off1] {sym1} x (MOVDaddr [off2] {sym2} y)) && is32Bit(int64(off1)+int64(off2)) &&
canMergeSym(sym1, sym2) && y.Op != OpSB =>
(MOVDaddridx [off1+off2] {mergeSym(sym1,sym2)} x y)

// Absorb InvertFlags into branches.
(BRC {c} (InvertFlags cmp) yes no) => (BRC {c.ReverseComparison()} cmp yes no)

//
Constant comparisons.
(CMPconst (MOVDconst [x]) [y]) && x==int64(y) => (FlagEQ)
(CMPconst (MOVDconst [x]) [y]) && x<int64(y) => (FlagLT)

```

```

(CMPconst (MOVDconst [x] [y]) && x>int64(y) => (FlagGT)
(CMPUconst (MOVDconst [x] [y]) && uint64(x)==uint64(y) => (FlagEQ)
(CMPUconst (MOVDconst [x] [y]) && uint64(x)<uint64(y) => (FlagLT)
(CMPUconst (MOVDconst [x] [y]) && uint64(x)>uint64(y) => (FlagGT)

(CMPWconst (MOVDconst [x] [y]) && int32(x)==int32(y) => (FlagEQ)
(CMPWconst (MOVDconst [x] [y]) && int32(x)<int32(y) => (FlagLT)
(CMPWconst (MOVDconst [x] [y]) && int32(x)>int32(y) => (FlagGT)
(CMPWUconst (MOVDconst [x] [y]) && uint32(x)==uint32(y) => (FlagEQ)
(CMPWUconst (MOVDconst [x] [y]) && uint32(x)<uint32(y) => (FlagLT)
(CMPWUconst (MOVDconst [x] [y]) && uint32(x)>uint32(y) => (FlagGT)

(CMP(W|WU)const (MOVBZreg _) [c] && 0xff < c => (FlagLT)
(CMP(W|WU)const (MOVHZreg _) [c] && 0xffff < c => (FlagLT)

(CMPconst (SRDconst _ [c] [n]) && c > 0 && n < 0 => (FlagGT)
(CMPWconst
(SRWconst _ [c] [n]) && c > 0 && n < 0 => (FlagGT)

(CMPUconst (SRDconst _ [c] [n]) && c > 0 && c < 64 && (1<<uint(64-c)) <= uint64(n) => (FlagLT)
(CMPWUconst (SRWconst _ [c] [n]) && c > 0 && c < 32 && (1<<uint(32-c)) <= uint32(n) => (FlagLT)

(CMPWconst (ANDWconst _ [m] [n]) && int32(m) >= 0 && int32(m) < int32(n) => (FlagLT)
(CMPWUconst (ANDWconst _ [m] [n]) && uint32(m) < uint32(n) => (FlagLT)

(CMPconst (RISBGZ x {r}) [c] && c > 0 && r.OutMask() < uint64(c) => (FlagLT)
(CMPUconst (RISBGZ x {r}) [c] && r.OutMask() < uint64(uint32(c)) => (FlagLT)

// Constant compare-and-branch with immediate.
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal != 0 && int64(x) == int64(y) => (First yes no)
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less != 0 && int64(x) < int64(y) => (First yes no)
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Greater != 0 && int64(x) > int64(y) => (First yes no)
(CIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal != 0 &&
int32(x) == int32(y) => (First yes no)
(CIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less != 0 && int32(x) < int32(y) => (First yes no)
(CIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Greater != 0 && int32(x) > int32(y) => (First yes no)
(CLGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal != 0 && uint64(x) == uint64(y) => (First yes no)
(CLGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less != 0 && uint64(x) < uint64(y) => (First yes no)
(CLGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Greater != 0 && uint64(x) > uint64(y) => (First yes no)
(CLIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal != 0 && uint32(x) == uint32(y) => (First yes no)
(CLIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less != 0 && uint32(x) < uint32(y) => (First yes no)
(CLIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Greater != 0 && uint32(x) > uint32(y) => (First yes no)
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal == 0 && int64(x) == int64(y) => (First no
yes)
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less == 0 && int64(x) < int64(y) => (First no yes)
(CGIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Greater == 0 && int64(x) > int64(y) => (First no yes)
(CIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Equal == 0 && int32(x) == int32(y) => (First no yes)
(CIJ {c} (MOVDconst [x] [y] yes no) && c&s390x.Less == 0 && int32(x) < int32(y) => (First no yes)

```

```

(CIJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Greater == 0 && int32(x) > int32(y) => (First no yes)
(CLGJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Equal == 0 && uint64(x) == uint64(y) => (First no yes)
(CLGJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Less == 0 && uint64(x) < uint64(y) => (First no yes)
(CLGJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Greater == 0 && uint64(x) > uint64(y) => (First no yes)
(CLIJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Equal == 0 && uint32(x) == uint32(y) => (First no yes)
(CLIJ {c} (MOVDconst [x]) [y]
yes no) && c&s390x.Less == 0 && uint32(x) < uint32(y) => (First no yes)
(CLIJ {c} (MOVDconst [x]) [y] yes no) && c&s390x.Greater == 0 && uint32(x) > uint32(y) => (First no yes)

// Constant compare-and-branch with immediate when unsigned comparison with zero.
(C(L|LG)IJ {s390x.GreaterOrEqual} _ [0] yes no) => (First yes no)
(C(L|LG)IJ {s390x.Less} _ [0] yes no) => (First no yes)

// Constant compare-and-branch when operands match.
(C(GR|R|LGR|LR)J {c} x y yes no) && x == y && c&s390x.Equal != 0 => (First yes no)
(C(GR|R|LGR|LR)J {c} x y yes no) && x == y && c&s390x.Equal == 0 => (First no yes)

// Convert 64-bit comparisons to 32-bit comparisons and signed comparisons
// to unsigned comparisons.
// Helps simplify constant comparison detection.
(CM(P|PU)const (MOV(W|WZ)reg x) [c]) => (CMP(W|WU)const x [c])
(CM(P|P|PU|PU)const x:(MOV(H|HZ|H|HZ)reg _) [c]) => (CMP(W|W|WU|WU)const x [c])
(CM(P|P|PU|PU)const x:(MOV(B|BZ|B|BZ)reg _) [c]) => (CMP(W|W|WU|WU)const x [c])
(CMPconst
(MOV(WZ|W)reg x:(ANDWconst [m] _) [c]) && int32(m) >= 0 && c >= 0 => (CMPWUconst x [c])
(CMPUconst (MOV(WZ|W)reg x:(ANDWconst [m] _) [c]) && int32(m) >= 0 => (CMPWUconst x [c])
(CMPconst x:(SRDconst _ [c]) [n]) && c > 0 && n >= 0 => (CMPUconst x [n])
(CMPWconst x:(SRWconst _ [c]) [n]) && c > 0 && n >= 0 => (CMPWUconst x [n])

// Absorb sign and zero extensions into 32-bit comparisons.
(CMP(W|W|WU|WU) x (MOV(W|WZ|W|WZ)reg y)) => (CMP(W|W|WU|WU) x y)
(CMP(W|W|WU|WU) (MOV(W|WZ|W|WZ)reg x) y) => (CMP(W|W|WU|WU) x y)
(CMP(W|W|WU|WU)const (MOV(W|WZ|W|WZ)reg x) [c]) => (CMP(W|W|WU|WU)const x [c])

// Absorb flag constants into branches.
(BRC {c} (FlagEQ) yes no) && c&s390x.Equal != 0 => (First yes no)
(BRC {c} (FlagLT) yes no) && c&s390x.Less != 0 => (First yes no)
(BRC {c} (FlagGT) yes no) && c&s390x.Greater != 0 => (First yes no)
(BRC {c} (FlagOV) yes no) && c&s390x.Unordered != 0 => (First yes no)

(BRC {c} (FlagEQ) yes no) && c&s390x.Equal ==
0 => (First no yes)
(BRC {c} (FlagLT) yes no) && c&s390x.Less == 0 => (First no yes)
(BRC {c} (FlagGT) yes no) && c&s390x.Greater == 0 => (First no yes)
(BRC {c} (FlagOV) yes no) && c&s390x.Unordered == 0 => (First no yes)

// Absorb flag constants into SETxx ops.
(LOCGR {c} _ x (FlagEQ)) && c&s390x.Equal != 0 => x

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```

(LOCGR {c} _ x (FlagLT)) && c&s390x.Less    != 0 => x
(LOCGR {c} _ x (FlagGT)) && c&s390x.Greater != 0 => x
(LOCGR {c} _ x (FlagOV)) && c&s390x.Unordered != 0 => x

(LOCGR {c} x _ (FlagEQ)) && c&s390x.Equal    == 0 => x
(LOCGR {c} x _ (FlagLT)) && c&s390x.Less    == 0 => x
(LOCGR {c} x _ (FlagGT)) && c&s390x.Greater == 0 => x
(LOCGR {c} x _ (FlagOV)) && c&s390x.Unordered == 0 => x

// Remove redundant *const ops
(ADDconst [0] x) => x
(ADDWconst [c] x) && int32(c)==0 => x
(SUBconst [0] x) => x
(SUBWconst [c] x) && int32(c) == 0 => x
(ANDconst [0] _)    => (MOVDconst [0])
(ANDWconst [c] _) && int32(c)==0 => (MOVDconst [0])
(ANDconst [-1] x)
    => x
(ANDWconst [c] x) && int32(c)==-1 => x
(ORconst [0] x)    => x
(ORWconst [c] x) && int32(c)==0 => x
(ORconst [-1] _)    => (MOVDconst [-1])
(ORWconst [c] _) && int32(c)==-1 => (MOVDconst [-1])
(XORconst [0] x)    => x
(XORWconst [c] x) && int32(c)==0 => x

// Shifts by zero (may be inserted during multiplication strength reduction).
((SLD|SLW|SRD|SRW|SRAD|SRAW)const x [0]) => x

// Convert constant subtracts to constant adds.
(SUBconst [c] x) && c != -(1<<31) => (ADDconst [-c] x)
(SUBWconst [c] x) => (ADDWconst [-int32(c)] x)

// generic constant folding
// TODO: more of this
(ADDconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)+d])
(ADDWconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)+d])
(ADDconst [c] (ADDconst [d] x)) && is32Bit(int64(c)+int64(d)) => (ADDconst [c+d] x)
(ADDWconst [c] (ADDWconst [d] x)) => (ADDWconst [int32(c+d)] x)
(SUBconst (MOVDconst [d]) [c]) => (MOVDconst [d-int64(c)])
(SUBconst (SUBconst x [d])
[c]) && is32Bit(-int64(c)-int64(d)) => (ADDconst [-c-d] x)
(SRADconst [c] (MOVDconst [d])) => (MOVDconst [d>>uint64(c)])
(SRAWconst [c] (MOVDconst [d])) => (MOVDconst [int64(int32(d))>>uint64(c)])
(NEG (MOVDconst [c])) => (MOVDconst [-c])
(NEGW (MOVDconst [c])) => (MOVDconst [int64(int32(-c))])
(MULLDconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)*d])
(MULLWconst [c] (MOVDconst [d])) => (MOVDconst [int64(c*int32(d))])

```

```

(AND (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c&d])
(ANDconst [c] (MOVDconst [d])) => (MOVDconst [c&d])
(ANDWconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)&d])
(OR (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c|d])
(ORconst [c] (MOVDconst [d])) => (MOVDconst [c|d])
(ORWconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)|d])
(XOR (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c^d])
(XORconst [c] (MOVDconst [d])) => (MOVDconst [c^d])
(XORWconst [c] (MOVDconst [d])) => (MOVDconst [int64(c)^d])
(LoweredRound32F x:(FMOVScnst)) => x
(LoweredRound64F x:(FMOVDconst))
=> x

// generic simplifications
// TODO: more of this
(ADD x (NEG y)) => (SUB x y)
(ADDW x (NEGW y)) => (SUBW x y)
(SUB x x) => (MOVDconst [0])
(SUBW x x) => (MOVDconst [0])
(AND x x) => x
(ANDW x x) => x
(OR x x) => x
(ORW x x) => x
(XOR x x) => (MOVDconst [0])
(XORW x x) => (MOVDconst [0])
(NEG (ADDconst [c] (NEG x))) && c != -(1<<31) => (ADDconst [-c] x)
(MOVBZreg (ANDWconst [m] x)) => (MOVWZreg (ANDWconst <typ.UInt32> [int32(uint8(m))] x))
(MOVHZreg (ANDWconst [m] x)) => (MOVWZreg (ANDWconst <typ.UInt32> [int32(uint16(m))] x))
(MOVBreg (ANDWconst [m] x)) && int8(m) >= 0 => (MOVWZreg (ANDWconst <typ.UInt32> [int32(
uint8(m))] x))
(MOVHreg (ANDWconst [m] x)) && int16(m) >= 0 => (MOVWZreg (ANDWconst <typ.UInt32>
[int32(uint16(m))] x))

// carry flag generation
// (only constant fold carry of zero)
(Select1 (ADDCconst (MOVDconst [c]) [d]))
&& uint64(c+int64(d)) >= uint64(c) && c+int64(d) == 0
=> (FlagEQ)
(Select1 (ADDCconst (MOVDconst [c]) [d]))
&& uint64(c+int64(d))
>= uint64(c) && c+int64(d) != 0
=> (FlagLT)

// borrow flag generation
// (only constant fold borrow of zero)
(Select1 (SUBC (MOVDconst [c]) (MOVDconst [d])))
&& uint64(d) <= uint64(c) && c-d == 0
=> (FlagGT)

```



```

(Select1 (SUBC (MOVDconst [c]) (MOVDconst [d])))
&& uint64(d) <= uint64(c) && c-d != 0
=> (FlagOV)

// add with carry
(ADDE x y (FlagEQ)) => (ADDC x y)
(ADDE x y (FlagLT)) => (ADDC x y)
(ADDC x (MOVDconst [c])) && is16Bit(c) => (ADDCconst x [int16(c)])
(Select0 (ADDCconst (MOVDconst [c]) [d])) => (MOVDconst [c+int64(d)])

// subtract with borrow
(SUBE x y (FlagGT)) => (SUBC x y)
(SUBE x y (FlagOV)) => (SUBC x y)
(Select0 (SUBC (MOVDconst [c]) (MOVDconst [d]))) => (MOVDconst [c-d])

// collapse carry chain
(ADDE x y (Select1 (ADDCconst [-1] (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) c))))
=> (ADDE x y c)

// collapse borrow chain
(SUBE x y (Select1 (SUBC (MOVDconst [0]) (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) c))))))
=> (SUBE x y c)

// branch on carry
(C|G|LG)IJ
{s390x.Equal} (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) carry)) [0] => (BRC {s390x.NoCarry}
carry)
(C|G|LG)IJ {s390x.Equal} (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) carry)) [1] => (BRC
{s390x.Carry} carry)
(C|G|LG)IJ {s390x.LessOrGreater} (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) carry)) [0] => (BRC
{s390x.Carry} carry)
(C|G|LG)IJ {s390x.LessOrGreater} (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) carry)) [1] => (BRC
{s390x.NoCarry} carry)
(C|G|LG)IJ {s390x.Greater} (Select0 (ADDE (MOVDconst [0]) (MOVDconst [0]) carry)) [0] => (BRC
{s390x.Carry} carry)

// branch on borrow
(C|G|LG)IJ {s390x.Equal} (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) borrow))) [0] =>
(BRC {s390x.NoBorrow} borrow)
(C|G|LG)IJ {s390x.Equal} (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) borrow))) [1] =>
(BRC {s390x.Borrow} borrow)
(C|G|LG)IJ {s390x.LessOrGreater} (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) borrow)))
[0] => (BRC {s390x.Borrow} borrow)
(C|G|LG)IJ {s390x.LessOrGreater} (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) borrow))) [1] =>
(BRC {s390x.NoBorrow} borrow)
(C|G|LG)IJ {s390x.Greater} (NEG (Select0 (SUBE (MOVDconst [0]) (MOVDconst [0]) borrow))) [0] =>
(BRC {s390x.Borrow} borrow)

```

```

// fused multiply-add
(Select0 (F(ADD|SUB) (FMUL y z) x)) => (FM(ADD|SUB) x y z)
(Select0 (F(ADDS|SUBS) (FMULS y z) x)) => (FM(ADDS|SUBS) x y z)

// Convert floating point comparisons against zero into 'load and test' instructions.
(F(CMP|CMPS) x (FMOV(D|S)const [0.0])) => (LT(D|E)BR x)
(F(CMP|CMPS) (FMOV(D|S)const [0.0]) x) => (InvertFlags (LT(D|E)BR <v.Type> x))

// FSUB, FSUBS, FADD, FADDS now produce a condition code representing the
// comparison of the result with 0.0. If a compare with zero instruction
// (e.g. LTDBR) is following one of those instructions, we can use the
// generated flag and remove the comparison instruction.
// Note: when inserting Select1 ops we need to ensure
// they are in the
// same block as their argument. We could also use @x.Block for this
// but moving the flag generating value to a different block seems to
// increase the likelihood that the flags value will have to be regenerated
// by flagalloc which is not what we want.
(LTDBR (Select0 x:(F(ADD|SUB) _ _))) && b == x.Block => (Select1 x)
(LTEBR (Select0 x:(F(ADDS|SUBS) _ _))) && b == x.Block => (Select1 x)

// Fold memory operations into operations.
// Exclude global data (SB) because these instructions cannot handle relative addresses.
// TODO(mundaym): indexed versions of these?
((ADD|SUB|MULLD|AND|OR|XOR) <t> x g:(MOVDload [off] {sym} ptr mem))
&& ptr.Op != OpSB
&& is20Bit(int64(off))
&& canMergeLoadClobber(v, g, x)
&& clobber(g)
=> ((ADD|SUB|MULLD|AND|OR|XOR)load <t> [off] {sym} x ptr mem)
((ADD|SUB|MULL|AND|OR|XOR)W <t> x g:(MOVWload [off] {sym} ptr mem))
&& ptr.Op != OpSB
&& is20Bit(int64(off))
&& canMergeLoadClobber(v, g, x)
&& clobber(g)
=> ((ADD|SUB|MULL|AND|OR|XOR)Wload
<t> [off] {sym} x ptr mem)
((ADD|SUB|MULL|AND|OR|XOR)W <t> x g:(MOVWZload [off] {sym} ptr mem))
&& ptr.Op != OpSB
&& is20Bit(int64(off))
&& canMergeLoadClobber(v, g, x)
&& clobber(g)
=> ((ADD|SUB|MULL|AND|OR|XOR)Wload <t> [off] {sym} x ptr mem)

// Combine constant stores into larger (unaligned) stores.
// Avoid SB because constant stores to relative offsets are
// emulated by the assembler and also can't handle unaligned offsets.
(MOVBstoreconst [c] {s} p x:(MOVBstoreconst [a] {s} p mem))

```

```

&& p.Op != OpSB
&& x.Uses == 1
&& a.Off() + 1 == c.Off()
&& clobber(x)
=> (MOVHstoreconst [makeValAndOff(c.Val()&0xff | a.Val()<<8, a.Off())] {s} p mem)
(MOVHstoreconst [c] {s} p x:(MOVHstoreconst [a] {s} p mem))
&& p.Op != OpSB
&& x.Uses == 1
&& a.Off() + 2 == c.Off()
&& clobber(x)
=> (MOVWstore [a.Off()] {s} p (MOVDconst [int64(c.Val()&0xffff | a.Val()<<16)]) mem)
(MOVWstoreconst [c] {s} p x:(MOVWstoreconst [a] {s} p mem))
&& p.Op != OpSB
&&
x.Uses == 1
&& a.Off() + 4 == c.Off()
&& clobber(x)
=> (MOVDstore [a.Off()] {s} p (MOVDconst [c.Val64()&0xffffffff | a.Val64()<<32]) mem)

// Combine stores into larger (unaligned) stores.
// It doesn't work on global data (based on SB) because stores with relative addressing
// require that the memory operand be aligned.
(MOVBstore [i] {s} p w x:(MOVBstore [i-1] {s} p (SRDconst [8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p w0:(SRDconst [j] w) x:(MOVBstore [i-1] {s} p (SRDconst [j+8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} p w0 mem)
(MOVBstore [i] {s} p w x:(MOVBstore [i-1] {s} p (SRWconst [8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p w0:(SRWconst [j] w) x:(MOVBstore [i-1] {s} p (SRWconst [j+8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHstore [i-1] {s} p w0 mem)
(MOVHstore
[i] {s} p w x:(MOVHstore [i-2] {s} p (SRDconst [16] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-2] {s} p w mem)

```

```

(MOVHstore [i] {s} p w0:(SRDconst [j] w) x:(MOVHstore [i-2] {s} p (SRDconst [j+16] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-2] {s} p w0 mem)
(MOVHstore [i] {s} p w x:(MOVHstore [i-2] {s} p (SRWconst [16] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-2] {s} p w mem)
(MOVHstore [i] {s} p w0:(SRWconst [j] w) x:(MOVHstore [i-2] {s} p (SRWconst [j+16] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVWstore [i-2] {s} p w0 mem)
(MOVWstore [i] {s} p (SRDconst [32] w) x:(MOVWstore [i-4] {s} p w mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVDstore [i-4] {s} p w mem)
(MOVWstore [i] {s} p w0:(SRDconst [j] w) x:(MOVWstore [i-4] {s} p (SRDconst [j+32] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVDstore [i-4] {s}
p w0 mem)

```

// Combine stores into larger (unaligned) stores with the bytes reversed (little endian).

// Store-with-bytes-reversed instructions do not support relative memory addresses,

// so these stores can't operate on global data (SB).

```

(MOVBstore [i] {s} p (SRDconst [8] w) x:(MOVBstore [i-1] {s} p w mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHBRstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p (SRDconst [j] w) x:(MOVBstore [i-1] {s} p w0:(SRDconst [j-8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHBRstore [i-1] {s} p w0 mem)
(MOVBstore [i] {s} p (SRWconst [8] w) x:(MOVBstore [i-1] {s} p w mem))
&& p.Op != OpSB
&& x.Uses == 1
&& clobber(x)
=> (MOVHBRstore [i-1] {s} p w mem)
(MOVBstore [i] {s} p (SRWconst [j] w) x:(MOVBstore [i-1] {s} p w0:(SRWconst [j-8] w) mem))
&& p.Op != OpSB
&& x.Uses == 1

```

```

&& clobber(x)
=> (MOVHBRstore [i-1] {s} p w0 mem)
(MOVHBRstore [i] {s} p (SRDconst [16] w) x:(MOVHBRstore [i-2] {s} p w mem))
&&
x.Uses == 1
&& clobber(x)
=> (MOVWBRstore [i-2] {s} p w mem)
(MOVHBRstore [i] {s} p (SRDconst [j] w) x:(MOVHBRstore [i-2] {s} p w0:(SRDconst [j-16] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWBRstore [i-2] {s} p w0 mem)
(MOVHBRstore [i] {s} p (SRWconst [16] w) x:(MOVHBRstore [i-2] {s} p w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWBRstore [i-2] {s} p w mem)
(MOVHBRstore [i] {s} p (SRWconst [j] w) x:(MOVHBRstore [i-2] {s} p w0:(SRWconst [j-16] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVWBRstore [i-2] {s} p w0 mem)
(MOVWBRstore [i] {s} p (SRDconst [32] w) x:(MOVWBRstore [i-4] {s} p w mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVDBRstore [i-4] {s} p w mem)
(MOVWBRstore [i] {s} p (SRDconst [j] w) x:(MOVWBRstore [i-4] {s} p w0:(SRDconst [j-32] w) mem))
&& x.Uses == 1
&& clobber(x)
=> (MOVDBRstore [i-4] {s} p w0 mem)

(MOVBstore [7] {s} p1 (SRDconst w)
x1:(MOVHBRstore [5] {s} p1 (SRDconst w)
x2:(MOVWBRstore [1] {s} p1 (SRDconst w)
x3:(MOVBstore [0] {s}
p1 w mem))))
&& x1.Uses == 1
&& x2.Uses == 1
&& x3.Uses == 1
&& clobber(x1, x2, x3)
=> (MOVDBRstore {s} p1 w mem)

// Combining byte loads into larger (unaligned) loads.

// Big-endian loads

(ORW      x1:(MOVBZload [i1] {s} p mem)
sh:(SLWconst [8] x0:(MOVBZload [i0] {s} p mem)))
&& i1 == i0+1
&& p.Op != OpSB
&& x0.Uses == 1

```

```
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVHZload [i0] {s} p mem)
```

```
(OR      x1:(MOVBZload [i1] {s} p mem)
  sh:(SLDconst [8] x0:(MOVBZload [i0] {s} p mem)))
&& i1 == i0+1
&& p.Op != OpSB
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVHZload [i0] {s} p mem)
```

```
(ORW    x1:(MOVHZload [i1] {s} p mem)
  sh:(SLWconst [16] x0:(MOVHZload [i0] {s} p mem)))
&& i1 == i0+2
&& p.Op != OpSB
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses
== 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVWZload [i0] {s} p mem)
```

```
(OR      x1:(MOVHZload [i1] {s} p mem)
  sh:(SLDconst [16] x0:(MOVHZload [i0] {s} p mem)))
&& i1 == i0+2
&& p.Op != OpSB
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVWZload [i0] {s} p mem)
```

```
(OR      x1:(MOVWZload [i1] {s} p mem)
  sh:(SLDconst [32] x0:(MOVWZload [i0] {s} p mem)))
&& i1 == i0+4
&& p.Op != OpSB
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
```

```
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVDload [i0] {s} p mem)
```

```
(ORW
  s0:(SLWconst [j0] x0:(MOVBZload [i0] {s} p mem))
  or:(ORW
    s1:(SLWconst [j1] x1:(MOVBZload [i1] {s} p mem))
  y))
&& i1 == i0+1
&& j1 == j0-8
&& j1 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&&
mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORW <v.Type> (SLWconst <v.Type> [j1] (MOVHZload [i0] {s} p mem)) y)
```

```
(OR
  s0:(SLDconst [j0] x0:(MOVBZload [i0] {s} p mem))
  or:(OR
    s1:(SLDconst [j1] x1:(MOVBZload [i1] {s} p mem))
  y))
&& i1 == i0+1
&& j1 == j0-8
&& j1 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR <v.Type> (SLDconst <v.Type> [j1] (MOVHZload [i0] {s} p mem)) y)
```

```
(OR
  s0:(SLDconst [j0] x0:(MOVHZload [i0] {s} p mem))
  or:(OR
    s1:(SLDconst [j1] x1:(MOVHZload [i1] {s} p mem))
  y))
&& i1 == i0+2
&& j1 == j0-16
&& j1 % 32 == 0
&& x0.Uses == 1
&& x1.Uses == 1
```

```

&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR <v.Type> (SLDconst <v.Type> [j1] (MOVWZload
[i0] {s} p mem)) y)

```

```
// Little-endian loads
```

```

(ORW          x0:(MOVBZload [i0] {s} p mem)
  sh:(SLWconst [8] x1:(MOVBZload [i1] {s} p mem)))
&& p.Op != OpSB
&& i1 == i0+1
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVHZreg (MOVHBRload [i0] {s} p mem))

```

```

(OR          x0:(MOVBZload [i0] {s} p mem)
  sh:(SLDconst [8] x1:(MOVBZload [i1] {s} p mem)))
&& p.Op != OpSB
&& i1 == i0+1
&& x0.Uses == 1
&& x1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, sh)
=> @mergePoint(b,x0,x1) (MOVHZreg (MOVHBRload [i0] {s} p mem))

```

```

(ORW          r0:(MOVHZreg x0:(MOVHBRload [i0] {s} p mem))
  sh:(SLWconst [16] r1:(MOVHZreg x1:(MOVHBRload [i1] {s} p mem))))
&& i1 == i0+2
&& x0.Uses == 1
&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, r0, r1, sh)
=> @mergePoint(b,x0,x1)
(MOVWBRload [i0] {s} p mem)

```

```

(OR          r0:(MOVHZreg x0:(MOVHBRload [i0] {s} p mem))
  sh:(SLDconst [16] r1:(MOVHZreg x1:(MOVHBRload [i1] {s} p mem))))
&& i1 == i0+2

```



```

&& x0.Uses == 1
&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, r0, r1, sh)
=> @mergePoint(b,x0,x1) (MOVWZreg (MOVWBRload [i0] {s} p mem))

(OR
    r0:(MOVWZreg x0:(MOVWBRload [i0] {s} p mem))
    sh:(SLDconst [32] r1:(MOVWZreg x1:(MOVWBRload [i1] {s} p mem))))
&& i1 == i0+4
&& x0.Uses == 1
&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&& sh.Uses == 1
&& mergePoint(b,x0,x1) != nil
&& clobber(x0, x1, r0, r1, sh)
=> @mergePoint(b,x0,x1) (MOVDDBRload [i0] {s} p mem)

(ORW
    s1:(SLWconst [j1] x1:(MOVBZload [i1] {s} p mem))
    or:(ORW
        s0:(SLWconst [j0] x0:(MOVBZload [i0] {s} p mem))
    y))
&& p.Op != OpSB
&& i1 == i0+1
&& j1 == j0+8
&& j0 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (ORW <v.Type> (SLWconst <v.Type> [j0] (MOVHZreg (MOVHBRload [i0] {s} p mem))) y)

(OR
    s1:(SLDconst [j1] x1:(MOVBZload [i1] {s} p mem))
    or:(OR
        s0:(SLDconst [j0] x0:(MOVBZload [i0] {s} p mem))
    y))
&& p.Op != OpSB
&& i1 == i0+1
&& j1 == j0+8

```

```

&& j0 % 16 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR <v.Type> (SLDconst <v.Type> [j0] (MOVHZreg (MOVHBRload [i0] {s} p mem))) y)

```

```

(OR
  s1:(SLDconst [j1] r1:(MOVHZreg x1:(MOVHBRload [i1] {s} p mem)))
  or:(OR
    s0:(SLDconst [j0] r0:(MOVHZreg x0:(MOVHBRload [i0] {s} p mem)))
  y))

```

```

&& i1 == i0+2
&& j1 == j0+16
&& j0 % 32 == 0
&& x0.Uses == 1
&& x1.Uses == 1
&& r0.Uses == 1
&& r1.Uses == 1
&&
s0.Uses == 1
&& s1.Uses == 1
&& or.Uses == 1
&& mergePoint(b,x0,x1,y) != nil
&& clobber(x0, x1, r0, r1, s0, s1, or)
=> @mergePoint(b,x0,x1,y) (OR <v.Type> (SLDconst <v.Type> [j0] (MOVWZreg (MOVWBRload [i0] {s} p mem))) y)

```

// Combine stores into store multiples.

// 32-bit

```

(MOVWstore [i] {s} p w1 x:(MOVWstore [i-4] {s} p w0 mem))
&& p.Op != OpSB
&& x.Uses == 1
&& is20Bit(int64(i)-4)
&& clobber(x)
=> (STM2 [i-4] {s} p w0 w1 mem)
(MOVWstore [i] {s} p w2 x:(STM2 [i-8] {s} p w0 w1 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-8)
&& clobber(x)
=> (STM3 [i-8] {s} p w0 w1 w2 mem)
(MOVWstore [i] {s} p w3 x:(STM3 [i-12] {s} p w0 w1 w2 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-12)

```

```

&& clobber(x)
=> (STM4 [i-12] {s} p w0 w1 w2 w3 mem)
(STM2 [i] {s} p w2 w3 x:(STM2 [i-8] {s} p w0 w1 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-8)
&& clobber(x)
=> (STM4 [i-8] {s} p w0 w1 w2 w3 mem)
// 64-bit
(MOVDstore [i] {s} p w1 x:(MOVDstore [i-8] {s} p w0 mem))
&& p.Op != OpSB
&& x.Uses == 1
&& is20Bit(int64(i)-8)
&& clobber(x)
=> (STMG2 [i-8] {s} p w0 w1 mem)
(MOVDstore [i] {s} p w2 x:(STMG2 [i-16] {s} p w0 w1 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-16)
&& clobber(x)
=> (STMG3 [i-16] {s} p w0 w1 w2 mem)
(MOVDstore [i] {s} p w3 x:(STMG3 [i-24] {s} p w0 w1 w2 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-24)
&& clobber(x)
=> (STMG4 [i-24] {s} p w0 w1 w2 w3 mem)
(STMG2 [i] {s} p w2 w3 x:(STMG2 [i-16] {s} p w0 w1 mem))
&& x.Uses == 1
&& is20Bit(int64(i)-16)
&& clobber(x)
=> (STMG4 [i-16] {s} p w0 w1 w2 w3 mem)

// Convert 32-bit store multiples into 64-bit stores.
(STM2 [i] {s} p (SRDconst [32] x) x mem) => (MOVDstore [i] {s} p x mem)

```

Found in path(s):

```

* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/S390X.rules
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```

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Found in path(s):

```

* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/basic.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/universe.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/check.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/named.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/testdata/exports.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/dwarfgen/dwarf.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/decls0.go

```

```

* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/pointer.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/map.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/chan.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/gotos.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/labels.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/inline/inl.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/fmt.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/resolver_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/scc.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/exportdata.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/tuple.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssagen/pgen.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/gc/compile.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/check_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/gcimporter.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/gcimporter_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/slice.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/array.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/typeparam.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/type.go

```

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// Lowering arithmetic

(Add(Ptr|64|32|16|8) ...) => (ADD ...)

(Add64F ...) => (FADD ...)

(Add32F ...) => (FADDS ...)

(Sub(Ptr|64|32|16|8) ...) => (SUB ...)

(Sub32F ...) => (FSUBS ...)

(Sub64F ...) => (FSUB ...)

// Combine 64 bit integer multiply and adds

(ADD l:(MULLD x y) z) && buildcfg.GOPPC64 >= 9 && l.Uses == 1 && clobber(l) => (MADDLD x y z)

(Mod16 x y) => (Mod32 (SignExt16to32 x) (SignExt16to32 y))

(Mod16u x y) => (Mod32u (ZeroExt16to32 x) (ZeroExt16to32 y))

(Mod8 x y) => (Mod32 (SignExt8to32 x) (SignExt8to32 y))

(Mod8u x y) => (Mod32u (ZeroExt8to32 x) (ZeroExt8to32 y))

(Mod64 x y) && buildcfg.GOPPC64 >= 9 => (MODSD x y)

(Mod64 x y) && buildcfg.GOPPC64 <= 8 => (SUB x (MULLD y (DIVD x y)))

```

(Mod64u x y) && buildcfg.GOPPC64 >= 9 => (MODUD x y)
(Mod64u x y)
&& buildcfg.GOPPC64 <= 8 => (SUB x (MULLD y (DIVDU x y)))
(Mod32 x y) && buildcfg.GOPPC64 >= 9 => (MODSW x y)
(Mod32 x y) && buildcfg.GOPPC64 <= 8 => (SUB x (MULLW y (DIVW x y)))
(Mod32u x y) && buildcfg.GOPPC64 >= 9 => (MODUW x y)
(Mod32u x y) && buildcfg.GOPPC64 <= 8 => (SUB x (MULLW y (DIVWU x y)))

// (x + y) / 2 with x>=y => (x - y) / 2 + y
(Avg64u <t> x y) => (ADD (SRDconst <t> (SUB <t> x y) [1]) y)

(Mul64 ...) => (MULLD ...)
(Mul(32|16|8) ...) => (MULLW ...)
(Mul64uhilo ...) => (LoweredMuluhilo ...)

(Div64 [false] x y) => (DIVD x y)
(Div64u ...) => (DIVDU ...)
(Div32 [false] x y) => (DIVW x y)
(Div32u ...) => (DIVWU ...)
(Div16 [false] x y) => (DIVW (SignExt16to32 x) (SignExt16to32 y))
(Div16u x y) => (DIVWU (ZeroExt16to32 x) (ZeroExt16to32 y))
(Div8 x y) => (DIVW (SignExt8to32 x) (SignExt8to32 y))
(Div8u x y) => (DIVWU (ZeroExt8to32 x) (ZeroExt8to32 y))

(Hmul(64|64u|32|32u) ...) => (MULH(D|DU|W|WU) ...)

(Mul32F ...) => (FMULS ...)
(Mul64F ...) => (FMUL ...)

(Div32F ...)
=> (FDIVS ...)
(Div64F ...) => (FDIV ...)

// Lowering float <=> int
(Cvt32to32F x) => (FCFIDS (MTVSRD (SignExt32to64 x)))
(Cvt32to64F x) => (FCFID (MTVSRD (SignExt32to64 x)))
(Cvt64to32F x) => (FCFIDS (MTVSRD x))
(Cvt64to64F x) => (FCFID (MTVSRD x))

(Cvt32Fto32 x) => (MFVSRD (FCTIWZ x))
(Cvt32Fto64 x) => (MFVSRD (FCTIDZ x))
(Cvt64Fto32 x) => (MFVSRD (FCTIWZ x))
(Cvt64Fto64 x) => (MFVSRD (FCTIDZ x))

(Cvt32Fto64F ...) => (Copy ...) // Note v will have the wrong type for patterns dependent on Float32/Float64
(Cvt64Fto32F ...) => (FRSP ...)

(CvtBoolToUInt8 ...) => (Copy ...)

```

```

(Round(32|64)F ...) => (LoweredRound(32|64)F ...)

(Sqrt ...) => (FSQRT ...)
(Sqrt32 ...) => (FSQRTS ...)
(Floor ...) => (FFLOOR ...)
(Ceil ...) => (FCEIL ...)
(Trunc ...) => (FTRUNC ...)
(Round ...) => (FROUND ...)
(Copysign x y) => (FCPSGN y x)
(Abs ...) => (FABS ...)
(FMA ...) => (FMADD ...)

// Lowering extension
// Note: we always extend to 64 bits even though some ops don't need that many result bits.
(SignExt8to(16|32|64)
...) => (MOVBreg ...)
(SignExt16to(32|64) ...) => (MOVHreg ...)
(SignExt32to64 ...) => (MOVWreg ...)

(ZeroExt8to(16|32|64) ...) => (MOVBZreg ...)
(ZeroExt16to(32|64) ...) => (MOVHZreg ...)
(ZeroExt32to64 ...) => (MOVWZreg ...)

(Trunc(16|32|64)to8 <t> x) && isSigned(t) => (MOVBreg x)
(Trunc(16|32|64)to8 x) => (MOVBZreg x)
(Trunc(32|64)to16 <t> x) && isSigned(t) => (MOVHreg x)
(Trunc(32|64)to16 x) => (MOVHZreg x)
(Trunc64to32 <t> x) && isSigned(t) => (MOVWreg x)
(Trunc64to32 x) => (MOVWZreg x)

// Lowering constants
(Const(64|32|16|8) [val]) => (MOVDconst [int64(val)])
(Const(32|64)F ...) => (FMOV(S|D)const ...)
(ConstNil) => (MOVDconst [0])
(ConstBool [t]) => (MOVDconst [b2i(t)])

// Carrying addition.
(Select0 (Add64carry x y c) => (Select0 <typ.UInt64> (ADDE x y (Select1 <typ.UInt64> (ADDCconst c [-1])))))
(Select1 (Add64carry x y c) => (ADDZEzero (Select1 <typ.UInt64> (ADDE x y (Select1 <typ.UInt64> (ADDCconst c [-1]))))))
// Fold initial carry bit if
0.
(ADDE x y (Select1 <typ.UInt64> (ADDCconst (MOVDconst [0]) [-1]))) => (ADDC x y)
// Fold transfer of CA -> GPR -> CA. Note 2 uses when feeding into a chained Add64carry.
(Select1 (ADDCconst n:(ADDZEzero x) [-1])) && n.Uses <= 2 => x

```

```

// Borrowing subtraction.
(Select0 (Sub64borrow x y c) => (Select0 <typ.UInt64> (SUBE x y (Select1 <typ.UInt64> (SUBCconst c
[0]))))
(Select1 (Sub64borrow x y c) => (NEG (SUBZEzero (Select1 <typ.UInt64> (SUBE x y (Select1 <typ.UInt64>
(SUBCconst c [0]))))))
// Fold initial borrow bit if 0.
(SUBE x y (Select1 <typ.UInt64> (SUBCconst (MOVDconst [0] [0]))) => (SUBC x y)
// Fold transfer of CA -> GPR -> CA. Note 2 uses when feeding into a chained Sub64borrow.
(Select1 (SUBCconst n:(NEG (SUBZEzero x)) [0])) && n.Uses <= 2 => x

// Constant folding
(FABS (FMOVDconst [x])) => (FMOVDconst [math.Abs(x)])
(FSQRT (FMOVDconst [x])) && x >= 0 => (FMOVDconst [math.Sqrt(x)])
(FFLOOR (FMOVDconst [x])) => (FMOVDconst [math.Floor(x)])
(FCEIL (FMOVDconst
[x])) => (FMOVDconst [math.Ceil(x)])
(FTRUNC (FMOVDconst [x])) => (FMOVDconst [math.Trunc(x)])

// Rotates
(RotateLeft8 <t> x (MOVDconst [c])) => (Or8 (Lsh8x64 <t> x (MOVDconst [c&7])) (Rsh8Ux64 <t> x
(MOVDconst [-c&7])))
(RotateLeft16 <t> x (MOVDconst [c])) => (Or16 (Lsh16x64 <t> x (MOVDconst [c&15])) (Rsh16Ux64 <t> x
(MOVDconst [-c&15])))
(RotateLeft32 x (MOVDconst [c])) => (ROTLWconst [c&31] x)
(RotateLeft64 x (MOVDconst [c])) => (ROTLconst [c&63] x)

// Rotate generation with const shift
(ADD (SLDconst x [c]) (SRDconst x [d])) && d == 64-c => (ROTLconst [c] x)
(OR (SLDconst x [c]) (SRDconst x [d])) && d == 64-c => (ROTLconst [c] x)
(XOR (SLDconst x [c]) (SRDconst x [d])) && d == 64-c => (ROTLconst [c] x)

(ADD (SLWconst x [c]) (SRWconst x [d])) && d == 32-c => (ROTLWconst [c] x)
(OR (SLWconst x [c]) (SRWconst x [d])) && d == 32-c => (ROTLWconst [c] x)
(XOR (SLWconst x [c]) (SRWconst x [d])) && d == 32-c => (ROTLWconst [c] x)

// Rotate generation with non-const shift
// these match
patterns from math/bits/RotateLeft[32|64], but there could be others
(ADD (SLD x (ANDconst [63] y)) (SRD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y))))
=> (ROTL x y)
(ADD (SLD x (ANDconst [63] y)) (SRD x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))) =>
(ROTL x y)
(OR (SLD x (ANDconst [63] y)) (SRD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y))))
=> (ROTL x y)
(OR (SLD x (ANDconst [63] y)) (SRD x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))) =>
(ROTL x y)
(XOR (SLD x (ANDconst [63] y)) (SRD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y))))
=> (ROTL x y)

```

```

(XOR (SLD x (ANDconst [63] y)) (SRD x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))) =>
(ROTL x y)

(ADD (SLW x (ANDconst [31] y)) (SRW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))) =>
(ROTLW x y)
(ADD (SLW x (ANDconst [31] y)) (SRW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y))))
=> (ROTLW x y)
(OR (SLW
x (ANDconst [31] y)) (SRW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))) => (ROTLW x y)
(OR (SLW x (ANDconst [31] y)) (SRW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y))))
=> (ROTLW x y)
(XOR (SLW x (ANDconst [31] y)) (SRW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))) =>
(ROTLW x y)
(XOR (SLW x (ANDconst [31] y)) (SRW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y))))
=> (ROTLW x y)

// Lowering rotates
(RotateLeft32 x y) => (ROTLW x y)
(RotateLeft64 x y) => (ROTL x y)

// Constant rotate generation
(ROTLW x (MOVDconst [c])) => (ROTLWconst x [c&31])
(ROTL x (MOVDconst [c])) => (ROTLconst x [c&63])

// Combine rotate and mask operations
(ANDconst [m] (ROTLWconst [r] x)) && isPPC64WordRotateMask(m) => (RLWINM
[encodePPC64RotateMask(r,m,32)] x)
(AND (MOVDconst [m] (ROTLWconst [r] x)) && isPPC64WordRotateMask(m) => (RLWINM
[encodePPC64RotateMask(r,m,32)] x)
(ANDconst [m] (ROTLW x r)) && isPPC64WordRotateMask(m) =>
(RLWNM [encodePPC64RotateMask(0,m,32)] x r)
(AND (MOVDconst [m] (ROTLW x r)) && isPPC64WordRotateMask(m) => (RLWNM
[encodePPC64RotateMask(0,m,32)] x r)

// Note, any rotated word bitmask is still a valid word bitmask.
(ROTLWconst [r] (AND (MOVDconst [m] x)) && isPPC64WordRotateMask(m) => (RLWINM
[encodePPC64RotateMask(r,rotateLeft32(m,r),32)] x)
(ROTLWconst [r] (ANDconst [m] x)) && isPPC64WordRotateMask(m) => (RLWINM
[encodePPC64RotateMask(r,rotateLeft32(m,r),32)] x)

(ANDconst [m] (SRWconst x [s])) && mergePPC64RShiftMask(m,s,32) == 0 => (MOVDconst [0])
(ANDconst [m] (SRWconst x [s])) && mergePPC64AndSrwi(m,s) != 0 => (RLWINM
[mergePPC64AndSrwi(m,s)] x)
(AND (MOVDconst [m] (SRWconst x [s])) && mergePPC64RShiftMask(m,s,32) == 0 => (MOVDconst [0])
(AND (MOVDconst [m] (SRWconst x [s])) && mergePPC64AndSrwi(m,s) != 0 => (RLWINM
[mergePPC64AndSrwi(m,s)] x)

```



```

(SRWconst (ANDconst [m] x) [s]) && mergePPC64RShiftMask(m>>uint(s),s,32) == 0 => (MOVDconst [0])
(SRWconst (ANDconst [m] x) [s])
&& mergePPC64AndSrwi(m>>uint(s),s) != 0 => (RLWINM [mergePPC64AndSrwi(m>>uint(s),s)] x)
(SRWconst (AND (MOVDconst [m] x) [s]) && mergePPC64RShiftMask(m>>uint(s),s,32) == 0 => (MOVDconst
[0])
(SRWconst (AND (MOVDconst [m] x) [s]) && mergePPC64AndSrwi(m>>uint(s),s) != 0 => (RLWINM
[mergePPC64AndSrwi(m>>uint(s),s)] x)

// Merge shift right + shift left and clear left (e.g for a table lookup)
(CLRLSLDI [c] (SRWconst [s] x)) && mergePPC64ClrslldiSrwi(int64(c),s) != 0 => (RLWINM
[mergePPC64ClrslldiSrwi(int64(c),s)] x)
(SLDconst [l] (SRWconst [r] x)) && mergePPC64SldiSrwi(l,r) != 0 => (RLWINM [mergePPC64SldiSrwi(l,r)] x)
// The following reduction shows up frequently too. e.g b[(x>>14)&0xFF]
(CLRLSLDI [c] i:(RLWINM [s] x)) && mergePPC64ClrslldiRlwinm(c,s) != 0 => (RLWINM
[mergePPC64ClrslldiRlwinm(c,s)] x)

// large constant shifts
(Lsh64x64 _ (MOVDconst [c])) && uint64(c) >= 64 => (MOVDconst [0])
(Rsh64Ux64 _ (MOVDconst [c])) && uint64(c) >= 64 => (MOVDconst [0])
(Lsh32x64 _ (MOVDconst [c]))
&& uint64(c) >= 32 => (MOVDconst [0])
(Rsh32Ux64 _ (MOVDconst [c])) && uint64(c) >= 32 => (MOVDconst [0])
(Lsh16x64 _ (MOVDconst [c])) && uint64(c) >= 16 => (MOVDconst [0])
(Rsh16Ux64 _ (MOVDconst [c])) && uint64(c) >= 16 => (MOVDconst [0])
(Lsh8x64 _ (MOVDconst [c])) && uint64(c) >= 8 => (MOVDconst [0])
(Rsh8Ux64 _ (MOVDconst [c])) && uint64(c) >= 8 => (MOVDconst [0])

// large constant signed right shift, we leave the sign bit
(Rsh64x64 x (MOVDconst [c])) && uint64(c) >= 64 => (SRADconst x [63])
(Rsh32x64 x (MOVDconst [c])) && uint64(c) >= 32 => (SRAWconst x [63])
(Rsh16x64 x (MOVDconst [c])) && uint64(c) >= 16 => (SRAWconst (SignExt16to32 x) [63])
(Rsh8x64 x (MOVDconst [c])) && uint64(c) >= 8 => (SRAWconst (SignExt8to32 x) [63])

// constant shifts
(Lsh64x64 x (MOVDconst [c])) && uint64(c) < 64 => (SLDconst x [c])
(Rsh64x64 x (MOVDconst [c])) && uint64(c) < 64 => (SRADconst x [c])
(Rsh64Ux64 x (MOVDconst [c])) && uint64(c) < 64 => (SRDconst x [c])
(Lsh32x64 x (MOVDconst
[c])) && uint64(c) < 32 => (SLWconst x [c])
(Rsh32x64 x (MOVDconst [c])) && uint64(c) < 32 => (SRAWconst x [c])
(Rsh32Ux64 x (MOVDconst [c])) && uint64(c) < 32 => (SRWconst x [c])
(Lsh16x64 x (MOVDconst [c])) && uint64(c) < 16 => (SLWconst x [c])
(Rsh16x64 x (MOVDconst [c])) && uint64(c) < 16 => (SRAWconst (SignExt16to32 x) [c])
(Rsh16Ux64 x (MOVDconst [c])) && uint64(c) < 16 => (SRWconst (ZeroExt16to32 x) [c])
(Lsh8x64 x (MOVDconst [c])) && uint64(c) < 8 => (SLWconst x [c])
(Rsh8x64 x (MOVDconst [c])) && uint64(c) < 8 => (SRAWconst (SignExt8to32 x) [c])
(Rsh8Ux64 x (MOVDconst [c])) && uint64(c) < 8 => (SRWconst (ZeroExt8to32 x) [c])

```

```

(Lsh64x32 x (MOVDconst [c])) && uint32(c) < 64 => (SLDconst x [c&63])
(Rsh64x32 x (MOVDconst [c])) && uint32(c) < 64 => (SRADconst x [c&63])
(Rsh64Ux32 x (MOVDconst [c])) && uint32(c) < 64 => (SRDconst x [c&63])
(Lsh32x32 x (MOVDconst [c])) && uint32(c) < 32 => (SLWconst x [c&31])
(Rsh32x32 x (MOVDconst [c])) && uint32(c) < 32 => (SRAWconst
x [c&31])
(Rsh32Ux32 x (MOVDconst [c])) && uint32(c) < 32 => (SRWconst x [c&31])
(Lsh16x32 x (MOVDconst [c])) && uint32(c) < 16 => (SLWconst x [c&31])
(Rsh16x32 x (MOVDconst [c])) && uint32(c) < 16 => (SRAWconst (SignExt16to32 x) [c&15])
(Rsh16Ux32 x (MOVDconst [c])) && uint32(c) < 16 => (SRWconst (ZeroExt16to32 x) [c&15])
(Lsh8x32 x (MOVDconst [c])) && uint32(c) < 8 => (SLWconst x [c&7])
(Rsh8x32 x (MOVDconst [c])) && uint32(c) < 8 => (SRAWconst (SignExt8to32 x) [c&7])
(Rsh8Ux32 x (MOVDconst [c])) && uint32(c) < 8 => (SRWconst (ZeroExt8to32 x) [c&7])

```

// Lower bounded shifts first. No need to check shift value.

```

(Lsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SLD x y)
(Lsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)
(Lsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)
(Lsh8x(64|32|16|8) x y) && shiftIsBounded(v) => (SLW x y)
(Rsh64Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRD x y)
(Rsh32Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRW x y)
(Rsh16Ux(64|32|16|8)
x y) && shiftIsBounded(v) => (SRW (MOVHZreg x) y)
(Rsh8Ux(64|32|16|8) x y) && shiftIsBounded(v) => (SRW (MOVBZreg x) y)
(Rsh64x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAD x y)
(Rsh32x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAW x y)
(Rsh16x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAW (MOVHreg x) y)
(Rsh8x(64|32|16|8) x y) && shiftIsBounded(v) => (SRAW (MOVBreg x) y)

```

// non-constant rotates

// These are subexpressions found in statements that can become rotates

// In these cases the shift count is known to be < 64 so the more complicated expressions

// with Mask & Carry is not needed

```

(Lsh64x64 x (AND y (MOVDconst [63]))) => (SLD x (ANDconst <typ.Int64> [63] y))
(Lsh64x64 x (ANDconst <typ.Int64> [63] y)) => (SLD x (ANDconst <typ.Int64> [63] y))
(Rsh64Ux64 x (AND y (MOVDconst [63]))) => (SRD x (ANDconst <typ.Int64> [63] y))
(Rsh64Ux64 x (ANDconst <typ.UInt> [63] y)) => (SRD x (ANDconst <typ.UInt> [63] y))
(Rsh64Ux64 x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst
<typ.UInt> [63] y))) => (SRD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y)))
(Rsh64Ux64 x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y))) => (SRD x (SUBFCconst
<typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))
(Rsh64Ux64 x (SUB <typ.UInt> (MOVDconst [64]) (AND <typ.UInt> y (MOVDconst [63]))) => (SRD x (SUB
<typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y)))
(Rsh64Ux64 x (SUBFCconst <typ.UInt> [64] (AND <typ.UInt> y (MOVDconst [63]))) => (SRD x (SUBFCconst
<typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))
(Rsh64x64 x (AND y (MOVDconst [63]))) => (SRAD x (ANDconst <typ.Int64> [63] y))
(Rsh64x64 x (ANDconst <typ.UInt> [63] y)) => (SRAD x (ANDconst <typ.UInt> [63] y))

```

(Rsh64x64 x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y))) => (SRAD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y)))  
 (Rsh64x64 x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y))) => (SRAD x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))  
 (Rsh64x64 x (SUB <typ.UInt> (MOVDconst [64]) (AND <typ.UInt> y (MOVDconst [63]))) => (SRAD x (SUB <typ.UInt> (MOVDconst [64]) (ANDconst <typ.UInt> [63] y)))  
 (Rsh64x64 x (SUBFCconst <typ.UInt> [64] (AND <typ.UInt> y (MOVDconst [63]))) => (SRAD x (SUBFCconst <typ.UInt> [64] (ANDconst <typ.UInt> [63] y)))

(Lsh64x64 x y) => (SLD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64])))  
 (Rsh64x64 x y) => (SRAD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64])))  
 (Rsh64Ux64 x y) => (SRD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64])))

(Lsh32x64 x (AND y (MOVDconst [31]))) => (SLW x (ANDconst <typ.Int32> [31] y))  
 (Lsh32x64 x (ANDconst <typ.Int32> [31] y)) => (SLW x (ANDconst <typ.Int32> [31] y))

(Rsh32Ux64 x (AND y (MOVDconst [31]))) => (SRW x (ANDconst <typ.Int32> [31] y))  
 (Rsh32Ux64 x (ANDconst <typ.UInt> [31] y)) => (SRW x (ANDconst <typ.UInt> [31] y))  
 (Rsh32Ux64 x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y))) => (SRW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y)))  
 (Rsh32Ux64 x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y))) => (SRW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))  
 (Rsh32Ux64 x (SUB <typ.UInt> (MOVDconst [32]) (AND <typ.UInt> y (MOVDconst [31]))) => (SRW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y)))  
 (Rsh32Ux64 x (SUBFCconst <typ.UInt> [32] (AND <typ.UInt> y (MOVDconst [31]))) => (SRW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))

(Rsh32x64 x (AND y (MOVDconst [31]))) => (SRAW x (ANDconst <typ.Int32> [31] y))  
 (Rsh32x64 x (ANDconst <typ.UInt> [31] y)) => (SRAW x (ANDconst <typ.UInt> [31] y))  
 (Rsh32x64 x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y))) => (SRAW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y)))  
 (Rsh32x64 x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y))) => (SRAW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))  
 (Rsh32x64 x (SUB <typ.UInt> (MOVDconst [32]) (AND <typ.UInt> y (MOVDconst [31]))) => (SRAW x (SUB <typ.UInt> (MOVDconst [32]) (ANDconst <typ.UInt> [31] y)))  
 (Rsh32x64 x (SUBFCconst <typ.UInt> [32] (AND <typ.UInt> y (MOVDconst [31]))) => (SRAW x (SUBFCconst <typ.UInt> [32] (ANDconst <typ.UInt> [31] y)))

(Rsh32x64 x y) => (SRAW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32])))  
 (Rsh32Ux64 x y) => (SRW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32])))  
 (Lsh32x64 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32])))

(Rsh16x64 x y) => (SRAW (SignExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16])))  
 (Rsh16Ux64 x y) => (SRW (ZeroExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16])))  
 (Lsh16x64 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16])))

(Rsh8x64 x y) => (SRAW (SignExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))  
 (Rsh8Ux64 x y) => (SRW (ZeroExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))  
 (Lsh8x64  
 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))

(Rsh64x32 x y) => (SRAD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64]))))  
 (Rsh64Ux32 x y) => (SRD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64]))))  
 (Lsh64x32 x y) => (SLD x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [64]))))  
 (Rsh32x32 x y) => (SRAW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32]))))  
 (Rsh32Ux32 x y) => (SRW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32]))))  
 (Lsh32x32 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [32]))))

(Rsh16x32 x y) => (SRAW (SignExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16]))))  
 (Rsh16Ux32 x y) => (SRW (ZeroExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16]))))  
 (Lsh16x32 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [16]))))

(Rsh8x32 x y) => (SRAW (SignExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))  
 (Rsh8Ux32  
 x y) => (SRW (ZeroExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))  
 (Lsh8x32 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU y (MOVDconst [8]))))

(Rsh64x16 x y) => (SRAD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [64]))))  
 (Rsh64Ux16 x y) => (SRD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [64]))))  
 (Lsh64x16 x y) => (SLD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [64]))))

(Rsh32x16 x y) => (SRAW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [32]))))  
 (Rsh32Ux16 x y) => (SRW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [32]))))  
 (Lsh32x16 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst [32]))))

(Rsh16x16 x y) => (SRAW (SignExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y)  
 (MOVDconst [16]))))  
 (Rsh16Ux16 x y) => (SRW (ZeroExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64  
 y) (MOVDconst [16]))))  
 (Lsh16x16 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst  
 [16]))))

(Rsh8x16 x y) => (SRAW (SignExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y)  
 (MOVDconst [8]))))  
 (Rsh8Ux16 x y) => (SRW (ZeroExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y)  
 (MOVDconst [8]))))  
 (Lsh8x16 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt16to64 y) (MOVDconst  
 [8]))))

(Rsh64x8 x y) => (SRAD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [64]))))  
 (Rsh64Ux8 x y) => (SRD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [64]))))  
 (Lsh64x8 x y) => (SLD x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [64]))))

```

(Rsh32x8 x y) => (SRAW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [32])))
(Rsh32Ux8 x y) => (SRW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [32])))
(Lsh32x8 x y) => (SLW
x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [32])))

(Rsh16x8 x y) => (SRAW (SignExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y)
(MOVDconst [16])))
(Rsh16Ux8 x y) => (SRW (ZeroExt16to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y)
(MOVDconst [16])))
(Lsh16x8 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst
[16])))

(Rsh8x8 x y) => (SRAW (SignExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst
[8])))
(Rsh8Ux8 x y) => (SRW (ZeroExt8to32 x) (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst
[8])))
(Lsh8x8 x y) => (SLW x (ISEL [0] y (MOVDconst [-1]) (CMPU (ZeroExt8to64 y) (MOVDconst [8])))

// Cleaning up shift ops
(ISEL [0] (ANDconst [d] y) (MOVDconst [-1]) (CMPU (ANDconst [d] y) (MOVDconst [c]))) && c >= d =>
(ANDconst [d] y)
(ISEL [0] (ANDconst [d] y) (MOVDconst [-1]) (CMPUconst [c] (ANDconst [d] y))) && c >= d => (ANDconst [d]
y)
(ORN x (MOVDconst [-1])) => x

(S(RAD|RD|LD) x (MOVDconst [c])) => (S(RAD|RD|LD)const [c&63 | (c>>6&1*63)] x)
(S(RAW|RW|LW) x (MOVDconst [c])) => (S(RAW|RW|LW)const [c&31 | (c>>5&1*31)] x)

(Addr {sym} base) => (MOVDaddr {sym} [0] base)
(LocalAddr {sym} base _) => (MOVDaddr {sym} base)
(OffPtr [off] ptr) => (ADD (MOVDconst <typ.Int64> [off]) ptr)

// TODO: optimize these cases?
(Ctz32NonZero ...) => (Ctz32 ...)
(Ctz64NonZero ...) => (Ctz64 ...)

(Ctz64 x) && buildcfg.GOPPC64<=8 => (POPCNTD (ANDN <typ.Int64> (ADDconst <typ.Int64> [-1] x) x))
(Ctz64 x) => (CNTTZD x)
(Ctz32 x) && buildcfg.GOPPC64<=8 => (POPCNTW (MOVWZreg (ANDN <typ.Int> (ADDconst <typ.Int> [-1]
x) x)))
(Ctz32 x) => (CNTTZW (MOVWZreg x))
(Ctz16 x) => (POPCNTW (MOVHZreg (ANDN <typ.Int16> (ADDconst <typ.Int16> [-1] x) x)))
(Ctz8 x) => (POPCNTB (MOVBZreg (ANDN <typ.UInt8> (ADDconst <typ.UInt8> [-1] x) x)))

(BitLen64 x) => (SUBFCconst [64] (CNTLZD <typ.Int> x))
(BitLen32 x) => (SUBFCconst [32] (CNTLZW <typ.Int> x))

```

```

(PopCount64
...) => (POPCNTD ...)
(PopCount32 x) => (POPCNTW (MOVWZreg x))
(PopCount16 x) => (POPCNTW (MOVHZreg x))
(PopCount8 x) => (POPCNTB (MOVBZreg x))

(And(64|32|16|8) ...) => (AND ...)
(Or(64|32|16|8) ...) => (OR ...)
(Xor(64|32|16|8) ...) => (XOR ...)

(Neg(64|32|16|8) ...) => (NEG ...)
(Neg64F ...) => (FNEG ...)
(Neg32F ...) => (FNEG ...)

(Com(64|32|16|8) x) => (NOR x x)

// Lowering boolean ops
(AndB ...) => (AND ...)
(OrB ...) => (OR ...)
(Not x) => (XORconst [1] x)

// Merge logical operations
(AND x (NOR y y)) => (ANDN x y)
(OR x (NOR y y)) => (ORN x y)

// Lowering comparisons
(EqB x y) => (ANDconst [1] (EQV x y))
// Sign extension dependence on operand sign sets up for sign/zero-extension elision later
(Eq8 x y) && isSigned(x.Type) && isSigned(y.Type) => (Equal (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Eq16 x y) && isSigned(x.Type) && isSigned(y.Type) => (Equal (CMPW (SignExt16to32 x) (SignExt16to32 y)))
(Eq8 x y) => (Equal (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Eq16 x
y) => (Equal (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Eq32 x y) => (Equal (CMPW x y))
(Eq64 x y) => (Equal (CMP x y))
(Eq32F x y) => (Equal (FCMPU x y))
(Eq64F x y) => (Equal (FCMPU x y))
(EqPtr x y) => (Equal (CMP x y))

(NeqB ...) => (XOR ...)
// Like Eq8 and Eq16, prefer sign extension likely to enable later elision.
(Neq8 x y) && isSigned(x.Type) && isSigned(y.Type) => (NotEqual (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Neq16 x y) && isSigned(x.Type) && isSigned(y.Type) => (NotEqual (CMPW (SignExt16to32 x) (SignExt16to32
y)))
(Neq8 x y) => (NotEqual (CMPW (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Neq16 x y) => (NotEqual (CMPW (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Neq32 x y) => (NotEqual (CMPW x y))
(Neq64 x y) => (NotEqual (CMP x y))

```

```

(Neq32F x y) => (NotEqual (FCMPU x y))
(Neq64F x y) => (NotEqual (FCMPU x y))
(NeqPtr x y) => (NotEqual (CMP x y))

(Less8 x y) => (LessThan (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Less16 x y) => (LessThan (CMPW (SignExt16to32 x) (SignExt16to32
y)))
(Less32 x y) => (LessThan (CMPW x y))
(Less64 x y) => (LessThan (CMP x y))
(Less32F x y) => (FLessThan (FCMPU x y))
(Less64F x y) => (FLessThan (FCMPU x y))

(Less8U x y) => (LessThan (CMPWU (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Less16U x y) => (LessThan (CMPWU (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Less32U x y) => (LessThan (CMPWU x y))
(Less64U x y) => (LessThan (CMPU x y))

(Leq8 x y) => (LessEqual (CMPW (SignExt8to32 x) (SignExt8to32 y)))
(Leq16 x y) => (LessEqual (CMPW (SignExt16to32 x) (SignExt16to32 y)))
(Leq32 x y) => (LessEqual (CMPW x y))
(Leq64 x y) => (LessEqual (CMP x y))
(Leq32F x y) => (FLessEqual (FCMPU x y))
(Leq64F x y) => (FLessEqual (FCMPU x y))

(Leq8U x y) => (LessEqual (CMPWU (ZeroExt8to32 x) (ZeroExt8to32 y)))
(Leq16U x y) => (LessEqual (CMPWU (ZeroExt16to32 x) (ZeroExt16to32 y)))
(Leq32U x y) => (LessEqual (CMPWU x y))
(Leq64U x y) => (LessEqual (CMPU x y))

// Absorb pseudo-ops into blocks.
(If (Equal cc) yes no) => (EQ cc yes no)
(If (NotEqual cc) yes
no) => (NE cc yes no)
(If (LessThan cc) yes no) => (LT cc yes no)
(If (LessEqual cc) yes no) => (LE cc yes no)
(If (GreaterThan cc) yes no) => (GT cc yes no)
(If (GreaterEqual cc) yes no) => (GE cc yes no)
(If (FLessThan cc) yes no) => (FLT cc yes no)
(If (FLessEqual cc) yes no) => (FLE cc yes no)
(If (FGreaterThan cc) yes no) => (FGT cc yes no)
(If (FGreaterEqual cc) yes no) => (FGE cc yes no)

(If cond yes no) => (NE (CMPWconst [0] (ANDconst <typ.UInt32> [1] cond)) yes no)

// Absorb boolean tests into block
(NE (CMPWconst [0] (ANDconst [1] (Equal cc))) yes no) => (EQ cc yes no)
(NE (CMPWconst [0] (ANDconst [1] (NotEqual cc))) yes no) => (NE cc yes no)
(NE (CMPWconst [0] (ANDconst [1] (LessThan cc))) yes no) => (LT cc yes no)

```

(NE (CMPWconst [0] (ANDconst [1] (LessEqual cc))) yes no) => (LE cc yes no)  
(NE (CMPWconst [0] (ANDconst [1] (GreaterThan cc))) yes no) => (GT cc yes no)  
(NE (CMPWconst [0] (ANDconst [1] (GreaterEqual cc))) yes no) => (GE cc yes no)  
(NE (CMPWconst [0] (ANDconst  
[1] (FLessThan cc))) yes no) => (FLT cc yes no)  
(NE (CMPWconst [0] (ANDconst [1] (FLessEqual cc))) yes no) => (FLE cc yes no)  
(NE (CMPWconst [0] (ANDconst [1] (FGreaterThan cc))) yes no) => (FGT cc yes no)  
(NE (CMPWconst [0] (ANDconst [1] (FGreaterEqual cc))) yes no) => (FGE cc yes no)

// Elide compares of bit tests // TODO need to make both CC and result of ANDCC available.

(EQ (CMPconst [0] (ANDconst [c] x)) yes no) => (EQ (ANDCCconst [c] x) yes no)  
(NE (CMPconst [0] (ANDconst [c] x)) yes no) => (NE (ANDCCconst [c] x) yes no)  
(EQ (CMPWconst [0] (ANDconst [c] x)) yes no) => (EQ (ANDCCconst [c] x) yes no)  
(NE (CMPWconst [0] (ANDconst [c] x)) yes no) => (NE (ANDCCconst [c] x) yes no)

// absorb flag constants into branches

(EQ (FlagEQ) yes no) => (First yes no)  
(EQ (FlagLT) yes no) => (First no yes)  
(EQ (FlagGT) yes no) => (First no yes)

(NE (FlagEQ) yes no) => (First no yes)  
(NE (FlagLT) yes no) => (First yes no)  
(NE (FlagGT) yes no) => (First yes no)

(LT (FlagEQ) yes no) => (First  
no yes)  
(LT (FlagLT) yes no) => (First yes no)  
(LT (FlagGT) yes no) => (First no yes)

(LE (FlagEQ) yes no) => (First yes no)  
(LE (FlagLT) yes no) => (First yes no)  
(LE (FlagGT) yes no) => (First no yes)

(GT (FlagEQ) yes no) => (First no yes)  
(GT (FlagLT) yes no) => (First no yes)  
(GT (FlagGT) yes no) => (First yes no)

(GE (FlagEQ) yes no) => (First yes no)  
(GE (FlagLT) yes no) => (First no yes)  
(GE (FlagGT) yes no) => (First yes no)

// absorb InvertFlags into branches

(LT (InvertFlags cmp) yes no) => (GT cmp yes no)  
(GT (InvertFlags cmp) yes no) => (LT cmp yes no)  
(LE (InvertFlags cmp) yes no) => (GE cmp yes no)  
(GE (InvertFlags cmp) yes no) => (LE cmp yes no)  
(EQ (InvertFlags cmp) yes no) => (EQ cmp yes no)  
(NE (InvertFlags cmp) yes no) => (NE cmp yes no)



```

// constant comparisons
(CMPWconst (MOVDconst [x] [y]) && int32(x)==int32(y) => (FlagEQ))
(CMPWconst (MOVDconst [x] [y]) && int32(x)<int32(y) => (FlagLT))
(CMPWconst (MOVDconst [x] [y]) && int32(x)>int32(y) => (FlagGT))

(CMPconst
(MOVDconst [x] [y]) && x==y => (FlagEQ))
(CMPconst (MOVDconst [x] [y]) && x<y => (FlagLT))
(CMPconst (MOVDconst [x] [y]) && x>y => (FlagGT))

(CMPWUconst (MOVDconst [x] [y]) && uint32(x)==uint32(y) => (FlagEQ))
(CMPWUconst (MOVDconst [x] [y]) && uint32(x)<uint32(y) => (FlagLT))
(CMPWUconst (MOVDconst [x] [y]) && uint32(x)>uint32(y) => (FlagGT))

(CMPUconst (MOVDconst [x] [y]) && x==y => (FlagEQ))
(CMPUconst (MOVDconst [x] [y]) && uint64(x)<uint64(y) => (FlagLT))
(CMPUconst (MOVDconst [x] [y]) && uint64(x)>uint64(y) => (FlagGT))

// other known comparisons
//(CMPconst (MOVBUreg _) [c]) && 0xff < c => (FlagLT))
//(CMPconst (MOVHUreg _) [c]) && 0xffff < c => (FlagLT))
//(CMPconst (ANDconst _ [m] [n]) && 0 <= int32(m) && int32(m) < int32(n) => (FlagLT))
//(CMPconst (SRLconst _ [c] [n]) && 0 <= n && 0 < c && c <= 32 && (1<<uint32(32-c)) <= uint32(n) =>
(FlagLT))

// absorb flag constants into boolean values
(Equal (FlagEQ)) => (MOVDconst [1])
(Equal (FlagLT)) => (MOVDconst [0])
(Equal
(FlagGT)) => (MOVDconst [0])

(NotEqual (FlagEQ)) => (MOVDconst [0])
(NotEqual (FlagLT)) => (MOVDconst [1])
(NotEqual (FlagGT)) => (MOVDconst [1])

(LessThan (FlagEQ)) => (MOVDconst [0])
(LessThan (FlagLT)) => (MOVDconst [1])
(LessThan (FlagGT)) => (MOVDconst [0])

(LessEqual (FlagEQ)) => (MOVDconst [1])
(LessEqual (FlagLT)) => (MOVDconst [1])
(LessEqual (FlagGT)) => (MOVDconst [0])

(GreaterThan (FlagEQ)) => (MOVDconst [0])
(GreaterThan (FlagLT)) => (MOVDconst [0])
(GreaterThan (FlagGT)) => (MOVDconst [1])

```

```

(GreaterEqual (FlagEQ)) => (MOVDconst [1])
(GreaterEqual (FlagLT)) => (MOVDconst [0])
(GreaterEqual (FlagGT)) => (MOVDconst [1])

// absorb InvertFlags into boolean values
(Equal (InvertFlags x)) => (Equal x)
(NotEqual (InvertFlags x)) => (NotEqual x)
(LessThan (InvertFlags x)) => (GreaterThan x)
(GreaterThan (InvertFlags x)) => (LessThan x)
(LessEqual (InvertFlags x)) => (GreaterEqual x)
(GreaterEqual (InvertFlags x)) => (LessEqual x)

// Elide compares of bit tests // TODO need to
// make both CC and result of ANDCC available.
((EQ|NE|LT|LE|GT|GE) (CMPconst [0] (ANDconst [c] x)) yes no) => ((EQ|NE|LT|LE|GT|GE) (ANDCCconst [c]
x) yes no)
((EQ|NE|LT|LE|GT|GE) (CMPWconst [0] (ANDconst [c] x)) yes no) => ((EQ|NE|LT|LE|GT|GE) (ANDCCconst [c]
x) yes no)
((EQ|NE|LT|LE|GT|GE) (CMPconst [0] z:(AND x y)) yes no) && z.Uses == 1 => ((EQ|NE|LT|LE|GT|GE)
(ANDCC x y) yes no)
((EQ|NE|LT|LE|GT|GE) (CMPconst [0] z:(OR x y)) yes no) && z.Uses == 1 => ((EQ|NE|LT|LE|GT|GE) (ORCC x
y) yes no)
((EQ|NE|LT|LE|GT|GE) (CMPconst [0] z:(XOR x y)) yes no) && z.Uses == 1 => ((EQ|NE|LT|LE|GT|GE)
(XORCC x y) yes no)

// Only lower after bool is lowered. It should always lower. This helps ensure the folding below happens reliably.
(CondSelect x y bool) && flagArg(bool) == nil => (ISEL [6] x y (ANDCCconst [1] bool))
// Fold any CR -> GPR -> CR transfers when applying the above rule.
(ISEL [6] x y (ANDCCconst [1] (ISELB [c] one cmp))) => (ISEL [c] x y cmp)

// Lowering loads
(Load <t> ptr mem) && (is64BitInt(t)
|| isPtr(t)) => (MOVDload ptr mem)
(Load <t> ptr mem) && is32BitInt(t) && isSigned(t) => (MOVWload ptr mem)
(Load <t> ptr mem) && is32BitInt(t) && !isSigned(t) => (MOVWZload ptr mem)
(Load <t> ptr mem) && is16BitInt(t) && isSigned(t) => (MOVHload ptr mem)
(Load <t> ptr mem) && is16BitInt(t) && !isSigned(t) => (MOVHZload ptr mem)
(Load <t> ptr mem) && t.IsBoolean() => (MOVBZload ptr mem)
(Load <t> ptr mem) && is8BitInt(t) && isSigned(t) => (MOVBreg (MOVBZload ptr mem)) // PPC has no signed-
byte load.
(Load <t> ptr mem) && is8BitInt(t) && !isSigned(t) => (MOVBZload ptr mem)

(Load <t> ptr mem) && is32BitFloat(t) => (FMOVSLoad ptr mem)
(Load <t> ptr mem) && is64BitFloat(t) => (FMOVDload ptr mem)

(Store {t} ptr val mem) && t.Size() == 8 && is64BitFloat(val.Type) => (FMOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && is32BitFloat(val.Type) => (FMOVDstore ptr val mem) // glitch from
(Cvt32Fto64F x) => x -- type is wrong

```

```

(Store {t} ptr val mem) && t.Size() == 4
  && is32BitFloat(val.Type) => (FMOVSstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 8 && !is64BitFloat(val.Type) => (MOVDstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 4 && is32BitInt(val.Type) => (MOVWstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 2 => (MOVHstore ptr val mem)
(Store {t} ptr val mem) && t.Size() == 1 => (MOVBstore ptr val mem)

```

```

// Using Zero instead of LoweredZero allows the

```

```

// target address to be folded where possible.

```

```

(Zero [0] _ mem) => mem
(Zero [1] destptr mem) => (MOVBstorezero destptr mem)
(Zero [2] destptr mem) =>
  (MOVHstorezero destptr mem)
(Zero [3] destptr mem) =>
  (MOVBstorezero [2] destptr
  (MOVHstorezero destptr mem))
(Zero [4] destptr mem) =>
  (MOVWstorezero destptr mem)
(Zero [5] destptr mem) =>
  (MOVBstorezero [4] destptr
  (MOVWstorezero destptr mem))
(Zero [6] destptr mem) =>
  (MOVHstorezero [4] destptr
  (MOVWstorezero destptr mem))
(Zero [7] destptr mem) =>
  (MOVBstorezero [6] destptr
  (MOVHstorezero [4] destptr
  (MOVWstorezero
  destptr mem))))
(Zero [8] {t} destptr mem) => (MOVDstorezero destptr mem)
(Zero [12] {t} destptr mem) =>
  (MOVWstorezero [8] destptr
  (MOVDstorezero [0] destptr mem))
(Zero [16] {t} destptr mem) =>
  (MOVDstorezero [8] destptr
  (MOVDstorezero [0] destptr mem))
(Zero [24] {t} destptr mem) =>
  (MOVDstorezero [16] destptr
  (MOVDstorezero [8] destptr
  (MOVDstorezero [0] destptr mem)))
(Zero [32] {t} destptr mem) =>
  (MOVDstorezero [24] destptr
  (MOVDstorezero [16] destptr
  (MOVDstorezero [8] destptr
  (MOVDstorezero [0] destptr mem))))

```

```

// Handle cases not handled above

```

```

// Lowered Short cases do not generate loops, and as a result don't clobber
// the address registers or flags.
(Zero [s] ptr mem) && buildcfg.GOPPC64 <= 8 && s < 64 => (LoweredZeroShort [s] ptr mem)
(Zero [s] ptr mem) && buildcfg.GOPPC64 <= 8 => (LoweredZero
[s] ptr mem)
(Zero [s] ptr mem) && s < 128 && buildcfg.GOPPC64 >= 9 => (LoweredQuadZeroShort [s] ptr mem)
(Zero [s] ptr mem) && buildcfg.GOPPC64 >= 9 => (LoweredQuadZero [s] ptr mem)

// moves
(Move [0] _ _ mem) => mem
(Move [1] dst src mem) => (MOVBstore dst (MOVBZload src mem) mem)
(Move [2] dst src mem) =>
    (MOVHstore dst (MOVHZload src mem) mem)
(Move [4] dst src mem) =>
    (MOVWstore dst (MOVWZload src mem) mem)
// MOVD for load and store must have offsets that are multiple of 4
(Move [8] {t} dst src mem) =>
    (MOVDstore dst (MOVDload src mem) mem)
(Move [3] dst src mem) =>
    (MOVBstore [2] dst (MOVBZload [2] src mem)
    (MOVHstore dst (MOVHload src mem) mem))
(Move [5] dst src mem) =>
    (MOVBstore [4] dst (MOVBZload [4] src mem)
    (MOVWstore dst (MOVWZload src mem) mem))
(Move [6] dst src mem) =>
    (MOVHstore [4] dst (MOVHZload [4] src mem)
    (MOVWstore dst (MOVWZload src mem) mem))
(Move [7] dst src mem)
=>
    (MOVBstore [6] dst (MOVBZload [6] src mem)
    (MOVHstore [4] dst (MOVHZload [4] src mem)
    (MOVWstore dst (MOVWZload src mem) mem)))

// Large move uses a loop. Since the address is computed and the
// offset is zero, any alignment can be used.
(Move [s] dst src mem) && s > 8 && buildcfg.GOPPC64 <= 8 && logLargeCopy(v, s) =>
    (LoweredMove [s] dst src mem)
(Move [s] dst src mem) && s > 8 && s <= 64 && buildcfg.GOPPC64 >= 9 =>
    (LoweredQuadMoveShort [s] dst src mem)
(Move [s] dst src mem) && s > 8 && buildcfg.GOPPC64 >= 9 && logLargeCopy(v, s) =>
    (LoweredQuadMove [s] dst src mem)

// Calls
// Lowering calls
(StaticCall ...) => (CALLstatic ...)
(ClosureCall ...) => (CALLclosure ...)
(InterCall ...) => (CALLinter ...)
(TailCall ...) => (CALLtail ...)

```

```

// Miscellaneous
(GetClosurePtr ...) => (LoweredGetClosurePtr ...)
(GetCallerSP ...) => (LoweredGetCallerSP ...)
(GetCallerPC ...) => (LoweredGetCallerPC ...)
(IsNotNil ptr)
=> (NotEqual (CMPconst [0] ptr))
(IsInBounds idx len) => (LessThan (CMPU idx len))
(IsSliceInBounds idx len) => (LessEqual (CMPU idx len))
(NilCheck ...) => (LoweredNilCheck ...)

// Write barrier.
(WB ...) => (LoweredWB ...)

// Publication barrier as intrinsic
(PubBarrier ...) => (LoweredPubBarrier ...)

(PanicBounds [kind] x y mem) && boundsABI(kind) == 0 => (LoweredPanicBoundsA [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 1 => (LoweredPanicBoundsB [kind] x y mem)
(PanicBounds [kind] x y mem) && boundsABI(kind) == 2 => (LoweredPanicBoundsC [kind] x y mem)

// Optimizations
// Note that PPC "logical" immediates come in 0:15 and 16:31 unsigned immediate forms,
// so ORconst, XORconst easily expand into a pair.

// Include very-large constants in the const-const case.
(AND (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c&d])
(OR (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c|d])
(XOR (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c^d])
(ORN (MOVDconst [c]) (MOVDconst
[d])) => (MOVDconst [c|^d])
(ANDN (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [c&^d])
(NOR (MOVDconst [c]) (MOVDconst [d])) => (MOVDconst [^(c|d)])

// Discover consts
(AND x (MOVDconst [c])) && isU16Bit(c) => (ANDconst [c] x)
(XOR x (MOVDconst [c])) && isU32Bit(c) => (XORconst [c] x)
(OR x (MOVDconst [c])) && isU32Bit(c) => (ORconst [c] x)

// Simplify consts
(ANDconst [c] (ANDconst [d] x)) => (ANDconst [c&d] x)
(ORconst [c] (ORconst [d] x)) => (ORconst [c|d] x)
(XORconst [c] (XORconst [d] x)) => (XORconst [c^d] x)
(ANDconst [-1] x) => x
(ANDconst [0] _) => (MOVDconst [0])
(XORconst [0] x) => x
(ORconst [-1] _) => (MOVDconst [-1])
(ORconst [0] x) => x

```

```

// zero-extend of small and => small and
(MOVBZreg y:(ANDconst [c] _) && uint64(c) <= 0xFF => y
(MOVHZreg y:(ANDconst [c] _) && uint64(c) <= 0xFFFF => y
(MOVWZreg y:(ANDconst [c] _) && uint64(c) <= 0xFFFFFFFF => y
(MOVWZreg y:(AND (MOVDconst [c] _) && uint64(c) <= 0xFFFFFFFF => y

// sign extend of small-positive and =>
small-positive-and
(MOVBreg y:(ANDconst [c] _) && uint64(c) <= 0x7F => y
(MOVHreg y:(ANDconst [c] _) && uint64(c) <= 0x7FFF => y
(MOVWreg y:(ANDconst [c] _) && uint64(c) <= 0xFFFF => y // 0xFFFF is largest immediate constant, when
regarded as 32-bit is > 0
(MOVWreg y:(AND (MOVDconst [c] _) && uint64(c) <= 0x7FFFFFFF => y

// small and of zero-extend => either zero-extend or small and
(ANDconst [c] y:(MOVBZreg _) && c&0xFF == 0xFF => y
(ANDconst [0xFF] (MOVBreg x)) => (MOVBZreg x)
(ANDconst [c] y:(MOVHZreg _) && c&0xFFFF == 0xFFFF => y
(ANDconst [0xFFFF] (MOVHreg x)) => (MOVHZreg x)

(AND (MOVDconst [c] y:(MOVWZreg _) && c&0xFFFFFFFF == 0xFFFFFFFF => y
(AND (MOVDconst [0xFFFFFFFF] y:(MOVWreg x)) => (MOVWZreg x)
// normal case
(ANDconst [c] (MOVBZreg x)) => (ANDconst [c&0xFF] x)
(ANDconst [c] (MOVHZreg x)) => (ANDconst [c&0xFFFF] x)
(ANDconst [c] (MOVWZreg x)) => (ANDconst [c&0xFFFFFFFF] x)

// Eliminate unnecessary sign/zero extend following right shift
(MOV(B|H|W)Zreg (SRWconst
[c] (MOVBZreg x))) => (SRWconst [c] (MOVBZreg x))
(MOV(H|W)Zreg (SRWconst [c] (MOVHZreg x))) => (SRWconst [c] (MOVHZreg x))
(MOVWZreg (SRWconst [c] (MOVWZreg x))) => (SRWconst [c] (MOVWZreg x))
(MOV(B|H|W)reg (SRAWconst [c] (MOVBreg x))) => (SRAWconst [c] (MOVBreg x))
(MOV(H|W)reg (SRAWconst [c] (MOVHreg x))) => (SRAWconst [c] (MOVHreg x))
(MOVWreg (SRAWconst [c] (MOVWreg x))) => (SRAWconst [c] (MOVWreg x))

(MOVWZreg (SRWconst [c] x)) && sizeof(x.Type) <= 32 => (SRWconst [c] x)
(MOVHZreg (SRWconst [c] x)) && sizeof(x.Type) <= 16 => (SRWconst [c] x)
(MOVBZreg (SRWconst [c] x)) && sizeof(x.Type) == 8 => (SRWconst [c] x)
(MOVWreg (SRAWconst [c] x)) && sizeof(x.Type) <= 32 => (SRAWconst [c] x)
(MOVHreg (SRAWconst [c] x)) && sizeof(x.Type) <= 16 => (SRAWconst [c] x)
(MOVBreg (SRAWconst [c] x)) && sizeof(x.Type) == 8 => (SRAWconst [c] x)

// initial right shift will handle sign/zero extend
(MOVBZreg (SRDconst [c] x)) && c>=56 => (SRDconst [c] x)
(MOVBreg (SRDconst [c] x)) && c>56 => (SRDconst

```

```

[c] x)
(MOVBreg (SRDconst [c] x)) && c==56 => (SRADconst [c] x)
(MOVBreg (SRADconst [c] x)) && c>=56 => (SRADconst [c] x)
(MOVBZreg (SRWconst [c] x)) && c>=24 => (SRWconst [c] x)
(MOVBreg (SRWconst [c] x)) && c>24 => (SRWconst [c] x)
(MOVBreg (SRWconst [c] x)) && c==24 => (SRAWconst [c] x)
(MOVBreg (SRAWconst [c] x)) && c>=24 => (SRAWconst [c] x)

```

```

(MOVHZreg (SRDconst [c] x)) && c>=48 => (SRDconst [c] x)
(MOVHreg (SRDconst [c] x)) && c>48 => (SRDconst [c] x)
(MOVHreg (SRDconst [c] x)) && c==48 => (SRADconst [c] x)
(MOVHreg (SRADconst [c] x)) && c>=48 => (SRADconst [c] x)
(MOVHZreg (SRWconst [c] x)) && c>=16 => (SRWconst [c] x)
(MOVHreg (SRWconst [c] x)) && c>16 => (SRWconst [c] x)
(MOVHreg (SRAWconst [c] x)) && c>=16 => (SRAWconst [c] x)
(MOVHreg (SRWconst [c] x)) && c==16 => (SRAWconst [c] x)

```

```

(MOVWZreg (SRDconst [c] x)) && c>=32 => (SRDconst [c] x)
(MOVWreg (SRDconst [c] x)) && c>32 => (SRDconst [c] x)
(MOVWreg (SRADconst [c] x)) && c>=32 => (SRADconst [c] x)
(MOVWreg (SRDconst
[c] x)) && c==32 => (SRADconst [c] x)

```

// Various redundant zero/sign extension combinations.

```

(MOVBZreg y:(MOVBZreg _)) => y // repeat
(MOVBreg y:(MOVBreg _)) => y // repeat
(MOVBreg (MOVBZreg x)) => (MOVBreg x)
(MOVBZreg (MOVBreg x)) => (MOVBZreg x)

```

// H - there are more combinations than these

```

(MOVHZreg y:(MOVHZreg _)) => y // repeat
(MOVHZreg y:(MOVBZreg _)) => y // wide of narrow
(MOVHZreg y:(MOVHBRload _ _)) => y

```

```

(MOVHreg y:(MOVHreg _)) => y // repeat
(MOVHreg y:(MOVBreg _)) => y // wide of narrow

```

```

(MOVHreg y:(MOVHZreg x)) => (MOVHreg x)
(MOVHZreg y:(MOVHreg x)) => (MOVHZreg x)

```

// W - there are more combinations than these

```

(MOVWZreg y:(MOVWZreg _)) => y // repeat
(MOVWZreg y:(MOVHZreg _)) => y // wide of narrow
(MOVWZreg y:(MOVBZreg _)) => y // wide of narrow
(MOVWZreg y:(MOVHBRload _ _)) => y
(MOVWZreg y:(MOVWBRload _ _)) => y

```

```

(MOVWreg y:(MOVWreg _)) => y // repeat
(MOVWreg y:(MOVHreg _)) => y // wide of narrow
(MOVWreg y:(MOVBreg _)) => y // wide of narrow

(MOVWreg y:(MOVWZreg
x)) => (MOVWreg x)
(MOVWZreg y:(MOVWreg x)) => (MOVWZreg x)

// Truncate then logical then truncate: omit first, lesser or equal truncate
(MOVWZreg ((OR|XOR|AND) <t> x (MOVWZreg y))) => (MOVWZreg ((OR|XOR|AND) <t> x y))
(MOVHZreg ((OR|XOR|AND) <t> x (MOVWZreg y))) => (MOVHZreg ((OR|XOR|AND) <t> x y))
(MOVHZreg ((OR|XOR|AND) <t> x (MOVHZreg y))) => (MOVHZreg ((OR|XOR|AND) <t> x y))
(MOVBZreg ((OR|XOR|AND) <t> x (MOVWZreg y))) => (MOVBZreg ((OR|XOR|AND) <t> x y))
(MOVBZreg ((OR|XOR|AND) <t> x (MOVHZreg y))) => (MOVBZreg ((OR|XOR|AND) <t> x y))
(MOVBZreg ((OR|XOR|AND) <t> x (MOVBZreg y))) => (MOVBZreg ((OR|XOR|AND) <t> x y))

(MOV(B|H|W)Zreg z:(ANDconst [c] (MOVBZload ptr x))) => z
(MOVBZreg z:(AND y (MOVBZload ptr x))) => z
(MOV(H|W)Zreg z:(ANDconst [c] (MOVHZload ptr x))) => z
(MOVHZreg z:(AND y (MOVHZload ptr x))) => z
(MOVWZreg z:(ANDconst [c] (MOVWZload ptr x))) => z
(MOVWZreg z:(AND y (MOVWZload ptr x))) => z

// Arithmetic constant ops

(ADD x (MOVDconst [c])) && is32Bit(c)
=> (ADDconst [c] x)
(ADDconst [c] (ADDconst [d] x)) && is32Bit(c+d) => (ADDconst [c+d] x)
(ADDconst [0] x) => x
(SUB x (MOVDconst [c])) && is32Bit(-c) => (ADDconst [-c] x)

(ADDconst [c] (MOVDaddr [d] {sym} x)) && is32Bit(c+int64(d)) => (MOVDaddr [int32(c+int64(d))] {sym} x)
(ADDconst [c] x:(SP)) && is32Bit(c) => (MOVDaddr [int32(c)] x) // so it is rematerializeable

(MULL(W|D) x (MOVDconst [c])) && is16Bit(c) => (MULL(W|D)const [int32(c)] x)

// Subtract from (with carry, but ignored) constant.
// Note, these clobber the carry bit.
(SUB (MOVDconst [c] x) && is32Bit(c) => (SUBFCconst [c] x)
(SUBFCconst [c] (NEG x)) => (ADDconst [c] x)
(SUBFCconst [c] (SUBFCconst [d] x)) && is32Bit(c-d) => (ADDconst [c-d] x)
(SUBFCconst [0] x) => (NEG x)
(ADDconst [c] (SUBFCconst [d] x)) && is32Bit(c+d) => (SUBFCconst [c+d] x)
(NEG (ADDconst [c] x)) && is32Bit(-c) => (SUBFCconst [-c] x)
(NEG (SUBFCconst [c] x)) && is32Bit(-c) => (ADDconst [-c] x)
(NEG (SUB x y)) => (SUB y x)
(NEG (NEG x)) => x

```



```

// Use
register moves instead of stores and loads to move int<=>float values
// Common with math Float64bits, Float64frombits
(MOVDload [off] {sym} ptr (FMOVDstore [off] {sym} ptr x _)) => (MFVSRD x)
(FMOVDload [off] {sym} ptr (MOVDstore [off] {sym} ptr x _)) => (MTVSRD x)

(FMOVDstore [off] {sym} ptr (MTVSRD x) mem) => (MOVDstore [off] {sym} ptr x mem)
(MOVDstore [off] {sym} ptr (MFVSRD x) mem) => (FMOVDstore [off] {sym} ptr x mem)

(MTVSRD (MOVDconst [c])) && !math.IsNaN(math.Float64frombits(uint64(c))) => (FMOVDconst
[math.Float64frombits(uint64(c))])
(MFVSRD (FMOVDconst [c])) => (MOVDconst [int64(math.Float64bits(c))])

(MTVSRD x:(MOVDload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (FMOVDload [off]
{sym} ptr mem)
(MFVSRD x:(FMOVDload [off] {sym} ptr mem)) && x.Uses == 1 && clobber(x) => @x.Block (MOVDload [off]
{sym} ptr mem)

// Fold offsets for stores.
(MOVDstore [off1] {sym} (ADDconst [off2] x) val mem) && is16Bit(int64(off1)+off2) => (MOVDstore
[off1+int32(off2)]
{sym} x val mem)
(MOVWstore [off1] {sym} (ADDconst [off2] x) val mem) && is16Bit(int64(off1)+off2) => (MOVWstore
[off1+int32(off2)] {sym} x val mem)
(MOVHstore [off1] {sym} (ADDconst [off2] x) val mem) && is16Bit(int64(off1)+off2) => (MOVHstore
[off1+int32(off2)] {sym} x val mem)
(MOVBstore [off1] {sym} (ADDconst [off2] x) val mem) && is16Bit(int64(off1)+off2) => (MOVBstore
[off1+int32(off2)] {sym} x val mem)

(FMOVStore [off1] {sym} (ADDconst [off2] ptr) val mem) && is16Bit(int64(off1)+off2) => (FMOVStore
[off1+int32(off2)] {sym} ptr val mem)
(FMOVDstore [off1] {sym} (ADDconst [off2] ptr) val mem) && is16Bit(int64(off1)+off2) => (FMOVDstore
[off1+int32(off2)] {sym} ptr val mem)

// Fold address into load/store.
// The assembler needs to generate several instructions and use
// temp register for accessing global, and each time it will reload
// the temp register. So don't fold address of global, unless there
// is only one use.
(MOVBstore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr)
val mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
(MOVBstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVHstore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
(MOVHstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVWstore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2)

```

```

&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVWstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(MOVDstore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVDstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)

(FMOVStore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses ==
1) =>
    (FMOVStore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)
(FMOVDstore [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) val mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (FMOVDstore [off1+off2] {mergeSym(sym1,sym2)} ptr val mem)

(MOVBZload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVBZload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVHload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVHZload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVHZload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWload [off1] {sym1} p:(MOVDaddr [off2] {sym2}
ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVWload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVWZload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVWZload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(MOVDload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (MOVDload [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(FMOVSLoad [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (FMOVSLoad [off1+off2] {mergeSym(sym1,sym2)} ptr mem)
(FMOVDload [off1] {sym1} p:(MOVDaddr [off2] {sym2} ptr) mem) && canMergeSym(sym1,sym2)
&& is16Bit(int64(off1+off2)) && (ptr.Op != OpSB || p.Uses == 1) =>
    (FMOVDload [off1+off2]
{mergeSym(sym1,sym2)} ptr mem)

// Fold offsets for loads.
(FMOVSLoad [off1] {sym} (ADDconst [off2] ptr) mem) && is16Bit(int64(off1)+off2) => (FMOVSLoad
[off1+int32(off2)] {sym} ptr mem)
(FMOVDload [off1] {sym} (ADDconst [off2] ptr) mem) && is16Bit(int64(off1)+off2) => (FMOVDload
[off1+int32(off2)] {sym} ptr mem)

(MOVDload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) => (MOVDload

```

```

[off1+int32(off2)] {sym} x mem)
(MOVWload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) => (MOVWload
[off1+int32(off2)] {sym} x mem)
(MOVWZload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) => (MOVWZload
[off1+int32(off2)] {sym} x mem)
(MOVHload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) => (MOVHload
[off1+int32(off2)] {sym} x mem)
(MOVHZload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) => (MOVHZload
[off1+int32(off2)] {sym} x mem)
(MOVBZload [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2)
=> (MOVBZload [off1+int32(off2)] {sym} x mem)

// Determine load + addressing that can be done as a register indexed load
(MOV(D|W|WZ|H|HZ|BZ)load [0] {sym} p:(ADD ptr idx) mem) && sym == nil && p.Uses == 1 =>
(MOV(D|W|WZ|H|HZ|BZ)loadidx ptr idx mem)

// Determine if there is benefit to using a non-indexed load, since that saves the load
// of the index register. With MOVDload and MOVWload, there is no benefit if the offset
// value is not a multiple of 4, since that results in an extra instruction in the base
// register address computation.
(MOV(D|W)loadidx ptr (MOVDconst [c]) mem) && is16Bit(c) && c%4 == 0 => (MOV(D|W)load [int32(c)] ptr
mem)
(MOV(WZ|H|HZ|BZ)loadidx ptr (MOVDconst [c]) mem) && is16Bit(c) => (MOV(WZ|H|HZ|BZ)load [int32(c)]
ptr mem)
(MOV(D|W)loadidx (MOVDconst [c]) ptr mem) && is16Bit(c) && c%4 == 0 => (MOV(D|W)load [int32(c)] ptr
mem)
(MOV(WZ|H|HZ|BZ)loadidx (MOVDconst [c]) ptr mem) && is16Bit(c) => (MOV(WZ|H|HZ|BZ)load [int32(c)]
ptr mem)

// Store of zero
=> storezero
(MOVDstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVDstorezero [off] {sym} ptr mem)
(MOVWstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVWstorezero [off] {sym} ptr mem)
(MOVHstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVHstorezero [off] {sym} ptr mem)
(MOVBstore [off] {sym} ptr (MOVDconst [0]) mem) => (MOVBstorezero [off] {sym} ptr mem)

// Fold offsets for storezero
(MOVDstorezero [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) =>
(MOVDstorezero [off1+int32(off2)] {sym} x mem)
(MOVWstorezero [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) =>
(MOVWstorezero [off1+int32(off2)] {sym} x mem)
(MOVHstorezero [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) =>
(MOVHstorezero [off1+int32(off2)] {sym} x mem)
(MOVBstorezero [off1] {sym} (ADDconst [off2] x) mem) && is16Bit(int64(off1)+off2) =>
(MOVBstorezero [off1+int32(off2)] {sym} x mem)

// Stores with addressing that can be done as indexed stores
(MOV(D|W|H|B)store

```

```

[0] {sym} p:(ADD ptr idx) val mem) && sym == nil && p.Uses == 1 => (MOV(D|W|H|B)storeidx ptr idx val
mem)

// Stores with constant index values can be done without indexed instructions
// No need to lower the idx cases if c%4 is not 0
(MOVDstoreidx ptr (MOVDconst [c]) val mem) && is16Bit(c) && c%4 == 0 => (MOVDstore [int32(c)] ptr val
mem)
(MOV(W|H|B)storeidx ptr (MOVDconst [c]) val mem) && is16Bit(c) => (MOV(W|H|B)store [int32(c)] ptr val
mem)
(MOVDstoreidx (MOVDconst [c]) ptr val mem) && is16Bit(c) && c%4 == 0 => (MOVDstore [int32(c)] ptr val
mem)
(MOV(W|H|B)storeidx (MOVDconst [c]) ptr val mem) && is16Bit(c) => (MOV(W|H|B)store [int32(c)] ptr val
mem)

// Fold symbols into storezero
(MOVDstorezero [off1] {sym1} p:(MOVDaddr [off2] {sym2} x) mem) && canMergeSym(sym1,sym2)
&& (x.Op != OpSB || p.Uses == 1) =>
  (MOVDstorezero [off1+off2] {mergeSym(sym1,sym2)} x mem)
(MOVWstorezero [off1] {sym1} p:(MOVDaddr [off2] {sym2} x) mem) && canMergeSym(sym1,sym2)
&& (x.Op !=
OpSB || p.Uses == 1) =>
  (MOVWstorezero [off1+off2] {mergeSym(sym1,sym2)} x mem)
(MOVHstorezero [off1] {sym1} p:(MOVDaddr [off2] {sym2} x) mem) && canMergeSym(sym1,sym2)
&& (x.Op != OpSB || p.Uses == 1) =>
  (MOVHstorezero [off1+off2] {mergeSym(sym1,sym2)} x mem)
(MOVBstorezero [off1] {sym1} p:(MOVDaddr [off2] {sym2} x) mem) && canMergeSym(sym1,sym2)
&& (x.Op != OpSB || p.Uses == 1) =>
  (MOVBstorezero [off1+off2] {mergeSym(sym1,sym2)} x mem)

// atomic intrinsics
(AtomicLoad(8|32|64|Ptr) ptr mem) => (LoweredAtomicLoad(8|32|64|Ptr) [1] ptr mem)
(AtomicLoadAcq(32|64) ptr mem) => (LoweredAtomicLoad(32|64) [0] ptr mem)

(AtomicStore(8|32|64) ptr val mem) => (LoweredAtomicStore(8|32|64) [1] ptr val mem)
(AtomicStoreRel(32|64) ptr val mem) => (LoweredAtomicStore(32|64) [0] ptr val mem)
//(AtomicStorePtrNoWB ptr val mem) => (STLR ptr val mem)

(AtomicExchange(32|64) ...) => (LoweredAtomicExchange(32|64) ...)

(AtomicAdd(32|64) ...) => (LoweredAtomicAdd(32|64) ...)

(AtomicCompareAndSwap(32|64)
ptr old new_ mem) => (LoweredAtomicCas(32|64) [1] ptr old new_ mem)
(AtomicCompareAndSwapRel32 ptr old new_ mem) => (LoweredAtomicCas32 [0] ptr old new_ mem)

(AtomicAnd8 ...) => (LoweredAtomicAnd8 ...)
(AtomicAnd32 ...) => (LoweredAtomicAnd32 ...)
(AtomicOr8 ...) => (LoweredAtomicOr8 ...)

```

(AtomicOr32 ...) => (LoweredAtomicOr32 ...)

(Slicemask <t> x) => (SRADconst (NEG <t> x) [63])

// Note that MOV??reg returns a 64-bit int, x is not necessarily that wide

// This may interact with other patterns in the future. (Compare with arm64)

(MOV(B|H|W)Zreg x:(MOVBZload \_\_)) => x

(MOV(B|H|W)Zreg x:(MOVBZloadidx \_\_ \_\_)) => x

(MOV(H|W)Zreg x:(MOVHZload \_\_)) => x

(MOV(H|W)Zreg x:(MOVHZloadidx \_\_ \_\_)) => x

(MOV(H|W)reg x:(MOVHload \_\_)) => x

(MOV(H|W)reg x:(MOVHloadidx \_\_ \_\_)) => x

(MOVWZreg x:(MOVWZload \_\_)) => x

(MOVWZreg x:(MOVWZloadidx \_\_ \_\_)) => x

(MOVWreg x:(MOVWload \_\_)) => x

(MOVWreg x:(MOVWloadidx \_\_ \_\_)) => x

(MOVBZreg x:(Select0 (LoweredAtomicLoad8 \_  
\_))) => x

(MOVWZreg x:(Select0 (LoweredAtomicLoad32 \_ \_))) => x

// don't extend if argument is already extended

(MOVBreg x:(Arg <t>)) && is8BitInt(t) && isSigned(t) => x

(MOVBZreg x:(Arg <t>)) && is8BitInt(t) && !isSigned(t) => x

(MOVHreg x:(Arg <t>)) && (is8BitInt(t) || is16BitInt(t)) && isSigned(t) => x

(MOVHZreg x:(Arg <t>)) && (is8BitInt(t) || is16BitInt(t)) && !isSigned(t) => x

(MOVWreg x:(Arg <t>)) && (is8BitInt(t) || is16BitInt(t) || is32BitInt(t)) && isSigned(t) => x

(MOVWZreg x:(Arg <t>)) && (is8BitInt(t) || is16BitInt(t) || is32BitInt(t)) && !isSigned(t) => x

(MOVBZreg (MOVDconst [c])) => (MOVDconst [int64(uint8(c))])

(MOVBreg (MOVDconst [c])) => (MOVDconst [int64(int8(c))])

(MOVHZreg (MOVDconst [c])) => (MOVDconst [int64(uint16(c))])

(MOVHreg (MOVDconst [c])) => (MOVDconst [int64(int16(c))])

(MOVWreg (MOVDconst [c])) => (MOVDconst [int64(int32(c))])

(MOVWZreg (MOVDconst [c])) => (MOVDconst [int64(uint32(c))])

// Implement clrsldi and clrslwi extended mnemonics as described

in

// ISA 3.0 section C.8. AuxInt field contains values needed for

// the instructions, packed together since there is only one available.

(SLDconst [c] z:(MOVBZreg x)) && c < 8 && z.Uses == 1 => (CLRSLDI [newPPC64ShiftAuxInt(c,56,63,64)]  
x)

(SLDconst [c] z:(MOVHZreg x)) && c < 16 && z.Uses == 1 => (CLRSLDI [newPPC64ShiftAuxInt(c,48,63,64)]  
x)

(SLDconst [c] z:(MOVWZreg x)) && c < 32 && z.Uses == 1 => (CLRSLDI [newPPC64ShiftAuxInt(c,32,63,64)]  
x)

(SLDconst [c] z:(ANDconst [d] x)) && z.Uses == 1 && isPPC64ValidShiftMask(d) && c <= (64-  
getPPC64ShiftMaskLength(d)) => (CLRSLDI [newPPC64ShiftAuxInt(c,64-getPPC64ShiftMaskLength(d),63,64)]

```

x)
(SLDconst [c] z:(AND (MOVDconst [d]) x)) && z.Uses == 1 && isPPC64ValidShiftMask(d) && c<=(64-
getPPC64ShiftMaskLength(d)) => (CLRLSLDI [newPPC64ShiftAuxInt(c,64-getPPC64ShiftMaskLength(d),63,64)]
x)
(SLWconst [c] z:(MOVBZreg x)) && z.Uses == 1 && c < 8 => (CLRLSLWI [newPPC64ShiftAuxInt(c,24,31,32)]
x)
(SLWconst [c] z:(MOVHZreg x)) && z.Uses ==
1 && c < 16 => (CLRLSLWI [newPPC64ShiftAuxInt(c,16,31,32)] x)
(SLWconst [c] z:(ANDconst [d] x)) && z.Uses == 1 && isPPC64ValidShiftMask(d) && c<=(32-
getPPC64ShiftMaskLength(d)) => (CLRLSLWI [newPPC64ShiftAuxInt(c,32-
getPPC64ShiftMaskLength(d),31,32)] x)
(SLWconst [c] z:(AND (MOVDconst [d]) x)) && z.Uses == 1 && isPPC64ValidShiftMask(d) && c<=(32-
getPPC64ShiftMaskLength(d)) => (CLRLSLWI [newPPC64ShiftAuxInt(c,32-
getPPC64ShiftMaskLength(d),31,32)] x)
// special case for power9
(SL(W|D)const [c] z:(MOVWreg x)) && c < 32 && buildcfg.GOPPC64 >= 9 => (EXTSWSLconst [c] x)

// Lose widening ops fed to stores
(MOVBstore [off] {sym} ptr (MOV(B|BZ|H|HZ|W|WZ)reg x) mem) => (MOVBstore [off] {sym} ptr x mem)
(MOVHstore [off] {sym} ptr (MOV(H|HZ|W|WZ)reg x) mem) => (MOVHstore [off] {sym} ptr x mem)
(MOVWstore [off] {sym} ptr (MOV(W|WZ)reg x) mem) => (MOVWstore [off] {sym} ptr x mem)
(MOVBstore [off] {sym} ptr (SRWconst (MOV(H|HZ)reg x) [c]) mem) && c <= 8 => (MOVBstore [off] {sym} ptr
(SRWconst <typ.UInt32>
x [c]) mem)
(MOVBstore [off] {sym} ptr (SRWconst (MOV(W|WZ)reg x) [c]) mem) && c <= 24 => (MOVBstore [off] {sym}
ptr (SRWconst <typ.UInt32> x [c]) mem)
(MOVBstoreidx ptr idx (MOV(B|BZ|H|HZ|W|WZ)reg x) mem) => (MOVBstoreidx ptr idx x mem)
(MOVHstoreidx ptr idx (MOV(H|HZ|W|WZ)reg x) mem) => (MOVHstoreidx ptr idx x mem)
(MOVWstoreidx ptr idx (MOV(W|WZ)reg x) mem) => (MOVWstoreidx ptr idx x mem)
(MOVBstoreidx ptr idx (SRWconst (MOV(H|HZ)reg x) [c]) mem) && c <= 8 => (MOVBstoreidx ptr idx
(SRWconst <typ.UInt32> x [c]) mem)
(MOVBstoreidx ptr idx (SRWconst (MOV(W|WZ)reg x) [c]) mem) && c <= 24 => (MOVBstoreidx ptr idx
(SRWconst <typ.UInt32> x [c]) mem)
(MOVHBRstore {sym} ptr (MOV(H|HZ|W|WZ)reg x) mem) => (MOVHBRstore {sym} ptr x mem)
(MOVWBRstore {sym} ptr (MOV(W|WZ)reg x) mem) => (MOVWBRstore {sym} ptr x mem)

// Lose W-widening ops fed to compare-W
(CMPW x (MOVWreg y)) => (CMPW x y)
(CMPW (MOVWreg x) y) => (CMPW x y)
(CMPWU x (MOVWZreg y)) => (CMPWU x y)
(CMPWU (MOVWZreg x) y) => (CMPWU
x y)

(CMP x (MOVDconst [c])) && is16Bit(c) => (CMPconst x [c])
(CMP (MOVDconst [c]) y) && is16Bit(c) => (InvertFlags (CMPconst y [c]))
(CMPW x (MOVDconst [c])) && is16Bit(c) => (CMPWconst x [int32(c)])
(CMPW (MOVDconst [c]) y) && is16Bit(c) => (InvertFlags (CMPWconst y [int32(c)]))

```

```

(CMPU x (MOVDconst [c])) && isU16Bit(c) => (CMPUconst x [c])
(CMPU (MOVDconst [c] y) && isU16Bit(c) => (InvertFlags (CMPUconst y [c]))
(CMPWU x (MOVDconst [c])) && isU16Bit(c) => (CMPWUconst x [int32(c)])
(CMPWU (MOVDconst [c] y) && isU16Bit(c) => (InvertFlags (CMPWUconst y [int32(c))))

// Canonicalize the order of arguments to comparisons - helps with CSE.
((CMP|CMPW|CMPU|CMPWU) x y) && canonLessThan(x,y) => (InvertFlags ((CMP|CMPW|CMPU|CMPWU) y
x))

// ISEL auxInt values 0=LT 1=GT 2=EQ  arg2 ? arg0 : arg1
// ISEL auxInt values 4=GE 5=LE 6=NE  !arg2 ? arg1 : arg0
// ISELB special case where arg0, arg1 values are 0, 1

(Equal cmp) => (ISELB [2] (MOVDconst [1]) cmp)
(NotEqual cmp) => (ISELB [6] (MOVDconst
[1]) cmp)
(LessThan cmp) => (ISELB [0] (MOVDconst [1]) cmp)
(FLessThan cmp) => (ISELB [0] (MOVDconst [1]) cmp)
(FLessEqual cmp) => (ISEL [2] (MOVDconst [1]) (ISELB [0] (MOVDconst [1]) cmp) cmp)
(GreaterEqual cmp) => (ISELB [4] (MOVDconst [1]) cmp)
(GreaterThan cmp) => (ISELB [1] (MOVDconst [1]) cmp)
(FGreaterThan cmp) => (ISELB [1] (MOVDconst [1]) cmp)
(FGreaterThanEqual cmp) => (ISEL [2] (MOVDconst [1]) (ISELB [1] (MOVDconst [1]) cmp) cmp)
(LessEqual cmp) => (ISELB [5] (MOVDconst [1]) cmp)

(ISELB [0] _ (FlagLT)) => (MOVDconst [1])
(ISELB [0] _ (Flag(GT|EQ))) => (MOVDconst [0])
(ISELB [1] _ (FlagGT)) => (MOVDconst [1])
(ISELB [1] _ (Flag(LT|EQ))) => (MOVDconst [0])
(ISELB [2] _ (FlagEQ)) => (MOVDconst [1])
(ISELB [2] _ (Flag(LT|GT))) => (MOVDconst [0])
(ISELB [4] _ (FlagLT)) => (MOVDconst [0])
(ISELB [4] _ (Flag(GT|EQ))) => (MOVDconst [1])
(ISELB [5] _ (FlagGT)) => (MOVDconst [0])
(ISELB [5] _ (Flag(LT|EQ))) => (MOVDconst [1])
(ISELB [6] _ (FlagEQ)) => (MOVDconst [0])
(ISELB [6]
_ (Flag(LT|GT))) => (MOVDconst [1])

(ISEL [2] x _ (FlagEQ)) => x
(ISEL [2] _ y (Flag(LT|GT))) => y

(ISEL [6] _ y (FlagEQ)) => y
(ISEL [6] x _ (Flag(LT|GT))) => x

(ISEL [0] _ y (Flag(EQ|GT))) => y
(ISEL [0] x _ (FlagLT)) => x

```

```
(ISEL [5] _ x (Flag(EQ|LT))) => x
(ISEL [5] y _ (FlagGT)) => y
```

```
(ISEL [1] _ y (Flag(EQ|LT))) => y
(ISEL [1] x _ (FlagGT)) => x
```

```
(ISEL [4] x _ (Flag(EQ|GT))) => x
(ISEL [4] _ y (FlagLT)) => y
```

```
(ISELB [n] (MOVDconst [1]) (InvertFlags bool)) && n%4 == 0 => (ISELB [n+1] (MOVDconst [1]) bool)
(ISELB [n] (MOVDconst [1]) (InvertFlags bool)) && n%4 == 1 => (ISELB [n-1] (MOVDconst [1]) bool)
(ISELB [n] (MOVDconst [1]) (InvertFlags bool)) && n%4 == 2 => (ISELB [n] (MOVDconst [1]) bool)
(ISEL [n] x y (InvertFlags bool)) && n%4 == 0 => (ISEL [n+1] x y bool)
(ISEL [n] x y (InvertFlags bool)) && n%4 == 1 => (ISEL [n-1] x y bool)
(ISEL [n] x y (InvertFlags bool)) && n%4 == 2 => (ISEL [n] x y bool)
(XORconst [1] (ISELB [6] (MOVDconst [1]) cmp)) => (ISELB [2] (MOVDconst [1]) cmp)
(XORconst
 [1] (ISELB [5] (MOVDconst [1]) cmp)) => (ISELB [1] (MOVDconst [1]) cmp)
(XORconst [1] (ISELB [4] (MOVDconst [1]) cmp)) => (ISELB [0] (MOVDconst [1]) cmp)
```

```
// A particular pattern seen in cgo code:
```

```
(AND (MOVDconst [c] x:(MOVBZload _ _)) => (ANDconst [c&0xFF] x)
```

```
// floating point negative abs
```

```
(FNEG (FABS x)) => (FNABS x)
(FNEG (FNABS x)) => (FABS x)
```

```
// floating-point fused multiply-add/sub
```

```
(FADD (FMUL x y) z) => (FMADD x y z)
(FSUB (FMUL x y) z) => (FMSUB x y z)
(FADDS (FMULS x y) z) => (FMADDS x y z)
(FSUBS (FMULS x y) z) => (FMSUBS x y z)
```

```
// The following statements are found in encoding/binary functions UintXX (load) and PutUintXX (store)
```

```
// and convert the statements in these functions from multiple single byte loads or stores to
```

```
// the single largest possible load or store.
```

```
// Some are marked big or little endian based on the order in which the bytes are loaded or stored,
```

```
// not on the ordering of the machine. These are intended for little endian machines.
```

```
// To implement
```

```
for big endian machines, most rules would have to be duplicated but the
```

```
// resulting rule would be reversed, i. e., MOVHZload on little endian would be MOVHBRload on big endian
```

```
// and vice versa.
```

```
// b[0] | b[1]<<8 => load 16-bit Little endian
```

```
(OR <t> x0:(MOVBZload [i0] {s} p mem)
 o1:(SL(W|D)const x1:(MOVBZload [i1] {s} p mem) [8]))
&& !config.BigEndian
&& i1 == i0+1
```



```

&& x0.Uses == 1 && x1.Uses == 1
&& o1.Uses == 1
&& mergePoint(b, x0, x1) != nil
&& clobber(x0, x1, o1)
=> @mergePoint(b,x0,x1) (MOVHZload <t> {s} [i0] p mem)

// b[0]<<8 | b[1] => load 16-bit Big endian on Little endian arch.
// Use byte-reverse indexed load for 2 bytes.
(OR <t> x0:(MOVBZload [i1] {s} p mem)
o1:(SL(W|D)const x1:(MOVBZload [i0] {s} p mem) [8]))
&& !config.BigEndian
&& i1 == i0+1
&& x0.Uses == 1 && x1.Uses == 1
&& o1.Uses == 1
&& mergePoint(b, x0, x1) != nil
&& clobber(x0, x1, o1)
=> @mergePoint(b,x0,x1) (MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p) mem)

// b[0]<<n+8 | b[1]<<n
=> load 16-bit Big endian (where n%8== 0)
// Use byte-reverse indexed load for 2 bytes,
// then shift left to the correct position. Used to match subrules
// from longer rules.
(OR <t> s0:(SL(W|D)const x0:(MOVBZload [i1] {s} p mem) [n1])
s1:(SL(W|D)const x1:(MOVBZload [i0] {s} p mem) [n2]))
&& !config.BigEndian
&& i1 == i0+1
&& n1%8 == 0
&& n2 == n1+8
&& x0.Uses == 1 && x1.Uses == 1
&& s0.Uses == 1 && s1.Uses == 1
&& mergePoint(b, x0, x1) != nil
&& clobber(x0, x1, s0, s1)
=> @mergePoint(b,x0,x1) (SLDconst <t> (MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p) mem) [n1])

// b[0] | b[1]<<8 | b[2]<<16 | b[3]<<24 => load 32-bit Little endian
// Use byte-reverse indexed load for 4 bytes.
(OR <t> s1:(SL(W|D)const x2:(MOVBZload [i3] {s} p mem) [24])
o0:(OR <t> s0:(SL(W|D)const x1:(MOVBZload [i2] {s} p mem) [16])
x0:(MOVHZload [i0] {s} p mem)))
&& !config.BigEndian
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& o0.Uses == 1
&& s0.Uses == 1 &&
s1.Uses == 1
&& mergePoint(b, x0, x1, x2) != nil

```

```

&& clobber(x0, x1, x2, s0, s1, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWZload <t> {s} [i0] p mem)

// b[0]<<24 | b[1]<<16 | b[2]<<8 | b[3] => load 32-bit Big endian order on Little endian arch
// Use byte-reverse indexed load for 4 bytes with computed address.
// Could be used to match subrules of a longer rule.
(OR <t> s1:(SL(W|D)const x2:(MOVBZload [i0] {s} p mem) [24])
o0:(OR <t> s0:(SL(W|D)const x1:(MOVBZload [i1] {s} p mem) [16])
x0:(MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i2] {s} p mem)))
&& !config.BigEndian
&& i1 == i0+1
&& i2 == i0+2
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& o0.Uses == 1
&& s0.Uses == 1 && s1.Uses == 1
&& mergePoint(b, x0, x1, x2) != nil
&& clobber(x0, x1, x2, s0, s1, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem)

// b[3] | b[2]<<8 | b[1]<<16 | b[0]<<24 => load 32-bit Big endian order on Little endian arch
// Use byte-reverse indexed load for 4 bytes
with computed address.
// Could be used to match subrules of a longer rule.
(OR <t> x0:(MOVBZload [i3] {s} p mem)
o0:(OR <t> s0:(SL(W|D)const x1:(MOVBZload [i2] {s} p mem) [8])
s1:(SL(W|D)const x2:(MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem) [16])))
&& !config.BigEndian
&& i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& o0.Uses == 1
&& s0.Uses == 1 && s1.Uses == 1
&& mergePoint(b, x0, x1, x2) != nil
&& clobber(x0, x1, x2, s0, s1, o0)
=> @mergePoint(b,x0,x1,x2) (MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem)

// b[0]<<56 | b[1]<<48 | b[2]<<40 | b[3]<<32 => load 32-bit Big endian order on Little endian arch
// Use byte-reverse indexed load to for 4 bytes with computed address.
// Used to match longer rules.
(OR <t> s2:(SLDconst x2:(MOVBZload [i3] {s} p mem) [32])
o0:(OR <t> s1:(SLDconst x1:(MOVBZload [i2] {s} p mem) [40])
s0:(SLDconst x0:(MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem) [48])))
&& !config.BigEndian
&&
i2 == i0+2
&& i3 == i0+3
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& o0.Uses == 1

```

```

&& s0.Uses == 1 && s1.Uses == 1 && s2.Uses == 1
&& mergePoint(b, x0, x1, x2) != nil
&& clobber(x0, x1, x2, s0, s1, s2, o0)
=> @mergePoint(b,x0,x1,x2) (SLDconst <t> (MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p) mem)
[32])

```

```

// b[3]<<32 | b[2]<<40 | b[1]<<48 | b[0]<<56 => load 32-bit Big endian order on Little endian arch
// Use byte-reverse indexed load for 4 bytes with constant address.
// Used to match longer rules.

```

```

(OR <t> s2:(SLDconst x2:(MOVBZload [i0] {s} p mem) [56])
o0:(OR <t> s1:(SLDconst x1:(MOVBZload [i1] {s} p mem) [48])
s0:(SLDconst x0:(MOVHBRload <t> (MOVDaddr <typ.Uintptr> [i2] {s} p) mem) [32])))
&& !config.BigEndian
&& i1 == i0+1
&& i2 == i0+2
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& o0.Uses == 1
&& s0.Uses == 1 && s1.Uses == 1 && s2.Uses == 1
&& mergePoint(b, x0, x1, x2) != nil

```

```

&& clobber(x0, x1, x2, s0, s1, s2, o0)
=> @mergePoint(b,x0,x1,x2) (SLDconst <t> (MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p)
mem) [32])

```

```

// b[0] | b[1]<<8 | b[2]<<16 | b[3]<<24 | b[4] <<32 | b[5]<<40 | b[6]<<48 | b[7]<<56 => load 64-bit Little endian
// Rules with commutative ops and many operands will result in extremely large functions in rewritePPC64,
// so matching shorter previously defined subrules is important.

```

```

// Offset must be multiple of 4 for MOVD
(OR <t> s6:(SLDconst x7:(MOVBZload [i7] {s} p mem) [56])
o5:(OR <t> s5:(SLDconst x6:(MOVBZload [i6] {s} p mem) [48])
o4:(OR <t> s4:(SLDconst x5:(MOVBZload [i5] {s} p mem) [40])
o3:(OR <t> s3:(SLDconst x4:(MOVBZload [i4] {s} p mem) [32])
x0:(MOVWZload {s} [i0] p mem))))))
&& !config.BigEndian
&& i4 == i0+4
&& i5 == i0+5
&& i6 == i0+6
&& i7 == i0+7
&& x0.Uses == 1 && x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& o3.Uses == 1 && o4.Uses == 1 && o5.Uses == 1
&& s3.Uses == 1 && s4.Uses
== 1 && s5.Uses == 1 && s6.Uses == 1
&& mergePoint(b, x0, x4, x5, x6, x7) != nil
&& clobber(x0, x4, x5, x6, x7, s3, s4, s5, s6, o3, o4, o5)
=> @mergePoint(b,x0,x4,x5,x6,x7) (MOVDload <t> {s} [i0] p mem)

```

```

// b[7] | b[6]<<8 | b[5]<<16 | b[4]<<24 | b[3]<<32 | b[2]<<40 | b[1]<<48 | b[0]<<56 load 64-bit Big endian ordered
bytes on Little endian arch

```

```

// Use byte-reverse indexed load of 8 bytes.
// Rules with commutative ops and many operands can result in extremely large functions in rewritePPC64,
// so matching shorter previously defined subrules is important.
(OR <t> s0:(SLDconst x0:(MOVBZload [i0] {s} p mem) [56])
o0:(OR <t> s1:(SLDconst x1:(MOVBZload [i1] {s} p mem) [48])
o1:(OR <t> s2:(SLDconst x2:(MOVBZload [i2] {s} p mem) [40])
o2:(OR <t> s3:(SLDconst x3:(MOVBZload [i3] {s} p mem) [32])
x4:(MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i4] p mem))))))
&& !config.BigEndian
&& i1 == i0+1
&& i2 == i0+2
&& i3 == i0+3
&& i4 == i0+4
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 &&
x3.Uses == 1 && x4.Uses == 1
&& o0.Uses == 1 && o1.Uses == 1 && o2.Uses == 1
&& s0.Uses == 1 && s1.Uses == 1 && s2.Uses == 1 && s3.Uses == 1
&& mergePoint(b, x0, x1, x2, x3, x4) != nil
&& clobber(x0, x1, x2, x3, x4, o0, o1, o2, s0, s1, s2, s3)
=> @mergePoint(b,x0,x1,x2,x3,x4) (MOVDBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem)

// b[0]<<56 | b[1]<<48 | b[2]<<40 | b[3]<<32 | b[4]<<24 | b[5]<<16 | b[6]<<8 | b[7] => load 64-bit Big endian
ordered bytes on Little endian arch
// Use byte-reverse indexed load of 8 bytes.
// Rules with commutative ops and many operands can result in extremely large functions in rewritePPC64,
// so matching shorter previously defined subrules is important.
(OR <t> x7:(MOVBZload [i7] {s} p mem)
o5:(OR <t> s6:(SLDconst x6:(MOVBZload [i6] {s} p mem) [8])
o4:(OR <t> s5:(SLDconst x5:(MOVBZload [i5] {s} p mem) [16])
o3:(OR <t> s4:(SLDconst x4:(MOVBZload [i4] {s} p mem) [24])
s0:(SL(W|D)const x3:(MOVWBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem)
[32]))))))
&& !config.BigEndian
&& i4 == i0+4
&& i5 == i0+5
&& i6 == i0+6
&& i7 == i0+7
&& x3.Uses == 1 && x4.Uses == 1 && x5.Uses == 1 && x6.Uses == 1 && x7.Uses == 1
&& o3.Uses == 1 && o4.Uses == 1 && o5.Uses == 1
&& s0.Uses == 1 && s4.Uses == 1 && s5.Uses == 1 && s6.Uses == 1
&& mergePoint(b, x3, x4, x5, x6, x7) != nil
&& clobber(x3, x4, x5, x6, x7, o3, o4, o5, s0, s4, s5, s6)
=> @mergePoint(b,x3,x4,x5,x6,x7) (MOVDBRload <t> (MOVDaddr <typ.Uintptr> [i0] {s} p mem)

// 2 byte store Little endian as in:
//   b[0] = byte(v >> 16)
//   b[1] = byte(v >> 24)
// Added for use in matching longer rules.

```

```
(MOVBstore [i1] {s} p (SR(W|D)const w [24])
  x0:(MOVBstore [i0] {s} p (SR(W|D)const w [16]) mem))
  && !config.BigEndian
  && x0.Uses == 1
  && i1 == i0+1
  && clobber(x0)
  => (MOVHstore [i0] {s} p (SRWconst <typ.UInt16> w [16]) mem)
```

```
// 2 byte store Little endian as in:
```

```
//  b[0] = byte(v)
//  b[1] = byte(v >> 8)
(MOVBstore [i1]
 {s} p (SR(W|D)const w [8])
 x0:(MOVBstore [i0] {s} p w mem))
&& !config.BigEndian
&& x0.Uses == 1
&& i1 == i0+1
&& clobber(x0)
=> (MOVHstore [i0] {s} p w mem)
```

```
// 4 byte store Little endian as in:
```

```
//  b[0:1] = uint16(v)
//  b[2:3] = uint16(v >> 16)
(MOVHstore [i1] {s} p (SR(W|D)const w [16])
 x0:(MOVHstore [i0] {s} p w mem))
&& !config.BigEndian
&& x0.Uses == 1
&& i1 == i0+2
&& clobber(x0)
=> (MOVWstore [i0] {s} p w mem)
```

```
// 4 byte store Big endian as in:
```

```
//  b[0] = byte(v >> 24)
//  b[1] = byte(v >> 16)
//  b[2] = byte(v >> 8)
//  b[3] = byte(v)
// Use byte-reverse indexed 4 byte store.
(MOVBstore [i3] {s} p w
 x0:(MOVBstore [i2] {s} p (SRWconst w [8])
 x1:(MOVBstore [i1] {s} p (SRWconst w [16])
 x2:(MOVBstore [i0] {s} p (SRWconst w [24]) mem))))
&& !config.BigEndian
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1
&& i1 == i0+1 && i2 == i0+2 && i3 == i0+3
&& clobber(x0, x1, x2)
=> (MOVWBRstore (MOVDaddr <typ.Uintptr> [i0] {s} p) w mem)
```

```
// The
```

```

2 byte store appears after the 4 byte store so that the
// match for the 2 byte store is not done first.
// If the 4 byte store is based on the 2 byte store then there are
// variations on the MOVDaddr subrule that would require additional
// rules to be written.

// 2 byte store Big endian as in:
//   b[0] = byte(v >> 8)
//   b[1] = byte(v)
(MOVBstore [i1] {s} p w x0:(MOVBstore [i0] {s} p (SRWconst w [8]) mem))
&& !config.BigEndian
&& x0.Uses == 1
&& i1 == i0+1
&& clobber(x0)
=> (MOVHBRstore (MOVDaddr <typ.Uintptr> [i0] {s} p) w mem)

// 8 byte store Little endian as in:
// b[0] = byte(v)
// b[1] = byte(v >> 8)
// b[2] = byte(v >> 16)
// b[3] = byte(v >> 24)
// b[4] = byte(v >> 32)
// b[5] = byte(v >> 40)
// b[6] = byte(v >> 48)
// b[7] = byte(v >> 56)
// Built on previously defined rules
// Offset must be multiple of 4 for MOVDstore
(MOVBstore [i7] {s} p (SRDconst w [56])
x0:(MOVBstore [i6] {s} p (SRDconst w [48])
x1:(MOVBstore [i5] {s} p (SRDconst w [40])
x2:(MOVBstore
[i4] {s} p (SRDconst w [32])
x3:(MOVWstore [i0] {s} p w mem))))))
&& !config.BigEndian
&& x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1
&& i4 == i0+4 && i5 == i0+5 && i6 == i0+6 && i7 == i0+7
&& clobber(x0, x1, x2, x3)
=> (MOVDstore [i0] {s} p w mem)

// 8 byte store Big endian as in:
//   b[0] = byte(v >> 56)
//   b[1] = byte(v >> 48)
//   b[2] = byte(v >> 40)
//   b[3] = byte(v >> 32)
//   b[4] = byte(v >> 24)
//   b[5] = byte(v >> 16)
//   b[6] = byte(v >> 8)
//   b[7] = byte(v)

```

```

// Use byte-reverse indexed 8 byte store.
(MOVBstore [i7] {s} p w
  x0:(MOVBstore [i6] {s} p (SRDconst w [8])
  x1:(MOVBstore [i5] {s} p (SRDconst w [16])
  x2:(MOVBstore [i4] {s} p (SRDconst w [24])
  x3:(MOVBstore [i3] {s} p (SRDconst w [32])
  x4:(MOVBstore [i2] {s} p (SRDconst w [40])
  x5:(MOVBstore [i1] {s} p (SRDconst w [48])
  x6:(MOVBstore [i0] {s} p (SRDconst w [56] mem))))))
  && !config.BigEndian
  && x0.Uses == 1 && x1.Uses == 1 && x2.Uses == 1 && x3.Uses == 1 && x4.Uses == 1 && x5.Uses == 1
&& x6.Uses == 1
  && i1 == i0+1 && i2 == i0+2 && i3 == i0+3 && i4 == i0+4 && i5 == i0+5 && i6 == i0+6 && i7 == i0+7
  && clobber(x0, x1, x2, x3, x4, x5, x6)
  => (MOVDstore (MOVDaddr <typ.Uintptr> [i0] {s} p) w mem)

// Arch-specific inlining for small or disjoint runtime.memmove
(SelectN [0] call:(CALLstatic {sym} s1:(MOVDstore _ (MOVDconst [sz]) s2:(MOVDstore _ src s3:(MOVDstore
{t} _ dst mem))))
  && sz >= 0
  && isSameCall(sym, "runtime.memmove")
  && s1.Uses == 1 && s2.Uses == 1 && s3.Uses == 1
  && isInlinableMemmove(dst, src, sz, config)
  && clobber(s1, s2, s3, call)
  => (Move [sz] dst src mem)

// Match post-lowering calls, register version.
(SelectN [0] call:(CALLstatic {sym} dst src (MOVDconst [sz] mem))
  && sz >= 0
  && isSameCall(sym, "runtime.memmove")
  && call.Uses == 1
  && isInlinableMemmove(dst,
src, sz, config)
  && clobber(call)
  => (Move [sz] dst src mem)

// Prefetch instructions (TH specified using aux field)
// For DCBT Ra,Rb,TH, A value of TH indicates:
// 0, hint this cache line will be used soon. (PrefetchCache)
// 16, hint this cache line will not be used for long. (PrefetchCacheStreamed)
// See ISA 3.0 Book II 4.3.2 for more detail. https://openpower.foundation/specifications/isa/
(PrefetchCache ptr mem) => (DCBT ptr mem [0])
(PrefetchCacheStreamed ptr mem) => (DCBT ptr mem [16])

```

Found in path(s):

\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/PPC64.rules

No license file was found, but licenses were detected in source scan.

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Found in path(s):

- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/main0.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue40056.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue40301.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/test/testdata/reproducible/issue38068.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue39768.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/bench\_test.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue46090.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/syntax/testing.go
- \*
- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/syntax/testdata/tparams.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types/type\_test.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/builtins1.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue39699.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue42758.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/positions.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue39664.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue39982.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/visit.go
- \*
- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue43190.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue42695.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/abi/abiutils.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/flags\_arm64\_test.s
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/staticdata/embed.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/rewriteCond\_test.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/devirtualize/devirtualize.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/flags\_test.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixdbugs/issue39693.go
- \*
- /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/mknode.go
- \* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-



zip/compile/internal/types2/testdata/fixbugs/issue40684.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/funcinference.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue40038.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/func.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/copy.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/base/print.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue39755.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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zip/compile/internal/types2/testdata/fixbugs/issue39938.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/errors\_test.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
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\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue39680.go  
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zip/compile/internal/ssa/addressingmodes.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/stmt.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ssa/expand\_calls.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue40057.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/check/typeparams.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/mini.go  
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zip/compile/internal/types2/testdata/fixbugs/issue20583.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue39754.go  
\*  
/opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/types2/testdata/fixbugs/issue41124.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/ir/package.go  
\* /opt/cola/permits/1662035280\_1692956359.5733373/0/compile-  
zip/compile/internal/test/bench\_test.go

```

* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixbugs/issue39723.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixbugs/issue39634.go
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zip/compile/internal/types2/testdata/fixbugs/issue39725.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/tuple.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
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* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/testing_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/abiutilsaux_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/unify.go
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```

```

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-->

```

## ## Introduction to the Go compiler

``cmd/compile`` contains the main packages that form the Go compiler. The compiler may be logically split in four phases, which we will briefly describe alongside the list of packages that contain their code.

You may sometimes hear the terms "front-end" and "back-end" when referring to the compiler. Roughly speaking, these translate to the first two and last two phases we are going to list here. A third term, "middle-end", often refers to much of the work that happens in the second phase.

Note that the ``go/*`` family of packages, such as ``go/parser`` and ``go/types``, are mostly unused by the compiler. Since the compiler was initially written in C, the ``go/*`` packages were developed to enable writing tools working with

Go code, such as ``gofmt`` and ``vet``.

However, over time the compiler's internal APIs have slowly evolved to be more familiar to users of the ``go/*`` packages.

It should be clarified that the name "gc" stands for "Go compiler", and has little to do with uppercase "GC", which stands for garbage collection.

### ### 1. Parsing

\* ``cmd/compile/internal/syntax`` (lexer, parser, syntax tree)

In the first phase of compilation, source code is tokenized (lexical analysis), parsed (syntax analysis), and a syntax tree is constructed for each source file.

Each syntax tree is an exact representation of the respective source file, with nodes corresponding to the various elements of the source such as expressions, declarations, and statements. The syntax tree also includes position information which is used for error reporting and the creation of debugging information.

### ### 2. Type checking

\* ``cmd/compile/internal/types2`` (type checking)

The `types2` package is a port of ``go/types`` to use the `syntax` package's AST instead of ``go/ast``.

### ### 3. IR construction ("noding")

\* ``cmd/compile/internal/types`` (compiler types)  
\* ``cmd/compile/internal/ir`` (compiler AST)  
\* ``cmd/compile/internal/typecheck`` (AST transformations)  
\* ``cmd/compile/internal/noder`` (create compiler AST)

The compiler middle end uses its own AST definition and representation of Go types carried over from when it was written in C. All of its code is written in terms of these, so the next step after type checking is to convert the `syntax` and `types2` representations to `ir` and `types`. This process is referred to as "noding."

There are currently two noding implementations:

1. `irgen` (aka `"-G=3"` or sometimes `"noder2"`) is the implementation used starting with Go 1.18, and
2. Unified IR is another, in-development implementation (enabled with ``GOEXPERIMENT=unified``), which also implements `import/export` and `inlining`.

Up through Go 1.18, there was a third noding implementation (just `"noder"` or `"-G=0"`), which directly converted

the pre-type-checked syntax representation into IR and then invoked package typecheck's type checker. This implementation was removed after Go 1.18, so now package typecheck is only used for IR transformations.

#### ### 4. Middle end

- \* ``cmd/compile/internal/deadcode`` (dead code elimination)
- \* ``cmd/compile/internal/inline`` (function call inlining)
- \* ``cmd/compile/internal/devirtualize`` (devirtualization of known interface method calls)
- \* ``cmd/compile/internal/escape`` (escape analysis)

Several optimization passes are performed on the IR representation: dead code elimination, (early) devirtualization, function call inlining, and escape analysis.

#### ### 5. Walk

- \* ``cmd/compile/internal/walk`` (order of evaluation, desugaring)

The final pass over the IR representation is "walk," which serves two purposes:

1. It decomposes complex statements into individual, simpler statements, introducing temporary variables and respecting order of evaluation. This step is also referred to as "order."
2. It desugars higher-level Go constructs into more primitive ones. For example, ``switch`` statements are turned into binary search or jump tables, and operations on maps and channels are replaced with runtime calls.

#### ### 6. Generic SSA

- \* ``cmd/compile/internal/ssa`` (SSA passes and rules)
- \* ``cmd/compile/internal/ssagen`` (converting IR to SSA)

In this phase, IR is converted into Static Single Assignment (SSA) form, a lower-level intermediate representation with specific properties that make it easier to implement optimizations and to eventually generate machine code from it.

During this conversion, function intrinsics are applied. These are special functions that the compiler has been taught to replace with heavily optimized code on a case-by-case basis.

Certain nodes are also lowered into simpler components during the AST to SSA conversion, so that the rest of the compiler can work with them. For instance, the copy builtin is replaced by memory moves, and range loops are rewritten

into  
for loops. Some of these currently happen before the conversion to SSA due to historical reasons, but the long-term plan is to move all of them here.

Then, a series of machine-independent passes and rules are applied. These do not concern any single computer architecture, and thus run on all `GOARCH` variants. These passes include dead code elimination, removal of unneeded nil checks, and removal of unused branches. The generic rewrite rules mainly concern expressions, such as replacing some expressions with constant values, and optimizing multiplications and float operations.

### ### 7. Generating machine code

- \* `cmd/compile/internal/ssa` (SSA lowering and arch-specific passes)
- \* `cmd/internal/obj` (machine code generation)

The machine-dependent phase of the compiler begins with the "lower" pass, which rewrites generic values into their machine-specific variants. For example, on amd64 memory operands are possible, so many load-store operations may be combined.

Note that the lower pass runs all machine-specific rewrite rules, and thus it currently applies lots of optimizations too.

Once the SSA has been "lowered" and is more specific to the target architecture, the final code optimization passes are run. This includes yet another dead code elimination pass, moving values closer to their uses, the removal of local variables that are never read from, and register allocation.

Other important pieces of work done as part of this step include stack frame layout, which assigns stack offsets to local variables, and pointer liveness analysis, which computes which on-stack pointers are live at each GC safe point.

At the end of the SSA generation phase, Go functions have been transformed into a series of obj.Prog instructions. These are passed to the assembler (`cmd/internal/obj`), which turns them into machine code and writes out the final object file. The object file will also contain reflect data, export data, and debugging information.

### ### Further reading

To dig deeper into how the SSA package works, including its passes and rules, head to [\[cmd/compile/internal/ssa/README.md\]\(internal/ssa/README.md\)](#).

Found in path(s):

- \* `/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/README.md`

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Found in path(s):

```
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/solve.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/numberlines.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/testdata/slice_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixdbugs/issue23203b.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/stmt.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/base/mapfile_mmap.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/testdata/sample.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/call.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/poset.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/base/mapfile_read.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/importer/testdata/issue25596.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/importer/testdata/issue25301.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/syntax/testdata/issue23434.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/escape.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/graph.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/issue25008/issue25008b.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/infer.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixdbugs/issue28251.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/assign.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types/identity.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/zeroextension_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/test/lang_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/syntax/testdata/issue31092.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/syntax/testdata/issue23385.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/check/issue25008/issue25008a.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/types2/subst.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/iimport.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ir/dump.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixdbugs/issue26390.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
```

```
zip/compile/internal/test/testdata/reproducible/issue27013.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/syntax/testdata/issue20789.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/expr.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/utils.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/pos.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/typecheck/iexport.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/syntax/error_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/wasm/ssa.go
*
/opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/biasedsparsemap.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/importer/iimport.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/gen/WasmOps.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/poset_test.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/ssa/loopbce.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/escape/leaks.go
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/fixdbugs/issue23203a.go
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```

```
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```

```
Found in path(s):
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-zip/compile/internal/objw/prog.go
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```

```
// Copyright 2019 The Go Authors. All rights reserved.
// are free to use their own name for that type parameter. That is, the
```

```
Found in path(s):
* /opt/cola/permits/1662035280_1692956359.5733373/0/compile-
zip/compile/internal/types2/testdata/examples/methods.go
```

## 1.484 cmd/doc (devel)

### 1.484.1 Available under license :

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```
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```

Found in path(s):

- \* /opt/cola/permits/1662035323\_1692956368.3274302/0/doc-zip/doc/main.go
- \* /opt/cola/permits/1662035323\_1692956368.3274302/0/doc-zip/doc/testdata/pkg.go
- \* /opt/cola/permits/1662035323\_1692956368.3274302/0/doc-zip/doc/dirs.go
- \* /opt/cola/permits/1662035323\_1692956368.3274302/0/doc-zip/doc/doc\_test.go
- \* /opt/cola/permits/1662035323\_1692956368.3274302/0/doc-zip/doc/pkg.go

## 1.485 cmd/objdump (devel)

### 1.485.1 Available under license :

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Found in path(s):

- \* /opt/cola/permits/1662035335\_1692956451.497634/0/objdump-1-zip/objdump/objdump\_test.go

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Found in path(s):

- \* /opt/cola/permits/1662035335\_1692956451.497634/0/objdump-1-zip/objdump/testdata/testfilenum/b.go
- \* /opt/cola/permits/1662035335\_1692956451.497634/0/objdump-1-zip/objdump/testdata/testfilenum/a.go
- \* /opt/cola/permits/1662035335\_1692956451.497634/0/objdump-1-zip/objdump/testdata/testfilenum/c.go

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Found in path(s):

- \* /opt/cola/permits/1662035335\_1692956451.497634/0/objdump-1-zip/objdump/main.go

## 1.486 cmd/link (devel)

### 1.486.1 Available under license :

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Found in path(s):

- \* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loadpe/ldpe.go

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Found in path(s):

- \* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/go\_test.go



```
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-
zip/link/internal/ld/testdata/deadcode/ifacemethod3.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/benchmark/bench.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/heap.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/outbuf_linux.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-
zip/link/internal/ld/testdata/issue39757/issue39757main.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/testdata/testIndexMismatch/b.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/testdata/deadcode/reflectcall.go
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/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/outbuf_nofallocate.go
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/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/testdata/testHashedSyms/p.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/outbuf_test.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/testdata/deadcode/ifacemethod.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/asmb.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/testdata/testRO/x.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue39256/x.s
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/benchmark/bench_test.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/errors.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue39256/x.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/deadcode_test.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-
zip/link/internal/ld/testdata/deadcode/ifacemethod2.go
*
/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/testdata/testIndexMismatch/a.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/target.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/outbuf_notdarwin.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue38192/main.go
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```

```
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```

```
Found in path(s):
```

```
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/dwtest/dwtest.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/cgo_test.go
```

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```
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/x86/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/s390x/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/link.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/symtab.go
*
/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/sym/symkind.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ppc64/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/mips64/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/s390x/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/s390x/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/mips64/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/amd64/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm64/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ppc64/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/amd64/l.go
*
/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/lib.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/x86/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/sym.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/ar.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/main.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/x86/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/amd64/obj.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm64/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/arm64/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/ld.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/sym/segment.go
*
/opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ppc64/l.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/mips64/asm.go
* /opt/cola/permits/1662035274_1692956391.9396112/0/link-zip/link/internal/ld/data.go
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Found in path(s):

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\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/mips/asm.go  
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Found in path(s):

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/stackcheck/main.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/stackcheck.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/stackcheck\_test.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/stackcheck/main.s  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loong64/obj.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loong64/l.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loong64/asm.go  
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Found in path(s):

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/pe.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/go.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/macho.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/doc.go  
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\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/sym/library.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/dwarf\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/sym/symbol.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/nooptcgolink\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/dwarf\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/outbuf.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/sym/reloc.go

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\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/deadcode.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/riscv64/l.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue32233/lib/ObjC.m

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/execarchive\_noexec.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue32233/lib/lib.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/elf\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/issue33808\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loader/loader\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/elf\_test.go

\*

/opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue32233/main/main.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/riscv64/obj.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/sym/compilation\_unit.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/dwarf.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/outbuf\_windows.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/riscv64/asm.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loader/loader.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/execarchive.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/outbuf\_mmap.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/outbuf\_nommap.go

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// version.

Found in path(s):

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loader/symbolbuilder.go

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\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/loadxcoff/ldxcoff.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/wasm/asm.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/testdata/issue10978/main.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/ld\_test.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/wasm/obj.go  
\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/xcoff.go

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\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/config.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/link\_test.go

\* /opt/cola/permits/1662035274\_1692956391.9396112/0/link-zip/link/internal/ld/typelink.go

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\* \$FreeBSD: src/sys/sys/elf32.h,v 1.8.14.1 2005/12/30 22:13:58 marcel Exp \$

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### 1.487.1 Available under license :

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\* /opt/cola/permits/1662035331\_1692956456.474398/0/pack-zip/pack/doc.go  
\* /opt/cola/permits/1662035331\_1692956456.474398/0/pack-zip/pack/pack\_test.go  
\* /opt/cola/permits/1662035331\_1692956456.474398/0/pack-zip/pack/pack.go

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\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/atomic/atomic.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/deadcode/deadcode.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/assign/assign.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/vet\_test.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/nilfunc/nilfunc.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/asm/asm1.s  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag2.go

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\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag4.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag5.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag3.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag7.s



\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/buildtag/buildtag6.s

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Found in path(s):

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/shift/shift.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/bool/bool.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/unsafepr/unsafepr.go

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Found in path(s):

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/structtag/structtag.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/asm/asm.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/print/print.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/method/method.go

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\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/testingpkg/tests.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/testingpkg/tests\_test.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/unmarshal/unmarshal.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/httpresponse/httpresponse.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/copylock/copylock.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/doc.go

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\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/rangeloop/rangeloop.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/main.go

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/composite/composite.go

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Found in path(s):

\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/cgo/cgo.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/tagtest/file1.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/tagtest/file2.go  
\* /opt/cola/permits/1662035283\_1692956488.1126251/0/vet-zip/vet/testdata/unused/unused.go

# 1.489 libncurses 6.2+20201114-2+deb11u1

## 1.489.1 Available under license :

Upstream source <https://invisible-island.net/ncurses/ncurses.html>

This package is used for testing builds of ncurses.

Current ncurses maintainer: Thomas Dickey <[dickey@invisible-island.net](mailto:dickey@invisible-island.net)>

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Files: doc/html/NCURSES-Programming-HOWTO.html

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Format: <https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: ncurses

Upstream-Contact: bug-ncurses@gnu.org

Thomas Dickey <dickey@his.com>

Source: <https://invisible-mirror.net/archives/ncurses/>

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## 1.490 libc-dev 2.31-13+deb11u6

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## 1.495 libaudit 3.0-2

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## 1.499 redis 8.11.4

### 1.499.1 Available under license :

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## 1.500 go-rendezvous 0.0.0-20200823014737-9f7001d12a5f

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## 1.501 zlib1g 1.2.11.dfsg-2+deb11u2

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Frequently Asked Questions about zlib

If your question is not there, please check the zlib home page

<http://zlib.net/> which may have more recent information.

The latest zlib FAQ is at [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html)

1. Is zlib Y2K-compliant?

Yes. zlib doesn't handle dates.

2. Where can I get a Windows DLL version?

The zlib sources can be compiled without change to produce a DLL. See the file win32/DLL\_FAQ.txt in the zlib distribution. Pointers to the precompiled DLL are found in the zlib web site at <http://zlib.net/>.

3. Where can I get a Visual Basic interface to zlib?

See

\* <http://marknelson.us/1997/01/01/zlib-engine/>

\* win32/DLL\_FAQ.txt in the zlib distribution

4. compress() returns Z\_BUF\_ERROR.

Make sure that before the call of compress(), the length of the compressed buffer is equal to the available size of the compressed buffer and not zero. For Visual Basic, check that this parameter is passed by reference ("as any"), not by value ("as long").

5. deflate() or inflate() returns Z\_BUF\_ERROR.

Before making the call, make sure that avail\_in and avail\_out are not zero. When setting the parameter flush equal to Z\_FINISH, also make sure that avail\_out is big enough to allow processing all pending input. Note that a Z\_BUF\_ERROR is not fatal--another call to deflate() or inflate() can be made with more input or output space. A Z\_BUF\_ERROR may in fact be unavoidable depending on how the functions are used, since it is not possible to tell whether or not there is more output pending when strm.avail\_out returns with zero. See [http://zlib.net/zlib\\_how.html](http://zlib.net/zlib_how.html) for a heavily annotated example.

6. Where's the zlib documentation (man pages, etc.)?

It's in zlib.h . Examples of zlib usage are in the files test/example.c and test/minigzip.c, with more in examples/ .

7. Why don't you use GNU autoconf or libtool or ...?

Because we would like to keep zlib as a very small and simple package. zlib is rather portable and doesn't need much configuration.

8. I found a bug in zlib.

Most of the time, such problems are due to an incorrect usage of zlib. Please try to reproduce the problem with a small program and send the corresponding source to us at [zlib@gzip.org](mailto:zlib@gzip.org) . Do not send multi-megabyte data files without prior agreement.

9. Why do I get "undefined reference to gzputc"?

If "make test" produces something like

```
example.o(.text+0x154): undefined reference to `gzputc'
```

check that you don't have old files libz.\* in /usr/lib, /usr/local/lib or /usr/X11R6/lib. Remove any old versions, then do "make install".

10. I need a Delphi interface to zlib.

See the contrib/delphi directory in the zlib distribution.

11. Can zlib handle .zip archives?

Not by itself, no. See the directory contrib/minizip in the zlib distribution.

12.

Can zlib handle .Z files?

No, sorry. You have to spawn an uncompress or gunzip subprocess, or adapt the code of uncompress on your own.

13. How can I make a Unix shared library?

By default a shared (and a static) library is built for Unix. So:

```
make distclean
./configure
make
```

14. How do I install a shared zlib library on Unix?

After the above, then:

```
make install
```

However, many flavors of Unix come with a shared zlib already installed. Before going to the trouble of compiling a shared version of zlib and trying to install it, you may want to check if it's already there! If you can `#include <zlib.h>`, it's there. The `-lz` option will probably link to it. You can check the version at the top of `zlib.h` or with the `ZLIB_VERSION` symbol defined in `zlib.h`.

15. I have a question about OttoPDF.

We are not the authors of OttoPDF. The real author is on the OttoPDF web site: Joel Hainley, [jhainley@myndkryme.com](mailto:jhainley@myndkryme.com).

16.

Can zlib decode Flate data in an Adobe PDF file?

Yes. See <http://www.pdflib.com/>. To modify PDF forms, see <http://sourceforge.net/projects/acroformtool/>.

17. Why am I getting this "register\_frame\_info not found" error on Solaris?

After installing zlib 1.1.4 on Solaris 2.6, running applications using zlib generates an error such as:

```
ld.so.1: rpm: fatal: relocation error: file /usr/local/lib/libz.so:  
symbol __register_frame_info: referenced symbol not found
```

The symbol `__register_frame_info` is not part of zlib, it is generated by the C compiler (cc or gcc). You must recompile applications using zlib which have this problem. This problem is specific to Solaris. See <http://www.sunfreeware.com> for Solaris versions of zlib and applications using zlib.

18. Why does gzip give an error on a file I make with compress/deflate?

The compress and deflate functions produce data in the zlib format, which is different and incompatible with the gzip format. The `gz*` functions in zlib on the other hand use the gzip format. Both the zlib and gzip formats use the same compressed data format internally, but have different headers and trailers around the compressed data.

19. Ok, so why are there two different formats?

The gzip format was designed to retain the directory information about a single file, such as the name and last modification date. The zlib format on the other hand was designed for in-memory and communication channel applications, and has a much more compact header and trailer and uses a faster integrity check than gzip.

20. Well that's nice, but how do I make a gzip file in memory?

You can request that deflate write the gzip format instead of the zlib format using `deflateInit2()`. You can also request that inflate decode the gzip format using `inflateInit2()`. Read `zlib.h` for more details.

21. Is zlib thread-safe?

Yes. However any library routines that zlib uses and any application-provided memory allocation routines must also be thread-safe. zlib's `gz*` functions use stdio library routines, and most of zlib's functions use the library memory allocation routines by default. zlib's `*Init*` functions allow for the application to provide custom memory allocation routines.

Of course, you should only operate on any given zlib or gzip stream from a single thread at a time.

22. Can I use zlib in my commercial application?

Yes. Please read the license in `zlib.h`.

23. Is zlib under the GNU license?

No. Please read the license in `zlib.h`.

24. The license says that altered source versions must be "plainly marked". So what exactly do I need to do to meet that requirement?

You need to change the `ZLIB_VERSION` and `ZLIB_VERNUM` #defines in `zlib.h`. In particular, the final version number needs to be changed to "f", and an identification string should be appended to `ZLIB_VERSION`. Version numbers `x.x.x.f` are reserved for modifications to zlib by others than the zlib maintainers. For example, if the version of the base zlib you are altering is "1.2.3.4", then in `zlib.h` you should change `ZLIB_VERNUM` to `0x123f`, and `ZLIB_VERSION` to something like "1.2.3.f-zachary-mods-v3". You can also update the version strings in `deflate.c` and `inftrees.c`.

For altered source distributions, you should also note the origin and nature of the changes in `zlib.h`, as well as in `ChangeLog` and `README`, along with the dates of the alterations. The origin should include at least your name (or your company's name), and an email address to contact for help or issues with the library.

Note that distributing a compiled zlib library along with `zlib.h` and `zconf.h` is also a source distribution, and so you should change `ZLIB_VERSION` and `ZLIB_VERNUM` and note the origin and nature of the changes in `zlib.h` as you would for a full source distribution.

25.

Will zlib work on a big-endian or little-endian architecture, and can I exchange compressed data between them?

Yes and yes.

26. Will zlib work on a 64-bit machine?

Yes. It has been tested on 64-bit machines, and has no dependence on any data types being limited to 32-bits in length. If you have any difficulties, please provide a complete problem report to [zlib@gzip.org](mailto:zlib@gzip.org)

27. Will zlib decompress data from the PKWare Data Compression Library?

No. The PKWare DCL uses a completely different compressed data format than does PKZIP and zlib. However, you can look in zlib's `contrib/blast`

directory for a possible solution to your problem.

28. Can I access data randomly in a compressed stream?

No, not without some preparation. If when compressing you periodically use `Z_FULL_FLUSH`, carefully write all the pending data at those points, and keep an index of those locations, then you can start decompression at those points. You have to be careful to not use `Z_FULL_FLUSH` too often, since it can significantly degrade compression. Alternatively, you can scan a deflate stream once to generate an index, and then use that index for random access. See `examples/zran.c`.

29. Does zlib work on MVS, OS/390, CICS, etc.?

It has in the past, but we have not heard of any recent evidence. There were working ports of zlib 1.1.4 to MVS, but those links no longer work. If you know of recent, successful applications of zlib on these operating systems, please let us know. Thanks.

30. Is there some simpler, easier to read version of inflate I can look at to understand the deflate format?

First off, you should read RFC 1951. Second, yes. Look in zlib's `contrib/puff` directory.

31. Does zlib infringe on any patents?

As far as we know, no. In fact, that was originally the whole point behind zlib. Look here for some more information:

<http://www.gzip.org/#faq11>

32. Can zlib work with greater than 4 GB of data?

Yes. `inflate()` and `deflate()` will process any amount of data correctly. Each call of `inflate()` or `deflate()` is limited to input and output chunks of the maximum value that can be stored in the compiler's "unsigned int" type, but there is no limit to the number of chunks. Note however that the `strm.total_in` and `strm_total_out` counters may be limited to 4 GB. These counters are provided as a convenience and are not used internally by `inflate()` or `deflate()`. The application can easily set up its own counters updated after each call of `inflate()` or `deflate()` to count beyond 4 GB. `compress()` and `uncompress()` may be limited to 4 GB, since they operate in a single call. `gzseek()` and `gztell()` may be limited to 4 GB depending on how zlib is compiled. See the `zlibCompileFlags()` function in `zlib.h`.



The word "may" appears several times above since there is a 4 GB limit only if the compiler's "long" type is 32 bits. If the compiler's "long" type is 64 bits, then the limit is 16 exabytes.

33. Does zlib have any security vulnerabilities?

The only one that we are aware of is potentially in `gzprintf()`. If zlib is compiled to use `sprintf()` or `vsprintf()`, then there is no protection against a buffer overflow of an 8K string space (or other value as set by `gzbuffer()`), other than the caller of `gzprintf()` assuring that the output will not exceed 8K. On the other hand, if zlib is compiled to use `snprintf()` or `vsnprintf()`, which should normally be the case, then there is no vulnerability. The `./configure` script will display warnings if an insecure variation of `sprintf()` will be used by `gzprintf()`. Also the `zlibCompileFlags()` function will return information on what variant of `sprintf()` is used by `gzprintf()`.

If you don't have `snprintf()` or `vsnprintf()` and would like one, you can find a portable implementation here:

<http://www.ijs.si/software/snprintf/>

Note that you should be using the most recent version of zlib. Versions 1.1.3 and before were subject to a double-free vulnerability, and versions 1.2.1 and 1.2.2 were subject to an access exception when decompressing invalid compressed data.

34. Is there a Java version of zlib?

Probably what you want is to use zlib in Java. zlib is already included as part of the Java SDK in the `java.util.zip` package. If you really want a version of zlib written in the Java language, look on the zlib home page for links: <http://zlib.net/>.

35. I get this or that compiler or source-code scanner warning when I crank it up to maximally-pedantic. Can't you guys write proper code?

Many years ago, we gave up attempting to avoid warnings on every compiler in the universe. It just got to be a waste of time, and some compilers were downright silly as well as contradicted each other. So now, we simply make sure that the code always works.

36. Valgrind (or some similar memory access checker) says that deflate is performing a conditional jump that depends on an uninitialized value. Isn't that a bug?

No. That is intentional for performance reasons, and the output of deflate is not affected. This only started showing up recently since zlib 1.2.x uses malloc() by default for allocations, whereas earlier versions used calloc(), which zeros out the allocated memory. Even though the code was correct, versions 1.2.4 and later was changed to not stimulate these checkers.

37. Will zlib read the (insert any ancient or arcane format here) compressed data format?

Probably not. Look in the comp.compression FAQ for pointers to various formats and associated software.

38. How can I encrypt/decrypt zip files with zlib?

zlib doesn't support encryption. The original PKZIP encryption is very weak and can be broken with freely available programs. To get strong encryption, use GnuPG, <http://www.gnupg.org/>, which already includes zlib compression. For PKZIP compatible "encryption", look at <http://www.info-zip.org/>

39. What's the difference between the "gzip" and "deflate" HTTP 1.1 encodings?

"gzip" is the gzip format, and "deflate" is the zlib format. They should probably have called the second one "zlib" instead to avoid confusion with the raw deflate compressed data format. While the HTTP 1.1 RFC 2616 correctly points to the zlib specification in RFC 1950 for the "deflate" transfer encoding, there have been reports of servers and browsers that incorrectly produce or expect raw deflate data per the deflate specification in RFC 1951, most notably Microsoft. So even though the "deflate" transfer encoding using the zlib format would be the more efficient approach (and in fact exactly what the zlib format was designed for), using the "gzip" transfer encoding is probably more reliable due to an unfortunate choice of name on the part of the HTTP 1.1 authors.

Bottom line: use the gzip format for HTTP 1.1 encoding.

40. Does zlib support the new "Deflate64" format introduced by PKWare?

No. PKWare has apparently decided to keep that format proprietary, since they have not documented it as they have previous compression formats. In any case, the compression improvements are so modest compared to other more modern approaches, that it's not worth the effort to implement.

41. I'm having a problem with the zip functions in zlib, can you help?

There are no zip functions in zlib. You are probably using minizip by Giles Vollant, which is found in the contrib directory of zlib. It is not part of zlib. In fact none of the stuff in contrib is part of zlib. The files in there are not supported by the zlib authors. You need to contact the authors of the respective contribution for help.

42. The match.asm code in contrib is under the GNU General Public License.

Since it's part of zlib, doesn't that mean that all of zlib falls under the GNU GPL?

No. The files in contrib are not part of zlib. They were contributed by other authors and are provided as a convenience to the user within the zlib distribution. Each item in contrib has its own license.

43. Is zlib subject to export controls? What is its ECCN?

zlib is not subject to export controls, and so is classified as EAR99.

44. Can you please sign these lengthy legal documents and fax them back to us so that we can use your software in our product?

No. Go away. Shoo.

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/FAQ

No license file was found, but licenses were detected in source scan.

/\* deflate.c -- compress data using the deflation algorithm

\* Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.c

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/\* Adler32.c -- compute the Adler-32 checksum of a data stream

\* Copyright (C) 1995-2011, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

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\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/adler32.c

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/\* minizip.c -- simulate gzip using the zlib compression library

\* Copyright (C) 1995-2006, 2010, 2011, 2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/minigzip.c

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/\* zran.c -- example of zlib/gzip stream indexing and random access

\* Copyright (C) 2005, 2012 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

Version 1.1 29 Sep 2012 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zran.c

No license file was found, but licenses were detected in source scan.

/\* example.c -- usage example of the zlib compression library

\* Copyright (C) 1995-2006, 2011, 2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/example.c

No license file was found, but licenses were detected in source scan.

/\* gun.c -- simple gunzip to give an example of the use of inflateBack()

\* Copyright (C) 2003, 2005, 2008, 2010, 2012 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

Version 1.7 12 August 2012 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gun.c

No license file was found, but licenses were detected in source scan.

/\* gzread.c -- zlib functions for reading gzip files

\* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzread.c

No license file was found, but licenses were detected in source scan.

/\* inflate.h -- internal inflate state definition

- \* Copyright (C) 1995-2016 Mark Adler
- \* For conditions of distribution and use, see copyright notice in zlib.h
- \*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inflate.h

No license file was found, but licenses were detected in source scan.

MiniZip - Copyright (c) 1998-2010 - by Gilles Vollant - version 1.1 64 bits from Mathias Svensson

## Introduction

-----

MiniZip 1.1 is built from MiniZip 1.0 by Gilles Vollant ( <http://www.winimage.com/zLibDll/minizip.html> )

When adding ZIP64 support into minizip it would result into risk of breaking compatibility with minizip 1.0.

All possible work was done for compatibility.

## Background

-----

When adding ZIP64 support Mathias Svensson found that Even Rouault have added ZIP64 support for unzip.c into minizip for a open source project called gdal ( <http://www.gdal.org/> )

That was used as a starting point. And after that ZIP64 support was added to zip.c some refactoring and code cleanup was also done.

## Changed from MiniZip 1.0 to MiniZip 1.1

-----

- \* Added ZIP64 support for unzip ( by Even Rouault )
- \* Added ZIP64 support for zip ( by Mathias Svensson )
- \* Reverted some changed that Even Rouault did.
- \* Bunch of patches received from Guller Vollant that he received for MiniZip from various users.
- \* Added unzip patch for BZIP Compression method (patch create by Daniel Borca)
- \* Added BZIP Compress method for zip
- \* Did some refactoring and code cleanup

## Credits

Gilles Vollant - Original MiniZip author  
Even Rouault - ZIP64 unzip Support  
Daniel Borca - BZip Compression method support in unzip  
Mathias Svensson - ZIP64 zip support  
Mathias Svensson - BZip Compression method support in zip

## Resources

ZipLayout <http://result42.com/projects/ZipFileLayout>

Command line tool for Windows that shows the layout and information of the headers in a zip archive.

Used when debugging and validating the creation of zip files using MiniZip64

ZIP App Note <http://www.pkware.com/documents/casestudies/APPNOTE.TXT>

Zip File specification

Notes.

\* To be able to use BZip compression method in zip64.c or unzip64.c the BZIP2 lib is needed and HAVE\_BZIP2 need to be defined.

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Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/MiniZip64\_info.txt

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/\* inffast.c -- fast decoding

\* Copyright (C) 1995-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.c

No license file was found, but licenses were detected in source scan.

/\* zutil.c -- target dependent utility functions for the compression library

\* Copyright (C) 1995-2017 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.c

No license file was found, but licenses were detected in source scan.

/\* gzjoin -- command to join gzip files into one gzip file

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version 1.2, 14 Aug 2012

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\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzjoin.c

No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zlib.3  
No license file was found, but licenses were detected in source scan.

# For conditions of distribution and use, see copyright notice in zlib.h

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/msdos/Makefile.emx

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/os2/Makefile.os2

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/Makefile.emx

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/msdos/Makefile.dj2

No license file was found, but licenses were detected in source scan.

/\* deflate.h -- internal compression state

\* Copyright (C) 1995-2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.h

No license file was found, but licenses were detected in source scan.

/\*

Additional tools for Minizip

Code: Xavier Roche '2004

License: Same as ZLIB (www.gzip.org)

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.c

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.h

No license file was found, but licenses were detected in source scan.

/\* gzlib.c -- zlib functions common to reading and writing gzip files

\* Copyright (C) 2004-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzlib.c

No license file was found, but licenses were detected in source scan.

/\* gzlog.h



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\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzlog.h

No license file was found, but licenses were detected in source scan.

/\* inffast.h -- header to use inffast.c

\* Copyright (C) 1995-2003, 2010 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.h

No license file was found, but licenses were detected in source scan.

/\* inftrees.c -- generate Huffman trees for efficient decoding

\* Copyright (C) 1995-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inftrees.c

No license file was found, but licenses were detected in source scan.

/\* gzclose.c -- zlib gzclose() function

\* Copyright (C) 2004, 2010 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzclose.c

No license file was found, but licenses were detected in source scan.

/\* unzip.c -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - ( <http://www.winimage.com/zLibDll/minizip.html> )

Copyright (C) 1998-2010 Gilles Vollant (minizip) ( <http://www.winimage.com/zLibDll/minizip.html> )

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

Copyright (C) 2009-2010 Mathias Svensson ( <http://result42.com> )

For more info read MiniZip\_info.txt

-----  
Decryption code comes from crypt.c by Info-ZIP but has been greatly reduced in terms of compatibility with older software. The following is from the original crypt.c.

Code woven in by Terry Thorsen 1/2003.

Copyright (c) 1990-2000 Info-ZIP. All rights reserved.

See the accompanying

file LICENSE, version 2000-Apr-09 or later

(the contents of which are also included in zip.h) for terms of use.

If, for some reason, all these files are missing, the Info-ZIP license also may be found at: <ftp://ftp.info-zip.org/pub/infozip/license.html>

crypt.c (full version) by Info-ZIP. Last revised: [see crypt.h]

The encryption/decryption parts of this source code (as opposed to the non-echoing password parts) were originally written in Europe. The whole source package can be freely distributed, including from the USA. (Prior to January 2000, re-export from the US was a violation of US law.)

This encryption code is a direct transcription of the algorithm from Roger Schlafly, described by Phil Katz in the file appnote.txt. This file (appnote.txt) is distributed with the PKZIP program (even in the version without encryption capabilities).

## Changes in unzip.c

2007-2008 - Even Rouault - Addition of cpl\_unzGetCurrentFileZStreamPos  
2007-2008 - Even Rouault - Decoration of symbol names unz\* -> cpl\_unz\*  
2007-2008 - Even Rouault - Remove old C style function prototypes  
2007-2008 - Even Rouault - Add unzip support for ZIP64

Copyright (C) 2007-2008 Even Rouault

Oct-2009 - Mathias Svensson - Removed cpl\_\* from symbol names (Even Rouault added them but since this is now moved to a new project (minizip64) I renamed them again).

Oct-2009 - Mathias Svensson - Fixed problem if uncompressed size was > 4G and compressed size was <4G should only read the compressed/uncompressed size from the Zip64 format if the size from normal header was 0xFFFFFFFF

Oct-2009 - Mathias Svensson - Applied some bug fixes from patches received from Gilles Vollant

Oct-2009 - Mathias Svensson - Applied support to unzip files with compression method BZIP2 (bzip2 lib is required)

Patch created by Daniel Borca

Jan-2010 - back to unzip and minizip 1.0 name scheme, with compatibility layer

Copyright (C) 1998 - 2010 Gilles Vollant, Even Rouault, Mathias Svensson

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.c

No license file was found, but licenses were detected in source scan.

/\* crc32.c -- compute the CRC-32 of a data stream

\* Copyright (C) 1995-2006, 2010, 2011, 2012, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*

\* Thanks to Rodney Brown <rbrown64@csc.com.au> for his contribution of faster

\* CRC methods: exclusive-oring 32 bits of data at a time, and pre-computing

\* tables for updating the shift register in one step with three exclusive-ors

\* instead of four steps with four exclusive-ors. This results in about a

\* factor of two increase in speed on a Power PC G4 (PPC7455) using gcc -O3.

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/crc32.c

No license file was found, but licenses were detected in source scan.

/\* infback.c -- inflate using a call-back interface

\* Copyright (C) 1995-2016 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/infback.c

No license file was found, but licenses were detected in source scan.

/\* unzip.h -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - ( <http://www.winimage.com/zLibDll/minizip.html> )

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For more info read MiniZip\_info.txt

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-----

Changes

See header of unzip64.c

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.h

No license file was found, but licenses were detected in source scan.

/\* zutil.h -- internal interface and configuration of the compression library

\* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler

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\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.h

No license file was found, but licenses were detected in source scan.

/\* gzappend -- command to append to a gzip file

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version 1.2, 11 Oct 2012

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\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzappend.c

No license file was found, but licenses were detected in source scan.

/\* zconf.h -- configuration of the zlib compression library

\* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h  
\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h.cmakein  
\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h.in  
No license file was found, but licenses were detected in source scan.

/\* inflate.c -- zlib decompression

\* Copyright (C) 1995-2016 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inflate.c  
No license file was found, but licenses were detected in source scan.

Not copyrighted -- provided to the public domain

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zlib\_how.html  
No license file was found, but licenses were detected in source scan.

/\* inftrees.h -- header to use inftrees.c

\* Copyright (C) 1995-2005, 2010 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/infrees.h  
No license file was found, but licenses were detected in source scan.

/\* fitblk.c: example of fitting compressed output to a specified size

Not copyrighted -- provided to the public domain  
Version 1.1 25 November 2004 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/fitblk.c  
No license file was found, but licenses were detected in source scan.

/\* zpipe.c: example of proper use of zlib's inflate() and deflate()

Not copyrighted -- provided to the public domain  
Version 1.4 11 December 2005 Mark Adler \*/

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zpipe.c
```

No license file was found, but licenses were detected in source scan.

```
/* compress.c -- compress a memory buffer
```

```
* Copyright (C) 1995-2005, 2014, 2016 Jean-loup Gailly, Mark Adler
```

```
* For conditions of distribution and use, see copyright notice in zlib.h
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/compress.c
```

No license file was found, but licenses were detected in source scan.

```
/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017
```

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Jean-loup Gailly      Mark Adler  
jloup@gzip.org      madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zlib.h
```

No license file was found, but licenses were detected in source scan.

```
/* infcover.c -- test zlib's inflate routines with full code coverage
* Copyright (C) 2011, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/infcover.c
```

No license file was found, but licenses were detected in source scan.

```
/* gzwrite.c -- zlib functions for writing gzip files
* Copyright (C) 2004-2017 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzwrite.c
```

No license file was found, but licenses were detected in source scan.

```
/* uncompr.c -- decompress a memory buffer
* Copyright (C) 1995-2003, 2010, 2014, 2016 Jean-loup Gailly, Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/uncompr.c
```

No license file was found, but licenses were detected in source scan.

```
/* zip.h -- IO on .zip files using zlib
Version 1.1, February 14h, 2010
part of the MiniZip project - ( http://www.winimage.com/zLibDll/minizip.html )
```

Copyright (C) 1998-2010 Gilles Vollant ( <http://www.winimage.com/zLibDll/minizip.html> )

Modifications for Zip64 support  
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For more info read MiniZip\_info.txt

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-----  
Changes

See header of zip.h

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/zip.h

No license file was found, but licenses were detected in source scan.

/\*

\* gzlog.c

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\* For conditions of distribution and use, see copyright notice in gzlog.h

\* version 2.2, 14 Aug 2012

\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzlog.c

No license file was found, but licenses were detected in source scan.

/\* gzguts.h -- zlib internal header definitions for gz\* operations

\* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler

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\*/

Found in path(s):

\* /opt/cola/permits/1680025043\_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzguts.h

No license file was found, but licenses were detected in source scan.

## ZLIB DATA COMPRESSION LIBRARY

zlib 1.2.11 is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), [rfc1951](http://tools.ietf.org/html/rfc1951) (deflate format) and [rfc1952](http://tools.ietf.org/html/rfc1952) (gzip format).

All functions of the compression library are documented in the file `zlib.h` (volunteer to write man pages welcome, contact [zlib@gzip.org](mailto:zlib@gzip.org)). A usage example of the library is given in the file `test/example.c` which also tests that the library is working correctly. Another example is given in the file `test/minigzip.c`. The compression library itself is composed of all source files in the root directory.

To compile all files and run the test program, follow the instructions given at the top of `Makefile.in`. In short `./configure; make test`, and if that goes well, `make install` should work for most flavors of Unix. For Windows, use one of the special makefiles in `win32/` or `contrib/vstudio/`. For VMS, use `make_vms.com`.

Questions about zlib should be sent to [<zlib@gzip.org>](mailto:zlib@gzip.org), or to Gilles Vollant [<info@winimage.com>](mailto:info@winimage.com) for the Windows DLL version. The zlib home page is <http://zlib.net/>. Before reporting a problem, please check this site to verify that you have the latest version of zlib; otherwise get the latest version and check whether the problem still exists or not.

PLEASE read the zlib FAQ [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html) before asking for help.

Mark Nelson [<markn@ieee.org>](mailto:markn@ieee.org) wrote an article about zlib for the Jan. 1997 issue of Dr. Dobbs's Journal; a copy of the article is available at <http://marknelson.us/1997/01/01/zlib-engine/>.

The changes made in version 1.2.11 are documented in the file `ChangeLog`.

Unsupported third party contributions are provided in directory `contrib/`.

zlib is available in Java using the `java.util.zip` package, documented at <http://java.sun.com/developer/technicalArticles/Programming/compression/>.

A Perl interface to zlib written by Paul Marquess [<pmqs@cpan.org>](mailto:pmqs@cpan.org) is available at CPAN (Comprehensive Perl Archive Network) sites, including <http://search.cpan.org/~pmqs/IO-Compress-Zlib/>.

A Python interface to zlib written by A.M. Kuchling [<amk@amk.ca>](mailto:amk@amk.ca) is available in Python 1.5 and later versions, see

<http://docs.python.org/library/zlib.html> .

zlib is built into tcl: <http://wiki.tcl.tk/4610> .

An experimental package to read and write files in .zip format, written on top of zlib by Gilles Vollant <[info@winimage.com](mailto:info@winimage.com)>, is available in the contrib/minizip directory of zlib.

Notes for some targets:

- For Windows DLL versions, please see win32/DLL\_FAQ.txt
- For 64-bit Irix, deflate.c must be compiled without any optimization. With -O, one libpng test fails. The test works in 32 bit mode (with the -n32 compiler flag). The compiler bug has been reported to SGI.
- zlib doesn't work with gcc 2.6.3 on a DEC 3000/300LX under OSF/1 2.1 it works when compiled with cc.
- On Digital Unix 4.0D (formely OSF/1) on AlphaServer, the cc option -std1 is necessary to get gzprintf working correctly. This is done by configure.
- zlib doesn't work on HP-UX 9.05 with some versions of /bin/cc. It works with other compilers. Use "make test" to check your compiler.
- gzdopen is not supported on RISCOS or BEOS.
- For PalmOs, see <http://palmzlib.sourceforge.net/>

Acknowledgments:

The deflate format used by zlib was defined by Phil Katz. The deflate and zlib specifications were written by L. Peter Deutsch. Thanks to all the people who reported problems and suggested various improvements in zlib; they are too numerous to cite here.

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jloup@gzip.org      madler@alumni.caltech.edu

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Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/README
No license file was found, but licenses were detected in source scan.
```

```
/* trees.c -- output deflated data using Huffman coding
* Copyright (C) 1995-2017 Jean-loup Gailly
* detect_data_type() function provided freely by Cosmin Truta, 2006
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1680025043_1684399799.3386216/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/trees.c
```

## 1.502 spf13-cast 1.4.1

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\*

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## 1.510 kotlin-reflect 1.8.10

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## 1.511 kotlin 1.8.10

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stractSet.kt", "src/kotlin/collections/ArrayDeque.kt", "src/kotlin/collections/Arrays.kt", "src/kotlin/collections/Indexed Value.kt", "src/kotlin/collections/MapAccessors.kt", "src/kotlin/collections/MapWithDefault.kt", "src/kotlin/collections/MutableCollections.kt", "src/kotlin/collections/PrimitiveIterators.kt", "src/kotlin/collections/ReversedViews.kt", "src/kotlin/collections/SequenceBuilder.kt", "src/kotlin/collections/SlidingWindow.kt", "src/kotlin/collections/UArraySorting.kt", "src/kotlin/comparisons/compareTo.kt", "src/kotlin/contracts/ContractBuilder.kt", "src/kotlin/coroutines/ContinuationInterceptor.kt", "src/kotlin/coroutines/CoroutineContext.kt", "src/kotlin/coroutines/CoroutineContextImpl.kt", "src/kotlin/coroutines/intrinsics/Intrinsics.kt", "src/kotlin/enums/EnumEntries.kt", "src/kotlin/experimental/ExperimentalObjCName.kt", "src/kotlin/experimental/ExperimentalObjCRefinement.kt", "src/kotlin/experimental/bitwiseOperations.kt", "src/kotlin/experimental/inferenceMarker.kt", "src/kotlin/internal/Annotations.kt", "src/kotlin/internal/progressionUtil.kt", "src/kotlin/properties/Delegates.kt", "src/kotlin/properties/Interfaces.kt", "src/kotlin/properties/ObservableProperty.kt", "src/kotlin/properties/PropertyReferenceDelegates.kt", "src/kotlin/random/Random.kt", "src/kotlin/random/URandom.kt", "src/kotlin/random/XorWowRandom.kt", "src/kotlin/ranges/ProgressionIterators.kt", "src/kotlin/ranges/Progressions.kt", "src/kotlin/ranges/Range.kt", "src/kotlin/ranges/Ranges.kt", "src/kotlin/reflect/KClasses.kt", "src/kotlin/reflect/KTypeProjection.kt", "src/kotlin/reflect/KVariance.kt", "src/kotlin/reflect/typeOf.kt", "src/kotlin/text/Appendable.kt", "src/kotlin/text/Indent.kt", "src/kotlin/text/Typography.kt", "src/kotlin/text/regex/MatchResult.kt", "src/kotlin/time/DurationUnit.kt", "src/kotlin/time/ExperimentalTime.kt", "src/kotlin/time/TimeSource.kt", "src/kotlin/time/TimeSources.kt", "src/kotlin/time/longSaturatedMath.kt", "src/kotlin/time/measureTime.kt", "src/kotlin/util/DeepRecursive.kt", "src/kotlin/util/FloorDivMod.kt", "src/kotlin/util/HashCode.kt", "src/kotlin/util/KotlinVersion.kt", "src/kotlin/util/Lateinit.kt", "src/kotlin/util/Lazy.kt", "src/kotlin/util/Numbers.kt", "src/kotlin/util/Suspend.kt", "src/kotlin/util/Tuples.kt", "unsigned/src/kotlin/UIntRange.kt", "unsigned/src/kotlin/ULongRange.kt", "unsigned/src/kotlin/UMath.kt", "unsigned/src/kotlin/UNumbers.kt", "unsigned/src/kotlin/UProgressionUtil.kt", "unsigned/src/kotlin/UStrings.kt", "unsigned/src/kotlin/annotations/Unsigned.kt", "common/src/kotlin/MathH.kt", "js/src/kotlin/js/math.kt"], "sourcesContent": ["(function

```
(root, factory) {\n  if (typeof define === 'function' && define.amd) {\n    define('kotlin', ['exports'], factory);\n  }\n  else if (typeof exports === 'object') {\n    factory(module.exports);\n  }\n  else {\n    root.kotlin = {};\n    factory(root.kotlin);\n  }\n}(this, function (Kotlin) {\n  var _ = Kotlin;\n  insertContent();\n});\n\n/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.isBooleanArray = function (a) {\n  return (Array.isArray(a) || a instanceof Int8Array) && a.$type$ === \"BooleanArray\";\n};\nKotlin.isByteArray = function (a) {\n  return a instanceof Int8Array && a.$type$ !== \"BooleanArray\";\n};\nKotlin.isShortArray = function (a) {\n  return a instanceof Int16Array;\n};\nKotlin.isCharArray = function (a) {\n  return a instanceof Uint16Array && a.$type$ === \"CharArray\";\n};\nKotlin.isIntArray = function (a) {\n  return a instanceof Int32Array;\n};\nKotlin.isFloatArray = function (a) {\n  return a instanceof Float32Array;\n};\nKotlin.isDoubleArray = function (a) {\n  return a instanceof Float64Array;\n};\nKotlin.isLongArray = function (a) {\n  return Array.isArray(a) && a.$type$ === \"LongArray\";\n};\nKotlin.isArray = function (a) {\n  return Array.isArray(a) && !a.$type$;\n};\nKotlin.isArrayish = function (a) {\n  return Array.isArray(a) || ArrayBuffer.isView(a);\n};\nKotlin.arrayToString = function (a) {\n  if (a === null) return \"null\";\n  var toString = Kotlin.isCharArray(a) ? String.fromCharCode : Kotlin.toString;\n  return \"[\" + Array.prototype.map.call(a, function(e) { return toString(e); }).join(\", \") + \"]\";\n};\nKotlin.arrayDeepToString = function (arr) {\n  return Kotlin.kotlin.collections.contentDeepToStringImpl(arr);\n};\nKotlin.arrayEquals = function (a, b) {\n  if (a === b) {\n    return true;\n  }\n  if (a === null || b === null || !Kotlin.isArrayish(b) || a.length !== b.length) {\n    return false;\n  }\n  for (var i = 0, n = a.length; i < n; i++) {\n    if (!Kotlin.equals(a[i], b[i])) {\n      return false;\n    }\n  }\n  return true;\n};\nKotlin.arrayDeepEquals = function (a, b) {\n  return Kotlin.kotlin.collections.contentDeepEqualsImpl(a, b);\n};\nKotlin.arrayHashCode = function (arr) {\n  if (arr === null) return 0;\n  var result = 1;\n  for (var i = 0, n = arr.length; i < n; i++) {\n    result = ((31 * result | 0) +
```

```

Kotlin.hashCode(arr[i]) | 0;\n } \n return result;\n};\n\nKotlin.arrayDeepHashCode
= function (arr) {\n return
Kotlin.kotlin.collections.contentDeepHashCodeImpl(arr);\n};\n\nKotlin.primitiveArraySort = function (array) {\n
array.sort(Kotlin.doubleCompareTo)\n};\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.getCallableRef = function(name, f) {\n f.callableName = name;\n return
f;\n};\n\nKotlin.getPropertyCallableRef = function(name, paramCount, getter, setter) {\n getter.get = getter;\n
getter.set = setter;\n getter.callableName = name;\n return getPropertyRefClass(getter, setter,
propertyRefClassMetadataCache[paramCount]);\n};\n\nfunction getPropertyRefClass(obj, setter, cache) {\n
obj.$metadata$ = getPropertyRefMetadata(typeof setter === "function" ? cache.mutable : cache.immutable);\n
obj.constructor = obj;\n return obj;\n}\n\nvar propertyRefClassMetadataCache
= [\n {\n mutable: { value: null, implementedInterface: function () {\n return
Kotlin.kotlin.reflect.KMutableProperty0 } \n },\n immutable: { value: null, implementedInterface: function
() {\n return Kotlin.kotlin.reflect.KProperty0 } \n } \n },\n {\n mutable: { value: null,
implementedInterface: function () {\n return Kotlin.kotlin.reflect.KMutableProperty1 } \n },\n
immutable: { value: null, implementedInterface: function () {\n return Kotlin.kotlin.reflect.KProperty1 } \n
} \n } \n ];\n\nfunction getPropertyRefMetadata(cache) {\n if (cache.value === null) {\n cache.value = {\n
interfaces: [cache.implementedInterface()],\n baseClass: null,\n functions: {},\n properties:
{} \n },\n types: {},\n staticMembers: {} \n }; \n } \n return cache.value;\n}\n", "/*\n * Copyright
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s.r.o. and Kotlin Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.toShort = function (a) {\n return (a &
0xFFFF) << 16 >> 16;\n};\n\nKotlin.toByte = function (a) {\n return (a & 0xFF) << 24 >>
24;\n};\n\nKotlin.toChar = function (a) {\n return a & 0xFFFF;\n};\n\nKotlin.numberToLong = function (a) {\n
return a instanceof Kotlin.Long ? a : Kotlin.Long.fromNumber(a);\n};\n\nKotlin.numberToInt = function (a) {\n
return a instanceof Kotlin.Long ? a.toInt() : Kotlin.doubleToInt(a);\n};\n\nKotlin.numberToShort = function (a) {\n
return Kotlin.toShort(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToByte = function (a) {\n return
Kotlin.toByte(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToDouble = function (a) {\n return
+a;\n};\n\nKotlin.numberToChar = function (a) {\n return
Kotlin.toChar(Kotlin.numberToInt(a));\n};\n\nKotlin.doubleToInt = function(a)
{\n if (a > 2147483647) return 2147483647;\n if (a < -2147483648) return -2147483648;\n return a |
0;\n};\n\nKotlin.toBoxedChar = function (a) {\n if (a == null) return a;\n if (a instanceof Kotlin.BoxedChar)
return a;\n return new Kotlin.BoxedChar(a);\n};\n\nKotlin.unboxChar = function(a) {\n if (a == null) return a;\n
return Kotlin.toChar(a);\n};\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.equals = function (obj1, obj2) {\n if (obj1 == null) {\n return obj2 ==
null;\n }\n\n if (obj2 == null) {\n return false;\n }\n\n if (obj1 !== obj2) {\n return obj2 !== obj2;\n
}\n\n if (typeof obj1 === "object" && typeof obj1.equals === "function") {\n return obj1.equals(obj2);\n
}\n\n if (typeof obj1 === "number" && typeof obj2 ===
"number") {\n return obj1 === obj2 && (obj1 !== 0 || 1 / obj1 === 1 / obj2)\n }\n\n return obj1 ===
obj2;\n};\n\nKotlin.hashCode = function (obj) {\n if (obj == null) {\n return 0;\n }\n var objType = typeof
obj;\n if ("object" === objType) {\n return "function" === typeof obj.hashCode ? obj.hashCode() :
getObjectHashCode(obj);\n }\n if ("function" === objType) {\n return getObjectHashCode(obj);\n }\n
if ("number" === objType) {\n return Kotlin.numberHashCode(obj);\n }\n if ("boolean" === objType)
{\n return Number(obj)\n }\n\n var str = String(obj);\n return
getStringHashCode(str);\n};\n\nKotlin.toString = function (o) {\n if (o == null) {\n return "null";\n }\n
else if (Kotlin.isArrayish(o)) {\n return "[...]";\n }\n else {\n return o.toString();\n }\n};\n\n/**
@const *\nvar POW_2_32 = 4294967296;\n// TODO: consider switching to Symbol type

```



```

once we are on ES6.\n/** @const *\nvar OBJECT_HASH_CODE_PROPERTY_NAME =
"hashCodeValue$";\n\nfunction getObjectHashCode(obj) {\n  if
(!(OBJECT_HASH_CODE_PROPERTY_NAME in obj)) {\n    var hash = (Math.random() * POW_2_32) | 0; //
Make 32-bit signed integer.\n    Object.defineProperty(obj, OBJECT_HASH_CODE_PROPERTY_NAME, {
value: hash, enumerable: false });\n  }\n  return
obj[OBJECT_HASH_CODE_PROPERTY_NAME];\n}\n\nfunction getStringHashCode(str) {\n  var hash = 0;\n  for (var i = 0; i < str.length; i++) {\n    var code = str.charCodeAt(i);\n    hash = (hash * 31 + code) | 0; // Keep
it 32-bit.\n  }\n  return hash;\n}\n\nKotlin.identityHashCode = getObjectHashCode;\n"/**\n * Copyright 2010-
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the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n */\n// Copyright 2009 The Closure
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```

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Constructs a 64-bit two's-complement integer, given its low and high 32-bit values as signed integers. See the from\* functions below for more convenient ways of constructing Longs.

The internal representation of a long is the two given signed, 32-bit values. We use 32-bit pieces because these are the size of integers on which Javascript performs bit-operations. For operations like addition and multiplication, we split each number into 16-bit pieces, which can easily be multiplied

within Javascript's floating-point representation without overflow or change in sign.

In the algorithms below, we frequently reduce the negative case to the positive case by negating the input(s) and then post-processing the result. Note that we must ALWAYS check specially whether those values are MIN\_VALUE (-2^63) because -MIN\_VALUE == MIN\_VALUE (since 2^63 cannot be represented as a positive number, it overflows back into a negative). Not handling this case would often result in infinite recursion.

**@param {number} low** The low (signed) 32 bits of the long.  
**@param {number} high** The high (signed) 32 bits of the long.

```

\n /**\n * @type {number}\n * @private\n *\n this.low_ = low | 0; // force into 32 signed bits.\n\n /**\n * @type {number}\n * @private\n *\n this.high_ = high | 0; // force into 32 signed bits.\n};\n\nKotlin.Long.$metadata$ = {\n  kind:
"class",\n  simpleName: "Long",\n  interfaces: []\n};\n\n// NOTE: Common constant values ZERO, ONE,
NEG_ONE, etc. are defined below the from* methods on which they depend.\n\n/**\n * A cache of the Long
representations of small integer values.\n * @type {!Object}\n * @private\n *\n Kotlin.Long.IntCache_ =
{};\n\n/**\n * Returns a Long representing the given (32-bit) integer value.\n * @param {number} value The 32-
bit integer in question.\n * @return {!Kotlin.Long} The corresponding Long value.\n *\n Kotlin.Long.fromInt =
function(value) {\n  if (-128 <= value && value < 128) {\n    var cachedObj = Kotlin.Long.IntCache_[value];\n    if
(cachedObj) {\n      return cachedObj;\n    }\n    var obj = new Kotlin.Long(value | 0, value < 0 ? -1 : 0);\n    if (-
128 <= value && value < 128) {\n      Kotlin.Long.IntCache_[value] = obj;\n    }\n    return obj;\n};\n\n/**\n *
Converts this number value to `Long`. The fractional part, if any, is rounded down towards zero. Returns
zero if this `Double` value is `NaN`, `Long.MIN_VALUE` if it's less than `Long.MIN_VALUE`, `Long.MAX_VALUE`
if it's bigger than `Long.MAX_VALUE`.\n * @param {number} value The number in question.\n * @return {!Kotlin.Long}
The corresponding Long value.\n *\n Kotlin.Long.fromNumber =
function(value) {\n  if (isNaN(value)) {\n    return Kotlin.Long.ZERO;\n  } else if (value <= -
Kotlin.Long.TWO_PWR_63_DBL_) {\n    return Kotlin.Long.MIN_VALUE;\n  } else if (value + 1 >=
Kotlin.Long.TWO_PWR_63_DBL_) {\n    return Kotlin.Long.MAX_VALUE;\n  } else if (value < 0) {\n    return
Kotlin.Long.fromNumber(-value).negate();\n  } else {\n    return new Kotlin.Long(\n      (value %
Kotlin.Long.TWO_PWR_32_DBL_) | 0,\n      (value / Kotlin.Long.TWO_PWR_32_DBL_) | 0);\n  }\n};\n\n/**\n * Returns a Long representing the 64-bit integer that comes by concatenating the given high and

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low bits. Each is assumed to use 32 bits.\n * @param {number} lowBits The low 32-bits.\n * @param {number}
highBits The high 32-bits.\n * @return {!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromBits
= function(lowBits, highBits) {\n  return new Kotlin.Long(lowBits, highBits);\n};\n\n/**\n * Returns a Long
representation of the given string, written using the given\n * radix.\n * @param {string} str The textual
representation of the Long.\n * @param {number=} opt_radix The radix in which the text is written.\n * @return
{!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromString = function(str, opt_radix) {\n  if
(str.length == 0) {\n    throw Error('number format error: empty string');\n  }\n\n  var radix = opt_radix || 10;\n  if
(radix < 2 || 36 < radix) {\n    throw Error('radix out of range: ' + radix);\n  }\n\n  if (str.charAt(0) == '-') {\n    return
Kotlin.Long.fromString(str.substring(1), radix).negate();\n  } else if (str.indexOf('.') >= 0) {\n    throw Error('number
format error: interior \\'-\' character: ' + str);\n  }\n\n  // Do several (8) digits
each time through the loop, so as to\n // minimize the calls to the very expensive emulated div.\n  var
radixToPower = Kotlin.Long.fromNumber(Math.pow(radix, 8));\n\n  var result = Kotlin.Long.ZERO;\n  for (var i =
0; i < str.length; i += 8) {\n    var size = Math.min(8, str.length - i);\n    var value = parseInt(str.substring(i, i + size),
radix);\n    if (size < 8) {\n      var power = Kotlin.Long.fromNumber(Math.pow(radix, size));\n      result =
result.multiply(power).add(Kotlin.Long.fromNumber(value));\n    } else {\n      result =
result.multiply(radixToPower);\n      result = result.add(Kotlin.Long.fromNumber(value));\n    }\n  }\n  return
result;\n};\n\n// NOTE: the compiler should inline these constant values below and then remove\n// these
variables, so there should be no runtime penalty for these.\n\n/**\n * Number used repeated below in calculations.
This must appear before the\n * first call to any from* function below.\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_16_DBL_
= 1 << 16;\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_24_DBL_ = 1 <<
24;\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_32_DBL_ =\n
Kotlin.Long.TWO_PWR_16_DBL_ * Kotlin.Long.TWO_PWR_16_DBL_;\n\n/**\n * @type {number}\n *
@private\n */\nKotlin.Long.TWO_PWR_31_DBL_ =\n  Kotlin.Long.TWO_PWR_32_DBL_ / 2;\n\n/**\n *
@type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_48_DBL_ =\n  Kotlin.Long.TWO_PWR_32_DBL_
* Kotlin.Long.TWO_PWR_16_DBL_;\n\n/**\n * @type {number}\n * @private\n
*/\nKotlin.Long.TWO_PWR_64_DBL_ =\n  Kotlin.Long.TWO_PWR_32_DBL_ *
Kotlin.Long.TWO_PWR_32_DBL_;\n\n/**\n * @type {number}\n * @private\n
*/\nKotlin.Long.TWO_PWR_63_DBL_ =\n  Kotlin.Long.TWO_PWR_64_DBL_ / 2;\n\n/**\n * @type
{!Kotlin.Long}\n */\nKotlin.Long.ZERO = Kotlin.Long.fromInt(0);\n\n/**\n * @type {!Kotlin.Long}\n
*/\nKotlin.Long.ONE = Kotlin.Long.fromInt(1);\n\n/**\n * @type {!Kotlin.Long}\n */\nKotlin.Long.NEG_ONE =
Kotlin.Long.fromInt(-1);\n\n/**\n * @type {!Kotlin.Long}\n */\nKotlin.Long.MAX_VALUE =\n  Kotlin.Long.fromBits(0xFFFFFFFF | 0, 0x7FFFFFFF
| 0);\n\n/**\n * @type {!Kotlin.Long}\n */\nKotlin.Long.MIN_VALUE = Kotlin.Long.fromBits(0, 0x80000000 |
0);\n\n/**\n * @type {!Kotlin.Long}\n */\n * @private\n */\nKotlin.Long.TWO_PWR_24_ = Kotlin.Long.fromInt(1
<< 24);\n\n/**\n * @return {number} The value, assuming it is a 32-bit integer.\n */\nKotlin.Long.prototype.toInt =
function() {\n  return this.low_;\n};\n\n/**\n * @return {number} The closest floating-point representation to this
value.\n */\nKotlin.Long.prototype.toNumber = function() {\n  return this.high_ *
Kotlin.Long.TWO_PWR_32_DBL_ +\n    this.getLowBitsUnsigned();\n};\n\n/**\n * @return {number} The 32-bit
hashCode of this value.\n */\nKotlin.Long.prototype.hashCode = function() {\n  return this.high_ ^
this.low_;\n};\n\n/**\n * @param {number=} opt_radix The radix in which the text should be written.\n * @return
{string} The textual representation of this value.\n */\n\n  @override\n */\nKotlin.Long.prototype.toString = function(opt_radix) {\n  var radix = opt_radix || 10;\n  if (radix <
2 || 36 < radix) {\n    throw Error('radix out of range: ' + radix);\n  }\n\n  if (this.isZero()) {\n    return '0';\n  }\n\n  if
(this.isNegative()) {\n    if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n      // We need to change the Long
value before it can be negated, so we remove\n      // the bottom-most digit in this base and then recurse to do the
rest.\n      var radixLong = Kotlin.Long.fromNumber(radix);\n      var div = this.div(radixLong);\n      var rem =
div.multiply(radixLong).subtract(this);\n      return div.toString(radix) + rem.toInt().toString(radix);\n    } else {\n

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>>> 16;\n var b32 = other.high_ & 0xFFFF;\n var b16 = other.low_ >>> 16;\n var b00 = other.low_ &
0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00 = 0;\n c00 += a00 + b00;\n c16 += c00 >>> 16;\n c00 &=
0xFFFF;\n
c16 += a16 + b16;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c32 += a32 + b32;\n c48 += c32 >>> 16;\n c32
&= 0xFFFF;\n c48 += a48 + b48;\n c48 &= 0xFFFF;\n return Kotlin.Long.fromBits((c16 << 16) | c00, (c48 <<
16) | c32);\n};\n\n/**\n * Returns the difference of this and the given Long.\n * @param {Kotlin.Long} other
Long to subtract from this.\n * @return {!Kotlin.Long} The difference of this and the given Long.\n
*/\nKotlin.Long.prototype.subtract = function(other) {\n return this.add(other.negate());\n};\n\n/**\n * Returns
the product of this and the given long.\n * @param {Kotlin.Long} other Long to multiply with this.\n * @return
{!Kotlin.Long} The product of this and the other.\n */\nKotlin.Long.prototype.multiply = function(other) {\n if
(this.isZero()) {\n return Kotlin.Long.ZERO;\n } else if (other.isZero()) {\n return Kotlin.Long.ZERO;\n }\n\n if
(this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return other.isOdd() ? Kotlin.Long.MIN_VALUE :
Kotlin.Long.ZERO;\n
} else if (other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return this.isOdd() ? Kotlin.Long.MIN_VALUE :
Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n if (other.isNegative()) {\n return
this.negate().multiply(other.negate());\n } else {\n return this.negate().multiply(other).negate();\n }\n } else if
(other.isNegative()) {\n return this.multiply(other.negate()).negate();\n }\n\n // If both longs are small, use float
multiplication\n if (this.lessThan(Kotlin.Long.TWO_PWR_24_) &&\n
other.lessThan(Kotlin.Long.TWO_PWR_24_)) {\n return Kotlin.Long.fromNumber(this.toNumber() *
other.toNumber());\n }\n\n // Divide each long into 4 chunks of 16 bits, and then add up 4x4 products.\n // We can
skip products that would overflow.\n\n var a48 = this.high_ >>> 16;\n var a32 = this.high_ & 0xFFFF;\n var a16 =
this.low_ >>> 16;\n var a00 = this.low_ & 0xFFFF;\n\n var b48 = other.high_ >>> 16;\n var b32 = other.high_ &
0xFFFF;\n var b16 = other.low_
>>> 16;\n var b00 = other.low_ & 0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00 = 0;\n c00 += a00 * b00;\n c16
+= c00 >>> 16;\n c00 &= 0xFFFF;\n c16 += a16 * b00;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c16 += a00
* b16;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c32 += a32 * b00;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n
c32 += a16 * b16;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c32 += a00 * b32;\n c48 += c32 >>> 16;\n c32 &=
0xFFFF;\n c48 += a48 * b00 + a32 * b16 + a16 * b32 + a00 * b48;\n c48 &= 0xFFFF;\n return
Kotlin.Long.fromBits((c16 << 16) | c00, (c48 << 16) | c32);\n};\n\n/**\n * Returns this Long divided by the given
one.\n * @param {Kotlin.Long} other Long by which to divide.\n * @return {!Kotlin.Long} This Long divided by
the given one.\n */\nKotlin.Long.prototype.div = function(other) {\n if (other.isZero()) {\n throw Error('division
by zero');\n } else if (this.isZero()) {\n return Kotlin.Long.ZERO;\n }\n\n if
(this.equalsLong(Kotlin.Long.MIN_VALUE))
{\n if (other.equalsLong(Kotlin.Long.ONE) ||\n other.equalsLong(Kotlin.Long.NEG_ONE)) {\n return
Kotlin.Long.MIN_VALUE; // recall that -MIN_VALUE == MIN_VALUE\n } else if
(other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.ONE;\n } else {\n // At this point,
we have |other| >= 2, so |this/other| < |MIN_VALUE|.\n var halfThis = this.shiftRight(1);\n var approx =
halfThis.div(other).shiftLeft(1);\n if (approx.equalsLong(Kotlin.Long.ZERO)) {\n return other.isNegative() ?
Kotlin.Long.ONE : Kotlin.Long.NEG_ONE;\n } else {\n var rem = this.subtract(other.multiply(approx));\n
var result = approx.add(rem.div(other));\n return result;\n }\n }\n } else if
(other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n
if (other.isNegative()) {\n return this.negate().div(other.negate());\n } else {\n return
this.negate().div(other).negate();\n
}\n } else if (other.isNegative()) {\n return this.div(other.negate()).negate();\n }\n\n // Repeat the following
until the remainder is less than other: find a\n // floating-point that approximates remainder / other *from below*,
add this\n // into the result, and subtract it from the remainder. It is critical that\n // the approximate value is less
than or equal to the real value so that the\n // remainder never becomes negative.\n var res = Kotlin.Long.ZERO;\n
var rem = this;\n while (rem.greaterThanOrEqual(other)) {\n // Approximate the result of division. This may be a

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little greater or\n // smaller than the actual value.\n var approx = Math.max(1, Math.floor(rem.toNumber() /
other.toNumber()));\n\n // We will tweak the approximate result by changing it in the 48-th digit or\n // the
smallest non-fractional digit, whichever is larger.\n var log2 = Math.ceil(Math.log(approx) / Math.LN2);\n var
delta = (log2 <= 48) ? 1
: Math.pow(2, log2 - 48);\n\n // Decrease the approximation until it is smaller than the remainder. Note\n // that
if it is too large, the product overflows and is negative.\n var approxRes = Kotlin.Long.fromNumber(approx);\n
var approxRem = approxRes.multiply(other);\n while (approxRem.isNegative() || approxRem.greaterThan(rem))
{\n approx -= delta;\n approxRes = Kotlin.Long.fromNumber(approx);\n approxRem =
approxRes.multiply(other);\n }\n\n // We know the answer can't be zero... and actually, zero would cause\n //
infinite recursion since we would make no progress.\n if (approxRes.isZero()) {\n approxRes =
Kotlin.Long.ONE;\n }\n\n res = res.add(approxRes);\n rem = rem.subtract(approxRem);\n }\n return
res;\n};\n\n\n/**\n * Returns this Long modulo the given one.\n * @param {Kotlin.Long} other Long by which to
mod.\n * @return {!Kotlin.Long} This Long modulo the given one.\n */\nKotlin.Long.prototype.modulo =
function(other)
{\n return this.subtract(this.div(other).multiply(other));\n};\n\n\n/**\n * @return {!Kotlin.Long} The bitwise-NOT of
this value.\n */\nKotlin.Long.prototype.not = function() {\n return Kotlin.Long.fromBits(~this.low_,
~this.high_);\n};\n\n\n/**\n * Returns the bitwise-AND of this Long and the given one.\n * @param {Kotlin.Long}
other The Long with which to AND.\n * @return {!Kotlin.Long} The bitwise-AND of this and the other.\n
*/\nKotlin.Long.prototype.and = function(other) {\n return Kotlin.Long.fromBits(this.low_ & other.low_,\n
this.high_ & other.high_);\n};\n\n\n/**\n * Returns the bitwise-OR of this Long and the given one.\n *
@param {Kotlin.Long} other The Long with which to OR.\n * @return {!Kotlin.Long} The bitwise-OR of this and
the other.\n */\nKotlin.Long.prototype.or = function(other) {\n return Kotlin.Long.fromBits(this.low_ |
other.low_,\n this.high_ | other.high_);\n};\n\n\n/**\n * Returns the bitwise-XOR of
this Long and the given one.\n * @param {Kotlin.Long} other The Long with which to XOR.\n * @return
{!Kotlin.Long} The bitwise-XOR of this and the other.\n */\nKotlin.Long.prototype.xor = function(other) {\n return
Kotlin.Long.fromBits(this.low_ ^ other.low_,\n this.high_ ^ other.high_);\n};\n\n\n\n/**\n *
Returns this Long with bits shifted to the left by the given amount.\n * @param {number} numBits The number of
bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the left by the given amount.\n
*/\nKotlin.Long.prototype.shiftLeft = function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return
this;\n } else {\n var low = this.low_;\n if (numBits < 32) {\n var high = this.high_;\n return
Kotlin.Long.fromBits(\n low << numBits,\n (high << numBits) | (low >>> (32 - numBits)));\n } else
{\n return Kotlin.Long.fromBits(0, low << (numBits - 32));\n }\n }\n};\n\n\n\n/**\n * Returns this Long
with bits shifted to the right by the given amount.\n * @param {number} numBits The number of bits by which to
shift.\n * @return {!Kotlin.Long} This shifted to the right by the given amount.\n
*/\nKotlin.Long.prototype.shiftRight = function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return
this;\n } else {\n var high = this.high_;\n if (numBits < 32) {\n var low = this.low_;\n return
Kotlin.Long.fromBits(\n (low >>> numBits) | (high << (32 - numBits)),\n high >> numBits);\n } else
{\n return Kotlin.Long.fromBits(\n high >> (numBits - 32),\n high >= 0 ? 0 : -1);\n }\n }\n};\n\n\n\n/**\n *
Returns this Long with bits shifted to the right by the given amount, with\n * zeros placed into the
new leading bits.\n * @param {number} numBits The number of bits by which to shift.\n * @return {!Kotlin.Long}
This shifted to the right by the given amount, with\n * zeros placed into the new leading bits.\n
*/\nKotlin.Long.prototype.shiftRightUnsigned
= function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return this;\n } else {\n var high =
this.high_;\n if (numBits < 32) {\n var low = this.low_;\n return Kotlin.Long.fromBits(\n (low >>>
numBits) | (high << (32 - numBits)),\n high >>> numBits);\n } else if (numBits == 32) {\n return
Kotlin.Long.fromBits(high, 0);\n } else {\n return Kotlin.Long.fromBits(high >>> (numBits - 32), 0);\n }\n
}\n};\n\n\n// Support for Kotlin\nKotlin.Long.prototype.equals = function (other) {\n return other instanceof
Kotlin.Long && this.equalsLong(other);\n};\n\nKotlin.Long.prototype.compareTo_11rb$ =

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Kotlin.Long.prototype.compare;\n\nKotlin.Long.prototype.inc = function() {\n  return
this.add(Kotlin.Long.ONE);\n};\n\nKotlin.Long.prototype.dec = function() {\n  return
this.add(Kotlin.Long.NEG_ONE);\n};\n\nKotlin.Long.prototype.valueOf = function() {\n  return
this.toNumber();\n};\n\nKotlin.Long.prototype.unaryPlus
= function() {\n  return this;\n};\n\nKotlin.Long.prototype.unaryMinus =
Kotlin.Long.prototype.negate;\n\nKotlin.Long.prototype.inv =
Kotlin.Long.prototype.not;\n\nKotlin.Long.prototype.rangeTo = function (other) {\n  return new
Kotlin.kotlin.ranges.LongRange(this, other);\n};\n\n/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n * @param {string} id\n * @param {Object} declaration\n */\n\nKotlin.defineModule = function (id, declaration) {\n};\n\nKotlin.defineInlineFunction = function(tag, fun) {\n
return fun;\n};\n\nKotlin.wrapFunction = function(fun) {\n  var f = function() {\n    f = fun();\n    return
f.apply(this, arguments);\n  }; \n  return function() {\n    return f.apply(this, arguments);\n
};\n};\n\nKotlin.isTypeOf = function(type) {\n  return function (object) {\n
return typeof object === type;\n  };\n};\n\nKotlin.isInstanceOf = function (klass) {\n  return function (object)
{\n    return Kotlin.isType(object, klass);\n  };\n};\n\nKotlin.orNull = function (fn) {\n  return function (object)
{\n    return object == null || fn(object);\n  };\n};\n\nKotlin.andPredicate = function (a, b) {\n  return function
(object) {\n    return a(object) && b(object);\n  };\n};\n\nKotlin.kotlinModuleMetadata = function (abiVersion,
moduleName, data) {\n};\n\nKotlin.suspendCall = function(value) {\n  return value;\n};\n\nKotlin.coroutineResult
= function(qualifier) {\n  throwMarkerError();\n};\n\nKotlin.coroutineController = function(qualifier) {\n
throwMarkerError();\n};\n\nKotlin.coroutineReceiver = function(qualifier) {\n
throwMarkerError();\n};\n\nKotlin.setCoroutineResult = function(value, qualifier) {\n
throwMarkerError();\n};\n\nKotlin.getReifiedTypeParameterKType = function(typeParameter) {\n
throwMarkerError();\n};\n\nfunction
throwMarkerError() {\n  throw new Error(\n    "This marker function should never be called. \n" +\n
"\nLooks like compiler did not eliminate it properly. \n" +\n
"\nPlease, report an issue if you caught this
exception.\n");\n};\n\nKotlin.getFunctionById = function(id, defaultValue) {\n  return function() {\n    return
defaultValue;\n  };\n};\n\n/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.compareTo = function (a, b) {\n  var typeA = typeof a;\n  if (typeA ===
"number") {\n    if (typeof b === "number") {\n      return Kotlin.doubleCompareTo(a, b);\n    }\n    return
Kotlin.primitiveCompareTo(a, b);\n  }\n  if (typeA === "string" || typeA === "boolean") {\n    return
Kotlin.primitiveCompareTo(a, b);\n  }\n  return a.compareTo_1Irb$(b);\n};\n\nKotlin.primitiveCompareTo
= function (a, b) {\n  return a < b ? -1 : a > b ? 1 : 0;\n};\n\nKotlin.doubleCompareTo = function (a, b) {\n  if (a <
b) return -1;\n  if (a > b) return 1;\n\n  if (a === b) {\n    if (a !== 0) return 0;\n\n    var ia = 1 / a;\n    return
ia === 1 / b ? 0 : (ia < 0 ? -1 : 1);\n  }\n\n  return a !== b ? (b !== b ? 0 : 1) : -1;\n};\n\nKotlin.charInc = function
(value) {\n  return Kotlin.toChar(value+1);\n};\n\nKotlin.charDec = function (value) {\n  return
Kotlin.toChar(value-1);\n};\n\nKotlin.imul = Math.imul || imul;\n\nKotlin.imulEmulated = imul;\n\nfunction imul(a,
b) {\n  return ((a & 0xffff0000) * (b & 0xffff) + (a & 0xffff) * (b | 0)) | 0;\n}\n\n(function() {\n  var buf = new
ArrayBuffer(8);\n  var bufFloat64 = new Float64Array(buf);\n  var bufFloat32 = new Float32Array(buf);\n  var
bufInt32 = new Int32Array(buf);\n  var lowIndex = 0;\n  var highIndex = 1;\n\n  bufFloat64[0] = -1; //
bfff00000_00000000\n\n  if (bufInt32[lowIndex] !== 0) {\n    lowIndex = 1;\n    highIndex = 0;\n  }\n\n  Kotlin.doubleToBits =
function(value) {\n    return Kotlin.doubleToRawBits(isNaN(value) ? NaN : value);\n  };\n\n  Kotlin.doubleToRawBits = function(value) {\n    bufFloat64[0] = value;\n    return
Kotlin.Long.fromBits(bufInt32[lowIndex], bufInt32[highIndex]);\n  };\n\n  Kotlin.doubleFromBits =
function(value) {\n    bufInt32[lowIndex] = value.low_;\n    bufInt32[highIndex] = value.high_;\n    return
bufFloat64[0];\n  };\n\n  Kotlin.floatToBits = function(value) {\n    return Kotlin.floatToRawBits(isNaN(value)

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? NaN : value);
};
Kotlin.floatToRawBits = function(value) {
    bufFloat32[0] = value;
    return bufInt32[0];
};
Kotlin.floatFromBits = function(value) {
    bufInt32[0] = value;
    return bufFloat32[0];
};
// returns zero value for number with positive sign bit and non-zero value for
number with negative sign bit.
Kotlin.doubleSignBit = function(value) {
    bufFloat64[0] = value;
    return bufInt32[highIndex] & 0x80000000;
};
Kotlin.numberHashCode = function(obj) {
    if ((obj | 0) === obj) {
        return obj | 0;
    } else {
        bufFloat64[0] = obj;
        return (bufInt32[highIndex] * 31 | 0) + bufInt32[lowIndex] | 0;
    }
};
Kotlin.ensureNotNull = function(x) {
    return x != null ? x : Kotlin.throwNPE();
};
/**
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Programming Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.
 */
Object.defineProperty(String.prototype, 'startsWith', {
    value: function (searchString, position) {
        position = position || 0;
        return this.lastIndexOf(searchString,
            position) === position;
    }
});
Object.defineProperty(String.prototype, 'endsWith', {
    value: function (searchString, position) {
        var subjectString = this.toString();
        if (position === undefined || position > subjectString.length) {
            position = subjectString.length;
        }
        position -= searchString.length;
        var lastIndex =
subjectString.indexOf(searchString, position);
        return lastIndex !== -1 && lastIndex === position;
    }
});
// ES6 Math polyfills
Object.defineProperty(Math, 'sign', {
    value: function(x) {
        x = +x; // convert to a number
        if (x === 0 || isNaN(x)) {
            return Number(x);
        }
        return x > 0 ? 1 : -1;
    }
});
Object.defineProperty(Math, 'trunc', {
    value: function(x) {
        if (isNaN(x)) {
            return NaN;
        }
        if (x > 0) {
            return Math.floor(x);
        }
        return Math.ceil(x);
    }
});
(function() {
    var epsilon = 2.220446049250313E-16;
    var taylor_2_bound = Math.sqrt(epsilon);
    var taylor_n_bound = Math.sqrt(taylor_2_bound);
    var upper_taylor_2_bound = 1/taylor_2_bound;
    var upper_taylor_n_bound = 1/taylor_n_bound;
    if (typeof Math.sinh === 'undefined') {
        Math.sinh = function(x) {
            if (Math.abs(x) < taylor_n_bound) {
                var result = x;
            } else if (Math.abs(x) > taylor_2_bound) {
                result += (x * x * x) / 6;
            }
            return result;
        } else {
            var y = Math.exp(x);
            var y1 = 1 / y;
            if (!isFinite(y)) return Math.exp(x - Math.LN2);
            if (!isFinite(y1)) return -Math.exp(-x - Math.LN2);
            return (y - y1) / 2;
        }
    }
    if (typeof Math.cosh === 'undefined') {
        Math.cosh = function(x) {
            var y = Math.exp(x);
            var y1 = 1 / y;
            if (!isFinite(y) || !isFinite(y1)) return Math.exp(Math.abs(x) - Math.LN2);
            return (y + y1) / 2;
        }
    }
    if (typeof Math.tanh === 'undefined') {
        Math.tanh = function(x) {
            if (Math.abs(x) < taylor_n_bound) {
                var result = x;
            } else if (Math.abs(x) > taylor_2_bound) {
                result -= (x * x * x) / 3;
            }
            return result;
        } else {
            var a = Math.exp(+x), b = Math.exp(-x);
            return a === Infinity ? 1 : b === Infinity ? -1 : (a - b) / (a + b);
        }
    }
    // Inverse hyperbolic function implementations derived
from boost special math functions.
    // Copyright Eric Ford & Hubert Holin 2001.
    if (typeof Math.asinh === 'undefined') {
        var asinh = function(x) {
            if (x >= +taylor_n_bound) {
                if (x > upper_taylor_n_bound) {
                    if (x > upper_taylor_2_bound) {
                        // approximation by laurent series in 1/x at 0+ order
return Math.log(x) + Math.LN2;
                    }
                    else {
                        // approximation by laurent series in 1/x at 0+ order
from -1 to 1
return Math.log(x * 2 + (1 / (x * 2)));
                    }
                } else {
                    if (x <= -taylor_n_bound) {
                        return -asinh(-x);
                    }
                    else {
                        // approximation by taylor
series in x at 0 up to order 2
var result = x;
                        if (Math.abs(x) >= taylor_2_bound) {
                            // approximation by taylor series in x at 0 up to order 4
var x3 = x * x * x;
                            result -= x3 / 6;
                        }
                    }
                }
            }
            return result;
        }
    }
    Math.asinh = asinh;
    if (typeof Math.acosh === 'undefined') {
        Math.acosh = function(x) {
            if (x < 1) {
                //

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return NaN;\n    }\n    else if (x - 1 >= taylor_n_bound)\n        {\n            if (x >
upper_taylor_2_bound)\n                {\n                    // approximation by laurent series in 1/x at 0+ order from -1 to
0\n                    return Math.log(x) + Math.LN2;\n                }\n            else\n                {\n                    return
Math.log(x + Math.sqrt(x * x - 1));\n                }\n        }\n    else\n        {\n            var y = Math.sqrt(x - 1);\n            // approximation by taylor series in y at 0
up to order 2\n            var result = y;\n            if (y >= taylor_2_bound)\n                {\n                    var y3 = y *
y * y;\n                    // approximation by taylor series in y at 0 up to order 4\n                    result -= y3 / 12;\n                }\n            return Math.sqrt(2) * result;\n        }\n    };\n}\n\nif (typeof Math.atanh === \"undefined\")
{\n    Math.atanh = function(x) {\n        if (Math.abs(x) < taylor_n_bound) {\n            var result = x;\n            if (Math.abs(x) > taylor_2_bound) {\n                result += (x * x * x) / 3;\n            }\n            return result;\n        }\n        return Math.log((1 + x) / (1 - x)) / 2;\n    };\n}\n\nif (typeof Math.log1p === \"undefined\") {\n    Math.log1p = function(x) {\n        if (Math.abs(x) < taylor_n_bound) {\n            var x2 = x * x;\n            var x3 = x2 * x;\n            var x4
= x3 * x;\n            // approximation by taylor series in x at 0 up to order 4\n            return (-x4 / 4 + x3 / 3 - x2 /
2 + x);\n        }\n        return Math.log(x + 1);\n    };\n}\n\nif (typeof Math.expm1 === \"undefined\") {\n    Math.expm1 = function(x) {\n        if (Math.abs(x) < taylor_n_bound) {\n            var x2 = x * x;\n            var x3 = x2 * x;\n            var x4 = x3 * x;\n            // approximation by taylor series in x at 0 up to order 4\n            return (x4 / 24 + x3 / 6 + x2 / 2 + x);\n        }\n        return Math.exp(x) - 1;\n    };\n}\n\nif (typeof Math.hypot === \"undefined\") {\n    Math.hypot = function() {\n        var y = 0;\n        var length =
arguments.length;\n        for (var i = 0; i < length; i++) {\n            if (arguments[i]
=== Infinity || arguments[i] === -Infinity) {\n                return Infinity;\n            }\n            y += arguments[i] *
arguments[i];\n        }\n        return Math.sqrt(y);\n    };\n}\n\nif (typeof Math.log10 === \"undefined\") {\n    Math.log10 = function(x) {\n        return Math.log(x) * Math.LOG10E;\n    };\n}\n\nif (typeof Math.log2 ===
\"undefined\") {\n    Math.log2 = function(x) {\n        return Math.log(x) * Math.LOG2E;\n    };\n}\n\nif (typeof
Math.clz32 === \"undefined\") {\n    Math.clz32 = (function(log, LN2) {\n        return function(x) {\n            var
asUint = x >>> 0;\n            if (asUint === 0) {\n                return 32;\n            }\n            return 31 - (log(asUint) /
LN2 | 0) | 0; // the \"| 0\" acts like math.floor\n        };\n    })(Math.log, Math.LN2);\n}\n\n// For HtmlUnit and
PhantomJs\nif (typeof ArrayBuffer.isView === \"undefined\") {\n    ArrayBuffer.isView = function(a) {\n        return a != null && a.__proto__ != null && a.__proto__.__proto__
=== Int8Array.prototype.__proto__;\n    };\n}\n\nif (typeof Array.prototype.fill === \"undefined\") {\n    // Polyfill
from https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/fill#Polyfill\n    Object.defineProperty(Array.prototype, 'fill', {\n        value: function (value) {\n            // Steps 1-2.\n            if
(this == null) {\n                throw new TypeError('this is null or not defined');\n            }\n            var O =
Object(this);\n            // Steps 3-5.\n            var len = O.length >>> 0;\n            // Steps 6-7.\n            var start =
arguments[1];\n            var relativeStart = start >> 0;\n            // Step 8.\n            var k = relativeStart < 0 ?\n            Math.max(len + relativeStart, 0) : \n            Math.min(relativeStart, len);\n            // Steps 9-10.\n            var end = arguments[2];\n            var relativeEnd = end === undefined ?\n            len : end >> 0;\n            // Step 11.\n            var finalValue = relativeEnd < 0 ?\n            Math.max(len + relativeEnd, 0) : \n            Math.min(relativeEnd, len);\n            // Step 12.\n            while (k < finalValue) {\n                O[k] = value;\n                k++;\n            }\n            // Step 13.\n            return
O;\n        };\n    });\n}\n\n(function() {\n    function normalizeOffset(offset, length) {\n        if (offset < 0) return
Math.max(0, offset + length);\n        return Math.min(offset, length);\n    }\n    function typedArraySlice(begin, end)
{\n        if (typeof end === \"undefined\") {\n            end = this.length;\n        }\n        begin = normalizeOffset(begin
|| 0, this.length);\n        end = Math.max(begin, normalizeOffset(end, this.length));\n        return new
this.constructor(this.subarray(begin, end));\n    }\n\n    var arrays = [Int8Array, Int16Array, Uint16Array,
Int32Array,
Float32Array, Float64Array];\n    for (var i = 0; i < arrays.length; ++i) {\n        var TypedArray = arrays[i];\n        if
(typeof TypedArray.prototype.fill === \"undefined\") {\n            Object.defineProperty(TypedArray.prototype, 'fill',

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(metadata.kind === Kotlin.Kind.OBJECT) {\n        return object === class;\n    }\n }\n\n var classMetadata
= class.$metadata$;\n\n // In WebKit (JavaScriptCore) for some interfaces from DOM typeof returns \"object\",
nevertheless they can be used in RHS of instanceof\n if (classMetadata == null) {\n    return object instanceof
class;\n }\n\n if (classMetadata.kind === Kotlin.Kind.INTERFACE && object.constructor != null) {\n
return isInheritanceFromInterface(object.constructor, class);\n
}\n\n return false;\n};\n\nKotlin.isNumber = function (a) {\n    return typeof a == \"number\" || a instanceof
Kotlin.Long;\n};\n\nKotlin.isChar = function (value) {\n    return value instanceof
Kotlin.BoxedChar;\n};\n\nKotlin.isComparable = function (value) {\n    var type = typeof value;\n\n    return type
=== \"string\" ||\n        type === \"boolean\" ||\n        Kotlin.isNumber(value) ||\n        Kotlin.isType(value,
Kotlin.kotlin.Comparable);\n};\n\nKotlin.isCharSequence = function (value) {\n    return typeof value === \"string\"
|| Kotlin.isType(value, Kotlin.kotlin.CharSequence);\n};\n\n\"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *^\n\n// a package is omitted to get declarations directly under the
module\n\n@PublishedApi\nnexternal internal fun <T> Array(size: Int): Array<T>\n\n@JsName(\"newArray\")\nfun
<T> newArray(size: Int, initialValue: T) = fillArrayVal(Array<T>(size),
initialValue)\n\n@JsName(\"newArrayF\")\ninline fun <T> arrayWithFun(size: Int, init: (Int) -> T) =
fillArrayFun(Array<T>(size), init)\n\n@JsName(\"fillArray\")\ninline fun <T> fillArrayFun(array: Array<T>, init:
(Int) -> T): Array<T> {\n    for (i in 0..array.size - 1) {\n        array[i] = init(i)\n    }\n    return
array\n}\n\n@JsName(\"booleanArray\")\nfun booleanArray(size: Int, init: dynamic): Array<Boolean> {\n    val
result: dynamic = Array<Boolean>(size)\n    result.$type$ = \"BooleanArray\"\n    return when (init) {\n        null,
true -> fillArrayVal(result, false)\n        false -> result\n        else -> fillArrayFun<Boolean>(result, init)\n
}\n}\n\n@JsName(\"booleanArrayF\")\ninline fun booleanArrayWithFun(size: Int, init: (Int) -> Boolean):
Array<Boolean> = fillArrayFun(booleanArray(size, false),
init)\n\n@JsName(\"charArray\")\n@Suppress(\"UNUSED_PARAMETER\")\nfun charArray(size: Int, init:
dynamic):
Array<Char> {\n    val result = js(\"new Uint16Array(size)\")\n    result.$type$ = \"CharArray\"\n    return when
(init) {\n        null, true, false -> result // For consistency\n        else -> fillArrayFun<Char>(result, init)\n
}\n}\n\n@JsName(\"charArrayF\")\ninline fun charArrayWithFun(size: Int, init: (Int) -> Char): Array<Char> {\n
val array = charArray(size, null)\n    for (i in 0..array.size - 1) {\n        @Suppress(\"UNUSED_VARIABLE\") //
used in js block\n        val value = init(i)\n        js(\"array[i] = value;\")\n    }\n    return
array\n}\n\n@JsName(\"untypedCharArrayF\")\ninline fun untypedCharArrayWithFun(size: Int, init: (Int) -> Char):
Array<Char> {\n    val array = Array<Char>(size)\n    for (i in 0..array.size - 1) {\n
@Suppress(\"UNUSED_VARIABLE\") // used in js block\n        val value = init(i)\n        js(\"array[i] = value;\")\n
}\n    return array\n}\n\n@JsName(\"longArray\")\nfun longArray(size: Int, init: dynamic): Array<Long> {\n
val result: dynamic = Array<Long>(size)\n    result.$type$ = \"LongArray\"\n    return when (init) {\n        null,
true -> fillArrayVal(result, 0L)\n        false -> result\n        else -> fillArrayFun<Long>(result, init)\n
}\n}\n\n@JsName(\"longArrayF\")\ninline fun longArrayWithFun(size: Int, init: (Int) -> Long): Array<Long> =
fillArrayFun(longArray(size, false), init)\n\nprivate fun <T> fillArrayVal(array: Array<T>, initialValue: T): Array<T>
{\n    for (i in 0..array.size - 1) {\n        array[i] = initialValue\n    }\n    return array\n}\n\n\"/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *^\n\npackage kotlin\n\npublic class
Enum<T : Enum<T>> : Comparable<Enum<T>> {\n    @JsName(\"name$\") private var _name: String = \"\"\n\n    @JsName(\"ordinal$\") private var _ordinal: Int = 0\n\n    val name: String\n        get() = _name\n\n    val ordinal: Int\n        get() = _ordinal\n\n    override fun compareTo(other: Enum<T>) =
ordinal.compareTo(other.ordinal)\n\n    override fun equals(other: Any?) = this === other\n\n    override fun
hashCode(): Int = js(\"Kotlin.identityHashCode\")(this)\n\n    override fun toString() = name\n\n    companion
object\n}\n\n\"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n

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kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: [---

Open Source Used In AppDynamics\\_OTIS\\_Pipeline 23.8.0 5688](https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n\nimport kotlin.random.*\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component1(): T {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component1(): Byte {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component1(): Short {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component1(): Int {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component1(): Long {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component1(): Float {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component1(): Double {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component1(): Boolean {\n    return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component1(): Char {\n    return get(0)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component2(): T {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component2(): Byte {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component2(): Short {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component2(): Int {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component2(): Long {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component2(): Float {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component2(): Double {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component2(): Boolean {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component2(): Char {\n    return get(1)\n}\n\n</p>
</div>
<div data-bbox=)

[IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n

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*\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component2(): Double {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component2(): Boolean {\n    return get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component2(): Char {\n    return get(1)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component3(): T {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component3(): Byte {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component3(): Short {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component3(): Int {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component3(): Long {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component3(): Float {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component3(): Double {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component3(): Boolean {\n    return get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component3(): Char {\n    return get(2)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component4(): T {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component4(): Byte {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component4(): Short {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component4(): Int
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{\n  return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4,
throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component4(): Long {\n  return
get(3)\n}\n\n/**\n
* Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component4(): Float {\n  return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component4(): Double {\n  return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component4(): Boolean {\n  return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n
* \n * If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where
the behavior is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component4():
Char {\n  return get(3)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less
than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component5(): T {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component5(): Byte {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component5(): Short {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component5(): Int {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component5(): Long {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior
is unspecified.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component5(): Float {\n
return get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5,
throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component5(): Double {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component5(): Boolean {\n  return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*/\n@kotlin.internal.InlineOnly\npublic
inline operator fun CharArray.component5(): Char {\n  return get(4)\n}\n\n/**\n * Returns `true` if [element] is
found in the array.\n */\npublic operator fun <@kotlin.internal.InputTypes T> Array<out T>.contains(element:
T): Boolean {\n  return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n
*/\npublic operator fun ByteArray.contains(element: Byte): Boolean {\n  return indexOf(element) >= 0\n}\n\n/**\n
* Returns `true` if [element] is found in the array.\n */\npublic operator fun ShortArray.contains(element: Short):

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Boolean { \n return indexOf(element) >= 0\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\npublic operator fun IntArray.contains(element: Int): Boolean { \n return indexOf(element) >= 0\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\npublic operator fun LongArray.contains(element: Long): Boolean { \n return indexOf(element) >= 0\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\n@Deprecated("The function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'any { it == element }' instead to continue using this behavior, or 'asList().contains(element: T)' to get the same search behavior as in a list.", ReplaceWith("any { it == element }"))\n\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6", hiddenSince = "1.7")\n\npublic operator fun FloatArray.contains(element: Float): Boolean { \n return any { it == element }\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\n@Deprecated("The function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'any { it == element }' instead to continue using this behavior, or 'asList().contains(element: T)' to get the same search behavior as in a list.", ReplaceWith("any { it == element }"))\n\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6", hiddenSince = "1.7")\n\npublic operator fun DoubleArray.contains(element: Double): Boolean { \n return any { it == element }\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\npublic operator fun BooleanArray.contains(element: Boolean): Boolean { \n return indexOf(element) >= 0\n}\n\n/\*\*\n \* Returns `true` if [element] is found in the array.\n \* \n\npublic operator fun CharArray.contains(element: Char): Boolean { \n return indexOf(element) >= 0\n}\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun <T> Array<out T>.elementAt(index: Int): T\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun ByteArray.elementAt(index: Int): Byte\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun ShortArray.elementAt(index: Int): Short\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun IntArray.elementAt(index: Int): Int\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun LongArray.elementAt(index: Int): Long\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun FloatArray.elementAt(index: Int): Float\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun DoubleArray.elementAt(index: Int): Double\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun BooleanArray.elementAt(index: Int): Boolean\n\n/\*\*\n \* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAt\n \* \n\npublic expect fun CharArray.elementAt(index: Int): Char\n\n/\*\*\n \* Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAtOrElse\n \* \n\n@kotlin.internal.InlineOnly\n\npublic inline fun <T> Array<out T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T { \n return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/\*\*\n \* Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n \* \n\n \* @sample samples.collections.Collections.Elements.elementAtOrElse\n \* \n\n@kotlin.internal.InlineOnly\n\npublic inline fun

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ByteArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Byte): Byte {\n  return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.elementAtOrElse(index: Int, defaultValue: (Int) ->
Short): Short {\n  return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n *
Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of
bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Int):
Int {\n  return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an
element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this
array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.elementAtOrElse(index: Int, defaultValue:
(Int) -> Long): Long {\n  return if (index >= 0 && index <= lastIndex) get(index) else
defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue]
function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Float): Float {\n  return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Double): Double {\n  return if (index >= 0 &&
index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n
* Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of
bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.elementAtOrElse(index: Int, defaultValue: (Int) ->
Boolean): Boolean {\n  return if (index >= 0 && index <= lastIndex) get(index) else
defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue]
function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n  return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the
[index] is out of bounds of this
array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.elementAtOrNull(index: Int): T? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.elementAtOrNull(index: Int): Byte? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.elementAtOrNull(index: Int): Short? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.elementAtOrNull(index: Int): Int? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.elementAtOrNull(index: Int): Long? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds

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of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.elementAtOrNull(index: Int): Float? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.elementAtOrNull(index: Int): Double? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.elementAtOrNull(index: Int): Boolean? {\n
return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of
bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.elementAtOrNull(index: Int): Char? {\n  return
this.getOrNull(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such
element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n
*\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Array<out T>.find(predicate: (T) -> Boolean): T? {\n  return firstOrNull(predicate)\n}\n\n/**\n *
Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.find(predicate: (Byte) -> Boolean): Byte? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.find(predicate: (Short) -> Boolean): Short? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.find(predicate: (Int) ->
Boolean): Int? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given
[predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.find(predicate: (Long) -> Boolean): Long? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.find(predicate: (Float) -> Boolean): Float? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.find(predicate: (Double) -> Boolean): Double? {\n  return firstOrNull(predicate)\n}\n\n/**\n
* Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.find(predicate: (Boolean) -> Boolean): Boolean? {\n  return firstOrNull(predicate)\n}\n\n/**\n
* Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.find(predicate: (Char) -> Boolean): Char? {\n  return firstOrNull(predicate)\n}\n\n/**\n
* Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.findLast(predicate: (T) -> Boolean): T? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the
last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.findLast(predicate: (Byte) -> Boolean): Byte? {\n  return lastOrNull(predicate)\n}\n\n/**\n
* Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n@kotlin.internal.InlineOnly\npublic inline fun

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ShortArray.findLast(predicate: (Short) -> Boolean): Short? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nIntArray.findLast(predicate: (Int) -> Boolean): Int? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nLongArray.findLast(predicate: (Long) -> Boolean): Long? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nFloatArray.findLast(predicate: (Float) -> Boolean): Float? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nDoubleArray.findLast(predicate: (Double) -> Boolean): Double? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nBooleanArray.findLast(predicate: (Boolean) -> Boolean): Boolean? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun\nCharArray.findLast(predicate: (Char) -> Boolean): Char? {\n  return lastOrNull(predicate)\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun <T> Array<out T>.first(): T {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun ByteArray.first(): Byte {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun ShortArray.first(): Short {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun IntArray.first(): Int {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun LongArray.first(): Long {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun FloatArray.first(): Float {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun DoubleArray.first(): Double {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the array is empty.\n */\npublic fun BooleanArray.first(): Boolean {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * \n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun <T> Array<out T>.first(predicate: (T) -> Boolean): T {\n  for (element in this) if (predicate(element)) return element\n  throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * \n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun ByteArray.first(predicate: (Byte) -> Boolean): Byte {\n  for (element in this) if (predicate(element)) return element\n  throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first

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element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*\npublic inline fun ShortArray.first(predicate: (Short) -> Boolean): Short {\n  for (element in this) if
(predicate(element)) return element\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException]
if no such element is found.\n *\npublic inline fun IntArray.first(predicate: (Int) -> Boolean): Int {\n  for (element
in this) if (predicate(element)) return element\n  throw NoSuchElementException("Array contains no element
matching the predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n *\npublic inline fun LongArray.first(predicate: (Long) -
> Boolean): Long {\n  for (element in this) if (predicate(element)) return element\n  throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first
element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*\npublic inline fun FloatArray.first(predicate: (Float) -> Boolean): Float {\n  for (element in this) if
(predicate(element)) return element\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n *\npublic inline fun DoubleArray.first(predicate: (Double) -> Boolean): Double {\n  for
(element in this) if (predicate(element)) return element\n  throw NoSuchElementException("Array contains no
element matching the predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n *
@throws [NoSuchElementException] if no such element is found.\n *\npublic inline fun
BooleanArray.first(predicate: (Boolean) -> Boolean): Boolean {\n  for (element in this) if (predicate(element))
return element\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n *\npublic inline fun CharArray.first(predicate: (Char) ->
Boolean): Char {\n  for (element in this)
if (predicate(element)) return element\n  throw NoSuchElementException("Array contains no element matching
the predicate.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to
elements of this array in iteration order,\n * or throws [NoSuchElementException] if no non-null value was
produced.\n * \n * @sample samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any> Array<out
T>.firstNotNullOf(transform: (T) -> R?): R {\n  return firstNotNullOfOrNull(transform) ?: throw
NoSuchElementException("No element of the array was transformed to a non-null value.")\n}\n\n/**\n * Returns
the first non-null value produced by [transform] function being applied to elements of this array in iteration order,\n
* or `null` if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R : Any> Array<out T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n  for (element in this)
{\n    val result = transform(element)\n    if (result != null) {\n      return result\n    }\n  }\n  return
null\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun <T> Array<out
T>.firstOrNull(): T? {\n  return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if
the array is empty.\n *\npublic fun ByteArray.firstOrNull(): Byte? {\n  return if (isEmpty()) null else
this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun
ShortArray.firstOrNull(): Short? {\n  return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element,
or `null` if the array is empty.\n *\npublic fun IntArray.firstOrNull(): Int? {\n  return if (isEmpty()) null else
this[0]\n}\n\n/**\n * Returns the
first element, or `null` if the array is empty.\n *\npublic fun LongArray.firstOrNull(): Long? {\n  return if
(isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun
FloatArray.firstOrNull(): Float? {\n  return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element,

```

or `null` if the array is empty.

```

public fun DoubleArray.firstOrNull(): Double? {
    return if (isEmpty()) null
    else this[0]
}

```

Returns the first element, or `null` if the array is empty.

```

public fun
BooleanArray.firstOrNull(): Boolean? {
    return if (isEmpty()) null
    else this[0]
}

```

Returns the first element, or `null` if the array is empty.

```

public fun CharArray.firstOrNull(): Char? {
    return if (isEmpty())
    null
    else this[0]
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun <T> Array<out T>.firstOrNull(predicate:
(T) -> Boolean): T? {
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun
ByteArray.firstOrNull(predicate: (Byte) -> Boolean): Byte? {
    for (element in this) if (predicate(element)) return
    element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun ShortArray.firstOrNull(predicate: (Short) -> Boolean): Short? {
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun
IntArray.firstOrNull(predicate: (Int) -> Boolean): Int? {
    for (element in this) if (predicate(element)) return
    element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun LongArray.firstOrNull(predicate: (Long) -> Boolean):
Long? {
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun
FloatArray.firstOrNull(predicate: (Float) -> Boolean): Float? {
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun DoubleArray.firstOrNull(predicate: (Double) -> Boolean): Double?
{
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun BooleanArray.firstOrNull(predicate: (Boolean) -> Boolean): Boolean?
{
    for (element in this)
    if (predicate(element)) return element
    return null
}

```

Returns the first element matching the given [predicate], or `null` if element was not found.

```

public inline fun CharArray.firstOrNull(predicate: (Char) -> Boolean): Char? {
    for (element in this) if (predicate(element)) return element
    return null
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun <T> Array<out T>.getOrElse(index: Int,
defaultValue: (Int) -> T): T {
    return if (index >= 0 && index <= lastIndex) get(index) else
    defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun
ByteArray.getOrElse(index: Int, defaultValue: (Int) -> Byte): Byte {
    return if (index >=
    0 && index <= lastIndex) get(index) else defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun ShortArray.getOrElse(index: Int, defaultValue: (Int) -> Short):
Short {
    return if (index >= 0 && index <= lastIndex) get(index) else
    defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun IntArray.getOrElse(index: Int, defaultValue: (Int) ->
Int): Int {
    return if (index >= 0 && index <= lastIndex) get(index) else
    defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun LongArray.getOrElse(index:
Int, defaultValue: (Int) -> Long): Long {
    return if (index >= 0 && index <= lastIndex) get(index) else
    defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

@kotlin.internal.InlineOnly
public inline fun
FloatArray.getOrElse(index: Int, defaultValue: (Int) -> Float): Float {
    return if (index >= 0 && index <=
    lastIndex) get(index) else defaultValue(index)
}

```

Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

```

*^@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.getOrNull(index: Int): Double? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index]\n is out of bounds of this array.\n *^@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.getOrNull(index:\n Int, defaultValue: (Int) -> Boolean): Boolean? {\n    return if (index >= 0 && index <= lastIndex) get(index) else\n defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue]\n function if the [index] is out of bounds of this array.\n *^@kotlin.internal.InlineOnly\npublic inline fun\n CharArray.getOrNull(index: Int, defaultValue: (Int) -> Char): Char? {\n    return if (index >= 0 && index <=\n lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the\n [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic inline fun\n <T> Array<out T>.getOrNull(index: Int): T? {\n    return if (index >= 0 && index <= lastIndex)\n get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index]\n is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic\n fun ByteArray.getOrNull(index: Int): Byte? {\n    return if (index >= 0 && index <= lastIndex) get(index) else\n null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun ShortArray.getOrNull(index: Int):\n Short? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at\n the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample\n samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun IntArray.getOrNull(index: Int): Int? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given\n [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample\n samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun LongArray.getOrNull(index: Int): Long? {\n    return if (index >= 0 && index <= lastIndex)\n get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of\n this array.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun\n FloatArray.getOrNull(index: Int): Float? {\n    return if (index >= 0 && index <= lastIndex) get(index) else\n null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun DoubleArray.getOrNull(index:\n Int): Double? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an\n element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample\n samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun BooleanArray.getOrNull(index:\n Int): Boolean? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an\n element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample\n samples.collections.Collections.Elements.getOrNull\n *^@kotlin.internal.InlineOnly\npublic fun CharArray.getOrNull(index: Int): Char? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -\n 1 if the array does not contain element.\n *^@kotlin.internal.InlineOnly\npublic fun <@kotlin.internal.OnlyInputTypes T> Array<out\n T>.indexOf(element: T): Int {\n    if (element == null) {\n        for (index in indices) {\n            if (this[index] ==\n null) {\n                return index\n            }\n        }\n    } else {\n        for (index in indices) {\n            if (element ==\n this[index]) {\n                return index\n            }\n        }\n    }\n    return -1\n}\n\n/**\n * Returns first index of\n [element], or -1 if the array does not contain element.\n * \n *^@kotlin.internal.InlineOnly\npublic fun ByteArray.indexOf(element: Byte): Int {\n    for (index in indices) {\n        if (element ==\n this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1 if\n the array does not contain element.\n *^@kotlin.internal.InlineOnly\npublic fun ShortArray.indexOf(element: Short): Int {\n    for (index in\n indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns\n first index of [element], or -1 if the array does not contain element.\n *^@kotlin.internal.InlineOnly\npublic fun IntArray.indexOf(element: Int):\n Int {\n    for (index in indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -\n 1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n *^@kotlin.internal.InlineOnly\npublic fun\n LongArray.indexOf(element: Long): Int {\n    for (index in indices) {\n        if (element == this[index]) {\n

```

```

return index\n
}\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
*\n@\Deprecated("The function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'indexOfFirst { it == element }' instead to continue using this behavior, or '.asList().indexOf(element: T)' to get the same search behavior as in a list.")\n, ReplaceWith("indexOfFirst { it == element }\n"))\n@\DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6", hiddenSince = "1.7")\npublic fun FloatArray.indexOf(element: Float): Int {\n    for (index in indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
*\n@\Deprecated("The function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'indexOfFirst { it == element }' instead to continue using this behavior, or '.asList().indexOf(element: T)' to get the same search behavior as in a list.")\n, ReplaceWith("indexOfFirst { it == element }\n"))\n@\DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6", hiddenSince = "1.7")\npublic fun DoubleArray.indexOf(element: Double): Int {\n    for (index in indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
*\npublic fun BooleanArray.indexOf(element: Boolean): Int {\n    for (index in indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
*\npublic fun CharArray.indexOf(element: Char): Int {\n    for (index in indices) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun <T> Array<out T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun ByteArray.indexOfFirst(predicate: (Byte) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun ShortArray.indexOfFirst(predicate: (Short) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun IntArray.indexOfFirst(predicate: (Int) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun LongArray.indexOfFirst(predicate: (Long) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun FloatArray.indexOfFirst(predicate: (Float) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun DoubleArray.indexOfFirst(predicate: (Double) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun BooleanArray.indexOfFirst(predicate: (Boolean) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun CharArray.indexOfFirst(predicate: (Char) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
*\npublic inline fun <T>

```

```

Array<out T>.indexOfLast(predicate: (T) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun ByteArray.indexOfLast(predicate: (Byte) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun ShortArray.indexOfLast(predicate: (Short) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun IntArray.indexOfLast(predicate: (Int) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun LongArray.indexOfLast(predicate: (Long) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun FloatArray.indexOfLast(predicate: (Float) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun DoubleArray.indexOfLast(predicate: (Double) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun BooleanArray.indexOfLast(predicate: (Boolean) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.

public inline fun CharArray.indexOfLast(predicate: (Char) -> Boolean): Int {
    for (index in indices.reversed()) {
        if (predicate(this[index])) {
            return index
        }
    }
    return -1
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun <T> Array<out T>.last(): T {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun ByteArray.last(): Byte {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun ShortArray.last(): Short {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun IntArray.last(): Int {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun LongArray.last(): Long {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun FloatArray.last(): Float {
    if (isEmpty()) {
        throw NoSuchElementException("Array is empty.")
    }
    return this[lastIndex]
}
// Returns the last element.
// @throws NoSuchElementException if the array is empty.
// @sample samples.collections.Collections.Elements.last

public fun DoubleArray.last(): Double {
    if (isEmpty()) {
        throw NoSuchElementException("Array is

```

```

empty.\\n    return this[lastIndex]\\n}\\n\\n/**\\n * Returns the last element.\\n * \\n * @throws
NoSuchElementException if the array is empty.\\n * \\n * @sample samples.collections.Collections.Elements.last\\n
*/\\npublic fun BooleanArray.last(): Boolean {\\n    if (isEmpty())\\n        throw NoSuchElementException("Array is
empty.\\")\\n    return this[lastIndex]\\n}\\n}\\n\\n/**\\n * Returns the last element.\\n * \\n * @throws
NoSuchElementException if the array is empty.\\n * \\n * @sample samples.collections.Collections.Elements.last\\n
*/\\npublic fun CharArray.last():
Char {\\n    if (isEmpty())\\n        throw NoSuchElementException("Array is empty.\\")\\n    return
this[lastIndex]\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun <T> Array<out T>.last(predicate: (T) ->
Boolean): T {\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if
(predicate(element)) return element\\n    }\\n    throw NoSuchElementException("Array contains no element
matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun ByteArray.last(predicate: (Byte) -> Boolean):
Byte {\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if
(predicate(element)) return element\\n    }\\n    throw NoSuchElementException("Array contains no element
matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun ShortArray.last(predicate: (Short) -> Boolean):
Short {\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if (predicate(element))
return element\\n    }\\n    throw NoSuchElementException("Array contains no element matching the
predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun IntArray.last(predicate: (Int) -> Boolean): Int
{\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if (predicate(element)) return element\\n    }\\n    throw NoSuchElementException("Array contains no element
matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun LongArray.last(predicate: (Long) -> Boolean):
Long {\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if (predicate(element))
return element\\n    }\\n    throw NoSuchElementException("Array contains no element matching the
predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun FloatArray.last(predicate: (Float) -> Boolean):
Float {\\n    for (index in this.indices.reversed()) {\\n        val element =
this[index]\\n        if (predicate(element)) return element\\n    }\\n    throw NoSuchElementException("Array contains
no element matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n *
@throws NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun DoubleArray.last(predicate: (Double) ->
Boolean): Double {\\n    for (index in this.indices.reversed()) {\\n        val element = this[index]\\n        if
(predicate(element)) return element\\n    }\\n    throw NoSuchElementException("Array contains no element
matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last element matching the given [predicate].\\n * \\n * @throws
NoSuchElementException if no such element is found.\\n * \\n * @sample
samples.collections.Collections.Elements.last\\n */\\npublic inline fun BooleanArray.last(predicate: (Boolean) ->
Boolean): Boolean {\\n    for (index in this.indices.reversed())
{\\n        val element = this[index]\\n        if (predicate(element)) return element\\n    }\\n    throw
NoSuchElementException("Array contains no element matching the predicate.\\")\\n}\\n}\\n\\n/**\\n * Returns the last

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element matching the given [predicate].\n * \n * @throws NoSuchElementException if no such element is found.\n
* \n * @sample samples.collections.Collections.Elements.last\n *^\npublic inline fun CharArray.last(predicate:
(Char) -> Boolean): Char {\n    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if
(predicate(element)) return element\n    }\n    throw NoSuchElementException("Array contains no element
matching the predicate.")\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain
element.\n *^\npublic fun <@kotlin.internal.OnlyInputTypes T> Array<out T>.lastIndexOf(element: T): Int {\n    if
(element == null) {\n        for (index in indices.reversed()) {\n            if (this[index] == null) {\n
                return index\n            }\n        }\n    } else {\n        for (index in indices.reversed()) {\n            if (element ==
this[index]) {\n                return index\n            }\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last index of
[element], or -1 if the array does not contain element.\n *^\npublic fun ByteArray.lastIndexOf(element: Byte): Int
{\n    for (index in indices.reversed()) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n *^\npublic fun
ShortArray.lastIndexOf(element: Short): Int {\n    for (index in indices.reversed()) {\n        if (element ==
this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last index of [element], or -1 if
the array does not contain element.\n *^\npublic fun IntArray.lastIndexOf(element: Int): Int {\n    for (index in
indices.reversed())
{\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last
index of [element], or -1 if the array does not contain element.\n *^\npublic fun LongArray.lastIndexOf(element:
Long): Int {\n    for (index in indices.reversed()) {\n        if (element == this[index]) {\n            return index\n
        }\n    }\n    return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n
*^\n@Deprecated("The function has unclear behavior when searching for NaN or zero values and will be removed
soon. Use 'indexOfLast { it == element }' instead to continue using this behavior, or '.asList().lastIndexOf(element:
T)' to get the same search behavior as in a list.", ReplaceWith("indexOfLast { it == element
}"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6", hiddenSince = "1.7")\npublic fun
FloatArray.lastIndexOf(element: Float): Int {\n    for (index in indices.reversed())
{\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last
index of [element], or -1 if the array does not contain element.\n *^\n@Deprecated("The function has unclear
behavior when searching for NaN or zero values and will be removed soon. Use 'indexOfLast { it == element }'
instead to continue using this behavior, or '.asList().lastIndexOf(element: T)' to get the same search behavior as in a
list.", ReplaceWith("indexOfLast { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.6", hiddenSince = "1.7")\npublic fun DoubleArray.lastIndexOf(element: Double): Int {\n    for
(index in indices.reversed()) {\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -
1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n *^\npublic fun
BooleanArray.lastIndexOf(element: Boolean): Int {\n    for (index in indices.reversed())
{\n        if (element == this[index]) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns last
index of [element], or -1 if the array does not contain element.\n *^\npublic fun CharArray.lastIndexOf(element:
Char): Int {\n    for (index in indices.reversed()) {\n        if (element == this[index]) {\n            return index\n        }\n
    }\n    return -1\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n *^\npublic fun <T> Array<out T>.lastOrNull(): T? {\n    return if
(isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n *^\npublic fun ByteArray.lastOrNull(): Byte? {\n    return
if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n *^\npublic fun ShortArray.lastOrNull(): Short? {\n    return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample
samples.collections.Collections.Elements.last\n *^\npublic fun IntArray.lastOrNull(): Int? {\n    return if (isEmpty())
null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample
samples.collections.Collections.Elements.last\n *^\npublic fun LongArray.lastOrNull(): Long? {\n    return if

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(isEmpty()) null else this[size - 1]\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n */\npublic fun FloatArray.lastOrNull(): Float? {\n return
if (isEmpty()) null else this[size - 1]\n\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n */\npublic fun DoubleArray.lastOrNull():
Double? {\n return if (isEmpty()) null else this[size - 1]\n\n}\n\n/**\n * Returns the last element, or `null` if the
array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n */\npublic fun
BooleanArray.lastOrNull(): Boolean? {\n return if (isEmpty()) null else this[size - 1]\n\n}\n\n/**\n * Returns the last
element, or `null` if the array is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n */\npublic
fun CharArray.lastOrNull(): Char? {\n return if (isEmpty()) null else this[size - 1]\n\n}\n\n/**\n * Returns the last
element matching the given [predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun <T> Array<out T>.lastOrNull(predicate: (T) ->
Boolean): T? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last
element matching the given [predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun ByteArray.lastOrNull(predicate: (Byte) ->
Boolean): Byte? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun ShortArray.lastOrNull(predicate: (Short) ->
Boolean): Short? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun IntArray.lastOrNull(predicate:
(Int) -> Boolean): Int? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun LongArray.lastOrNull(predicate: (Long) ->
Boolean): Long? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n *
@sample
samples.collections.Collections.Elements.last\n */\npublic inline fun FloatArray.lastOrNull(predicate: (Float) ->
Boolean): Float? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n *
@sample samples.collections.Collections.Elements.last\n */\npublic inline fun
CharArray.lastOrNull(predicate: (Char) -> Boolean): Char? {\n for (index in
this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n
return null\n}\n\n/**\n * Returns a random element from this array.\n * \n *
@throws NoSuchElementException if
this array is empty.\n * \n *
@SinceKotlin("1.3")\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.random(): T {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n *

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@throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.random(): Byte {\n    return\n    random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws\n    NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    inline fun ShortArray.random(): Short\n    {\n        return random(Random)\n    }\n\n/**\n * Returns a random element from this array.\n * \n * @throws\n    NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    inline fun IntArray.random(): Int {\n        return random(Random)\n    }\n\n/**\n * Returns a random element from this\n    array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.random(): Long {\n    return\n    random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws\n    NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    inline fun FloatArray.random(): Float {\n        return random(Random)\n    }\n\n/**\n * Returns a random element from\n    this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.random():\n    Double {\n        return random(Random)\n    }\n\n/**\n * Returns a random element from this\n    array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    inline fun BooleanArray.random(): Boolean {\n        return random(Random)\n    }\n\n/**\n * Returns a random element\n    from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.random():\n    Char {\n        return\n        random(Random)\n    }\n\n/**\n * Returns a random element from this\n    array using the specified source of\n    randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun <T> Array<out T>.random(random: Random): T {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array is empty.")\n        return get(random.nextInt(size))\n    }\n\n/**\n * Returns a random\n    element from this array using the\n    specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    ByteArray.random(random: Random): Byte {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array is\n            empty.")\n        return get(random.nextInt(size))\n    }\n\n/**\n * Returns a random element from this\n    array using the\n    specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    ShortArray.random(random: Random): Short {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array is\n            empty.")\n        return get(random.nextInt(size))\n    }\n\n/**\n * Returns a\n    random element from this array using\n    the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    IntArray.random(random: Random): Int {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array is\n            empty.")\n        return\n        get(random.nextInt(size))\n    }\n\n/**\n * Returns\n    a random element from this array\n    using the specified source of\n    randomness.\n * \n * @throws\n    NoSuchElementException if this array\n    is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    LongArray.random(random: Random): Long {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array is\n            empty.")\n        return\n        get(random.nextInt(size))\n    }\n\n/**\n * Returns a\n    random element from this array using\n    the\n    specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    FloatArray.random(random: Random): Float {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array\n            is empty.")\n        return\n        get(random.nextInt(size))\n    }\n\n/**\n * Returns a\n    random element from this array using\n    the\n    specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    DoubleArray.random(random: Random): Double {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array\n            is empty.")\n        return\n        get(random.nextInt(size))\n    }\n\n/**\n * Returns a\n    random element from this array using\n    the\n    specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic\n    fun\n    BooleanArray.random(random: Random): Boolean {\n        if (isEmpty())\n            throw\n            NoSuchElementException("Array\n            is empty.")\n        return\n        get(random.nextInt(size))\n    }\n

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throw NoSuchElementException("Array is empty.")\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a
random element from this array using the specified source of randomness.\n * \n * @throws
NoSuchElementException if this array is empty.\n */\n@SinceKotlin("1.3")\npublic fun
CharArray.random(random: Random): Char {\n    if (isEmpty())\n        throw NoSuchElementException("Array is
empty.")\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array, or `null` if
this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline
fun <T> Array<out T>.randomOrNull(): T? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random
element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun ByteArray.randomOrNull(): Byte? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random
element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun ShortArray.randomOrNull(): Short? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun IntArray.randomOrNull(): Int? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random
element from this array, or `null` if this array is
empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun LongArray.randomOrNull(): Long? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun FloatArray.randomOrNull(): Float? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun DoubleArray.randomOrNull(): Double? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this array, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun BooleanArray.randomOrNull():
Boolean? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if
this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun CharArray.randomOrNull(): Char? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <T> Array<out
T>.randomOrNull(random: Random): T? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
ByteArray.randomOrNull(random: Random): Byte? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
ShortArray.randomOrNull(random: Random): Short? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n */

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*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
IntArray.randomOrNull(random: Random): Int? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
LongArray.randomOrNull(random: Random): Long? {\n if (isEmpty())\n
return null\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using
the specified source of randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
FloatArray.randomOrNull(random: Random): Float? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
DoubleArray.randomOrNull(random: Random): Double? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
BooleanArray.randomOrNull(random:
Random): Boolean? {\n if (isEmpty())\n return null\n return get(random.nextInt(size))\n}\n\n/**\n *
Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
CharArray.randomOrNull(random: Random): Char? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or
has more than one element.\n */\npublic fun <T> Array<out T>.single(): T {\n return when (size) {\n 0 ->
throw NoSuchElementException("Array is empty.")\n 1 -> this[0]\n else -> throw
IllegalArgumentException("Array has more than one element.")\n }\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n */\npublic fun ByteArray.single(): Byte
{\n
return when (size) {\n 0 -> throw NoSuchElementException("Array is empty.")\n 1 -> this[0]\n else
-> throw IllegalArgumentException("Array has more than one element.")\n }\n}\n\n/**\n * Returns the single
element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun
ShortArray.single(): Short {\n return when (size) {\n 0 -> throw NoSuchElementException("Array is
empty.")\n 1 -> this[0]\n else -> throw IllegalArgumentException("Array has more than one element.")\n
}\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one
element.\n */\npublic fun IntArray.single(): Int {\n return when (size) {\n 0 -> throw
NoSuchElementException("Array is empty.")\n 1 -> this[0]\n else -> throw
IllegalArgumentException("Array has more than one element.")\n }\n}\n\n/**\n * Returns the single element, or
throws an exception if
the array is empty or has more than one element.\n */\npublic fun LongArray.single(): Long {\n return when
(size) {\n 0 -> throw NoSuchElementException("Array is empty.")\n 1 -> this[0]\n else -> throw
IllegalArgumentException("Array has more than one element.")\n }\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n */\npublic fun FloatArray.single(): Float
{\n return when (size) {\n 0 -> throw NoSuchElementException("Array is empty.")\n 1 -> this[0]\n
else -> throw IllegalArgumentException("Array has more than one element.")\n }\n}\n\n/**\n * Returns the
single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun
DoubleArray.single(): Double {\n return when (size) {\n 0 -> throw NoSuchElementException("Array is
empty.")\n 1 -> this[0]\n else -> throw IllegalArgumentException("Array

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has more than one element.}")\n } \n\n/n/**\n * Returns the single element, or throws an exception if the array is
empty or has more than one element.\n */\npublic fun BooleanArray.single(): Boolean {\n    return when (size) {\n        0 -> throw NoSuchElementException("Array is empty.")\n        1 -> this[0]\n        else -> throw
IllegalArgumentOutOfRangeException("Array has more than one element.")\n    } \n\n/n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n */\npublic fun CharArray.single(): Char
{\n    return when (size) {\n        0 -> throw NoSuchElementException("Array is empty.")\n        1 -> this[0]\n        else -> throw
IllegalArgumentOutOfRangeException("Array has more than one element.")\n    } \n\n/n/**\n * Returns the
single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n */\npublic inline fun <T> Array<out T>.single(predicate: (T) -> Boolean): T {\n
    var single: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if
(found) throw IllegalArgumentOutOfRangeException("Array contains more than one matching element.")\n            single =
element\n            found = true\n        } \n    } \n    if (!found) throw NoSuchElementException("Array contains no
element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as T\n}\n\n/n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one
matching element.\n */\npublic inline fun ByteArray.single(predicate: (Byte) -> Boolean): Byte {\n    var single:
Byte? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentOutOfRangeException("Array contains more than one matching element.")\n            single = element\n            found = true\n        } \n    } \n    if (!found) throw NoSuchElementException("Array
contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Byte\n}\n\n/n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or
more than one matching element.\n */\npublic inline fun ShortArray.single(predicate: (Short) -> Boolean): Short {\n
    var single: Short? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if
(found) throw IllegalArgumentOutOfRangeException("Array contains more than one matching element.")\n            single =
element\n            found = true\n        } \n    } \n    if (!found) throw NoSuchElementException("Array contains no
element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Short\n}\n\n/n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one
matching element.\n */\npublic inline fun IntArray.single(predicate:
(Int) -> Boolean): Int {\n    var single: Int? = null\n    var found = false\n    for (element in this) {\n        if
(predicate(element)) {\n            if (found) throw IllegalArgumentOutOfRangeException("Array contains more than one
matching element.")\n            single = element\n            found = true\n        } \n    } \n    if (!found) throw
NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Int\n}\n\n/n/**\n * Returns the single element matching
the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun
LongArray.single(predicate: (Long) -> Boolean): Long {\n    var single: Long? = null\n    var found = false\n    for
(element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentOutOfRangeException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        } \n    } \n    if (!found) throw
NoSuchElementException("Array contains no element matching the
predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Long\n}\n\n/n/**\n * Returns the single
element matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*/\npublic inline fun FloatArray.single(predicate: (Float) -> Boolean): Float {\n    var single: Float? = null\n    var
found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentOutOfRangeException("Array contains more than one matching element.")\n            single = element\n            found = true\n        } \n    } \n    if (!found) throw
NoSuchElementException("Array contains no element matching the
predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Float\n}\n\n/n/**\n * Returns the
single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n */\npublic inline fun DoubleArray.single(predicate: (Double) -> Boolean): Double {\n    var single:
Double? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found)
throw IllegalArgumentOutOfRangeException("Array contains more than one matching element.")\n            single = element\n

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        found = true\n    }\n    }\n    if (!found) throw NoSuchElementException("Array contains no element
matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Double\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one
matching element.\n */\npublic inline fun BooleanArray.single(predicate: (Boolean) -> Boolean): Boolean {\n    var
single: Boolean? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if
(found) throw IllegalArgumentException("Array contains more than one
matching element.")\n            single = element\n            found = true\n        }\n    }\n    if (!found) throw
NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Boolean\n}\n\n/**\n * Returns the single element
matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic
inline fun CharArray.single(predicate: (Char) -> Boolean): Char {\n    var single: Char? = null\n    var found =
false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentException("Array contains more than one matching element.")\n            single = element\n
found = true\n        }\n    }\n    if (!found) throw NoSuchElementException("Array contains no element matching
the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Char\n}\n\n/**\n * Returns single
element, or `null` if the
array is empty or has more than one element.\n */\npublic fun <T> Array<out T>.singleOrNull(): T? {\n    return if
(size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one
element.\n */\npublic fun ByteArray.singleOrNull(): Byte? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun
ShortArray.singleOrNull(): Short? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element,
or `null` if the array is empty or has more than one element.\n */\npublic fun IntArray.singleOrNull(): Int? {\n
return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n */\npublic fun LongArray.singleOrNull(): Long? {\n    return if (size == 1) this[0] else
null\n}\n\n/**\n * Returns single element, or `null` if the array is empty
or has more than one element.\n */\npublic fun FloatArray.singleOrNull(): Float? {\n    return if (size == 1) this[0]
else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\n
public fun DoubleArray.singleOrNull(): Double? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun
BooleanArray.singleOrNull(): Boolean? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single
element, or `null` if the array is empty or has more than one element.\n */\npublic fun CharArray.singleOrNull():
Char? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element matching the given
[predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun <T>
Array<out T>.singleOrNull(predicate: (T) -> Boolean): T? {\n    var single: T? = null\n    var found
= false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single =
element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n */\npublic inline fun ByteArray.singleOrNull(predicate: (Byte) -> Boolean): Byte? {\n    var single: Byte?
= null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return
null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return
single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or
more than one element was found.\n */\npublic inline fun ShortArray.singleOrNull(predicate: (Short) -> Boolean):
Short? {\n    var single: Short? = null\n
var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n
single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one
element was found.\n */\npublic inline fun IntArray.singleOrNull(predicate: (Int) -> Boolean): Int? {\n    var single:
Int? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return

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null\n      single = element\n      found = true\n    }\n }\n if (!found) return null\n return
single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or
more than one element was found.\n */\npublic inline fun LongArray.singleOrNull(predicate: (Long) -> Boolean):
Long? {\n  var single: Long? =
  null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if (found) return null\n
      single = element\n      found = true\n    }\n }\n if (!found) return null\n return single\n}\n\n/**\n *
Returns the single element matching the given [predicate], or `null` if element was not found or more than one
element was found.\n */\npublic inline fun FloatArray.singleOrNull(predicate: (Float) -> Boolean): Float? {\n  var
single: Float? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if
(found) return null\n      single = element\n      found = true\n    }\n }\n if (!found) return null\n return
single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or
more than one element was found.\n */\npublic inline fun DoubleArray.singleOrNull(predicate: (Double) ->
Boolean): Double? {\n
  var single: Double? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if
(found) return null\n      single = element\n      found = true\n    }\n }\n if (!found) return null\n return
single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or
more than one element was found.\n */\npublic inline fun BooleanArray.singleOrNull(predicate: (Boolean) ->
Boolean): Boolean? {\n  var single: Boolean? = null\n  var found = false\n  for (element in this) {\n    if
(predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n }\n
if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or
`null` if element was not found or more than one element was found.\n */\npublic inline fun
CharArray.singleOrNull(predicate: (Char) ->
Boolean): Char? {\n  var single: Char? = null\n  var found = false\n  for (element in this) {\n    if
(predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n }\n
if (!found) return null\n return single\n}\n\n/**\n * Returns a list containing all elements except first [n]
elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Array<out T>.drop(n: Int): List<T> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun ByteArray.drop(n: Int): List<Byte> {\n
require(n >= 0) { \"Requested element count
$n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all
elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun ShortArray.drop(n: Int): List<Short> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun IntArray.drop(n: Int): List<Int> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun LongArray.drop(n: Int):
List<Long> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun FloatArray.drop(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -

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n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun DoubleArray.drop(n: Int): List<Double> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return
takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n
* \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun BooleanArray.drop(n: Int): List<Boolean>
{\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun CharArray.drop(n: Int): List<Char> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\npublic fun <T> Array<out T>.dropLast(n: Int): List<T> {\n
require(n >= 0) { \"Requested element count $n is
less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements
except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun ByteArray.dropLast(n: Int): List<Byte> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun ShortArray.dropLast(n: Int): List<Short> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n]
is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n *\npublic fun
IntArray.dropLast(n: Int): List<Int> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n
return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n]
elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun LongArray.dropLast(n: Int): List<Long> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic
fun FloatArray.dropLast(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than
zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last
[n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun DoubleArray.dropLast(n: Int): List<Double>
{\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun BooleanArray.dropLast(n: Int):
List<Boolean> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing
all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n *
@sample samples.collections.Collections.Transformations.drop\n *\npublic fun CharArray.dropLast(n: Int):
List<Char> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size -

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n).coerceAtLeast(0))\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given
[predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n * \npublic inline fun <T>
Array<out T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n    for (index in lastIndex downTo 0) {\n        if
(!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns
a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun ByteArray.dropLastWhile(predicate:
(Byte) -> Boolean): List<Byte> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n
        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun ShortArray.dropLastWhile(predicate:
(Short) -> Boolean): List<Short> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n
        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun IntArray.dropLastWhile(predicate:
(Int) -> Boolean): List<Int> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index]))
{\n        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all
elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun LongArray.dropLastWhile(predicate:
(Long) -> Boolean): List<Long> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n
        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun FloatArray.dropLastWhile(predicate:
(Float) -> Boolean): List<Float> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n
        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except
last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun DoubleArray.dropLastWhile(predicate:
(Double) -> Boolean): List<Double> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n
        return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun
BooleanArray.dropLastWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n    for (index in lastIndex
downTo 0) {\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return
emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given
[predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n * \npublic inline fun
CharArray.dropLastWhile(predicate: (Char) -> Boolean): List<Char> {\n    for (index in
lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return
emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given
[predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n * \npublic inline fun <T>
Array<out T>.dropWhile(predicate: (T) -> Boolean): List<T> {\n    var yielding = false\n    val list =
ArrayList<T>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n
        list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing all elements
except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n * \npublic inline fun ByteArray.dropWhile(predicate:
(Byte) -> Boolean): List<Byte> {\n    var yielding = false\n    val list = ArrayList<Byte>()\n    for (item in this)\n
    if (yielding)\n        list.add(item)\n    else if (!predicate(item)) {\n        list.add(item)\n        yielding =
true\n    }\n    return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the
given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n * \npublic inline fun

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ShortArray.dropWhile(predicate: (Short) -> Boolean): List<Short> {\n  var yielding = false\n  val list =
ArrayList<Short>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing all
elements except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun IntArray.dropWhile(predicate: (Int) -> Boolean): List<Int> {\n  var yielding = false\n  val
list = ArrayList<Int>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing all
elements except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun LongArray.dropWhile(predicate:
(Long) -> Boolean): List<Long> {\n  var yielding = false\n  val list = ArrayList<Long>()\n  for (item in this)\n
if (yielding)\n  list.add(item)\n  else if (!predicate(item))\n  {\n    list.add(item)\n    yielding =
true\n  }\n  return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the
given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun FloatArray.dropWhile(predicate: (Float) -> Boolean): List<Float> {\n  var yielding = false\n  val list =
ArrayList<Float>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing all
elements except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun DoubleArray.dropWhile(predicate:
(Double) -> Boolean): List<Double> {\n  var yielding = false\n  val list = ArrayList<Double>()\n  for (item in
this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing all elements
except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun BooleanArray.dropWhile(predicate:
(Boolean) -> Boolean): List<Boolean> {\n  var yielding = false\n  val list = ArrayList<Boolean>()\n  for (item in
this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing all elements except first elements that
satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*/\n\npublic inline fun CharArray.dropWhile(predicate: (Char) -> Boolean): List<Char> {\n  var yielding = false\n  val list =
ArrayList<Char>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      {\n        list.add(item)\n        yielding = true\n      }\n  return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun <T> Array<out T>.filter(predicate: (T) ->
Boolean): List<T> {\n  return filterTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only
elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun ByteArray.filter(predicate: (Byte) -> Boolean): List<Byte> {\n  return
filterTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given
[predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun ShortArray.filter(predicate: (Short) -> Boolean): List<Short> {\n  return filterTo(ArrayList<Short>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun IntArray.filter(predicate: (Int) -> Boolean): List<Int> {\n  return filterTo(ArrayList<Int>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun LongArray.filter(predicate: (Long) ->
Boolean): List<Long> {\n  return filterTo(ArrayList<Long>(), predicate)\n}\n\n/**\n * Returns a list containing
only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*/\n\npublic inline fun FloatArray.filter(predicate: (Float) -> Boolean): List<Float> {\n  return

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filterTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given
[predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun
DoubleArray.filter(predicate: (Double) -> Boolean): List<Double> {\n    return
    filterTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given
[predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun
BooleanArray.filter(predicate: (Boolean) -> Boolean): List<Boolean> {\n    return filterTo(ArrayList<Boolean>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n */\npublic inline fun CharArray.filter(predicate: (Char) ->
Boolean): List<Char> {\n    return filterTo(ArrayList<Char>(), predicate)\n}\n\n/**\n * Returns a list containing
only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element
and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun <T> Array<out
T>.filterIndexed(predicate:
(index: Int, T) -> Boolean): List<T> {\n    return filterIndexedTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns
a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index
of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n *
@sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun
ByteArray.filterIndexed(predicate: (index: Int, Byte) -> Boolean): List<Byte> {\n    return
filterIndexedTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun ShortArray.filterIndexed(predicate:
(index: Int, Short) -> Boolean): List<Short>
{\n    return filterIndexedTo(ArrayList<Short>(), predicate)\n}\n\n/**\n * Returns a list containing only elements
matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element
itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun IntArray.filterIndexed(predicate:
(index: Int, Int) -> Boolean): List<Int> {\n    return filterIndexedTo(ArrayList<Int>(), predicate)\n}\n\n/**\n *
Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes
the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n *
\n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun
LongArray.filterIndexed(predicate: (index: Int, Long) -> Boolean): List<Long> {\n    return
filterIndexedTo(ArrayList<Long>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic
inline fun FloatArray.filterIndexed(predicate: (index: Int, Float) -> Boolean): List<Float> {\n    return
filterIndexedTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun DoubleArray.filterIndexed(predicate:
(index: Int, Double) -> Boolean): List<Double> {\n    return filterIndexedTo(ArrayList<Double>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic
inline fun
BooleanArray.filterIndexed(predicate: (index: Int, Boolean) -> Boolean): List<Boolean> {\n    return
filterIndexedTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching

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the given [predicate].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexed\n \*/\npublic inline fun CharArray.filterIndexed(predicate: (index: Int, Char) -> Boolean): List<Char> {\n return filterIndexedTo(ArrayList<Char>(), predicate)\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterIndexedTo(destination: C, predicate: (index: Int, Byte) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterIndexedTo(destination: C, predicate: (index: Int, Short) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Int>> IntArray.filterIndexedTo(destination: C, predicate: (index: Int, Int) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Long>> LongArray.filterIndexedTo(destination: C, predicate: (index: Int, Long) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Float>> FloatArray.filterIndexedTo(destination: C, predicate: (index: Int, Float) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterIndexedTo(destination: C, predicate: (index: Int, Double) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements matching the given [predicate] to the given [destination].\n \* @param [predicate] function that takes the index of an element and the element itself\n \* and returns the result of predicate evaluation on the element.\n \* \n \* @sample samples.collections.Collections.Filtering.filterIndexedTo\n \*/\npublic inline fun <C : MutableCollection<in<

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Boolean>> BooleanArray.filterIndexedTo(destination: C, predicate: (index: Int, Boolean) -> Boolean): C {\n
forEachIndexed { index, element ->\n    if (predicate(index, element)) destination.add(element)\n } \n return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *
@param [predicate] function that takes the index of an element and
the element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n */\npublic inline fun <C : MutableCollection<in Char>>
CharArray.filterIndexedTo(destination: C, predicate: (index: Int, Char) -> Boolean): C {\n    forEachIndexed {
index, element ->\n        if (predicate(index, element)) destination.add(element)\n    } \n return
destination\n}\n\n/**\n * Returns a list containing all elements that are instances of specified type parameter R.\n *
\n * @sample samples.collections.Collections.Filtering.filterIsInstance\n */\npublic inline fun <reified R>
Array<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\n    return
filterIsInstanceTo(ArrayList<R>())\n}\n\n/**\n * Appends all elements that are instances of specified type
parameter R to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterIsInstanceTo\n */\npublic inline fun <reified R, C
: MutableCollection<in R>> Array<*>.filterIsInstanceTo(destination: C): C {\n    for (element in this) if (element is
R) destination.add(element)\n    return destination\n}\n\n/**\n * Returns a list containing all elements not matching
the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun <T>
Array<out T>.filterNot(predicate: (T) -> Boolean): List<T> {\n    return filterNotTo(ArrayList<T>(),
predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n */\npublic inline fun ByteArray.filterNot(predicate: (Byte) ->
Boolean): List<Byte> {\n    return filterNotTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing
all elements not matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n
*/\npublic inline fun ShortArray.filterNot(predicate: (Short) -> Boolean): List<Short>
{\n    return filterNotTo(ArrayList<Short>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not
matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline
fun IntArray.filterNot(predicate: (Int) -> Boolean): List<Int> {\n    return filterNotTo(ArrayList<Int>(),
predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n */\npublic inline fun LongArray.filterNot(predicate: (Long) ->
Boolean): List<Long> {\n    return filterNotTo(ArrayList<Long>(), predicate)\n}\n\n/**\n * Returns a list
containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n */\npublic inline fun FloatArray.filterNot(predicate: (Float) ->
Boolean): List<Float> {\n    return filterNotTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list
containing all elements
not matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic
inline fun DoubleArray.filterNot(predicate: (Double) -> Boolean): List<Double> {\n    return
filterNotTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the
given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun
BooleanArray.filterNot(predicate: (Boolean) -> Boolean): List<Boolean> {\n    return
filterNotTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the
given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun
CharArray.filterNot(predicate: (Char) -> Boolean): List<Char> {\n    return filterNotTo(ArrayList<Char>(),
predicate)\n}\n\n/**\n * Returns a list containing all elements that are not `null`.\n * \n * @sample
samples.collections.Collections.Filtering.filterNotNull\n
*/\npublic fun <T : Any> Array<out T?>.filterNotNull(): List<T> {\n    return
filterNotNullTo(ArrayList<T>())\n}\n\n/**\n * Appends all elements that are not `null` to the given [destination].\n
\n * @sample samples.collections.Collections.Filtering.filterNotNullTo\n */\npublic fun <C :
MutableCollection<in T>, T : Any> Array<out T?>.filterNotNullTo(destination: C): C {\n    for (element in this) if
(element != null) destination.add(element)\n    return destination\n}\n\n/**\n * Appends all elements not matching

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the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterNotTo(destination: C, predicate: (T) ->
Boolean): C {\n  for (element in this) if (!predicate(element)) destination.add(element)\n  return
destination}\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterNotTo(destination: C, predicate: (Byte) ->
Boolean): C {\n  for (element in this) if (!predicate(element)) destination.add(element)\n  return
destination}\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterNotTo(destination: C, predicate: (Short) -> Boolean): C {\n  for (element in this) if
(!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Int>>
IntArray.filterNotTo(destination: C, predicate: (Int) -> Boolean): C {\n  for (element in this)
if (!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Long>>
LongArray.filterNotTo(destination: C, predicate: (Long) -> Boolean): C {\n  for (element in this) if
(!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Float>>
FloatArray.filterNotTo(destination: C, predicate: (Float) -> Boolean): C {\n  for (element in this) if
(!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterNotTo(destination: C, predicate:
(Double) -> Boolean): C {\n  for (element in this) if (!predicate(element)) destination.add(element)\n  return
destination}\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterNotTo(destination: C, predicate: (Boolean) -> Boolean): C {\n  for (element in this)
if (!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Char>>
CharArray.filterNotTo(destination: C, predicate: (Char) -> Boolean): C {\n  for (element in this)
if (!predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <T, C : MutableCollection<in T>>
Array<out T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n  for (element in this) if
(predicate(element)) destination.add(element)\n  return destination}\n}\n\n/**\n * Appends all elements matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterTo(destination: C, predicate: (Byte) ->
Boolean): C {\n  for (element in this) if (predicate(element)) destination.add(element)\n  return
destination}\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterTo(destination: C, predicate: (Short) ->
Boolean): C {\n  for (element in this) if (predicate(element)) destination.add(element)\n  return
destination}\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Int>>

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IntArray.filterTo(destination: C, predicate: (Int) -> Boolean): C {\n  for (element in this) if (predicate(element))
destination.add(element)\n  return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to
the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n */\npublic inline fun
<C : MutableCollection<in Long>> LongArray.filterTo(destination: C, predicate: (Long) -> Boolean): C {\n  for
(element in this) if (predicate(element)) destination.add(element)\n
return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n
\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n */\npublic inline fun <C : MutableCollection<in
Float>> FloatArray.filterTo(destination: C, predicate: (Float) -> Boolean): C {\n  for (element in this) if
(predicate(element)) destination.add(element)\n  return destination\n}\n\n/**\n * Appends all elements matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*/\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterTo(destination: C, predicate: (Double)
-> Boolean): C {\n  for (element in this) if (predicate(element)) destination.add(element)\n  return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
\n * @sample samples.collections.Collections.Filtering.filterTo\n */\npublic inline fun <C :
MutableCollection<in Boolean>> BooleanArray.filterTo(destination: C, predicate: (Boolean) -> Boolean): C {\n
for (element in this) if (predicate(element)) destination.add(element)\n  return destination\n}\n\n/**\n * Appends
all elements matching the given [predicate] to the given [destination].\n * \n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n */\npublic inline fun <C : MutableCollection<in Char>>
CharArray.filterTo(destination: C, predicate: (Char) -> Boolean): C {\n  for (element in this) if
(predicate(element)) destination.add(element)\n  return destination\n}\n\n/**\n * Returns a list containing elements
at indices in the specified [indices] range.\n */\npublic fun <T> Array<out T>.slice(indices: IntRange): List<T> {\n
if (indices.isEmpty()) return listOf()\n  return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic
fun ByteArray.slice(indices:
IntRange): List<Byte> {\n  if (indices.isEmpty()) return listOf()\n  return copyOfRange(indices.start,
indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified
[indices] range.\n */\npublic fun ShortArray.slice(indices: IntRange): List<Short> {\n  if (indices.isEmpty())
return listOf()\n  return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list
containing elements at indices in the specified [indices] range.\n */\npublic fun IntArray.slice(indices: IntRange):
List<Int> {\n  if (indices.isEmpty()) return listOf()\n  return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic
fun LongArray.slice(indices: IntRange): List<Long> {\n  if (indices.isEmpty()) return listOf()\n  return
copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at
indices in the specified [indices] range.\n */\npublic fun
FloatArray.slice(indices: IntRange): List<Float> {\n  if (indices.isEmpty()) return listOf()\n  return
copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at
indices in the specified [indices] range.\n */\npublic fun DoubleArray.slice(indices: IntRange): List<Double> {\n
if (indices.isEmpty()) return listOf()\n  return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic
fun BooleanArray.slice(indices: IntRange): List<Boolean> {\n  if (indices.isEmpty()) return listOf()\n  return
copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at
indices in the specified [indices] range.\n */\npublic fun CharArray.slice(indices: IntRange): List<Char> {\n
if (indices.isEmpty()) return listOf()\n  return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun <T> Array<out
T>.slice(indices: Iterable<Int>): List<T> {\n  val size = indices.collectionSizeOrDefault(10)\n  if (size == 0)
return emptyList()\n  val list = ArrayList<T>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n
return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun
ByteArray.slice(indices: Iterable<Int>): List<Byte> {\n  val size = indices.collectionSizeOrDefault(10)\n  if (size

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== 0) return emptyList()\n  val list = ArrayList<Byte>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun\nShortArray.slice(indices: Iterable<Int>): List<Short> {\n  val size = indices.collectionSizeOrDefault(10)\n  if (size == 0) return emptyList()\n  val list = ArrayList<Short>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun\nIntArray.slice(indices: Iterable<Int>): List<Int> {\n  val size =\nindices.collectionSizeOrDefault(10)\n  if (size == 0) return emptyList()\n  val list = ArrayList<Int>(size)\n  for\n(index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at\nspecified [indices].\n */\npublic fun\nLongArray.slice(indices: Iterable<Int>): List<Long> {\n  val size =\nindices.collectionSizeOrDefault(10)\n  if (size == 0) return emptyList()\n  val list = ArrayList<Long>(size)\n  for\n(index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing\nelements at specified [indices].\n */\npublic fun\nFloatArray.slice(indices:\nIterable<Int>): List<Float> {\n  val size = indices.collectionSizeOrDefault(10)\n  if (size == 0) return\nemptyList()\n  val list = ArrayList<Float>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun\nDoubleArray.slice(indices: Iterable<Int>): List<Double> {\n  val size = indices.collectionSizeOrDefault(10)\n  if\n(size == 0) return emptyList()\n  val list = ArrayList<Double>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun\nBooleanArray.slice(indices: Iterable<Int>): List<Boolean> {\n  val size =\nindices.collectionSizeOrDefault(10)\n  if (size == 0) return emptyList()\n  val list = ArrayList<Boolean>(size)\n  for\n(index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun\nCharArray.slice(indices: Iterable<Int>):\nList<Char> {\n  val size = indices.collectionSizeOrDefault(10)\n  if (size == 0) return emptyList()\n  val list =\nArrayList<Char>(size)\n  for (index in indices) {\n    list.add(get(index))\n  }\n  return list\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun <T>\nArray<T>.sliceArray(indices: Collection<Int>): Array<T> {\n  val result = arrayOfNulls(this, indices.size)\n  var\ntargetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return\nresult\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun\nByteArray.sliceArray(indices: Collection<Int>): ByteArray {\n  val result = ByteArray(indices.size)\n  var\ntargetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++]\n= this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements of this array at\nspecified [indices].\n */\npublic fun\nShortArray.sliceArray(indices: Collection<Int>): ShortArray {\n  val result =\nShortArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] =\nthis[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements of this array at specified\n[indices].\n */\npublic fun\nIntArray.sliceArray(indices: Collection<Int>): IntArray {\n  val result =\nIntArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] =\nthis[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements of this array at specified\n[indices].\n */\npublic fun\nLongArray.sliceArray(indices: Collection<Int>): LongArray {\n  val result =\nLongArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices)\n{\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing\nelements of this array at specified [indices].\n */\npublic fun\nFloatArray.sliceArray(indices: Collection<Int>):\nFloatArray {\n  val result = FloatArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements\nof this array at specified [indices].\n */\npublic fun\nDoubleArray.sliceArray(indices: Collection<Int>): DoubleArray\n{\n  val result = DoubleArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements\nof this array at specified [indices].\n */\npublic fun\nBooleanArray.sliceArray(indices: Collection<Int>):\nBooleanArray {\n  val result = BooleanArray(indices.size)\n}

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var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n *\npublic fun CharArray.sliceArray(indices: Collection<Int>): CharArray {\n  val result = CharArray(indices.size)\n  var targetIndex = 0\n  for (sourceIndex in indices) {\n    result[targetIndex++] = this[sourceIndex]\n  }\n  return result\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun <T> Array<T>.sliceArray(indices: IntRange): Array<T> {\n  if (indices.isEmpty()) return copyOfRange(0, 0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun ByteArray.sliceArray(indices: IntRange): ByteArray {\n  if (indices.isEmpty()) return ByteArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun ShortArray.sliceArray(indices: IntRange): ShortArray {\n  if (indices.isEmpty()) return ShortArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun IntArray.sliceArray(indices: IntRange): IntArray {\n  if (indices.isEmpty()) return IntArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun LongArray.sliceArray(indices: IntRange): LongArray {\n  if (indices.isEmpty()) return LongArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun FloatArray.sliceArray(indices: IntRange): FloatArray {\n  if (indices.isEmpty()) return FloatArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun DoubleArray.sliceArray(indices: IntRange): DoubleArray {\n  if (indices.isEmpty()) return DoubleArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun BooleanArray.sliceArray(indices: IntRange): BooleanArray {\n  if (indices.isEmpty()) return BooleanArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n *\npublic fun CharArray.sliceArray(indices: IntRange): CharArray {\n  if (indices.isEmpty()) return CharArray(0)\n  return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns a list containing first [n] elements.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.take\n *\npublic fun <T> Array<out T>.take(n: Int): List<T> {\n  require(n >= 0) { "Requested element count $n is less than zero." }\n  if (n == 0) return emptyList()\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[0])\n  var count = 0\n  val list = ArrayList<T>(n)\n  for (item in this) {\n    list.add(item)\n    if (++count == n)\n      break\n  }\n  return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.take\n *\npublic fun ByteArray.take(n: Int): List<Byte> {\n  require(n >= 0) { "Requested element count $n is less than zero." }\n  if (n == 0) return emptyList()\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[0])\n  var count = 0\n  val list = ArrayList<Byte>(n)\n  for (item in this) {\n    list.add(item)\n    if (++count == n)\n      break\n  }\n  return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.take\n *\npublic fun ShortArray.take(n: Int): List<Short> {\n  require(n >= 0) { "Requested element count $n is less than zero." }\n  if (n == 0) return emptyList()\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[0])\n  var count = 0\n  val list = ArrayList<Short>(n)\n  for (item in this) {\n    list.add(item)\n    if (++count == n)\n      break\n  }\n  return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.take\n *\npublic fun IntArray.take(n: Int): List<Int> {\n  require(n >= 0) { "Requested element count $n is less than zero." }\n  if (n == 0) return emptyList()\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[0])\n  var count = 0\n  val list = ArrayList<Int>(n)\n  for (item in this) {\n    list.add(item)\n    if (++count == n)\n
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break\n } \n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun LongArray.take(n: Int): List<Long> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<Long>(n)\n for
(item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun FloatArray.take(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<Float>(n)\n for
(item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun DoubleArray.take(n: Int): List<Double> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n
if (n == 0) return emptyList()\n if (n >= size) return toList()\n if (n == 1) return listOf(this[0])\n var count =
0\n val list = ArrayList<Double>(n)\n for (item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun BooleanArray.take(n: Int): List<Boolean> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<Boolean>(n)\n
for (item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun CharArray.take(n: Int): List<Char> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<Char>(n)\n for
(item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun <T> Array<out T>.takeLast(n: Int): List<T>
{\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val
size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list =
ArrayList<T>(n)\n
for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing
last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun ByteArray.takeLast(n: Int): List<Byte> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size =
size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<Byte>(n)\n
for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last
[n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun ShortArray.takeLast(n: Int): List<Short> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\"
}\n
if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return
listOf(this[size - 1])\n val list = ArrayList<Short>(n)\n for (index in size - n until size)\n
list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic fun IntArray.takeLast(n: Int): List<Int> {\n

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require(n >= 0) { \"Requested element count $n is less than zero.\" } \n  if (n == 0) return emptyList()\n  val size =
size\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[size - 1])\n  val list = ArrayList<Int>()\n
for (index in size - n until size)\n    list.add(this[index])\n  return list\n}\n\n/**\n * Returns a list containing last
[n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic fun LongArray.takeLast(n: Int): List<Long> {\n  require(n >= 0) { \"Requested element count $n is less
than zero.\" }\n  if (n == 0) return emptyList()\n  val size = size\n  if (n >= size) return toList()\n  if (n == 1)
return listOf(this[size - 1])\n  val list = ArrayList<Long>()\n  for (index in size - n until size)\n
list.add(this[index])\n  return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic fun FloatArray.takeLast(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  if (n == 0) return emptyList()\n  val size =
size\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[size - 1])\n  val list = ArrayList<Float>()\n
for (index in size - n until size)\n    list.add(this[index])\n
return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if
[n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\npublic fun
DoubleArray.takeLast(n: Int): List<Double> {\n  require(n >= 0) { \"Requested element count $n is less than
zero.\" }\n  if (n == 0) return emptyList()\n  val size = size\n  if (n >= size) return toList()\n  if (n == 1) return
listOf(this[size - 1])\n  val list = ArrayList<Double>()\n  for (index in size - n until size)\n
list.add(this[index])\n  return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic fun BooleanArray.takeLast(n: Int):
List<Boolean> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  if (n == 0) return
emptyList()\n  val
size = size\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[size - 1])\n  val list =
ArrayList<Boolean>()\n  for (index in size - n until size)\n    list.add(this[index])\n  return list\n}\n\n/**\n *
Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n *
@sample samples.collections.Collections.Transformations.take\n
*/\npublic fun CharArray.takeLast(n: Int):
List<Char> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  if (n == 0) return
emptyList()\n  val size = size\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[size - 1])\n  val list
= ArrayList<Char>()\n  for (index in size - n until size)\n    list.add(this[index])\n  return list\n}\n\n/**\n *
Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic inline fun <T> Array<out
T>.takeLastWhile(predicate: (T) -> Boolean): List<T> {\n  for (index in lastIndex downTo 0) {\n    if
(!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a
list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic inline fun ByteArray.takeLastWhile(predicate:
(Byte) -> Boolean): List<Byte> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements
satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\npublic
inline fun ShortArray.takeLastWhile(predicate: (Short) -> Boolean): List<Short> {\n  for (index in lastIndex
downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n *
Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\npublic inline fun
IntArray.takeLastWhile(predicate: (Int) -> Boolean): List<Int> {\n  for (index in lastIndex downTo 0) {\n    if
(!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a
list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\npublic inline fun LongArray.takeLastWhile(predicate:

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(Long) -> Boolean): List<Long> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements\n * satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun FloatArray.takeLastWhile(predicate: (Float) -> Boolean): List<Float> {\n  for (index in\n  lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return\n  toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun DoubleArray.takeLastWhile(predicate:\n (Double) -> Boolean): List<Double> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements\n * satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun BooleanArray.takeLastWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n  for (index in\n  lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements\n * satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun CharArray.takeLastWhile(predicate: (Char) -> Boolean): List<Char> {\n  for (index in lastIndex\n  downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return\n  toList()\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun <T> Array<out\n T>.takeWhile(predicate: (T) -> Boolean): List<T> {\n  val list = ArrayList<T>()\n  for (item in this) {\n    if\n    (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first\n * elements satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun ByteArray.takeWhile(predicate: (Byte) -> Boolean): List<Byte> {\n  val list =\n  ArrayList<Byte>()\n  for (item in this) {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun ShortArray.takeWhile(predicate:\n (Short) -> Boolean): List<Short> {\n  val list = ArrayList<Short>()\n  for (item in this) {\n    if\n    (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first\n * elements satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun IntArray.takeWhile(predicate: (Int) -> Boolean): List<Int> {\n  val list = ArrayList<Int>()\n  for (item in this)\n    {\n      if (!predicate(item))\n        break\n      list.add(item)\n    }\n  return list\n}\n\n/**\n * Returns a list\n * containing first elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun LongArray.takeWhile(predicate:\n (Long) -> Boolean): List<Long> {\n  val list = ArrayList<Long>()\n  for (item in this) {\n    if\n    (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first\n * elements satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun FloatArray.takeWhile(predicate: (Float) -> Boolean): List<Float> {\n  val list =\n  ArrayList<Float>()\n  for (item in this) {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun\n * DoubleArray.takeWhile(predicate: (Double) -> Boolean): List<Double> {\n  val list = ArrayList<Double>()\n  for (item in this) {\n    if\n    (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n */\n * @sample\n * samples.collections.Collections.Transformations.take\n */\npublic inline fun BooleanArray.takeWhile(predicate:\n (Boolean) -> Boolean): List<Boolean> {\n  val list = ArrayList<Boolean>()\n  for (item in this) {\n    if\n    (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first\n * elements satisfying the given [predicate].\n */\n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun CharArray.takeWhile(predicate: (Char) -> Boolean): List<Char> {\n  val

```





of the range (inclusive) to reverse.\n \* @param toIndex the end of the range (exclusive) to reverse.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n@SinceKotlin("1.4")\npublic fun CharArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n val midPoint = (fromIndex + toIndex) / 2\n if (fromIndex == midPoint) return\n var reverseIndex = toIndex - 1\n for (index in fromIndex until midPoint) {\n val tmp = this[index]\n this[index] = this[reverseIndex]\n this[reverseIndex] = tmp\n reverseIndex--\n }\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun <T> Array<out T>.reversed(): List<T> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun ByteArray.reversed(): List<Byte> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun ShortArray.reversed(): List<Short> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun IntArray.reversed(): List<Int> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun LongArray.reversed(): List<Long> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun FloatArray.reversed(): List<Float> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun DoubleArray.reversed(): List<Double> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun BooleanArray.reversed(): List<Boolean> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns a list with elements in reversed order.\n \*/\npublic fun CharArray.reversed(): List<Char> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun <T> Array<T>.reversedArray(): Array<T> {\n if (isEmpty()) return this\n val result = arrayOfNulls(this, size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun ByteArray.reversedArray(): ByteArray {\n if (isEmpty()) return this\n val result = ByteArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun ShortArray.reversedArray(): ShortArray {\n if (isEmpty()) return this\n val result = ShortArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun IntArray.reversedArray(): IntArray {\n if (isEmpty()) return this\n val result = IntArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun LongArray.reversedArray(): LongArray {\n if (isEmpty()) return this\n val result = LongArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun FloatArray.reversedArray(): FloatArray {\n if (isEmpty()) return this\n val result = FloatArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun DoubleArray.reversedArray(): DoubleArray {\n if (isEmpty()) return this\n val result = DoubleArray(size)\n val lastIndex = lastIndexOf\n for (i in 0..lastIndex)\n result[lastIndex - i] = this[i]\n return result\n}\n\n/\*\*\n \* Returns an array with elements of this array in reversed order.\n \*/\npublic fun BooleanArray.reversedArray(): BooleanArray {\n if (isEmpty()) return this\n val result = BooleanArray(size)\n val lastIndex = lastIndexOf\n



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    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n * Returns an array with
elements of this array in reversed order.\n */\npublic fun CharArray.reversedArray(): CharArray {\n    if (isEmpty())\n    return this\n    val result = CharArray(size)\n    val lastIndex = lastIndex\n    for (i in 0..lastIndex)\n    result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun <T> Array<T>.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun ByteArray.shuffle():\nUnit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun ShortArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun IntArray.shuffle():\nUnit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun LongArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun FloatArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun DoubleArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun BooleanArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n@SinceKotlin("1.4")\npublic fun CharArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place using the specified [random] instance as the source of randomness.\n */\n * See: https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic fun <T> Array<T>.shuffle(random: Random): Unit {\n    for (i in lastIndex
downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the
source of randomness.\n */\n * See:\nhttps://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic fun ByteArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo
1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the
source of randomness.\n */\n * See:\nhttps://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic\nfun ShortArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i
+ 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles
elements in this array in-place using the specified [random] instance as the source of randomness.\n */\n * See:\nhttps://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic fun IntArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1)
{\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the
source of randomness.\n */\n * See:\nhttps://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic fun LongArray.shuffle(random: Random): Unit {\n    for
(i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random]
instance as the source of randomness.\n */\n * See:\nhttps://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm\n */\n@SinceKotlin("1.4")\npublic fun FloatArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo
1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the
source of randomness.\n */\n * See:

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[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)

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*\n@SinceKotlin("1.4")\npublic fun DoubleArray.shuffle(random: Random): Unit {\n    for (i in lastIndex\n        downTo 1) {\n        val j = random.nextInt(i\n            + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles\n * elements in this array in-place using the specified [random] instance as the source of randomness.\n * See:\n * https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\_shuffle#The\_modern\_algorithm
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*\n@SinceKotlin("1.4")\npublic fun BooleanArray.shuffle(random: Random): Unit {\n    for (i in lastIndex\n        downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the\n * source of randomness.\n * See:
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[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)

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*\n@SinceKotlin("1.4")\npublic fun CharArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo\n        1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Sorts elements in the array in-place according to natural sort order of the\n * value returned by specified [selector] function.\n * The sort is _stable_. It means that equal elements preserve\n * their order relative to each other after sorting.\n */\n\npublic inline fun <T, R : Comparable<R>> Array<out\n    T>.sortBy(crossinline selector: (T) -> R?): Unit {\n    if (size > 1) sortByWith(compareBy(selector))\n}\n\n/**\n * Sorts elements in the array in-place descending according to natural sort order of the value returned by specified\n * [selector] function.\n * The sort is _stable_. It means that equal elements preserve their order relative to each\n * other after sorting.\n */\n\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortByDescending(crossinline\n    selector: (T) -> R?): Unit {\n    if (size > 1) sortByWith(compareByDescending(selector))\n}\n\n/**\n * Sorts elements\n * in the array in-place descending according to their natural sort order.\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\n\npublic fun <T : Comparable<T>> Array<out T>.sortDescending(): Unit {\n    sortByDescending(reverseOrder())\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural\n * sort order.\n */\n\npublic fun ByteArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n\npublic fun ShortArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts\n * elements in the array in-place descending according to their natural sort order.\n */\n\npublic fun IntArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements\n * in the array in-place descending according to their natural sort order.\n */\n\npublic fun LongArray.sortDescending():\n    Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements in the array in-place\n * descending according to their natural sort order.\n */\n\npublic fun FloatArray.sortDescending(): Unit {\n    if (size >\n        1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements in the array in-place descending according to\n * their natural sort order.\n */\n\npublic fun DoubleArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n\npublic fun CharArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n * The sort is _stable_. It means that\n * equal elements preserve their order relative to each other after sorting.\n */\n\npublic fun <T : Comparable<T>>\n    Array<out T>.sorted():\n    List<T> {\n    return sortedArray().asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their\n * natural sort order.\n */\n\npublic fun ByteArray.sorted(): List<Byte> {\n    return toTypedArray().apply { sort() }\n}.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n\npublic fun ShortArray.sorted(): List<Short> {\n    return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of\n * all elements sorted according to their natural sort order.\n */\n\npublic fun IntArray.sorted(): List<Int> {\n    return\n    toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural\n * sort order.\n */\n\npublic fun LongArray.sorted(): List<Long> {\n    return toTypedArray().apply { sort() }\n}.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n\npublic fun
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FloatArray.sorted(): List<Float> {\n  return toTypedArray().apply
{ sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n
*/\n\npublic fun DoubleArray.sorted(): List<Double> {\n  return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n
*/\n\npublic fun CharArray.sorted():
List<Char> {\n  return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns an array with all elements of
this array sorted according to their natural sort order.\n
*/\n * The sort is _stable_. It means that equal elements
preserve their order relative to each other after sorting.\n
*/\n\npublic fun <T : Comparable<T>>
Array<T>.sortedArray(): Array<T> {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort()
}\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun ByteArray.sortedArray(): ByteArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply
{ sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun ShortArray.sortedArray(): ShortArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun IntArray.sortedArray(): IntArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort()
}\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun LongArray.sortedArray(): LongArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun FloatArray.sortedArray(): FloatArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sort() }\n}\n\n/**\n * Returns
an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun
DoubleArray.sortedArray(): DoubleArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort()
}\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*/\n\npublic fun CharArray.sortedArray(): CharArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural
sort order.\n
*/\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after
sorting.\n
*/\n\npublic fun <T : Comparable<T>> Array<T>.sortedArrayDescending(): Array<T> {\n  if (isEmpty())
return this\n  return this.copyOf().apply { sortWith(reverseOrder()) }\n}\n\n/**\n * Returns an array with all
elements of this array sorted descending according to their natural sort order.\n
*/\n\npublic fun ByteArray.sortedArrayDescending(): ByteArray {\n  if (isEmpty()) return this\n  return
this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted
descending according to their natural sort order.\n
*/\n\npublic fun ShortArray.sortedArrayDescending(): ShortArray
{\n  if (isEmpty()) return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array
with all elements of this array sorted descending according to their natural sort order.\n
*/\n\npublic fun
IntArray.sortedArrayDescending(): IntArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to
their natural sort order.\n
*/\n\npublic fun LongArray.sortedArrayDescending(): LongArray {\n  if (isEmpty()) return
this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements
of this array sorted descending according to their natural sort order.\n
*/\n\npublic fun
FloatArray.sortedArrayDescending(): FloatArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to
their natural sort order.\n
*/\n\npublic fun DoubleArray.sortedArrayDescending(): DoubleArray {\n  if (isEmpty())
return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of
this array sorted descending according to their natural sort order.\n
*/\n\npublic fun
CharArray.sortedArrayDescending(): CharArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply {
sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according the specified
[comparator].\n
*/\n * The sort is _stable_. It means that equal elements preserve their order relative to each other
after sorting.\n
*/\n\npublic

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fun <T> Array<out T>.sortedArrayWith(comparator: Comparator<in T>): Array<out T> {\n  if (isEmpty()) return
this\n  return this.copyOf().apply { sortBy(comparator) }\n}\n\n/**\n * Returns a list of all elements sorted
according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <T, R : Comparable<R>> Array<out
T>.sortedBy(crossinline selector: (T) -> R?): List<T> {\n  return sortedWith(compareBy(selector))\n}\n\n/**\n *
Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector]
function.\n * \n * @sample samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R :
Comparable<R>> ByteArray.sortedBy(crossinline selector: (Byte) -> R?): List<Byte> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n *
Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector]
function.\n * \n * @sample samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R :
Comparable<R>> ShortArray.sortedBy(crossinline selector: (Short) -> R?): List<Short> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
IntArray.sortedBy(crossinline selector: (Int) -> R?): List<Int> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
LongArray.sortedBy(crossinline selector: (Long) -> R?): List<Long> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
FloatArray.sortedBy(crossinline selector: (Float) -> R?): List<Float> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
DoubleArray.sortedBy(crossinline selector: (Double) -> R?): List<Double> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
BooleanArray.sortedBy(crossinline selector: (Boolean) -> R?): List<Boolean> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order
of the value returned by specified [selector] function.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n */\npublic inline fun <R : Comparable<R>>
CharArray.sortedBy(crossinline selector: (Char) -> R?): List<Char> {\n  return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural
sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal
elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>>
Array<out T>.sortedByDescending(crossinline selector: (T) -> R?): List<T> {\n  return
sortedWith(compareByDescending(selector))\n}\n\n/**\n *
Returns a list of all elements sorted descending according to natural sort order of the value returned by specified
[selector] function.\n */\npublic inline fun <R : Comparable<R>> ByteArray.sortedByDescending(crossinline
selector: (Byte) -> R?): List<Byte> {\n  return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns
a list of all elements sorted descending according to natural sort order of the value returned by specified [selector]
function.\n */\npublic inline fun <R : Comparable<R>> ShortArray.sortedByDescending(crossinline selector:
(Short) -> R?): List<Short> {\n  return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of

```

all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> IntArray.sortedByDescending(crossinline selector: (Int) -> R?): List<Int> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> LongArray.sortedByDescending(crossinline selector: (Long) -> R?): List<Long> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> FloatArray.sortedByDescending(crossinline selector: (Float) -> R?): List<Float> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> DoubleArray.sortedByDescending(crossinline selector: (Double) -> R?): List<Double> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> BooleanArray.sortedByDescending(crossinline selector: (Boolean) -> R?): List<Boolean> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.

```

public inline fun <R : Comparable<R>> CharArray.sortedByDescending(crossinline selector: (Char) -> R?): List<Char> {
    return sortedWith(compareByDescending(selector))
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

\* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.

```

public fun <T : Comparable<T>> Array<out T>.sortedDescending(): List<T> {
    return sortedWith(reverseOrder())
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun ByteArray.sortedDescending(): List<Byte> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun ShortArray.sortedDescending(): List<Short> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun IntArray.sortedDescending(): List<Int> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun LongArray.sortedDescending(): List<Long> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun FloatArray.sortedDescending(): List<Float> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun DoubleArray.sortedDescending(): List<Double> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted descending according to their natural sort order.

```

public fun CharArray.sortedDescending(): List<Char> {
    return copyOf().apply { sort() }.reversed()
}

```

\* Returns a list of all elements sorted according to the specified [comparator].

\* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.

```

public fun <T> Array<out T>.sortedWith(comparator: Comparator<in T>): List<T> {
    return sortedArrayWith(comparator).asList()
}

```

\* Returns a list of all elements sorted according to the specified [comparator].

```

public fun ByteArray.sortedWith(comparator: Comparator<in Byte>): List<Byte> {
    return toTypedArray().apply { sortWith(comparator) }.asList()
}

```

\* Returns a list of all elements sorted according to the specified [comparator].

```

public fun ShortArray.sortedWith(comparator: Comparator<in Short>): List<Short> {
    return toTypedArray().apply { sortWith(comparator) }.asList()
}

```

\* Returns a list of all elements sorted according to the specified [comparator].

```

public fun IntArray.sortedWith(comparator: Comparator<in Int>): List<Int> {
    return toTypedArray().apply { sortWith(comparator) }.asList()
}

```

\* Returns a list of all elements sorted according to the specified [comparator].

```

public fun LongArray.sortedWith(comparator: Comparator<in Long>): List<Long> {
    return toTypedArray().apply { sortWith(comparator) }.asList()
}

```

\* Returns a list of all elements sorted according

to the specified [comparator].\n \*/\npublic fun FloatArray.sortedWith(comparator: Comparator<in Float>): List<Float>

{\n return toTypedArray().apply { sortedWith(comparator) }.asList()\n}\n\n\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun DoubleArray.sortedWith(comparator: Comparator<in Double>): List<Double> {\n return toTypedArray().apply { sortedWith(comparator) }.asList()\n}\n\n\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun BooleanArray.sortedWith(comparator: Comparator<in Boolean>): List<Boolean> {\n return toTypedArray().apply { sortedWith(comparator) }.asList()\n}\n\n\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun CharArray.sortedWith(comparator: Comparator<in Char>): List<Char> {\n return toTypedArray().apply { sortedWith(comparator) }.asList()\n}\n\n\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun <T> Array<out T>.asList(): List<T>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun ByteArray.asList(): List<Byte>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun ShortArray.asList(): List<Short>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun IntArray.asList(): List<Int>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun LongArray.asList(): List<Long>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun FloatArray.asList(): List<Float>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun DoubleArray.asList(): List<Double>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun BooleanArray.asList(): List<Boolean>\n\n\*\*\n \* Returns a [List] that wraps the original array.\n\n \*/\npublic expect fun CharArray.asList(): List<Char>\n\n\*\*\n \* Returns `true` if the two specified arrays are *deeply* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \* \n \* If two corresponding elements are nested arrays, they are also compared deeply.\n \* If any of arrays contains itself on any nesting level the behavior is undefined.\n \* \n \* The elements of other types are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n\n \*/\n\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect infix fun <T> Array<out T>.contentDeepEquals(other: Array<out T>): Boolean\n\n\*\*\n \* Returns `true` if the two specified arrays are *deeply* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \* \n \* The specified arrays are also considered deeply equal if both are `null`.\n \* \n \* If two corresponding elements are nested arrays, they are also compared deeply.\n \* If any of arrays contains itself on any nesting level the behavior is undefined.\n \* \n \* The elements of other types are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n\n \*/\n\n@SinceKotlin("1.4")\npublic expect infix fun <T> Array<out T>?.contentDeepEquals(other: Array<out T>?): Boolean\n\n\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \* Nested arrays are treated as lists too.\n \* \n \* If any of arrays contains itself on any nesting level the behavior is undefined.\n\n \*/\n\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect fun <T> Array<out T>.contentDeepHashCode(): Int\n\n\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \* Nested arrays are treated as lists too.\n \* \n \* If any of arrays contains itself on any nesting level the behavior is undefined.\n\n \*/\n\n@SinceKotlin("1.4")\npublic expect fun <T> Array<out T>?.contentDeepHashCode(): Int\n\n\*\*\n \* Returns a string representation of the contents of this array as if it is a [List].\n \* Nested arrays are treated as lists too.\n \* \n \* If any of arrays contains itself on any nesting level that reference\n \* is rendered as `[...]` to prevent recursion.\n \* \n \* @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n\n \*/\n\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect fun <T> Array<out T>.contentDeepToString(): String\n\n\*\*\n \* Returns a string representation of the contents of this array as if it is a [List].\n \* Nested arrays are treated as lists too.\n \* \n \* If any of arrays contains itself on any nesting level that reference\n \* is rendered as `[...]` to prevent recursion.\n \* \n \* @sample

`samples.collections.Arrays.ContentOperations.contentDeepToString`  
`<T> Array<out T>?.contentDeepToString(): String`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun <T> Array<out T>.contentEquals(other: Array<out T>): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun ByteArray.contentEquals(other: ByteArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun ShortArray.contentEquals(other: ShortArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun IntArray.contentEquals(other: IntArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun LongArray.contentEquals(other: LongArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun FloatArray.contentEquals(other: FloatArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun DoubleArray.contentEquals(other: DoubleArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order. The elements are compared for equality with the `[equals][Any.equals]` function. For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
`@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")`  
`@SinceKotlin("1.1")`  
`@DeprecatedSinceKotlin(hiddenSince = "1.4")`  
`public expect infix fun BooleanArray.contentEquals(other: BooleanArray): Boolean`  
 Returns `true` if the two specified arrays are \*structurally\* equal to one another, i.e. contain the same number of the same elements in the same order.

\* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect infix fun CharArray.contentEquals(other: CharArray): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun <T> Array<out T>?.contentEquals(other: Array<out T>?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun ByteArray?.contentEquals(other: ByteArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun ShortArray?.contentEquals(other: ShortArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun IntArray?.contentEquals(other: IntArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun LongArray?.contentEquals(other: LongArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun FloatArray?.contentEquals(other: FloatArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun DoubleArray?.contentEquals(other: DoubleArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun BooleanArray?.contentEquals(other: BooleanArray?): Boolean\n\n/\*\*\n \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \*/\n\n \* The elements are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n \*/\n@SinceKotlin("1.4")\npublic expect infix fun CharArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun <T> Array<out T>.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun



ByteArray.contentHashCode():

Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

ShortArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

IntArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

LongArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid

deprecation warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

FloatArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

DoubleArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

BooleanArray.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

CharArray.contentHashCode():

Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

<T> Array<out T>?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

ByteArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

ShortArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

IntArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

LongArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

FloatArray?.contentHashCode():

Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

DoubleArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

BooleanArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*\n \*\n @SinceKotlin("1.4")\n public expect fun

CharArray?.contentHashCode(): Int\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*\n \*\n @sample samples.collections.Arrays.ContentOperations.contentToString\n \*\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation

warning.\")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun

ByteArray.contentToString(): String\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*\n \*\n @sample samples.collections.Arrays.ContentOperations.contentToString\n

```

*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
ShortArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince
= "1.4")\npublic expect fun IntArray.contentToString(): String\n\n/**\n * Returns a string representation of the
contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect fun LongArray.contentToString(): String\n\n/**\n * Returns a string representation of the
specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
FloatArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
DoubleArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
BooleanArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
CharArray.contentToString(): String\n\n/**\n * Returns
a string representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun <T>
Array<out T>?.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun ByteArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun ShortArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic
expect fun IntArray?.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the
specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun LongArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun FloatArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\npublic expect fun DoubleArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n

```

\*  
`@SinceKotlin("1.4")`  
`public expect fun BooleanArray?.contentToString(): String`  
Returns a string representation of the contents of the specified array as if it is [List].  
@sample  
`samples.collections.Arrays.ContentOperations.contentToString`  
\*  
`@SinceKotlin("1.4")`  
`public expect fun CharArray?.contentToString(): String`  
Copies this array or its subrange into the [destination] array and returns that array.  
It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.  
@param destination the array to copy to.  
@param destinationOffset the position in the [destination] array to copy to, 0 by default.  
@param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.  
@param endIndex the end (exclusive) of the subrange to copy, size of this array by default.  
@throws `IndexOutOfBoundsException` or `IllegalArgumentException`  
when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex``.  
@throws `IndexOutOfBoundsException` when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],  
or when that index is out of the [destination] array indices range.  
@return the [destination] array.  
\*  
`@SinceKotlin("1.3")`  
`public expect fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T>`  
Copies this array or its subrange into the [destination] array and returns that array.  
It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.  
@param destination the array to copy to.  
@param destinationOffset the position in the [destination] array to copy to, 0 by default.  
@param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.  
@param endIndex the end (exclusive) of the subrange to copy, size of this array by default.  
@throws `IndexOutOfBoundsException` or `IllegalArgumentException` when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex``.  
@throws `IndexOutOfBoundsException` when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],  
or when that index is out of the [destination] array indices range.  
@return the [destination] array.  
\*  
`@SinceKotlin("1.3")`  
`public expect fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ByteArray`  
Copies this array or its subrange into the [destination] array and returns that array.  
It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.  
@param destination the array to copy to.  
@param destinationOffset the position in the [destination] array to copy to, 0 by default.  
@param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.  
@param endIndex the end (exclusive) of the subrange to copy, size of this array by default.  
@throws `IndexOutOfBoundsException` or `IllegalArgumentException` when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex``.  
@throws `IndexOutOfBoundsException` when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],  
or when that index is out of the [destination] array indices range.  
@return the [destination] array.  
\*  
`@SinceKotlin("1.3")`  
`public expect fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ShortArray`  
Copies this array or its subrange into the [destination] array and returns that array.  
It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.  
@param destination the array to copy to.  
@param destinationOffset the position in the [destination] array to copy to, 0 by default.  
@param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.  
@param endIndex the end (exclusive) of the subrange to copy, size of this array by default.  
@throws `IndexOutOfBoundsException` or `IllegalArgumentException` when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex``.  
@throws `IndexOutOfBoundsException` when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],  
or when that index is out of the [destination] array indices range.  
@return the [destination] array.  
\*  
`@SinceKotlin("1.3")`  
`public expect fun IntArray.copyInto(destination: IntArray,`

destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): IntArray\n\n\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n\n\*/\n@SinceKotlin("1.3")\npublic expect fun LongArray.copyInto(destination: LongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): LongArray\n\n\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* \n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n\n\*/\n@SinceKotlin("1.3")\npublic expect fun FloatArray.copyInto(destination: FloatArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): FloatArray\n\n\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n\n\*/\n@SinceKotlin("1.3")\npublic expect fun DoubleArray.copyInto(destination: DoubleArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): DoubleArray\n\n\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n\n\*/\n@SinceKotlin("1.3")\npublic expect fun BooleanArray.copyInto(destination: BooleanArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): BooleanArray\n\n\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange

so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n \* \n \* @SinceKotlin("1.3")\n \* \n \* public expect fun

CharArray.copyInto(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): CharArray\n \* \n \* Returns

new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* @Suppress("NO\_ACTUAL\_FOR\_EXPECT")\n \* \n \* public expect fun <T> Array<T>.copyOf(): Array<T>\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun ByteArray.copyOf(): ByteArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun ShortArray.copyOf(): ShortArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun IntArray.copyOf(): IntArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun LongArray.copyOf(): LongArray\n \* \n \* Returns new array

which is a copy of the original array.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun FloatArray.copyOf(): FloatArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun

DoubleArray.copyOf(): DoubleArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun BooleanArray.copyOf(): BooleanArray\n \* \n \* Returns new array which is a copy of the original array.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.copyOfOf\n \* \n \* public expect fun CharArray.copyOf(): CharArray\n \* \n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* \n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the

copy array is truncated to the [newSize].\n \* \n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n \* \n \* @sample

samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \n \* public expect fun

ByteArray.copyOf(newSize: Int): ByteArray\n \* \n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* \n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* \n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \n \* public expect fun

ShortArray.copyOf(newSize: Int): ShortArray\n \* \n \* Returns new array which is a copy of the original array, resized to the given

[newSize].\n \* \n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* \n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \n \* public expect fun

IntArray.copyOf(newSize: Int): IntArray\n \* \n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* \n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* -



ShortArray.copyOfRange(fromIndex: Int, toIndex: Int): ShortArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun IntArray.copyOfRange(fromIndex: Int, toIndex: Int): IntArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun LongArray.copyOfRange(fromIndex: Int, toIndex: Int): LongArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun FloatArray.copyOfRange(fromIndex: Int, toIndex: Int): FloatArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun CharArray.copyOfRange(fromIndex: Int, toIndex: Int): CharArray\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n@SinceKotlin("1.3")\npublic expect fun <T> Array<T>.fill(element: T, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n@SinceKotlin("1.3")\npublic expect fun ByteArray.fill(element: Byte, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n@SinceKotlin("1.3")\npublic expect fun ShortArray.fill(element: Short, fromIndex: Int = 0, toIndex: Int =

size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun IntArray.fill(element: Int, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun LongArray.fill(element: Long, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun FloatArray.fill(element: Float, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun DoubleArray.fill(element: Double, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun BooleanArray.fill(element: Boolean, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*\n@SinceKotlin("1.3")\npublic expect fun CharArray.fill(element: Char, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val <T> Array<out T>.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val ByteArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val ShortArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val IntArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val LongArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val FloatArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val DoubleArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val BooleanArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns the range of valid indices for the array.\n \*\npublic val CharArray.indices: IntRange\n get() = IntRange(0, lastIndex)\n\n/\*\*\n \* Returns `true` if the array is empty.\n \*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.isEmpty(): Boolean {\n return size == 0\n}\n\n/\*\*\n \* Returns `true` if the array is empty.\n \*\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.isEmpty(): Boolean {\n return size == 0\n}\n\n/\*\*\n \* Returns `true` if the array is empty.\n \*\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.isEmpty(): Boolean {\n return size == 0\n}\n\n



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* Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.isEmpty():
Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.isEmpty():
Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.isEmpty(): Boolean {\n    return size ==
0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n
 * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n
 * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun IntArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun FloatArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not
empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns the last valid index for the array.\n
*/\npublic val <T> Array<out T>.lastIndex:
Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val ByteArray.lastIndex:
Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val ShortArray.lastIndex:
Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val IntArray.lastIndex: Int\n
    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val LongArray.lastIndex: Int\n
    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic
val FloatArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic
val DoubleArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic
val BooleanArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic
val CharArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns an array containing all elements of the original
array and then the given [element].\n */\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect operator
fun <T> Array<T>.plus(element: T): Array<T>\n\n/**\n * Returns an array containing all elements of the original
array and then the given [element].\n */\npublic expect operator fun ByteArray.plus(element: Byte):
ByteArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n
*/\npublic expect operator fun ShortArray.plus(element: Short): ShortArray\n\n/**\n
 * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect
operator fun IntArray.plus(element: Int): IntArray\n\n/**\n * Returns an array containing all elements of the original
array and then the given [element].\n */\npublic expect operator fun LongArray.plus(element: Long):
LongArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n
*/\npublic expect operator fun FloatArray.plus(element: Float): FloatArray\n\n/**\n * Returns an array containing
all elements of the original array and then the given [element].\n */\npublic expect operator fun
DoubleArray.plus(element: Double): DoubleArray\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n */\npublic expect operator fun BooleanArray.plus(element: Boolean):
BooleanArray\n\n/**\n * Returns an array containing all elements of the original array and then the given

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[element].\n

\*\npublic expect operator fun CharArray.plus(element: Char): CharArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n

\*\n@Suppress("NO\_ACTUAL\_FOR\_EXPECT")\npublic expect operator fun <T> Array<T>.plus(elements: Collection<T>): Array<T>\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun ByteArray.plus(elements: Collection<Byte>): ByteArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun ShortArray.plus(elements: Collection<Short>): ShortArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun IntArray.plus(elements: Collection<Int>): IntArray\n\n\*\*\n

\* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun LongArray.plus(elements: Collection<Long>): LongArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun FloatArray.plus(elements: Collection<Float>): FloatArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun DoubleArray.plus(elements: Collection<Double>): DoubleArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun BooleanArray.plus(elements: Collection<Boolean>): BooleanArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*\npublic expect operator fun CharArray.plus(elements: Collection<Char>): CharArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n

\*\n@Suppress("NO\_ACTUAL\_FOR\_EXPECT")\npublic expect operator fun <T> Array<T>.plus(elements: Array<out T>): Array<T>\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun ByteArray.plus(elements: ByteArray): ByteArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun ShortArray.plus(elements: ShortArray): ShortArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun IntArray.plus(elements: IntArray): IntArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun LongArray.plus(elements: LongArray): LongArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun FloatArray.plus(elements: FloatArray): FloatArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun DoubleArray.plus(elements: DoubleArray): DoubleArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun BooleanArray.plus(elements: BooleanArray): BooleanArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*\npublic expect operator fun CharArray.plus(elements: CharArray): CharArray\n\n\*\*\n \* Returns an array containing all elements of the original array and then the given [element].\n

\*\n@Suppress("NO\_ACTUAL\_FOR\_EXPECT")\npublic expect fun <T> Array<T>.plusElement(element: T): Array<T>\n\n\*\*\n \* Sorts the array in-place.\n \* \n \* @sample samples.collections.Arrays.Sorting.sortArray\n \*\npublic expect fun IntArray.sort(): Unit\n\n\*\*\n \* Sorts the array in-place.\n \* \n \* @sample samples.collections.Arrays.Sorting.sortArray\n \*\npublic expect fun LongArray.sort(): Unit\n\n\*\*\n \* Sorts the array in-place.\n \* \n \* @sample samples.collections.Arrays.Sorting.sortArray\n \*\npublic expect fun ByteArray.sort(): Unit\n\n\*\*\n \* Sorts the array in-place.\n \* \n \* @sample

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samples.collections.Arrays.Sorting.sortArray\n * \npublic expect fun ShortArray.sort(): Unit\n\n/**\n * Sorts the
array in-place.\n * \n * @sample samples.collections.Arrays.Sorting.sortArray\n * \npublic expect fun
DoubleArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n
* \n * @sample samples.collections.Arrays.Sorting.sortArray\n * \npublic expect fun FloatArray.sort():
Unit\n\n/**\n * Sorts the array in-place.\n * \n * @sample samples.collections.Arrays.Sorting.sortArray\n * \npublic
expect fun CharArray.sort(): Unit\n\n/**\n * Sorts the array in-place according to the natural order of its elements.\n
\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n *
\n * @sample samples.collections.Arrays.Sorting.sortArrayOfComparable\n * \npublic expect fun <T :
Comparable<T>> Array<out T>.sort(): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n * The sort is
_stable_. It means that equal elements preserve their order relative to each other after sorting.\n * \n * @param
fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range
(exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentOutOfRangeException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArrayOfComparable\n * \n@SinceKotlin("1.4")\npublic expect
fun <T : Comparable<T>> Array<out T>.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range
in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param
toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
\n * @throws IllegalArgumentOutOfRangeException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n * \n@SinceKotlin("1.4")\npublic expect fun
ByteArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts
a range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
\n * @throws IllegalArgumentOutOfRangeException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n * \n@SinceKotlin("1.4")\npublic expect fun
ShortArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *
\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range
(exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentOutOfRangeException if
[fromIndex]
is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
* \n@SinceKotlin("1.4")\npublic expect fun IntArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n *
Sorts a range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by
default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
\n * @throws IllegalArgumentOutOfRangeException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n * \n@SinceKotlin("1.4")\npublic expect fun
LongArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *
\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range
(exclusive) to
sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or
[toIndex] is greater than the size of this array.\n * @throws IllegalArgumentOutOfRangeException if [fromIndex] is greater
than
[toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
* \n@SinceKotlin("1.4")\npublic expect fun FloatArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n *
Sorts a range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by
default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws

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IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \*  
 @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \* \n \* @sample  
 samples.collections.Arrays.Sorting.sortRangeOfArray\n \*/\n@SinceKotlin("1.4")\npublic expect fun  
 DoubleArray.sort(fromIndex:  
 Int = 0, toIndex: Int = size): Unit\n/n/\*\*\n \* Sorts a range in the array in-place.\n \* \n \* @param fromIndex the start  
 of the range (inclusive) to sort, 0 by default.\n \* @param toIndex the end of the range (exclusive) to sort, size of this  
 array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is  
 greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n  
 \* \n \* @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n \*/\n@SinceKotlin("1.4")\npublic expect  
 fun CharArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n/n/\*\*\n \* Sorts elements of the array in the  
 specified range in-place.\n \* The elements are sorted descending according to their natural sort order.\n \* \n \* The  
 sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.\n \* \n \*  
 @param fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex  
 the end of the range (exclusive) to sort.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than  
 zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is  
 greater than [toIndex].\n \*/\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Array<out  
 T>.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n sortWith(reverseOrder(), fromIndex,  
 toIndex)\n}\n/n/\*\*\n \* Sorts elements of the array in the specified range in-place.\n \* The elements are sorted  
 descending according to their natural sort order.\n \* \n \* @param fromIndex the start of the range (inclusive) to  
 sort.\n \* @param toIndex the end of the range (exclusive) to sort.\n \* \n \* @throws IndexOutOfBoundsException if  
 [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws  
 IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n@SinceKotlin("1.4")\npublic fun  
 ByteArray.sortDescending(fromIndex:  
 Int, toIndex: Int): Unit {\n sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n/n/\*\*\n \* Sorts elements  
 of the array in the specified range in-place.\n \* The elements are sorted descending according to their natural sort  
 order.\n \* \n \* @param fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex the end of the range  
 (exclusive) to sort.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is  
 greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n  
 \*/\n@SinceKotlin("1.4")\npublic fun ShortArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n  
 sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n/n/\*\*\n \* Sorts elements of the array in the specified  
 range in-place.\n \* The elements are sorted descending according to their natural sort order.\n \* \n \* @param  
 fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex the end of  
 the range (exclusive) to sort.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or  
 [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than  
 [toIndex].\n \*/\n@SinceKotlin("1.4")\npublic fun IntArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n  
 sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n/n/\*\*\n \* Sorts elements of the array in the specified  
 range in-place.\n \* The elements are sorted descending according to their natural sort order.\n \* \n \* @param  
 fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex the end of the range (exclusive) to sort.\n \*  
 \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of  
 this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n  
 \*/\n@SinceKotlin("1.4")\npublic fun LongArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n  
 sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n/n/\*\*\n \* Sorts elements of the array in the  
 specified range in-place.\n \* The elements are sorted descending according to their natural sort order.\n \* \n \*  
 @param fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex the end of the range (exclusive) to  
 sort.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the  
 size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n  
 \*/\n@SinceKotlin("1.4")\npublic fun FloatArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n  
 sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n/n/\*\*\n \* Sorts elements of the array in the specified

range in-place.\n \* The elements are sorted descending according to their natural sort order.\n \* \n \* @param fromIndex the start of the range (inclusive) to sort.\n \* @param toIndex the end of the range (exclusive) to sort.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n

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*\n@SinceKotlin("1.4")\npublic fun DoubleArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun CharArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n
reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other
after sorting.\n */\npublic expect fun <T> Array<out T>.sortWith(comparator: Comparator<in T>): Unit\n\n/**\n * Sorts a range in the array in-place with the given [comparator].\n * \n * The sort is _stable_. It means that equal
elements preserve their order relative to each other after sorting.\n * \n * @param fromIndex the start of the range
(inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
expect fun <T> Array<out T>.sortWith(comparator: Comparator<in
T>, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Returns an array of Boolean containing all of the
elements of this generic array.\n */\npublic fun Array<out Boolean>.toBooleanArray(): BooleanArray {\n return
BooleanArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Byte containing all of the elements of
this generic array.\n */\npublic fun Array<out Byte>.toByteArray(): ByteArray {\n return ByteArray(size) { index
-> this[index] }\n}\n\n/**\n * Returns an array of Char containing all of the elements of this generic array.\n
*/\npublic fun Array<out Char>.toCharArray(): CharArray {\n return CharArray(size) { index -> this[index]
}\n}\n\n/**\n * Returns an array of Double containing all of the elements of this generic array.\n */\npublic fun
Array<out Double>.toDoubleArray(): DoubleArray {\n return DoubleArray(size) { index -> this[index]
}\n}\n\n/**\n * Returns an array of Float containing all of the elements of this generic array.\n */\npublic
fun Array<out Float>.toFloatArray(): FloatArray {\n return FloatArray(size) { index -> this[index] }\n}\n\n/**\n
* Returns an array of Int containing all of the elements of this generic array.\n */\npublic fun Array<out
Int>.toIntArray(): IntArray {\n return IntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of
Long containing all of the elements of this generic array.\n */\npublic fun Array<out Long>.toLongArray():
LongArray {\n return LongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Short containing
all of the elements of this generic array.\n */\npublic fun Array<out Short>.toShortArray(): ShortArray {\n return
ShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n */\npublic expect fun ByteArray.toTypedArray(): Array<Byte>\n\n/**\n * Returns a
*typed* object array containing all of the elements of this primitive array.\n */\npublic
expect fun ShortArray.toTypedArray(): Array<Short>\n\n/**\n * Returns a *typed* object array containing all of
the elements of this primitive array.\n */\npublic expect fun IntArray.toTypedArray(): Array<Int>\n\n/**\n *
Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun
LongArray.toTypedArray(): Array<Long>\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n */\npublic expect fun FloatArray.toTypedArray(): Array<Float>\n\n/**\n * Returns a
*typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun
DoubleArray.toTypedArray(): Array<Double>\n\n/**\n * Returns a *typed* object array containing all of the
elements of this primitive array.\n */\npublic expect fun BooleanArray.toTypedArray(): Array<Boolean>\n\n/**\n
* Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun

```

CharArray.toArray():

```
Array<Char>\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <T, K, V>\nArray<out T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V> ByteArray.associate(transform: (Byte) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nShortArray.associate(transform: (Short) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nIntArray.associate(transform: (Int) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nLongArray.associate(transform: (Long) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nFloatArray.associate(transform: (Float) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nDoubleArray.associate(transform: (Double) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n */\npublic inline fun <K, V>\nDoubleArray.associate(transform: (Double) -> Pair<K, V>): Map<K, V> {\n    val capacity =\n    mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),\n    transform)\n}
```

```

samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n *\npublic inline fun <K, V>
BooleanArray.associate(transform: (Boolean) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs
provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have
the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the
original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n
*\npublic inline fun <K, V> CharArray.associate(transform: (Char) -> Pair<K, V>): Map<K, V> {\n    val capacity
= mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <T, K> Array<out T>.associateBy(keySelector: (T) -> K): Map<K, T> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, T>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <K>
ByteArray.associateBy(keySelector: (Byte) -> K): Map<K, Byte> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, Byte>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned
from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned
by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of
the original array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <K> ShortArray.associateBy(keySelector: (Short) -> K): Map<K, Short> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, Short>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <K> IntArray.associateBy(keySelector: (Int) -> K): Map<K, Int> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, Int>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <K>
LongArray.associateBy(keySelector: (Long) -> K): Map<K, Long> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, Long>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same
key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry
iteration order of the original array.\n * \n * @sample

```

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samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n *\npublic inline fun <K>
FloatArray.associateBy(keySelector: (Float) -> K): Map<K, Float> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Float>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n
*\npublic inline fun <K> DoubleArray.associateBy(keySelector: (Double) -> K): Map<K, Double> {\n  val
capacity = mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Double>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n *\npublic inline fun <K>
BooleanArray.associateBy(keySelector: (Boolean) -> K): Map<K, Boolean> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Boolean>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the
given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two
elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n *\npublic inline fun <K>
CharArray.associateBy(keySelector: (Char) -> K): Map<K, Char> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Char>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by
[keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n
*\npublic inline fun <T, K, V> Array<out T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V):
Map<K, V> {\n  val capacity = mapCapacity(size).coerceAtLeast(16)\n  return
associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map]
containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of
the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets
added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n *
@sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n
*\npublic inline fun <K, V> ByteArray.associateBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V):
Map<K, V> {\n  val capacity = mapCapacity(size).coerceAtLeast(16)\n  return
associateByTo(LinkedHashMap<K,
V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by
[valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two
elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n *\npublic inline
fun <K, V> ShortArray.associateBy(keySelector: (Short) -> K, valueTransform: (Short) -> V): Map<K, V> {\n
val capacity = mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, V>(capacity),
keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform]
and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would

```



have

the same key returned by [keySelector] the last one gets added to the map.  
The returned map preserves the entry iteration order of the original array.

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> IntArray.associateBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nReturns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map. The returned map preserves the entry iteration order of the original array.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> LongArray.associateBy(keySelector: (Long) -> K, valueTransform: (Long) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nReturns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map. The returned map preserves the entry iteration order of the original array.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> FloatArray.associateBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nReturns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map. The returned map preserves the entry iteration order of the original array.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> DoubleArray.associateBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nReturns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map. The returned map preserves the entry iteration order of the original array.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> BooleanArray.associateBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nReturns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map. The returned map preserves the entry iteration order of the original array.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n\npublic inline fun <K, V> CharArray.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {\n    val capacity = mapCapacity(size).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\nPopulates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function applied to each element of the given array and value is the element itself. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.
```

```
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n\npublic inline fun <T, K, M : MutableMap<in K, in T>> Array<out T>.associateByTo(destination: M, keySelector: (T) ->
```

K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Byte>> ByteArray.associateByTo(destination: M, keySelector: (Byte) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Short>> ShortArray.associateByTo(destination: M, keySelector: (Short) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Int>> IntArray.associateByTo(destination: M, keySelector: (Int) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Long>> LongArray.associateByTo(destination: M, keySelector: (Long) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Float>> FloatArray.associateByTo(destination: M, keySelector: (Float) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Double>> DoubleArray.associateByTo(destination: M, keySelector: (Double) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo \n \* \n public inline fun <K, M : MutableMap<in K, in Boolean>> BooleanArray.associateByTo(destination: M, keySelector: (Boolean) -> K): M { \n for (element in this) { \n destination.put(keySelector(element), element)\n } \n return destination\n} \n \n \n \* Populates and returns the [destination] mutable map with key-value pairs, \n \* where key is provided by the [keySelector] function applied to each element of the given array \n \* and value is the element itself. \n \* \n \* If any two elements would have the same key returned by [keySelector] the last one gets added to the map. \n \* \n \* @sample

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo
*/npublic inline fun <K, M : MutableMap<in K, in Char>> CharArray.associateByTo(destination: M, keySelector:
(Char) -> K): M {
    for (element in this) {
        destination.put(keySelector(element), element)
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * and value is provided by the [valueTransform] function applied to
elements of the given array.
 *
 * If any two elements would have the same key returned by [keySelector] the last
one gets added to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <T, K, V, M : MutableMap<in K, in V>> Array<out T>.associateByTo(destination: M, keySelector: (T) -
> K, valueTransform: (T) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
        valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable
map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * and value is provided by
the [valueTransform] function applied to elements of the given array.
 *
 * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <K, V, M : MutableMap<in K, in V>> ByteArray.associateByTo(destination: M, keySelector: (Byte) ->
K, valueTransform: (Byte) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
        valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable
map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * and value is provided by
the [valueTransform] function applied to elements of the given array.
 *
 * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <K, V, M : MutableMap<in K, in V>> ShortArray.associateByTo(destination: M, keySelector: (Short) ->
K, valueTransform: (Short) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
        valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable
map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * and value is provided by
the [valueTransform] function applied to elements of the given array.
 *
 * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <K, V, M : MutableMap<in K, in V>> IntArray.associateByTo(destination: M, keySelector:
(Int) -> K, valueTransform: (Int) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
        valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable
map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * and value is provided by
the [valueTransform] function applied to elements of the given array.
 *
 * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateByTo(destination: M, keySelector: (Long) ->
K, valueTransform: (Long) -> V): M {
    for (element in this)
    {
        destination.put(keySelector(element), valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable map with key-value pairs,
 * where key is provided by the
[keySelector] function and
 * and value is provided by the [valueTransform] function applied to elements of the
given array.
 *
 * If any two elements would have the same key returned by [keySelector] the last one gets added
to the map.
 *
 * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
*/npublic
inline fun <K, V, M : MutableMap<in K, in V>> FloatArray.associateByTo(destination: M, keySelector: (Float) ->
K, valueTransform: (Float) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
        valueTransform(element))
    }
    return destination
}
/n/n/**
 * Populates and returns the [destination] mutable
map with key-value pairs,
 * where key is provided by the [keySelector]

```

```

function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *
\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *
\n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n *
\n * \npublic inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateByTo(destination: M,
keySelector: (Double) -> K, valueTransform: (Double) -> V): M {\n  for (element in this) {\n
destination.put(keySelector(element), valueTransform(element))\n  }\n  return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector]
function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *
\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the
map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n *
\npublic
inline fun <K, V, M : MutableMap<in K, in V>> BooleanArray.associateByTo(destination: M, keySelector:
(Boolean) -> K, valueTransform: (Boolean) -> V): M {\n  for (element in this) {\n
destination.put(keySelector(element), valueTransform(element))\n  }\n  return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector]
function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *
\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *
\n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n *
\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateByTo(destination: M, keySelector:
(Char)
-> K, valueTransform: (Char) -> V): M {\n  for (element in this) {\n
destination.put(keySelector(element),
valueTransform(element))\n  }\n  return destination\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n *
\n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n *
\npublic inline fun <T, K, V, M :
MutableMap<in K, in V>> Array<out T>.associateTo(destination: M, transform: (T) -> Pair<K, V>): M {\n  for
(element in this) {\n
destination += transform(element)\n  }\n  return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * \n * If any of two pairs would have the same key the last one gets
added to the map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n *
\npublic inline fun <K, V, M : MutableMap<in K, in V>> ByteArray.associateTo(destination: M, transform:
(Byte) -> Pair<K, V>): M {\n  for (element in this) {\n
destination += transform(element)\n  }\n  return
destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by
[transform] function applied to each element of the given array.\n * \n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n *
\npublic inline fun <K, V, M :
MutableMap<in K, in V>> ShortArray.associateTo(destination: M, transform: (Short) -> Pair<K, V>): M {\n  for
(element in this) {\n
destination += transform(element)\n  }\n  return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with
key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * \n *
\n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n *
\npublic inline fun <K, V, M :
MutableMap<in K, in V>> IntArray.associateTo(destination: M, transform: (Int) -> Pair<K, V>): M {\n  for
(element in this) {\n
destination += transform(element)\n  }\n  return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n *
\npublic
inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateTo(destination: M, transform: (Long) ->

```

```

Pair<K, V>: M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

Populates and returns the [destination] mutable map with key-value pairs provided by [transform] function applied to each element of the given array. If any of two pairs would have the same key the last one gets added to the map.

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo

public inline fun <K, V, M : MutableMap<in K, in V>> FloatArray.associateTo(destination: M, transform: (Float) -> Pair<K, V>): M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

Populates and returns the [destination] mutable map with key-value pairs provided by [transform] function applied to each element of the given array. If any of two pairs would have the same key the last one gets added to the map.

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo

public inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateTo(destination: M, transform: (Double) -> Pair<K, V>): M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

Populates and returns the [destination] mutable map with key-value pairs provided by [transform] function applied to each element of the given array. If any of two pairs would have the same key the last one gets added to the map.

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo

public inline fun <K, V, M : MutableMap<in K, in V>> BooleanArray.associateTo(destination: M, transform: (Boolean) -> Pair<K, V>): M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

Populates and returns the [destination] mutable map with key-value pairs provided by [transform] function applied to each element of the given array. If any of two pairs would have the same key the last one gets added to the map.

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo

public inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateTo(destination: M, transform: (Char) -> Pair<K, V>): M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

Returns a [Map] where keys are elements from the given array and values are produced by the [valueSelector] function applied to each element. If any two elements are equal, the last one gets added to the map. The returned map preserves the entry iteration order of the original array.

@sample samples.collections.Collections.Transformations.associateWith

public inline fun <K, V> Array<out K>.associateWith(valueSelector: (K) -> V): Map<K, V> {
    val result = LinkedHashMap<K, V>(mapCapacity(size).coerceAtLeast(16))
    return associateWithTo(result, valueSelector)
}

Returns a [Map] where keys are elements from the given array and values are produced by the [valueSelector] function applied to each element. If any two elements are equal, the last one gets added to the map. The returned map preserves the entry iteration order of the original array.

@sample samples.collections.Collections.Transformations.associateWith

public inline fun <V> ByteArray.associateWith(valueSelector: (Byte) -> V): Map<Byte, V> {
    val result = LinkedHashMap<Byte, V>(mapCapacity(size).coerceAtLeast(16))
    return associateWithTo(result, valueSelector)
}

Returns a [Map] where keys are elements from the given array and values are produced by the [valueSelector] function applied to each element. If any two elements are equal, the last one gets added to the map. The returned map preserves the entry iteration order of the original array.

@sample samples.collections.Collections.Transformations.associateWith

public inline fun <V> ShortArray.associateWith(valueSelector: (Short) -> V): Map<Short, V> {
    val result = LinkedHashMap<Short, V>(mapCapacity(size).coerceAtLeast(16))
    return associateWithTo(result, valueSelector)
}

Returns a [Map] where keys are elements from the given array and values are produced by the [valueSelector] function applied to each element. If any two elements are equal, the last one gets added to the map. The returned map preserves the entry iteration order of the original array.

@sample

```

```

samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
IntArray.associateWith(valueSelector: (Int) -> V): Map<Int, V> {\n
    val result = LinkedHashMap<Int, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n *
produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one
gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n *
@sample samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
LongArray.associateWith(valueSelector: (Long) -> V): Map<Long, V> {\n    val result = LinkedHashMap<Long,
V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function
applied to each element.\n * \n * If any two elements are equal,
the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original
array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
FloatArray.associateWith(valueSelector: (Float) -> V): Map<Float, V> {\n    val result = LinkedHashMap<Float,
V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function
applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
DoubleArray.associateWith(valueSelector:
(Double) -> V): Map<Double, V> {\n    val result = LinkedHashMap<Double,
V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function
applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
BooleanArray.associateWith(valueSelector: (Boolean) -> V): Map<Boolean, V> {\n    val result =
LinkedHashMap<Boolean, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n *
produced by the [valueSelector] function applied to
each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map
preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
CharArray.associateWith(valueSelector: (Char) -> V): Map<Char, V> {\n    val result = LinkedHashMap<Char,
V>(mapCapacity(size.coerceAtMost(128)).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each
element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function
applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n *
@sample samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\npublic
inline
fun <K, V, M : MutableMap<in K, in V>> Array<out K>.associateWithTo(destination: M, valueSelector: (K) ->
V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return

```

destination\n}\n\n/\*\*\n \* Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n \* where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n \* \n \* If any two elements are equal, the last one overwrites the former value in the map.\n \* \n \* @sample samples.collections.Collections.Transformations.associateWithTo\n

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Byte, in V>>\nByteArray.associateWithTo(destination: M, valueSelector: (Byte) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination]
```

mutable map with key-value pairs for each element of the given array,\n \* where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n \* \n \* If any two elements are equal, the last one overwrites the former value in the map.\n \* \n \* @sample

```
samples.collections.Collections.Transformations.associateWithTo\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Short, in V>>\nShortArray.associateWithTo(destination: M, valueSelector: (Short) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.associateWithTo\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Int, in V>>\nIntArray.associateWithTo(destination: M, valueSelector: (Int) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.associateWithTo\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Long, in V>>\nLongArray.associateWithTo(destination: M, valueSelector: (Long) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.associateWithTo\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Float, in V>>\nFloatArray.associateWithTo(destination: M, valueSelector: (Float) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector]
```

function applied to that key.\n \* \n \* If any two elements are equal, the last one overwrites the former value in the map.\n \* \n \* @sample samples.collections.Collections.Transformations.associateWithTo\n

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Double, in V>>\nDoubleArray.associateWithTo(destination: M, valueSelector: (Double) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.associateWithTo\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline
```

```

fun <V, M : MutableMap<in Boolean, in V>> BooleanArray.associateWithTo(destination: M, valueSelector:
(Boolean) -> V): M {\n for (element in this) {\n destination.put(element, valueSelector(element))\n }\n
return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each
element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function
applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n
* @sample samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Char, in V>>
CharArray.associateWithTo(destination: M, valueSelector: (Char) -> V): M {\n for (element in this) {\n
destination.put(element, valueSelector(element))\n }\n return destination\n}\n\n/**\n * Appends all elements to
the given
[destination] collection.\n *\npublic fun <T, C : MutableCollection<in T>> Array<out T>.toCollection(destination:
C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all
elements to the given [destination] collection.\n *\npublic fun <C : MutableCollection<in Byte>>
ByteArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return
destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n *\npublic fun <C :
MutableCollection<in Short>> ShortArray.toCollection(destination: C): C {\n for (item in this) {\n
destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination]
collection.\n *\npublic fun <C : MutableCollection<in Int>> IntArray.toCollection(destination: C): C {\n for
(item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends
all elements to the given [destination] collection.\n *\npublic fun <C : MutableCollection<in Long>>
LongArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return
destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n *\npublic fun <C :
MutableCollection<in Float>> FloatArray.toCollection(destination: C): C {\n for (item in this) {\n
destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination]
collection.\n *\npublic fun <C : MutableCollection<in Double>> DoubleArray.toCollection(destination: C): C {\n
for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the
given [destination] collection.\n *\npublic fun <C : MutableCollection<in Boolean>>
BooleanArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return
destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n *\npublic fun <C :
MutableCollection<in Char>> CharArray.toCollection(destination: C): C {\n for (item in this) {\n
destination.add(item)\n }\n return destination\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun <T> Array<out T>.toHashSet(): HashSet<T> {\n return
toCollection(HashSet<T>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun ByteArray.toHashSet(): HashSet<Byte> {\n return
toCollection(HashSet<Byte>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun ShortArray.toHashSet(): HashSet<Short> {\n return
toCollection(HashSet<Short>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun IntArray.toHashSet(): HashSet<Int> {\n return
toCollection(HashSet<Int>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all
elements.\n *\npublic fun LongArray.toHashSet(): HashSet<Long> {\n return
toCollection(HashSet<Long>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun FloatArray.toHashSet(): HashSet<Float> {\n return
toCollection(HashSet<Float>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun DoubleArray.toHashSet(): HashSet<Double> {\n return
toCollection(HashSet<Double>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun BooleanArray.toHashSet(): HashSet<Boolean> {\n return
toCollection(HashSet<Boolean>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [HashSet] of all elements.\n
*\npublic fun CharArray.toHashSet(): HashSet<Char> {\n return

```



```

toCollection(HashSet<Char>(mapCapacity(size.coerceAtMost(128))))\n}\n\n/**\n * Returns a [List] containing all
elements.\n */\npublic fun <T> Array<out T>.toList(): List<T> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all
elements.\n */\npublic fun ByteArray.toList(): List<Byte> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun ShortArray.toList(): List<Short> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun IntArray.toList(): List<Int> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun LongArray.toList(): List<Long> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun FloatArray.toList(): List<Float> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun DoubleArray.toList(): List<Double> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun BooleanArray.toList(): List<Boolean> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun CharArray.toList(): List<Char> {\n    return when (size) {\n        0 -> emptyList()\n        1 -> listOf(this[0])\n    }\n}\n\n/**\n * Returns a new [MutableList] filled
with all elements of this array.\n */\npublic fun <T> Array<out T>.toMutableList(): MutableList<T> {\n    return
ArrayList(this.asCollection())\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this array.\n */\npublic fun ByteArray.toMutableList(): MutableList<Byte> {\n    val list = ArrayList<Byte>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this
array.\n */\npublic fun ShortArray.toMutableList(): MutableList<Short> {\n    val list = ArrayList<Short>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of
this array.\n */\npublic fun IntArray.toMutableList(): MutableList<Int> {\n    val list = ArrayList<Int>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this
array.\n */\npublic fun LongArray.toMutableList(): MutableList<Long> {\n    val list = ArrayList<Long>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this
array.\n */\npublic fun FloatArray.toMutableList(): MutableList<Float> {\n    val list = ArrayList<Float>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this
array.\n */\npublic fun DoubleArray.toMutableList(): MutableList<Double> {\n    val list = ArrayList<Double>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of this
array.\n */\npublic fun BooleanArray.toMutableList(): MutableList<Boolean> {\n    val list = ArrayList<Boolean>(size)\n    for (item
in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of
this array.\n */\npublic fun CharArray.toMutableList(): MutableList<Char> {\n    val
list = ArrayList<Char>(size)\n    for (item in this) list.add(item)\n    return list\n}\n\n/**\n * Returns a [Set] of all
elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun <T>
Array<out T>.toSet(): Set<T> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n    }\n    else -
> toCollection(LinkedHashSet<T>(mapCapacity(size)))\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n *
The returned set preserves the element iteration order of the original array.\n */\npublic fun ByteArray.toSet():
Set<Byte> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n    }\n    else ->
toCollection(LinkedHashSet<Byte>(mapCapacity(size)))\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n *
The returned set preserves the element iteration order of the original array.\n */\npublic fun ShortArray.toSet():
Set<Short> {\n    return when (size) {\n        0 -> emptySet()\n

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1 -> setOf(this[0])\n    else -> toCollection(LinkedHashSet<Short>(mapCapacity(size)))\n  }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun IntArray.toSet(): Set<Int> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Int>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun LongArray.toSet(): Set<Long> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Long>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun FloatArray.toSet(): Set<Float> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Float>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun DoubleArray.toSet(): Set<Double> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Double>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun BooleanArray.toSet(): Set<Boolean> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Boolean>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun CharArray.toSet(): Set<Char> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Char>(mapCapacity(size.coerceAtMost(128))))\n    }\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <T, R> Array<out T>.flatMap(transform: (T) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> ByteArray.flatMap(transform: (Byte) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> ShortArray.flatMap(transform: (Short) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> IntArray.flatMap(transform: (Int) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> LongArray.flatMap(transform: (Long) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> FloatArray.flatMap(transform: (Float) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> DoubleArray.flatMap(transform: (Double) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>

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BooleanArray.flatMap(transform: (Boolean) -> Iterable<R>):
List<R> {\n  return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements
yielded from results of [transform] function being invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
(Char) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element of original array.\n *
\n * @sample samples.collections.Collections.Transformations.flatMap\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequence")\npublic inline fun <R> CharArray.flatMap(transform:
(T) -> Sequence<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements
yielded from results of [transform] function being invoked on each element\n * and its index in the original array.\n
\n * \n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> Array<out T>.flatMapIndexed(transform: (index: Int, T) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> ByteArray.flatMapIndexed(transform: (index: Int, Byte) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> ShortArray.flatMapIndexed(transform: (index: Int, Short) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> IntArray.flatMapIndexed(transform: (index: Int, Int) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> LongArray.flatMapIndexed(transform: (index: Int, Long) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original array.\n * \n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> FloatArray.flatMapIndexed(transform: (index: Int, Float) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from

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results of [transform] function being invoked on each element\n \* and its index in the original array.\n \* \n \*  
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic  
inline fun <R> DoubleArray.flatMapIndexed(transform: (index: Int, Double) -> Iterable<R>): List<R> {\n return  
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/\*\*\n \* Returns a single list of all elements yielded from  
results of [transform] function being invoked on each element\n \* and its index in the original array.\n \* \n \*  
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic  
inline fun <R> BooleanArray.flatMapIndexed(transform: (index: Int, Boolean) -> Iterable<R>): List<R> {\n  
return flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/\*\*\n \* Returns a single list of all elements yielded  
from results of [transform] function being invoked  
on each element\n \* and its index in the original array.\n \* \n \* @sample  
samples.collections.Collections.Transformations.flatMapIndexed\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic  
inline fun <R> CharArray.flatMapIndexed(transform: (index: Int, Char) -> Iterable<R>): List<R> {\n return  
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/\*\*\n \* Returns a single list of all elements yielded from  
results of [transform] function being invoked on each element\n \* and its index in the original array.\n \* \n \*  
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequence")\n@kotlin.internal.InlineOnly\npubli  
c inline fun <T, R> Array<out T>.flatMapIndexed(transform:  
(index: Int, T) -> Sequence<R>): List<R> {\n return flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/\*\*\n \*  
Appends all elements yielded from results of [transform] function being invoked on each element\n \* and its index  
in the original array, to the given [destination].\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli  
c inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapIndexedTo(destination: C, transform:  
(index: Int, T) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,  
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements yielded from  
results of [transform] function being invoked on each element\n \* and its index in the original array, to the given  
[destination].\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli  
c inline fun <R, C : MutableCollection<in R>> ByteArray.flatMapIndexedTo(destination: C, transform: (index: Int,  
Byte) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,  
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/\*\*\n \* Appends all elements yielded from  
results of [transform] function being invoked on each element\n \* and its index in the original array, to the given  
[destination].\n
\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli  
c inline fun <R, C : MutableCollection<in R>> ShortArray.flatMapIndexedTo(destination:  
C, transform: (index: Int, Short) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list =  
transform(index++, element)\n destination.addAll(list)\n }\n return destination\n}\n\n/\*\*\n \* Appends all  
elements yielded from results of [transform] function being invoked on each element\n \* and its index in the original  
array, to the given [destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> IntArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Int) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++, element)\n
    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked

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on each element\n \* and its index in the original array, to the given [destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> LongArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Long) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c
inline fun <R, C : MutableCollection<in R>> FloatArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Float) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> DoubleArray.flatMapIndexedTo(destination: C, transform: (index:
Int, Double) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element\n * and its
index in the original array, to the given [destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> BooleanArray.flatMapIndexedTo(destination: C, transform: (index:
Int, Boolean) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c
inline fun <R, C : MutableCollection<in R>> CharArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Char) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n    destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequenceTo")\n@kotlin.internal.InlineOnly\npub
lic inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Sequence<R>): C {\n    var index = 0\n    for (element in this) {\n        val list =

```



map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
ByteArray.groupBy(keySelector: (Byte) -> K): Map<K, List<Byte>> {\n  return groupByTo(LinkedHashMap<K,
MutableList<Byte>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the
given [keySelector] function\n * applied to each element and returns a map where each group key is associated with
a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced
from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
ShortArray.groupBy(keySelector: (Short) -> K): Map<K, List<Short>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<Short>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
IntArray.groupBy(keySelector: (Int) -> K): Map<K, List<Int>> {\n  return groupByTo(LinkedHashMap<K,
MutableList<Int>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the
given [keySelector] function\n * applied to each element and returns a map where each group key is associated with
a
list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced
from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic
inline fun <K> LongArray.groupBy(keySelector: (Long) -> K): Map<K, List<Long>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<Long>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
FloatArray.groupBy(keySelector: (Float) -> K): Map<K, List<Float>> {\n  return groupByTo(LinkedHashMap<K,
MutableList<Float>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
DoubleArray.groupBy(keySelector: (Double) -> K): Map<K, List<Double>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<Double>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <K>
BooleanArray.groupBy(keySelector:
(Boolean) -> K): Map<K, List<Boolean>> {\n  return groupByTo(LinkedHashMap<K,
MutableList<Boolean>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by
the given [keySelector] function\n * applied to each element and returns a map where each group key is associated
with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n
*\npublic inline fun <K> CharArray.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n/**\n * Groups values returned by the
[valueTransform] function applied to each element of the original array\n * by the key returned by the given
```

[keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n

\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <T, K, V> Array<out T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <K, V> ByteArray.groupBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V):

Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <K, V>

ShortArray.groupBy(keySelector: (Short) -> K, valueTransform: (Short) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n

\* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <K, V>

IntArray.groupBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic

inline fun <K, V> LongArray.groupBy(keySelector: (Long) -> K, valueTransform: (Long) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,

valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <K, V>

FloatArray.groupBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the

original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n \* \npublic inline fun <K, V>

DoubleArray.groupBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups



values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n

```
* \n * @sample samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V> BooleanArray.groupBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, List<V>> {\n    return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V> CharArray.groupBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, List<V>> {\n    return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n *
```

```
@return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <T, K, M : MutableMap<in K, MutableList<T>>> Array<out T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<T>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n *
```

```
@return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <K, M : MutableMap<in K, MutableList<Byte>>> ByteArray.groupByTo(destination: M, keySelector: (Byte) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Byte>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n *
```

```
@return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <K, M : MutableMap<in K, MutableList<Short>>> ShortArray.groupByTo(destination: M, keySelector: (Short) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Short>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample
```

```
samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <K, M : MutableMap<in K, MutableList<Int>>> IntArray.groupByTo(destination: M, keySelector: (Int) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Int>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n
```

```
* @sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <K, M : MutableMap<in K, MutableList<Long>>> LongArray.groupByTo(destination: M, keySelector: (Long) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Long>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n
```

```
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n
```

```
@sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline
```

```

fun <K, M : MutableMap<in K, MutableList<Float>>> FloatArray.groupByTo(destination: M, keySelector: (Float)
-> K): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) {
  ArrayList<Float>() }\n  list.add(element)\n }\n  return destination\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the
[destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline
fun <K, M : MutableMap<in K, MutableList<Double>>> DoubleArray.groupByTo(destination: M, keySelector:
(Double) -> K): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) { ArrayList<Double>() }\n  list.add(element)\n }\n  return destination\n}\n\n/**\n
 * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each
element and puts to the [destination] map each group key associated with a list of corresponding elements.\n
 * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K,
MutableList<Boolean>>> BooleanArray.groupByTo(destination: M, keySelector: (Boolean) -> K): M {\n  for
(element in this) {\n    val key = keySelector(element)\n    val list = destination.getOrPut(key) {
  ArrayList<Boolean>() }\n  list.add(element)\n }\n  return destination\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the
[destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline
fun <K, M : MutableMap<in K, MutableList<Char>>> CharArray.groupByTo(destination: M, keySelector: (Char) -
> K): M {\n  for (element in this) {\n    val key = keySelector(element)\n
    val list = destination.getOrPut(key) { ArrayList<Char>() }\n  list.add(element)\n }\n  return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic
inline fun <T, K, V, M : MutableMap<in K, MutableList<V>>> Array<out T>.groupByTo(destination: M,
keySelector: (T) -> K, valueTransform: (T) -> V): M {\n  for (element in this) {\n    val key =
keySelector(element)\n    val list = destination.getOrPut(key) { ArrayList<V>() }\n  list.add(valueTransform(element))\n }\n  return destination\n}\n\n/**\n * Groups values returned by the
[valueTransform] function
applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to
the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n
 * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M :
MutableMap<in K, MutableList<V>>> ByteArray.groupByTo(destination: M, keySelector: (Byte) -> K,
valueTransform: (Byte) -> V): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) { ArrayList<V>() }\n  list.add(valueTransform(element))\n }\n  return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with
a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M :
MutableMap<in K, MutableList<V>>> ShortArray.groupByTo(destination: M, keySelector: (Short) -> K,
valueTransform: (Short) -> V): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) { ArrayList<V>() }\n  list.add(valueTransform(element))\n }\n  return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the

```

original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in
K, MutableList<V>>> IntArray.groupByTo(destination: M, keySelector: (Int) -> K, valueTransform: (Int) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M :
MutableMap<in K, MutableList<V>>> LongArray.groupByTo(destination: M, keySelector: (Long) -> K,
valueTransform: (Long) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> FloatArray.groupByTo(destination: M, keySelector:
(Float) -> K, valueTransform: (Float) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M :
MutableMap<in K, MutableList<V>>> DoubleArray.groupByTo(destination: M, keySelector: (Double) -> K,
valueTransform: (Double) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M :
MutableMap<in K, MutableList<V>>> BooleanArray.groupByTo(destination: M, keySelector: (Boolean) -> K,
valueTransform: (Boolean) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K,
V, M : MutableMap<in K, MutableList<V>>> CharArray.groupByTo(destination: M, keySelector: (Char) -> K,
valueTransform: (Char) -> V): M
{
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) {
            ArrayList<V>()
        }
        list.add(valueTransform(element))
    }
    return destination
}

```

Creates a [Grouping] source from an array to be used later with one of group-and-fold operations using the specified [keySelector] function to extract a key from each element. @sample samples.collections.Grouping.groupingByEachCount

```

@SinceKotlin("1.1")
public inline fun <T, K>

```

Array<out T>.groupBy(crossinline keySelector: (T) -> K): Grouping<T, K> {\n return object : Grouping<T, K> {\n override fun sourceIterator(): Iterator<T> = this@groupBy.iterator()\n override fun keyOf(element: T): K = keySelector(element)\n }}\n\n/\*\*\n \* Returns a list containing the results of applying the given

[transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <T, R> Array<out T>.map(transform: (T) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> ByteArray.map(transform: (Byte) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> ShortArray.map(transform: (Short) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> IntArray.map(transform: (Int) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> LongArray.map(transform: (Long) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> FloatArray.map(transform: (Float) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> DoubleArray.map(transform: (Double) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> BooleanArray.map(transform: (Boolean) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample

samples.collections.Collections.Transformations.map\n \*\npublic inline fun <R> CharArray.map(transform: (Char) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \* \npublic inline fun <T, R> Array<out T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \* \npublic inline fun <R> ByteArray.mapIndexed(transform: (index: Int, Byte) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \* \npublic inline fun <R> ShortArray.mapIndexed(transform: (index: Int, Short) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function

that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> IntArray.mapIndexed(transform: (index: Int, Int) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing the results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> LongArray.mapIndexed(transform: (index: Int, Long) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing the results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> FloatArray.mapIndexed(transform: (index: Int, Float) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing the results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> DoubleArray.mapIndexed(transform: (index: Int, Double) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing the results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> BooleanArray.mapIndexed(transform: (index: Int, Boolean) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing the results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R> CharArray.mapIndexed(transform: (index: Int, Char) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(size), transform)
}
```

Returns a list containing only the non-null results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <T, R : Any> Array<out T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {
    return mapIndexedNotNullTo(ArrayList<R>(), transform)
}
```

Applies the given [transform] function to each element and its index in the original array and appends only the non-null results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <T, R : Any, C : MutableCollection<in R>> Array<out T>.mapIndexedNotNullTo(destination: C, transform: (index: Int, T) -> R?): C {
    forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) }
}
```

Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <T, R, C : MutableCollection<in R>> Array<out T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}
```

Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R, C : MutableCollection<in R>> ByteArray.mapIndexedTo(destination: C, transform: (index: Int, Byte) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}
```

Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```
public inline fun <R, C : MutableCollection<in R>> ShortArray.mapIndexedTo(destination: C, transform:
```

```

(index: Int, Short) -> R): C {\n  var index = 0\n  for (item in this)\n    destination.add(transform(index++,
item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function to
each element and its index in the original array\n * and appends the results to the given [destination].\n * @param
[transform] function that takes the index of an element and the element itself\n * and returns the result of the
transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>>
IntArray.mapIndexedTo(destination: C, transform: (index: Int, Int) -> R): C {\n  var index = 0\n  for (item in
this)\n    destination.add(transform(index++, item))\n  return destination\n}\n\n/**\n * Applies the given
[transform] function to each element and its index in the original array\n * and appends the results to the given
[destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and
returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>>
LongArray.mapIndexedTo(destination: C, transform: (index: Int, Long) -> R): C {\n  var index = 0\n  for
(item in this)\n    destination.add(transform(index++, item))\n  return destination\n}\n\n/**\n * Applies the
given [transform] function to each element and its index in the original array\n * and appends the results to the given
[destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and
returns the result of the transform applied to the element.\n */\npublic inline
fun <R, C : MutableCollection<in R>> DoubleArray.mapIndexedTo(destination: C, transform: (index: Int, Double)
-> R): C {\n  var index = 0\n  for (item in this)\n    destination.add(transform(index++, item))\n  return
destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n
* and appends the results to the given [destination].\n * @param [transform] function that takes the index of an
element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline
fun <R, C : MutableCollection<in R>> BooleanArray.mapIndexedTo(destination: C, transform: (index: Int,
Boolean) -> R): C {\n  var index = 0\n  for (item in this)\n    destination.add(transform(index++, item))\n
return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original
array\n * and appends the results to the given [destination].\n * @param [transform]
function that takes the index of an element and the element itself\n * and returns the result of the transform applied
to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> CharArray.mapIndexedTo(destination: C,
transform: (index: Int, Char) -> R): C {\n  var index = 0\n  for (item in this)\n
destination.add(transform(index++, item))\n  return destination\n}\n\n/**\n * Returns a list containing only the
non-null results of applying the given [transform] function\n * to each element in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.mapNotNull\n */\npublic inline fun <T, R : Any>
Array<out T>.mapNotNull(transform: (T) -> R?): List<R> {\n  return mapNotNullTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Applies the given [transform] function to each element in the original array\n * and
appends only the non-null results to the given [destination].\n */\npublic inline fun <T, R : Any, C :
MutableCollection<in R>>
Array<out T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n  for (element in this)\n
transform(element)?.let { destination.add(it) }\n  return destination\n}\n\n/**\n * Applies the given [transform]
function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic
inline fun <T, R, C : MutableCollection<in R>> Array<out T>.mapTo(destination: C, transform: (T) -> R): C {\n
for (item in this)\n  destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given
[transform] function to each element of the original array\n * and appends the results to the given [destination].\n
*/\npublic inline fun <R, C : MutableCollection<in R>> ByteArray.mapTo(destination: C, transform: (Byte) -> R):
C {\n  for (item in this)\n    destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the
given [transform] function to each element of the original array\n * and appends the results

```

```

to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>>
ShortArray.mapTo(destination: C, transform: (Short) -> R): C {\n  for (item in this)\n
destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function to each
element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C :
MutableCollection<in R>> IntArray.mapTo(destination: C, transform: (Int) -> R): C {\n  for (item in this)\n
destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function to each
element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C :
MutableCollection<in R>> LongArray.mapTo(destination: C, transform: (Long) -> R): C {\n  for (item in this)\n
destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function
to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun
<R, C : MutableCollection<in R>> FloatArray.mapTo(destination: C, transform: (Float) -> R): C {\n  for (item in
this)\n  destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform]
function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic
inline fun <R, C : MutableCollection<in R>> DoubleArray.mapTo(destination: C, transform: (Double) -> R): C {\n
for (item in this)\n  destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given
[transform] function to each element of the original array\n * and appends the results to the given [destination].\n
*/\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.mapTo(destination: C, transform: (Boolean)
-> R): C {\n  for (item in this)\n  destination.add(transform(item))\n
return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n *
and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>>
CharArray.mapTo(destination: C, transform: (Char) -> R): C {\n  for (item in this)\n
destination.add(transform(item))\n  return destination\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each
element of the original array\n * into an [IndexedValue] containing the index of that element and the element
itself.\n */\npublic fun <T> Array<out T>.withIndex(): Iterable<IndexedValue<T>> {\n  return IndexingIterable {
iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original array\n * into an
[IndexedValue] containing the index of that element and the element itself.\n */\npublic fun ByteArray.withIndex():
Iterable<IndexedValue<Byte>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and
the element itself.\n */\npublic fun ShortArray.withIndex(): Iterable<IndexedValue<Short>> {\n  return
IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original array\n
* into an [IndexedValue] containing the index of that element and the element itself.\n */\npublic fun
IntArray.withIndex(): Iterable<IndexedValue<Int>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n *
Returns a lazy [Iterable] that wraps each element of the original array\n * into an [IndexedValue] containing the
index of that element and the element itself.\n */\npublic fun LongArray.withIndex():
Iterable<IndexedValue<Long>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and
the element itself.\n */\npublic fun FloatArray.withIndex(): Iterable<IndexedValue<Float>> {\n  return
IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original array\n
* into an [IndexedValue] containing the index of that element and the element itself.\n */\npublic fun DoubleArray.withIndex():
Iterable<IndexedValue<Double>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and
the element itself.\n */\npublic fun BooleanArray.withIndex(): Iterable<IndexedValue<Boolean>> {\n  return
IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original array\n
* into an [IndexedValue] containing the index of that element and the element itself.\n */\npublic fun
CharArray.withIndex(): Iterable<IndexedValue<Char>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n *
Returns a list containing only distinct elements from the given array.\n * \n * Among equal elements of the given
array, only the first one will be present in the resulting list.\n * The elements in the resulting list are in the same

```

order as they were in the source array.\n \* \n \* @sample

```

samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun <T> Array<out
T>.distinct(): List<T> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct
elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the
source array.\n * \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic
fun ByteArray.distinct(): List<Byte> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing
only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they
were in
the source array.\n * \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n
*^\npublic fun ShortArray.distinct(): List<Short> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a
list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same
order as they were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun IntArray.distinct():
List<Int> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from
the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n
* \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun
LongArray.distinct(): List<Long> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing
only distinct elements from the
given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n * \n *
@sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun
FloatArray.distinct(): List<Float> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing
only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun DoubleArray.distinct():
List<Double> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements
from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source
array.\n * \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun
BooleanArray.distinct(): List<Boolean> {\n    return
this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n
* The elements in the resulting list are in the same order as they were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun CharArray.distinct():
List<Char> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only elements from the
given array\n * having distinct keys returned by the given [selector] function.\n * \n * Among elements of the given
array with equal keys, only the first one will be present in the resulting list.\n * \n * The elements in the resulting
list are
in the same order as they were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <T, K> Array<out
T>.distinctBy(selector: (T) -> K): List<T> {\n    val set = HashSet<K>()\n    val list = ArrayList<T>()\n    for (e
in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector]
function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n * \n *
@sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
ByteArray.distinctBy(selector: (Byte) -> K): List<Byte> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Byte>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n

```



```

*public inline fun <K> ShortArray.distinctBy(selector: (Short) -> K): List<Short> {
    val set = HashSet<K>()
    val list = ArrayList<Short>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from the
given array
* having distinct keys returned by the given [selector] function.
* The elements in the resulting
list are in the same order as they were in the source array.
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K>
IntArray.distinctBy(selector: (Int) -> K): List<Int> {
    val set = HashSet<K>()
    val list = ArrayList<Int>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from
the given array
* having distinct keys returned by the given [selector] function.
* The elements in the
resulting list are in the same order as they were in the source array.
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K>
LongArray.distinctBy(selector: (Long) -> K): List<Long> {
    val set = HashSet<K>()
    val list =
ArrayList<Long>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from the given array
* having distinct keys
returned by the given [selector] function.
* The elements in the resulting list are in the same order as they
were in the source array.
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K>
FloatArray.distinctBy(selector: (Float) -> K): List<Float> {
    val set = HashSet<K>()
    val list = ArrayList<Float>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from the given array
* having
distinct keys returned by the given [selector] function.
* The elements in the resulting list are in the same
order as they were in the source array.
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K>
DoubleArray.distinctBy(selector: (Double) -> K): List<Double> {
    val set = HashSet<K>()
    val list =
ArrayList<Double>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from the given array
* having distinct keys
returned by the given [selector] function.
* The elements in the resulting list are in the same order as they
were
in the source array.
@sample samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K> BooleanArray.distinctBy(selector: (Boolean) -> K): List<Boolean> {
    val set =
HashSet<K>()
    val list = ArrayList<Boolean>()
    for (e in this) {
        val key = selector(e)
        if
(set.add(key))
            list.add(e)
    }
    return list
}

* Returns a list containing only elements from the
given array
* having distinct keys returned by the given [selector] function.
* The elements in the resulting
list are in the same order as they were in the source array.
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy

*public inline fun <K>
CharArray.distinctBy(selector: (Char) -> K): List<Char> {
    val set = HashSet<K>()
    val list =
ArrayList<Char>()
    for (e in this) {
        val key = selector(e)
        if (set.add(key))
            list.add(e)
    }
    return
list
}

* Returns a set containing all elements that are contained by both this array and the specified
collection.
* The returned set preserves the element iteration order of the original array.
* To get a set
containing all elements that are contained at least in one of these collections use [union].

*public infix fun <T>
Array<out T>.intersect(other: Iterable<T>): Set<T> {
    val set = this.toMutableSet()
    set.retainAll(other)
    return set
}

* Returns a set containing all elements that are contained by both this array and the specified
collection.
* The returned set preserves the element iteration order of the original array.
* To get a set
containing all elements that are contained at least in one of these collections use [union].

*public infix fun
ByteArray.intersect(other: Iterable<Byte>): Set<Byte> {
    val set = this.toMutableSet()
    set.retainAll(other)
    return set
}

* Returns a set containing

```

all elements that are contained by both this array and the specified collection.

`ShortArray.intersect(other: Iterable<Short>): Set<Short>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by both this array and the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`IntArray.intersect(other: Iterable<Int>): Set<Int>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by both this array and the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`FloatArray.intersect(other: Iterable<Float>): Set<Float>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by both this array and the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`DoubleArray.intersect(other: Iterable<Double>): Set<Double>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by both this array and the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`BooleanArray.intersect(other: Iterable<Boolean>): Set<Boolean>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by both this array and the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`CharArray.intersect(other: Iterable<Char>): Set<Char>` {  
`val set = this.toMutableSet()`  
`set.retainAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. To get a set containing all elements that are contained at least in one of these collections use [union]. */`

`<T> Array<out T>.subtract(other: Iterable<T>): Set<T>` {  
`val set = this.toMutableSet()`  
`set.removeAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. */`

`ByteArray.subtract(other: Iterable<Byte>): Set<Byte>` {  
`val set = this.toMutableSet()`  
`set.removeAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. */`

`ShortArray.subtract(other: Iterable<Short>): Set<Short>` {  
`val set = this.toMutableSet()`  
`set.removeAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. */`

`IntArray.subtract(other: Iterable<Int>): Set<Int>` {  
`val set = this.toMutableSet()`  
`set.removeAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. */`

`LongArray.subtract(other: Iterable<Long>): Set<Long>` {  
`val set = this.toMutableSet()`  
`set.removeAll(other)`  
`return set`  
} `/* Returns a set containing all elements that are contained by this array and not contained by the specified collection. The returned set preserves the element iteration order of the original array. */`

preserves the element iteration order of the original array.

```

public infix fun FloatArray.subtract(other:
Iterable<Float>): Set<Float> {
    val set = this.toMutableSet()
    set.removeAll(other)
    return set
}

```

Returns a set containing all elements that are contained by this array and not contained by the specified collection.

The returned set preserves the element iteration order of the original array.

```

public infix fun
DoubleArray.subtract(other: Iterable<Double>): Set<Double> {
    val set = this.toMutableSet()
    set.removeAll(other)
    return set
}

```

Returns a set containing all elements that are contained by this array and not contained by the specified collection.

The returned set preserves the element iteration order of the original array.

```

public infix fun BooleanArray.subtract(other: Iterable<Boolean>):
Set<Boolean> {
    val set = this.toMutableSet()
    set.removeAll(other)
    return set
}

```

Returns a set containing all elements that are contained by this array and not contained by the specified collection.

The returned set preserves the element iteration order of the original array.

```

public infix fun
CharArray.subtract(other: Iterable<Char>): Set<Char> {
    val set = this.toMutableSet()
    set.removeAll(other)
    return set
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun <T> Array<out T>.toMutableSet(): MutableSet<T> {
    return toCollection(LinkedHashSet<T>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun ByteArray.toMutableSet():
MutableSet<Byte> {
    return toCollection(LinkedHashSet<Byte>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun ShortArray.toMutableSet(): MutableSet<Short> {
    return toCollection(LinkedHashSet<Short>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun IntArray.toMutableSet(): MutableSet<Int> {
    return toCollection(LinkedHashSet<Int>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun LongArray.toMutableSet(): MutableSet<Long> {
    return toCollection(LinkedHashSet<Long>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun FloatArray.toMutableSet(): MutableSet<Float> {
    return toCollection(LinkedHashSet<Float>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun DoubleArray.toMutableSet(): MutableSet<Double> {
    return toCollection(LinkedHashSet<Double>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun BooleanArray.toMutableSet(): MutableSet<Boolean> {
    return toCollection(LinkedHashSet<Boolean>(mapCapacity(size)))
}

```

Returns a new [MutableSet] containing all distinct elements from the given array.

The returned set preserves the element iteration order of the original array.

```

public fun CharArray.toMutableSet(): MutableSet<Char> {
    return toCollection(LinkedHashSet<Char>(mapCapacity(size.coerceAtMost(128))))
}

```

Returns a set containing all distinct elements from both collections.

The returned set preserves the element iteration order of the original array.

Those elements of the [other] collection that are unique are iterated in the end in the order of the [other] collection.

To get a set containing all elements that are contained in both collections use [intersect].

```

public infix fun <T> Array<out T>.union(other: Iterable<T>):
Set<T> {
    val set = this.toMutableSet()
    set.addAll(other)
    return set
}

```

Returns a set containing all distinct elements from both collections.

The returned set preserves the element iteration order of the original array.

Those elements of the [other] collection that are unique are iterated in the end in the order of the [other] collection.

To get a set containing all elements that are contained in both collections use

```

[intersect].\n *^\npublic infix fun ByteArray.union(other: Iterable<Byte>): Set<Byte> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n *
\n * To get a set containing all elements that are contained
in both collections use [intersect].\n *^\npublic infix fun ShortArray.union(other: Iterable<Short>): Set<Short> {\n
val set = this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct
elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n
* Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other]
collection.\n * \n * To get a set containing all elements that are contained in both collections use [intersect].\n
*^\npublic infix fun IntArray.union(other: Iterable<Int>): Set<Int> {\n    val set = this.toMutableSet()\n
set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n
* \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other]
collection that are unique are iterated in the end\n *
\n * To get a set containing all elements that are contained in both
collections use [intersect].\n *^\npublic infix fun LongArray.union(other: Iterable<Long>): Set<Long> {\n    val set
= this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n
* \n * To get a set containing all elements that are contained in both collections use [intersect].\n *^\npublic infix fun
FloatArray.union(other: Iterable<Float>): Set<Float> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n
return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set
preserves the element iteration order of
the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order
of the [other] collection.\n * \n * To get a set containing all elements that are contained in both collections use
[intersect].\n *^\npublic infix fun DoubleArray.union(other: Iterable<Double>): Set<Double> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n
* \n * To get a set containing all elements that are contained in both collections use [intersect].\n *^\npublic infix fun
BooleanArray.union(other: Iterable<Boolean>): Set<Boolean> {\n    val set = this.toMutableSet()\n
set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing
all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the
original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of
the [other] collection.\n * \n * To get a set containing all elements that are contained in both collections use
[intersect].\n *^\npublic infix fun CharArray.union(other: Iterable<Char>): Set<Char> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns `true` if all elements match the given
[predicate].\n * \n * Note that if the array contains no elements, the function returns `true`\n * because there are no
elements in it that _do not_ match the predicate.\n * See a more detailed explanation of this logic concept in
["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth) article.\n * \n * @sample
samples.collections.Collections.Aggregates.all\n *^\npublic inline fun <T> Array<out T>.all(predicate:
(T) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n
* Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the
function returns `true`\n * because there are no elements in it that _do not_ match the predicate.\n * See a more
detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth)
article.\n * \n * @sample samples.collections.Collections.Aggregates.all\n *^\npublic inline fun
ByteArray.all(predicate: (Byte) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the

```

array contains no elements, the function returns `true` because there are no elements in it that `_do not_` match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous\_truth) article.

`@sample`

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun ShortArray.all(predicate: (Short) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun IntArray.all(predicate: (Int) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun LongArray.all(predicate: (Long) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun FloatArray.all(predicate: (Float) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun DoubleArray.all(predicate: (Double) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun BooleanArray.all(predicate: (Boolean) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns `true` because there are no elements in it that _do not_ match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuuous_truth) article.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.all\n */\npublic inline fun CharArray.all(predicate: (Char) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.any\n */\npublic fun <T> Array<out T>.any(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.any\n */\npublic fun ByteArray.any(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.any\n */\npublic fun ShortArray.any(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.any\n */\npublic fun IntArray.any(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```
samples.collections.Collections.Aggregates.any\n */\npublic fun LongArray.any(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
```

```

isEmpty()\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n *\npublic fun FloatArray.any(): Boolean
{\n    return isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n *\npublic fun DoubleArray.any(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n *\npublic fun BooleanArray.any(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n *\npublic fun CharArray.any(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun <T> Array<out
T>.any(predicate: (T) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return true\n    return
false\n}\n\n/**\n * Returns `true` if at least one element matches
the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic
inline fun ByteArray.any(predicate: (Byte) -> Boolean): Boolean {\n    for (element in this) if (predicate(element))
return true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun
ShortArray.any(predicate: (Short) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun
IntArray.any(predicate: (Int) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return true\n
return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun
LongArray.any(predicate: (Long) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun
FloatArray.any(predicate: (Float) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic inline fun
DoubleArray.any(predicate: (Double) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*\npublic inline fun BooleanArray.any(predicate: (Boolean) -> Boolean): Boolean {\n    for (element in this) if
(predicate(element)) return true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the
given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n *\npublic
inline fun CharArray.any(predicate: (Char) -> Boolean): Boolean {\n    for (element in this) if (predicate(element))
return true\n    return false\n}\n\n/**\n * Returns the number of elements in this array.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.count(): Int {\n    return size\n}\n\n/**\n *
Returns the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.count(): Int {\n    return size\n}\n\n/**\n * Returns the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.count(): Int {\n    return size\n}\n\n/**\n *
Returns the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.count(): Int {\n    return size\n}\n\n/**\n * Returns the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.count(): Int {\n    return size\n}\n\n/**\n * Returns the
number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.count(): Int {\n
return size\n}\n\n/**\n * Returns the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.count(): Int {\n    return size\n}\n\n/**\n * Returns the number of elements in this array.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.count(): Int {\n    return size\n}\n\n/**\n * Returns
the number of elements in this array.\n *\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.count(): Int {\n

```

```

return size\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun <T> Array<out T>.count(predicate: (T) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun ByteArray.count(predicate: (Byte) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun ShortArray.count(predicate: (Short) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun IntArray.count(predicate: (Int) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun LongArray.count(predicate: (Long) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun FloatArray.count(predicate: (Float) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun DoubleArray.count(predicate: (Double) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun BooleanArray.count(predicate: (Boolean) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*/\npublic inline fun CharArray.count(predicate: (Char) -> Boolean): Int {\n    var count = 0\n    for (element in this) if (predicate(element)) ++count\n    return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator value and each element.\n\n * Returns the specified [initial] value if the array is empty.\n\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*/\npublic inline fun <T, R> Array<out T>.fold(initial: R, operation: (acc: R, T) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator value and each element.\n\n * Returns the specified [initial] value if the array is empty.\n\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*/\npublic inline fun <R> ByteArray.fold(initial: R, operation: (acc: R, Byte) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator value and each element.\n\n * Returns the specified [initial] value if the array is empty.\n\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*/\npublic inline fun <R> ShortArray.fold(initial: R, operation: (acc: R, Short) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator value and each element.\n\n * Returns the specified [initial] value if the array is empty.\n\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*/\npublic inline fun <R> IntArray.fold(initial: R, operation: (acc: R, Int) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator value and each element.\n\n * Returns the specified [initial] value if the array is empty.\n\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*/\npublic inline fun <R> LongArray.fold(initial: R, operation: (acc: R, Long) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n
*/\n * to current accumulator

```

value and each element.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
public inline fun <R> FloatArray.fold(initial: R, operation: (acc: R, Float) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
public inline fun <R> DoubleArray.fold(initial: R, operation: (acc: R, Double) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
public inline fun <R> BooleanArray.fold(initial: R, operation: (acc: R, Boolean) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
public inline fun <R> CharArray.fold(initial: R, operation: (acc: R, Char) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
public inline fun <T, R> Array<out T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
public inline fun <R> ByteArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
public inline fun <R> ShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
public inline fun <R> IntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

```

Returns the specified [initial] value if the array is empty.
@param [operation] function that takes the index of an

```



```

element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*/\npublic inline fun <R> LongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): R {\n  var
index = 0\n  var accumulator = initial\n  for (element in this) accumulator = operation(index++, accumulator,
element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value
and applying [operation] from left to right\n * to current accumulator value and each element with its index in the
original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n */\npublic inline fun <R> FloatArray.foldIndexed(initial: R, operation: (index: Int, acc: R,
Float) -> R): R {\n  var index = 0\n  var accumulator = initial\n  for (element in this) accumulator =
operation(index++, accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting with
[initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its
index in the original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, current accumulator
value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R>
DoubleArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Double) -> R): R {\n  var index = 0\n  var
accumulator = initial\n  for (element in this) accumulator = operation(index++, accumulator, element)\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\n
public inline fun <R> BooleanArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Boolean) -> R): R {\n
  var index = 0\n  var accumulator = initial\n  for (element in this) accumulator = operation(index++,
accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and
applying [operation] from left to right\n * to current accumulator value and each element with its index in the
original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n */\npublic inline fun <R> CharArray.foldIndexed(initial: R, operation: (index: Int, acc: R,
Char) -> R): R {\n  var index = 0\n  var accumulator = initial\n  for (element in this) accumulator =
operation(index++, accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting with
[initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns the specified [initial] value if the array is empty.\n * \n * @param
[operation] function that takes an element and current accumulator value, and calculates the next accumulator
value.\n */\npublic inline fun <T, R> Array<out T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {\n  var
index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(get(index--),
accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying
[operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns the specified
[initial] value if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R>
ByteArray.foldRight(initial: R, operation: (Byte, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator =
initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from
right to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if
the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and
calculates the next accumulator value.\n */\npublic inline fun <R> ShortArray.foldRight(initial: R, operation: (Short,
acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n
  accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value
starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator
value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that

```

takes an element and current accumulator value, and calculates the next

```
accumulator value.\n */\npublic inline fun <R> IntArray.foldRight(initial: R, operation: (Int, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator =\n        operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/* Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n *\n * Returns the specified [initial] value if the array is empty.\n *\n * @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n */\n\npublic inline fun <R>\nLongArray.foldRight(initial: R, operation: (Long, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator =\n    initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return\n    accumulator\n}\n\n/* Accumulates value starting with [initial] value and applying [operation]\n * from right to left\n * to each element and current accumulator value.\n *\n * Returns the specified [initial] value if\n * the array is empty.\n *\n * @param [operation] function that takes an element and current accumulator value, and\n * calculates the next accumulator value.\n */\n\npublic inline fun <R> FloatArray.foldRight(initial: R, operation: (Float,\nacc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/* Accumulates value\n * starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator\n * value.\n *\n * Returns the specified [initial] value if the array is empty.\n *\n * @param [operation] function that\n * takes an element and current accumulator value, and calculates the next accumulator value.\n */\n\npublic inline fun\n<R> DoubleArray.foldRight(initial: R, operation: (Double, acc:\nR) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator =\n        operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/* Accumulates value starting with\n * [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n *\n * Returns the specified [initial] value if the array is empty.\n *\n * @param [operation] function that takes an element\n * and current accumulator value, and calculates the next accumulator value.\n */\n\npublic inline fun <R>\nBooleanArray.foldRight(initial: R, operation: (Boolean, acc: R) -> R): R {\n    var index = lastIndex\n    var\n    accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return\n    accumulator\n}\n\n/* Accumulates value starting with [initial] value and applying [operation] from right\n * to left\n * to each element and current accumulator value.\n *\n * Returns\n * the specified [initial] value if the array is empty.\n *\n * @param [operation] function that takes an element and\n * current accumulator value, and calculates the next accumulator value.\n */\n\npublic inline fun <R>\nCharArray.foldRight(initial: R, operation: (Char, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator =\n    initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return\n    accumulator\n}\n\n/* Accumulates value starting with [initial] value and applying [operation] from right to\n * left\n * to each element with its index in the original array and current accumulator value.\n *\n * Returns the\n * specified [initial] value if the array is empty.\n *\n * @param [operation] function that takes the index of an\n * element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n\npublic inline fun <T, R> Array<out T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc:\nR) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator =\n        operation(index, get(index), accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/* Accumulates\n * value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the\n * original array and current accumulator value.\n *\n * Returns the specified [initial] value if the array is empty.\n *\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator\n * value, and calculates the next accumulator value.\n */\n\npublic inline fun <R> ByteArray.foldRightIndexed(initial: R,\noperation: (index: Int, Byte, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while\n    (index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return\n    accumulator\n}\n\n/* Accumulates value starting with\n * [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and\n * current accumulator value.\n *\n * Returns the specified [initial] value if the array is empty.\n *\n * @param
```

[operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> ShortArray.foldRightIndexed(initial: R,
operation: (index: Int, Short, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> IntArray.foldRightIndexed(initial: R, operation: (index: Int, Int, acc:
R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator =
operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> LongArray.foldRightIndexed(initial:
R, operation: (index: Int, Long, acc: R) -> R): R
{
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator =
operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> FloatArray.foldRightIndexed(initial:
R, operation: (index: Int, Float, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return
accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> DoubleArray.foldRightIndexed(initial: R, operation: (index: Int,
Double, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> BooleanArray.foldRightIndexed(initial: R, operation: (index: Int,
Boolean, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns the specified [initial] value if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> CharArray.foldRightIndexed(initial: R, operation: (index: Int, Char, acc: R) -> R): R
{
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator =
operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Performs the given [action] on each element.

```

public inline fun <T> Array<out T>.forEach(action: (T) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element.

```

public inline fun ByteArray.forEach(action: (Byte) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element.

```

public inline fun ShortArray.forEach(action: (Short) -> Unit):
Unit {
    for (element in this) action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun IntArray.forEach(action: (Int) -> Unit): Unit {
    for (element in this)
action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun
LongArray.forEach(action:
(Long) -> Unit): Unit {
    for (element in this) action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun FloatArray.forEach(action: (Float) -> Unit): Unit {
    for (element in this)
action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun
DoubleArray.forEach(action: (Double) -> Unit): Unit {
    for (element in this) action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun BooleanArray.forEach(action: (Boolean) ->
Unit): Unit {
    for (element in this) action(element)
}

```

\* Performs the given [action] on each element.

```

public inline fun CharArray.forEach(action: (Char) -> Unit): Unit {
    for (element in this)
action(element)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs
the action on the element.
public inline fun <T> Array<out T>.forEachIndexed(action: (index: Int, T) ->
Unit): Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of
an element and the element itself
* and performs the action on the element.
public inline fun
ByteArray.forEachIndexed(action: (index: Int, Byte) -> Unit): Unit {
    var index = 0
    for (item in this)
action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs
the action on the element.
public inline fun ShortArray.forEachIndexed(action: (index: Int, Short) -> Unit):
Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs the action on the element.
public inline
fun IntArray.forEachIndexed(action: (index: Int, Int) -> Unit): Unit {
    var index = 0
    for (item in this)
action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs
the action on the element.
public inline fun LongArray.forEachIndexed(action: (index: Int, Long) -> Unit):
Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs the action on the element.
public inline fun FloatArray.forEachIndexed(action: (index: Int, Float) -> Unit): Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs the action on the element.
public inline fun DoubleArray.forEachIndexed(action: (index: Int, Double) -> Unit): Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs the action on the element.
public inline fun BooleanArray.forEachIndexed(action: (index: Int, Boolean) -> Unit): Unit {
    var index = 0
    for (item in this) action(index++, item)
}

```

\* Performs the given [action] on each element, providing sequential index with the element.

```

@param [action] function that takes the index of an element and the element itself
* and performs the action on the element.
public inline fun CharArray.forEachIndexed(action: (index: Int, Char) -> Unit): Unit {
    var index = 0
    for (item in this)
action(index++, item)
}

```

\* Returns the largest element.

```

* If any of elements is `NaN` returns `NaN`.
* @throws NoSuchElementException if the array is empty.

```

```

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("maxOrNull")
@Suppress("CONFLICTING_OVERLOADS")
public fun Array<out Double>.max(): Double {
    if (isEmpty()) throw NoSuchElementException()
    var

```

```

max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n max = maxOf(max, e)\n }\n return
max\n}\n\n/**\n * Returns the largest element.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun Array<out Float>.max(): Float {\n if (isEmpty()) throw NoSuchElementException()\n var
max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n max = maxOf(max, e)\n }\n return
max\n}\n\n/**\n * Returns the largest element.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun <T : Comparable<T>> Array<out T>.max(): T {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e)
max = e\n }\n return max\n}\n\n/**\n * Returns the largest element.\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun ByteArray.max():
Byte {\n if (isEmpty()) throw NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n
val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun ShortArray.max(): Short {\n if (isEmpty()) throw NoSuchElementException()\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n *
Returns the largest element.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun IntArray.max(): Int {\n if (isEmpty()) throw NoSuchElementException()\n var max = this[0]\n
for (i in 1..lastIndex) {\n val e = this[i]\n
if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun LongArray.max(): Long {\n if (isEmpty()) throw NoSuchElementException()\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n *
Returns the largest element.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun FloatArray.max(): Float {\n if (isEmpty()) throw NoSuchElementException()\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n max = maxOf(max, e)\n }\n return max\n}\n\n/**\n *
Returns the largest
element.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun DoubleArray.max(): Double {\n if (isEmpty()) throw NoSuchElementException()\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n max = maxOf(max, e)\n }\n return max\n}\n\n/**\n *
Returns the largest element.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun CharArray.max(): Char {\n if (isEmpty()) throw NoSuchElementException()\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n *
Returns the first element yielding the largest value of the given function.\n * \n * @throws
NoSuchElementException
if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL

```

```

OADS\)\npublic inline fun <T, R : Comparable<R>> Array<out T>.maxBy(selector: (T) -> R): T {\n  if
(isEmpty()) throw NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return maxElem\n  var maxValue = selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (maxValue < v) {\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS\)\npublic
inline fun <R : Comparable<R>> ByteArray.maxBy(selector: (Byte) -> R): Byte {\n  if (isEmpty()) throw
NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0)
return maxElem\n  var maxValue = selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v
= selector(e)\n    if (maxValue < v) {\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return
maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function.\n * \n * @throws
NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS\)\npublic inline fun <R : Comparable<R>> ShortArray.maxBy(selector: (Short) -> R): Short {\n  if
(isEmpty()) throw NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex
= this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue = selector(maxElem)\n  for (i in
1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v) {\n      maxElem = e\n
maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value
of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS\)\npublic inline fun <R : Comparable<R>> IntArray.maxBy(selector: (Int) -> R): Int {\n  if (isEmpty())
throw NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex ==
0) return maxElem\n  var maxValue = selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val
v = selector(e)\n    if (maxValue
< v) {\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the
first element yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the
array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS\)\npublic inline fun <R : Comparable<R>> LongArray.maxBy(selector: (Long) -> R): Long {\n  if
(isEmpty()) throw NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return maxElem\n  var maxValue = selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (maxValue < v) {\n      maxElem = e\n      maxValue = v\n    }\n  }\n
return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function.\n * \n *
@throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS\)\npublic inline fun <R : Comparable<R>> FloatArray.maxBy(selector: (Float) -> R): Float {\n  if
(isEmpty()) throw NoSuchElementException()\n  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return maxElem\n  var maxValue = selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (maxValue < v) {\n      maxElem = e\n      maxValue = v\n    }\n  }\n
return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function.\n * \n *
@throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n

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*^@SinceKotlin("1.7")@kotlin.jvm.JvmName("maxByOrThrow")@Suppress("CONFLICTING_OVERLOADS")\npublic
inline fun <R : Comparable<R>> DoubleArray.maxBy(selector: (Double) -> R): Double {\n if (isEmpty()) throw
NoSuchElementException()\n var maxElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0)
return maxElem\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v
= selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return
maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function.\n * \n * @throws
NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*^@SinceKotlin("1.7")@kotlin.jvm.JvmName("maxByOrThrow")@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> BooleanArray.maxBy(selector: (Boolean) -> R): Boolean {\n
if (isEmpty()) throw NoSuchElementException()\n var
maxElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return maxElem\n var maxValue =
selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v)
{\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the array is
empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*^@SinceKotlin("1.7")@kotlin.jvm.JvmName("maxByOrThrow")@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> CharArray.maxBy(selector: (Char) -> R): Char {\n if
(isEmpty()) throw NoSuchElementException()\n var maxElem = this[0]\n val lastIndex = this.lastIndex\n if
(lastIndex == 0) return maxElem\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e =
this[i]\n
val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n
return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if
there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun <T, R : Comparable<R>> Array<out T>.maxByOrNull(selector: (T) ->
R): T? {\n if (isEmpty()) return null\n var maxElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex
== 0) return maxElem\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n
val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return
maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are
no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> ByteArray.maxByOrNull(selector: (Byte) ->
R): Byte? {\n if (isEmpty()) return null\n var maxElem = this[0]\n val lastIndex = this.lastIndex\n if
(lastIndex == 0) return maxElem\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e =
this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n
return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or
`null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> ShortArray.maxByOrNull(selector: (Short) ->
R): Short? {\n if (isEmpty()) return null\n var maxElem = this[0]\n val lastIndex = this.lastIndex\n if
(lastIndex == 0) return maxElem\n var maxValue
= selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue <
v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> IntArray.maxByOrNull(selector: (Int) -> R): Int? {\n if (isEmpty()) return null\n var maxElem
= this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return maxElem\n var maxValue =
selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v)
{\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first

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element yielding the largest value of the given function

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or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> LongArray.maxByOrNull(selector: (Long) -> R): Long? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or\n * `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> FloatArray.maxByOrNull(selector: (Float) -> R): Float? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val\n    lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i\n    in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value\n * of the given function or `null` if there are no elements.\n * \n * @sample\n * samples.collections.Collections.Aggregates.maxByOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> DoubleArray.maxByOrNull(selector: (Double) -> R): Double? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)\n        {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return\n    maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there\n * are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> BooleanArray.maxByOrNull(selector:\n * (Boolean) -> R): Boolean? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex =\n    this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in\n    1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value\n * of the given function or `null` if there are no elements.\n * \n * @sample\n * samples.collections.Collections.Aggregates.maxByOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> CharArray.maxByOrNull(selector:\n * (Char) -> R): Char? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e =\n        this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * \n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned\n * result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T> Array<out T>.maxOf(selector: (T) ->\n * Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue\n    = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue,\n        v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector]\n * function\n * \n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`,\n * the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun ByteArray.maxOf(selector: (Byte) ->\n * Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for\n    (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * \n * applied
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to each element in the array.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n \* \n \* @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.maxOf(selector: (Short) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
    inline fun IntArray.maxOf(selector: (Int) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.maxOf(selector: (Long) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n
    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n
    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.maxOf(selector: (Float) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element
    in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n *
@throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.maxOf(selector: (Double) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
    inline fun BooleanArray.maxOf(selector: (Boolean) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.maxOf(selector: (Char) ->
Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.maxOf(selector: (T) ->
Float): Float {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i
in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.maxOf(selector: (Byte) -> Float):
Float {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun ShortArray.maxOf(selector: (Short) -> Float): Float {\n  if (isEmpty()) throw
NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.maxOf(selector: (Int) -> Float):
Float {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in
1..lastIndex)
{\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.maxOf(selector: (Long) ->
Float): Float {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i
in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.maxOf(selector: (Float) ->
Float): Float {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i

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in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n } \n return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.maxOf(selector: (Double) -> Float): Float {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.maxOf(selector: (Boolean) ->
Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i
in 1..lastIndex) {\n        val v
= selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.maxOf(selector: (Char) -> Float):
Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>> Array<out
T>.maxOf(selector: (T) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (maxValue < v) {\n
maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ByteArray.maxOf(selector: (Byte) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (maxValue <
v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all
values produced by [selector] function\n * applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ShortArray.maxOf(selector: (Short) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (maxValue < v) {\n
maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element

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in the array.\n \* \n \* @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
IntArray.maxOf(selector: (Int) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var maxValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue}\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
LongArray.maxOf(selector: (Long) -> R):
R {\n if (isEmpty()) throw NoSuchElementException()\n var maxValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n
return maxValue}\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
FloatArray.maxOf(selector: (Float) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue}\n}\n\n/**\n * Returns the largest value among all values
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by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
DoubleArray.maxOf(selector: (Double) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue}\n}\n\n/**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R
: Comparable<R>> BooleanArray.maxOf(selector: (Boolean) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n}\n\n/**\n *
Returns the largest value among all values produced by [selector] function\n * applied to each element in the
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharArray.maxOf(selector: (Char) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue}\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the
array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.maxOfOrNull(selector:
(T) -> Double): Double? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in

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1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n } \n return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.maxOfOrNull(selector: (Byte) -> Double): Double? {\n    if (isEmpty()) return null\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.maxOfOrNull(selector: (Short) -
> Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i
in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.maxOfOrNull(selector: (Int) ->
Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n
        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.maxOfOrNull(selector: (Long) -
> Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex)
{\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n *
Returns the largest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.maxOfOrNull(selector:
(Float) -> Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.maxOfOrNull(selector:
(Double) -> Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.maxOfOrNull(selector:

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(Boolean) -> Double): Double? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun CharArray.maxOfOrNull(selector: (Char) -> Double): Double? {\n  if (isEmpty()) return null\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.maxOfOrNull(selector:
(T) -> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex)
{\n    val v = selector(this[i])\n
    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all
values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n *
\n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.maxOfOrNull(selector: (Byte) ->
Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is
`NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.maxOfOrNull(selector: (Short) -
> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is
`NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.maxOfOrNull(selector: (Int) ->
Float): Float? {\n  if (isEmpty()) return
null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue
= maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n *
If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.maxOfOrNull(selector: (Long) -
> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in
the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.maxOrNull(selector: (Float) -
> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.maxOrNull(selector: (Double) -> Float): Float? {\n  if (isEmpty()) return null\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.maxOrNull(selector:
(Boolean) -> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.maxOrNull(selector: (Char) ->
Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns
the largest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R : Comparable<R>> Array<out T>.maxOrNull(selector: (T) -> R): R? {\n  if (isEmpty()) return
null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value
among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no
elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ByteArray.maxOrNull(selector: (Byte) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n
maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n
* applied to each element in the array or `null` if there are no elements.\n
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ShortArray.maxOrNull(selector: (Short) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n
maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
IntArray.maxOfOrNull(selector: (Int) -> R): R? {\n if (isEmpty()) return null\n var maxV =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxV < v) {\n
maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
LongArray.maxOfOrNull(selector: (Long) -> R): R? {\n if (isEmpty()) return null\n var maxV =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxV < v) {\n
maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value among all values produced
by [selector]
function\n * applied to each element in the array or `null` if there are no elements.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
FloatArray.maxOfOrNull(selector: (Float) -> R): R? {\n if (isEmpty()) return null\n var maxV =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxV < v) {\n
maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
DoubleArray.maxOfOrNull(selector: (Double) -> R): R? {\n if
(isEmpty()) return null\n var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (maxV < v) {\n maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
BooleanArray.maxOfOrNull(selector: (Boolean) -> R): R? {\n if (isEmpty()) return null\n var maxV =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxV < v) {\n
maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharArray.maxOfOrNull(selector: (Char) -> R): R? {\n if (isEmpty()) return null\n var maxV =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxV < v) {\n
maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out
T>.maxOfWith(comparator: Comparator<in R>, selector: (T)
-> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var maxV = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n if (comparator.compare(maxV, v) < 0) {\n maxV =
v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.maxOfWith(comparator:
Comparator<in R>, selector: (Byte) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue
= v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.maxOfWith(comparator:
Comparator<in R>, selector: (Short) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.maxOfWith(comparator:
Comparator<in R>, selector: (Int) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue
= selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.maxOfWith(comparator:
Comparator<in R>, selector: (Long) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.maxOfWith(comparator:
Comparator<in R>, selector: (Float) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.maxOfWith(comparator:
Comparator<in R>, selector: (Double) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function
applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> BooleanArray.maxOfWith(comparator:
Comparator<in R>, selector: (Boolean) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if

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(comparator.compare(maxValue, v) < 0) {\n        maxValue = v\n    }\n }\n return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharArray.maxOfWith(comparator: Comparator<in R>, selector: (Char) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out T>.maxOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Byte) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Short) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Int) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Long) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.\n */\n
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*^@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@kotlin.internal.InlineOnly\npublic inline fun <R>
FloatArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Float) -> R): R? {\n  if (isEmpty())
return null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return max\n}\n\n**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*^@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@kotlin.internal.InlineOnly\npublic
inline fun <R> DoubleArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Double) -> R): R? {\n
if (isEmpty()) return null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return
max\n}\n\n**\n * Returns the largest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*^@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@kotlin.internal.InlineOnly\npublic inline fun <R>
BooleanArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Boolean) -> R): R? {\n  if (isEmpty())
return null\n  var
max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return max\n}\n\n**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*^@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@kotlin.internal.InlineOnly\npublic inline fun <R>
CharArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n  if (isEmpty()) return
null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return max\n}\n\n**\n *
Returns the largest element or `null` if there
are no elements.\n * If any of elements is `NaN` returns `NaN`.\n
*^@SinceKotlin("1.4")\npublic fun
Array<out Double>.maxOrNull(): Double? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in
1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return max\n}\n\n**\n * Returns the
largest element or `null` if there are no elements.\n * If any of elements is `NaN` returns `NaN`.\n
*^@SinceKotlin("1.4")\npublic fun
Array<out Float>.maxOrNull(): Float? {\n  if (isEmpty()) return null\n  var
max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return
max\n}\n\n**\n * Returns the largest element or `null` if there are no elements.\n
*^@SinceKotlin("1.4")\npublic fun
<T : Comparable<T>> Array<out T>.maxOrNull(): T? {\n  if (isEmpty()) return null\n  var max = this[0]\n
for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n**\n *
Returns the largest element or `null` if there are no elements.\n
*^@SinceKotlin("1.4")\npublic fun
ByteArray.maxOrNull(): Byte? {\n  if (isEmpty()) return null\n  var max =
this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n**\n *
Returns the largest element or `null` if there are no elements.\n
*^@SinceKotlin("1.4")\npublic fun
ShortArray.maxOrNull(): Short? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n
val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n**\n * Returns the largest element or `null` if
there are no elements.\n
*^@SinceKotlin("1.4")\npublic fun
IntArray.maxOrNull(): Int? {\n  if (isEmpty())
return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n
return max\n}\n\n**\n * Returns the largest element or
`null` if there are no elements.\n
*^@SinceKotlin("1.4")\npublic fun
LongArray.maxOrNull(): Long? {\n  if (isEmpty())
return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max

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= e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any
of elements is `NaN` returns `NaN`.\n *\n@SinceKotlin("1.4")\npublic fun FloatArray.maxOrNull(): Float? {\n
if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n max =
maxOf(max, e)\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n *
\n * If any of elements is `NaN` returns `NaN`.\n *\n@SinceKotlin("1.4")\npublic fun DoubleArray.maxOrNull():
Double? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n
max = maxOf(max, e)\n }\n return
max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun CharArray.maxOrNull(): Char? {\n if (isEmpty()) return null\n var max =
this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n *
Returns the first element having the largest value according to the provided [comparator].\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun <T> Array<out T>.maxWith(comparator: Comparator<in T>): T {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun ByteArray.maxWith(comparator: Comparator<in Byte>): Byte {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun ShortArray.maxWith(comparator: Comparator<in Short>): Short {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the
first element having the largest value according to the provided [comparator].\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun IntArray.maxWith(comparator: Comparator<in Int>): Int {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun LongArray.maxWith(comparator: Comparator<in Long>): Long {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n
if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element
having the largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException
if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun FloatArray.maxWith(comparator: Comparator<in Float>): Float {\n if (isEmpty()) throw
NoSuchElementException()\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException
if the array is empty.\n

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*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun DoubleArray.maxWith(comparator: Comparator<in Double>): Double {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the array is empty.\n */

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*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun BooleanArray.maxWith(comparator: Comparator<in Boolean>): Boolean {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the array is empty.\n */

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*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun CharArray.maxWith(comparator: Comparator<in Char>): Char {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

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*\n@SinceKotlin("1.4")\npublic fun <T> Array<out T>.maxWithOrNull(comparator: Comparator<in T>): T? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

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*\n@SinceKotlin("1.4")\npublic fun ByteArray.maxWithOrNull(comparator: Comparator<in Byte>): Byte? {\n    if (isEmpty())\n        return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun ShortArray.maxWithOrNull(comparator: Comparator<in Short>): Short? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun IntArray.maxWithOrNull(comparator: Comparator<in Int>): Int? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun LongArray.maxWithOrNull(comparator: Comparator<in Long>): Long? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun FloatArray.maxWithOrNull(comparator: Comparator<in Float>): Float? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun DoubleArray.maxWithOrNull(comparator: Comparator<in Double>): Double? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

*\n@SinceKotlin("1.4")\npublic fun BooleanArray.maxWithOrNull(comparator: Comparator<in Boolean>): Boolean? {\n    if (isEmpty()) return null\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */

```

```

var max = this[0]
for (i in 1..lastIndex) {
    val e = this[i]
    if (comparator.compare(max, e) < 0) max = e
}
return max
}

Returns the first element having the largest value according to the provided
[comparator] or `null` if there are no elements.

@SinceKotlin("1.4")
public fun
CharArray.maxWithOrNull(comparator:
    Comparator<in Char>): Char? {
    if (isEmpty()) return null
    var max = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (comparator.compare(max, e) < 0) max = e
    }
    return max
}

Returns the
smallest element.

* If any of elements is `NaN` returns `NaN`.

* @throws NoSuchElementException if
the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun Array<out Double>.min(): Double {
    if (isEmpty()) throw NoSuchElementException()
    var
min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        min = minOf(min, e)
    }
    return
min
}

Returns the smallest element.

* If any of elements is `NaN` returns `NaN`.

* @throws NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun Array<out Float>.min():
Float {
    if (isEmpty()) throw NoSuchElementException()
    var min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        min = minOf(min, e)
    }
    return min
}

Returns the smallest element.

* @throws NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun <T : Comparable<T>> Array<out T>.min(): T {
    if (isEmpty()) throw
NoSuchElementException()
    var min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e)
min = e
    }
    return min
}

Returns the smallest element.

* @throws
NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun ByteArray.min(): Byte {
    if (isEmpty()) throw NoSuchElementException()
    var min =
this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e) min = e
    }
    return min
}

Returns the smallest element.

* @throws NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun ShortArray.min(): Short {
    if (isEmpty()) throw NoSuchElementException()
    var min =
this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e) min = e
    }
    return min
}

Returns the smallest element.

* @throws NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun IntArray.min(): Int {
    if (isEmpty()) throw NoSuchElementException()
    var min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e) min = e
    }
    return min
}

Returns the
smallest element.

* @throws NoSuchElementException
if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun LongArray.min(): Long {
    if (isEmpty()) throw NoSuchElementException()
    var min =
this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e) min = e
    }
    return min
}

Returns the smallest element.

* If any of elements is `NaN` returns `NaN`.

* @throws
NoSuchElementException if the array is empty.

@SinceKotlin("1.7")
@kotlin.jvm.JvmName("minOrThrow")
@Suppress("CONFLICTING_OVERLOADS")
public fun FloatArray.min(): Float {
    if (isEmpty()) throw NoSuchElementException()
    var min =
this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        min = minOf(min, e)
    }
    return min
}

Returns the smallest element.

* If any of elements is `NaN` returns `NaN`.

* @throws
NoSuchElementException if the array is empty.

```

```

*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun DoubleArray.min(): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        min = minOf(min, e)\n    }\n    return min\n}\n\nReturns the smallest element.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun CharArray.min(): Char {\n    if (isEmpty()) throw NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\nReturns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <T, R : Comparable<R>> Array<out T>.minBy(selector: (T) -> R): T {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\nReturns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> ByteArray.minBy(selector: (Byte) -> R): Byte {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\nReturns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> ShortArray.minBy(selector: (Short) -> R): Short {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\nReturns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> IntArray.minBy(selector: (Int) -> R): Int {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\nReturns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> LongArray.minBy(selector: (Long) -> R): Long {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =

```

```

this[i]\n    val v = selector(e)\n    if (minValue > v) {\n        minElem = e\n        minValue = v\n    }\n}\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> FloatArray.minBy(selector: (Float) -> R): Float {\n    if
(isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> DoubleArray.minBy(selector: (Double) ->
R): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex =
this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in
1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value
of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> BooleanArray.minBy(selector: (Boolean) -> R): Boolean {\n    if
(isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function.\n * \n * @throws NoSuchElementException if the array is
empty.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic inline fun <R : Comparable<R>> CharArray.minBy(selector: (Char) -> R): Char {\n    if
(isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function
or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun <T, R : Comparable<R>> Array<out T>.minByOrNull(selector: (T) ->
R): T? {\n    if (isEmpty()) return null\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex
== 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there
are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> ByteArray.minByOrNull(selector:
(Byte) -> R): Byte? {\n    if (isEmpty()) return null\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or
`null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> ShortArray.minByOrNull(selector: (Short) ->

```



```

R): Short? {\n  if (isEmpty()) return null\n  var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return minElem\n  var minValue = selector(minElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (minValue > v) {\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n
 * @sample samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline
fun <R : Comparable<R>> IntArray.minByOrNull(selector: (Int) -> R): Int? {\n  if (isEmpty()) return null\n  var
minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)
{\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> LongArray.minByOrNull(selector: (Long) ->
R): Long? {\n  if (isEmpty()) return null\n  var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return minElem\n  var minValue = selector(minElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (minValue > v) {\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or
`null` if there are no elements.\n * \n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> FloatArray.minByOrNull(selector: (Float) ->
R): Float? {\n  if (isEmpty()) return null\n  var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if
(lastIndex == 0) return minElem\n  var minValue = selector(minElem)\n  for (i in 1..lastIndex) {\n    val e =
this[i]\n    val v = selector(e)\n    if (minValue > v) {\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first element yielding the
smallest value of the given function or `null` if there are no elements.\n * \n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> DoubleArray.minByOrNull(selector: (Double) -> R): Double? {\n  if (isEmpty()) return null\n
var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)
{\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null`
if there are no elements.\n * \n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> BooleanArray.minByOrNull(selector:
(Boolean) -> R): Boolean? {\n  if (isEmpty()) return null\n  var minElem = this[0]\n  val lastIndex =
this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue = selector(minElem)\n  for (i in
1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v) {\n      minElem = e\n
minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value
of the given function or `null` if there are no elements.\n * \n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> CharArray.minByOrNull(selector: (Char) -> R): Char? {\n  if (isEmpty()) return null\n  var
minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v) {\n      minElem = e\n
minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * \n * @throws NoSuchElementException if the array is empty.\n
 */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOf(selector: (T) ->
Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n  var minValue = selector(this[0])\n  for

```

```

(i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue
= minOf(minValue, v)\n } \n return minValue\n}\n\n/**\n * Returns the smallest value among all values
produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is
empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOf(selector: (Byte) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOf(selector: (Short) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun IntArray.minOf(selector: (Int) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOf(selector: (Long) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue,
v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`,
the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOf(selector: (Float) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOf(selector: (Double) ->
Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline
fun BooleanArray.minOf(selector: (Boolean) -> Double): Double {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOf(selector: (Char) ->
Double): Double {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for
(i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue,
v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`,
the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOf(selector: (T) ->
Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOf(selector: (Byte) -> Float):
Float {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOf(selector:
(Short) -> Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var minValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOf(selector: (Int) -> Float):
Float {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOf(selector: (Long) ->
Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to

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each element in the array.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n \* \n \* @throws

NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOf(selector: (Float) -> Float):\nFloat {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in\n    1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to\n * each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is\n * `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOf(selector:\n(Double) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue =\n    selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned\n * result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOf(selector: (Boolean) ->\nFloat): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in\n    1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return\n    minValue\n}\n\n/**\n
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\* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the\n \* array.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n \* \n \* @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOf(selector: (Char) -> Float):\nFloat {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in\n    1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to\n * each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\n    inline fun <T, R : Comparable<R>> Array<out T>.minOf(selector: (T) -> R): R {\n        if (isEmpty()) throw\n        NoSuchElementException()\n        var minValue = selector(this[0])\n        for (i in 1..lastIndex) {\n            val v =\n            selector(this[i])\n            if (minValue > v) {\n                minValue = v\n            }\n        }\n        return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the\n * array.\n * \n * @throws NoSuchElementException if the array is empty.\n
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nByteArray.minOf(selector: (Byte) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue\n    = selector(this[0])\n    for (i in 1..lastIndex) {\n        val\n        v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the\n * array.\n * \n * @throws NoSuchElementException if the array is empty.\n
```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nShortArray.minOf(selector: (Short) -> R): R {\n    if (isEmpty()) throw\n    NoSuchElementException()\n    var
```

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minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nIntArray.minOf(selector: (Int) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var minValue =\n  selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the\n * array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nLongArray.minOf(selector: (Long) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nFloatArray.minOf(selector: (Float) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nDoubleArray.minOf(selector: (Double) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nBooleanArray.minOf(selector: (Boolean) -> R): R {\n  if (isEmpty())\n  throw NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =\n    selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the\n * array.\n * \n * @throws NoSuchElementException if the array is empty.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nCharArray.minOf(selector: (Char) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var minValue\n  = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector]\n * function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values\n * produced by [selector] function is `NaN`, the returned result is `NaN`.\n\n*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOrNull(selector:
(T) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.minOrNull(selector: (Byte) -> Double): Double? {\n  if (isEmpty()) return null\n  var
minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOrNull(selector: (Short) -
> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue
= minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOrNull(selector: (Int) ->
Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns
the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOrNull(selector: (Long) -
> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns
the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOrNull(selector: (Float) ->
Double): Double? {\n  if (isEmpty()) return null\n
var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOrNull(selector:
(Double) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the

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array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN` , the returned result is `NaN` .\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOfOrNull(selector:\n(Boolean) -> Double): Double? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return\nminValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function\n is `NaN` , the returned result is `NaN` .\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun CharArray.minOfOrNull(selector: (Char) -> Double): Double? {\n    if (isEmpty()) return null\n    var\nminValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue =\nminOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of\n values produced by [selector] function is `NaN` , the returned result is `NaN` .\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOfOrNull(selector:\n(T) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex)\n{\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the\n array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN` , the\n returned result is `NaN` .\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOfOrNull(selector: (Byte) ->\nFloat): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the\n smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if\n there are no elements.\n * \n * If any of values produced by [selector] function is `NaN` , the returned result is\n `NaN` .\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun ShortArray.minOfOrNull(selector: (Short) -> Float): Float? {\n    if (isEmpty()) return null\n    var\nminValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue =\nminOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of\n values produced by [selector] function is `NaN` , the returned result is `NaN` .\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOfOrNull(selector: (Int) ->\nFloat): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex)\n{\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array\n or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN` , the returned\n result is `NaN` .\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOfOrNull(selector: (Long) -\n> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the
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smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any

of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOrNull(selector: (Float) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOrNull(selector: (Double) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOrNull(selector: (Boolean) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOrNull(selector: (Char) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\n    Array<out T>.minOrNull(selector: (T) -> R): R? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\n    ByteArray.minOrNull(selector: (Byte) -> R): R? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
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```
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```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
IntArray.minOfOrNull(selector: (Int) -> R): R? {\n
    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
LongArray.minOfOrNull(selector: (Long) -> R): R? {\n    if (isEmpty()) return null\n    var minValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n
minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the
array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
FloatArray.minOfOrNull(selector: (Float) -> R): R? {\n    if (isEmpty()) return null\n    var minValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n
minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
DoubleArray.minOfOrNull(selector: (Double) -> R): R? {\n    if (isEmpty()) return null\n    var minValue =
selector(this[0])\n
    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n
        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
BooleanArray.minOfOrNull(selector: (Boolean) -> R): R? {\n    if (isEmpty()) return null\n    var minValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n
minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
inline fun <R : Comparable<R>> CharArray.minOfOrNull(selector: (Char) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value
according to the provided [comparator]\n * among all values produced by [selector] function applied to each
element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out
T>.minOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n    if (isEmpty()) throw
NoSuchElementException()\n
    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.minOfWith(comparator:
Comparator<in R>, selector: (Byte) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n }\n }\n return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.minOfWith(comparator:
Comparator<in R>, selector: (Short) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n }\n }\n return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.minOfWith(comparator:
Comparator<in R>, selector: (Int) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var minValue
= selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (comparator.compare(minValue,
v) > 0) {\n minValue = v\n }\n }\n return minValue\n}\n\n/**\n * Returns the smallest value
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.minOfWith(comparator:
Comparator<in R>, selector:
(Long) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for
(i in 1..lastIndex) {\n val v = selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n
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* @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.minOfWith(comparator:
Comparator<in R>, selector: (Float) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n
minValue = v\n }\n }\n return minValue\n}\n\n/**\n * Returns the smallest value according to the
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.minOfWith(comparator:
Comparator<in R>, selector: (Double) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n
minValue = v\n }\n }\n return minValue\n}\n\n/**\n * Returns the smallest value according to the provided
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> BooleanArray.minOfWith(comparator:
Comparator<in R>, selector: (Boolean) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var

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minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n return minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
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inline fun <R> CharArray.minOfWith(comparator: Comparator<in R>, selector: (Char) -> R): R {\n if
(isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n
val v = selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n
return minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out
T>.minOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n if (isEmpty()) return null\n
var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue,
v) > 0) {\n minValue = v\n } }\n return minValue\n}\n\n/*\n * Returns the smallest value
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ByteArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Byte) -> R): R? {\n if (isEmpty()) return
null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n return minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
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*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ShortArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Short) -> R): R? {\n if (isEmpty())
return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n return minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
IntArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Int)
-> R): R? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v
= selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n return
minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all values
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
LongArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Long) -> R): R? {\n if (isEmpty()) return
null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(minValue, v) > 0) {\n minValue = v\n } }\n return minValue\n}\n\n/*\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
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*^@SinceKotlin("1.4")^@OptIn(kotlin.experimental.ExperimentalTypeInference::class)^@OverloadResolution
ByLambdaReturnType^@kotlin.internal.InlineOnly^public inline fun <R>
FloatArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Float) -> R): R? {^n  if (isEmpty()) return
null^n  var minValue = selector(this[0])^n  for (i in 1..lastIndex) {^n    val v = selector(this[i])^n    if
(comparator.compare(minValue, v) > 0) {^n      minValue = v^n    }^n }^n return minValue^n}^n/^n *
Returns the smallest value according to the provided [comparator]^n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.^n
*^@SinceKotlin("1.4")^@OptIn(kotlin.experimental.ExperimentalTypeInference::class)^@OverloadResolution
ByLambdaReturnType^@kotlin.internal.InlineOnly^public
inline fun <R> DoubleArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Double) -> R): R? {^n
if (isEmpty()) return null^n  var minValue = selector(this[0])^n  for (i in 1..lastIndex) {^n    val v =
selector(this[i])^n    if (comparator.compare(minValue, v) > 0) {^n      minValue = v^n    }^n }^n return
minValue^n}^n/^n * Returns the smallest value according to the provided [comparator]^n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.^n
*^@SinceKotlin("1.4")^@OptIn(kotlin.experimental.ExperimentalTypeInference::class)^@OverloadResolution
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BooleanArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Boolean) -> R): R? {^n  if (isEmpty())
return null^n  var minValue = selector(this[0])^n
    for (i in 1..lastIndex) {^n      val v = selector(this[i])^n      if (comparator.compare(minValue, v) > 0) {^n
minValue = v^n      }^n }^n return minValue^n}^n/^n * Returns the smallest value according to the provided
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CharArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {^n  if (isEmpty()) return
null^n  var minValue = selector(this[0])^n  for (i in 1..lastIndex) {^n    val v = selector(this[i])^n    if
(comparator.compare(minValue, v) > 0) {^n      minValue = v^n    }^n }^n return minValue^n}^n/^n *
Returns the smallest element or `null` if there are no elements.^n * ^n * If any
of elements is `NaN` returns `NaN`.^n *^@SinceKotlin("1.4")^npublic fun Array<out Double>.minOrNull():
Double? {^n  if (isEmpty()) return null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n    val e = this[i]^n
min = minOf(min, e)^n  }^n return min^n}^n/^n * Returns the smallest element or `null` if there are no
elements.^n * ^n * If any of elements is `NaN` returns `NaN`.^n *^@SinceKotlin("1.4")^npublic fun Array<out
Float>.minOrNull(): Float? {^n  if (isEmpty()) return null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n    val
e = this[i]^n    min = minOf(min, e)^n  }^n return min^n}^n/^n * Returns the smallest element or `null` if
there are no elements.^n *^@SinceKotlin("1.4")^npublic fun <T : Comparable<T>> Array<out T>.minOrNull():
T? {^n  if (isEmpty()) return null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n    val e = this[i]^n    if (min
> e) min = e^n  }^n return min^n}^n/^n *
Returns the smallest element or `null` if there are no elements.^n *^@SinceKotlin("1.4")^npublic fun
ByteArray.minOrNull(): Byte? {^n  if (isEmpty()) return null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n
val e = this[i]^n    if (min > e) min = e^n  }^n return min^n}^n/^n * Returns the smallest element or `null` if
there are no elements.^n *^@SinceKotlin("1.4")^npublic fun ShortArray.minOrNull(): Short? {^n  if (isEmpty())
return null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n    val e = this[i]^n    if (min > e) min = e^n  }^n
return min^n}^n/^n * Returns the smallest element or `null` if there are no elements.^n
*^@SinceKotlin("1.4")^npublic fun IntArray.minOrNull(): Int? {^n  if (isEmpty()) return null^n  var min =
this[0]^n  for (i in 1..lastIndex) {^n    val e = this[i]^n    if (min > e) min = e^n  }^n return min^n}^n/^n *
Returns the smallest element or `null` if there are no
elements.^n *^@SinceKotlin("1.4")^npublic fun LongArray.minOrNull(): Long? {^n  if (isEmpty()) return
null^n  var min = this[0]^n  for (i in 1..lastIndex) {^n    val e = this[i]^n    if (min > e) min = e^n  }^n return

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*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun DoubleArray.minWith(comparator: Comparator<in Double>): Double {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the array is empty.\n */\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun BooleanArray.minWith(comparator: Comparator<in Boolean>): Boolean {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the array is empty.\n */\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun CharArray.minWith(comparator: Comparator<in Char>): Char {\n    if (isEmpty())\n        throw NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun <T> Array<out T>.minWithOrNull(comparator: Comparator<in T>): T? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun ByteArray.minWithOrNull(comparator: Comparator<in Byte>): Byte? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun ShortArray.minWithOrNull(comparator: Comparator<in Short>): Short? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun IntArray.minWithOrNull(comparator: Comparator<in Int>): Int? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun LongArray.minWithOrNull(comparator: Comparator<in Long>): Long? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun FloatArray.minWithOrNull(comparator: Comparator<in Float>): Float? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun DoubleArray.minWithOrNull(comparator: Comparator<in Double>): Double? {\n    if (isEmpty())\n        return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n*\n@SinceKotlin("1.4")\npublic fun BooleanArray.minWithOrNull(comparator: Comparator<in Boolean>): Boolean? {\n    if (isEmpty())\n        return null\n}

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var min = this[0]\n for (i in 1..lastIndex) {\n     val e = this[i]\n     if (comparator.compare(min, e) > 0) min =
e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided
[comparator] or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\npublic fun
CharArray.minWithOrNull(comparator: Comparator<in
Char>): Char? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n     val e = this[i]\n
if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns `true` if the array has no
elements.\n */\n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun <T> Array<out
T>.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun ByteArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun ShortArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun IntArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample samples.collections.Collections.Aggregates.none\n
*/\npublic fun LongArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no
elements.\n */\n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun FloatArray.none():
Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun DoubleArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun BooleanArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.none\n */\npublic fun CharArray.none(): Boolean {\n return
isEmpty()\n}\n\n/**\n * Returns `true` if no elements match the
given [predicate].\n */\n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic
inline fun <T> Array<out T>.none(predicate: (T) -> Boolean): Boolean {\n for (element in this) if
(predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given
[predicate].\n */\n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun
ByteArray.none(predicate: (Byte) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return
false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun ShortArray.none(predicate:
(Short) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*/\npublic inline fun IntArray.none(predicate: (Int) -> Boolean): Boolean {\n for (element in this) if
(predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given
[predicate].\n */\n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun
LongArray.none(predicate: (Long) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return
false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun FloatArray.none(predicate:
(Float) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun
DoubleArray.none(predicate: (Double) -> Boolean): Boolean {\n for (element in this) if (predicate(element))
return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun
BooleanArray.none(predicate: (Boolean) -> Boolean): Boolean {\n for (element in this) if (predicate(element))
return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n */\n * @sample

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samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun CharArray.none(predicate:
(Char) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return
true\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.onEach(action: (T) ->
Unit): Array<out
T> {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given [action] on each
element and returns the array itself afterwards.\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.onEach(action: (Byte) -> Unit): ByteArray {\n    return apply { for (element in this)
action(element) }\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself
afterwards.\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.onEach(action:
(Short) -> Unit): ShortArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the
given [action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.onEach(action: (Int) -> Unit):
IntArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given [action] on
each element and returns
the array itself afterwards.\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.onEach(action: (Long) -> Unit): LongArray {\n    return apply { for (element in this) action(element)
}\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.onEach(action: (Float) ->
Unit): FloatArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.onEach(action: (Double) ->
Unit): DoubleArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.onEach(action:
(Boolean) -> Unit): BooleanArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n *
Performs the given [action] on each element and returns the array itself afterwards.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.onEach(action: (Char) ->
Unit): CharArray {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element, providing sequential index with the element,\n * and returns the array itself afterwards.\n
*/\n@param [action] function that takes the index of an element and the element itself\n * and performs the action on
the element.\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.onEachIndexed(action: (index: Int, T) -> Unit): Array<out T> {\n    return apply { forEachIndexed(action)
}\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element,\n * and
returns the
array itself afterwards.\n * @param [action] function that takes the index of an element and the element itself\n *
and performs the action on the element.\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.onEachIndexed(action: (index: Int, Byte) -> Unit): ByteArray {\n    return apply {
forEachIndexed(action) }\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index
with the element,\n * and returns the array itself afterwards.\n * @param [action] function that takes the index of an
element and the element itself\n * and performs the action on the element.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.onEachIndexed(action:
(index: Int, Short) -> Unit): ShortArray {\n    return apply { forEachIndexed(action) }\n}\n\n/**\n * Performs the
given [action] on each element, providing sequential index with the element,\n * and returns the array itself
afterwards.\n * @param [action] function
that takes the index of an element and the element itself\n * and performs the action on the element.\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.onEachIndexed(action: (index:
Int, Int) -> Unit): IntArray {\n    return apply { forEachIndexed(action) }\n}\n\n/**\n * Performs the given [action]

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on each element, providing sequential index with the element,\n \* and returns the array itself afterwards.\n \*  
@param [action] function that takes the index of an element and the element itself\n \* and performs the action on the element.\n \*  
@SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun  
LongArray.onEachIndexed(action: (index: Int, Long) -> Unit): LongArray {\n return apply {  
forEachIndexed(action) }\n }\n\n/\*\*\n \* Performs the given [action] on each element, providing sequential index with the element,\n \* and returns the array itself afterwards.\n \* @param [action] function that takes the index of an element and the element itself\n \* and performs the action on the element.\n \*  
@SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun FloatArray.onEachIndexed(action: (index: Int, Float) -> Unit): FloatArray {\n return apply {  
forEachIndexed(action) }\n }\n\n/\*\*\n \* Performs the given [action] on each element, providing sequential index with the element,\n \* and returns the array itself afterwards.\n \* @param [action] function that takes the index of an element and the element itself\n \* and performs the action on the element.\n \*  
@SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun DoubleArray.onEachIndexed(action: (index: Int, Double) -> Unit): DoubleArray {\n return apply {  
forEachIndexed(action) }\n }\n\n/\*\*\n \* Performs the given [action] on each element, providing sequential index with the element,\n \* and returns the array itself afterwards.\n \* @param [action] function that takes the index of an element and the element itself\n \* and performs the action on the element.\n \*  
@SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun BooleanArray.onEachIndexed(action: (index: Int, Boolean) -> Unit): BooleanArray {\n return apply {  
forEachIndexed(action) }\n }\n\n/\*\*\n \* Performs the given [action] on each element, providing sequential index with the element,\n \* and returns the array itself afterwards.\n \* @param [action] function that takes the index of an element and the element itself\n \* and performs the action on the element.\n \*  
@SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun CharArray.onEachIndexed(action: (index: Int, Char) -> Unit): CharArray {\n return apply {  
forEachIndexed(action) }\n }\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*  
@public inline fun <S, T : S> Array<out T>.reduce(operation: (acc: S, T) -> S): S {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator: S = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n }\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*  
@public inline fun ByteArray.reduce(operation: (acc: Byte, Byte) -> Byte): Byte {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n }\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*/

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*/\npublic inline fun ShortArray.reduce(operation: (acc: Short, Short) -> Short): Short {\n  if (isEmpty())\n  throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */\n\npublic inline fun IntArray.reduce(operation: (acc: Int, Int) -> Int): Int {\n  if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */\n\npublic inline fun LongArray.reduce(operation: (acc: Long, Long) -> Long): Long {\n  if (isEmpty())\n  throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */\n\npublic inline fun FloatArray.reduce(operation: (acc: Float, Float) -> Float): Float {\n  if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */\n\npublic inline fun DoubleArray.reduce(operation: (acc: Double, Double) -> Double): Double {\n  if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */\n\npublic inline fun BooleanArray.reduce(operation: (acc: Boolean, Boolean) -> Boolean): Boolean {\n  if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n */

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samples.collections.Collections.Aggregates.reduce\n * \npublic inline fun CharArray.reduce(operation: (acc: Char,
Char) -> Char): Char {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be
reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =
operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the
first element and applying [operation] from left to right\n * to current accumulator value and each element with its
index in the original array.\n * \n * Throws an exception if this array is empty. If the array can
be empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the
element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n * \npublic inline fun <S, T : S> Array<out
T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator: S = this[0]\n for (index
in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be
empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the
element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n * \npublic inline fun ByteArray.reduceIndexed(operation:
(index: Int, acc: Byte, Byte) -> Byte): Byte {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty
in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n *
\n * @param [operation] function that takes the index of an element, current accumulator value and the element
itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n * \npublic inline fun ShortArray.reduceIndexed(operation:
(index: Int, acc: Short, Short) -> Short): Short {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty in
an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n *
@param [operation] function that takes the index of an element, current accumulator value and the element itself,\n *
and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n *
\npublic inline fun IntArray.reduceIndexed(operation: (index: Int, acc: Int, Int) -> Int): Int {\n if (isEmpty())\n
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected
way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value and the element itself,\n * and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n

```

```

*public inline fun LongArray.reduceIndexed(operation: (index: Int, acc: Long, Long) -> Long): Long {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.
 @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 @sample samples.collections.Collections.Aggregates.reduce

```

*public inline fun FloatArray.reduceIndexed(operation: (index: Int, acc: Float, Float) -> Float): Float {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.
 @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 @sample samples.collections.Collections.Aggregates.reduce

```

*public inline fun DoubleArray.reduceIndexed(operation: (index: Int, acc: Double, Double) -> Double): Double {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.
 @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 @sample samples.collections.Collections.Aggregates.reduce

```

*public inline fun BooleanArray.reduceIndexed(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): Boolean {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.
 @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 @sample samples.collections.Collections.Aggregates.reduce

```

*public inline fun CharArray.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Returns `null` if the array is empty.
 @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 @sample samples.collections.Collections.Aggregates.reduceOrNull

```

@SinceKotlin("1.4")
*public inline fun <S, T : S> Array<out T>.reduceIndexedOrNull(operation: (index: Int, acc: S, T) -> S): S? {
    if (isEmpty()) return null
    var accumulator: S = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(index, accumulator, this[index])
    }
    return accumulator
}

```

Accumulates value starting with the first element and applying [operation] from left to

right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Returns `null` if the array is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceOrNull\n

```

*\n@SinceKotlin("1.4")\npublic inline fun ByteArray.reduceIndexedOrNull(operation: (index: Int, acc: Byte, Byte) -> Byte): Byte? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun ShortArray.reduceIndexedOrNull(operation: (index: Int, acc: Short, Short) -> Short): Short? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun IntArray.reduceIndexedOrNull(operation: (index: Int, acc: Int, Int) -> Int): Int? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun LongArray.reduceIndexedOrNull(operation: (index: Int, acc: Long, Long) -> Long): Long? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun FloatArray.reduceIndexedOrNull(operation: (index: Int, acc: Float, Float) -> Float): Float? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun DoubleArray.reduceIndexedOrNull(operation: (index: Int, acc: Double, Double) -> Double): Double? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the

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next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic
inline fun BooleanArray.reduceIndexedOrNull(operation: (index: Int, acc: Boolean, Boolean) -> Boolean):
Boolean? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n
accumulator = operation(index, accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates
value starting with the first element and applying [operation] from left to right\n * to current accumulator value and
each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value and the element itself,\n * and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun CharArray.reduceIndexedOrNull(operation: (index: Int, acc: Char,
Char) -> Char): Char? {\n if (isEmpty())\n
return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index,
accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current accumulator value and
an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Array<out T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n if (isEmpty())\n return null\n var
accumulator: S = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
} \n return accumulator\n}\n\n/**\n * Accumulates value starting with
the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current accumulator value
and an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ByteArray.reduceOrNull(operation: (acc: Byte, Byte) -> Byte): Byte? {\n if (isEmpty())\n return null\n var
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
} \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n
*\n * @param [operation] function that takes current accumulator
value and an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ShortArray.reduceOrNull(operation: (acc: Short, Short) -> Short): Short? {\n if (isEmpty())\n return null\n
var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
} \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n
*\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
inline fun IntArray.reduceOrNull(operation: (acc: Int, Int) -> Int): Int? {\n if (isEmpty())\n return null\n var
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
} \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n
*\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun

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LongArray.reduceOrNull(operation: (acc: Long, Long) -> Long): Long? {\n  if (isEmpty())\n    return null\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator\n    = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with\n the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n *\n * Returns `null` if the array is empty.\n *\n * @param [operation] function that takes current accumulator value\n and an element,\n * and calculates the next accumulator value.\n *\n * @sample\n samples.collections.Collections.Aggregates.reduceOrNull\n\n*/\n\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun\nFloatArray.reduceOrNull(operation: (acc: Float, Float) -> Float): Float? {\n  if (isEmpty())\n    return null\n  var\n accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]\n from left to right\n * to current accumulator value and each\n element.\n *\n * Returns `null` if the array is empty.\n *\n * @param [operation] function that takes current\n accumulator value and an element,\n * and calculates the next accumulator value.\n *\n * @sample\n samples.collections.Collections.Aggregates.reduceOrNull\n\n*/\n\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun\nDoubleArray.reduceOrNull(operation: (acc: Double, Double) -> Double): Double? {\n  if (isEmpty())\n    return\n null\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator,\n this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and\n applying [operation] from left to right\n * to current accumulator value and each element.\n *\n * Returns `null` if\n the array is empty.\n *\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n *\n * @sample\n samples.collections.Collections.Aggregates.reduceOrNull\n\n*/\n\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun\nBooleanArray.reduceOrNull(operation: (acc: Boolean, Boolean) -> Boolean): Boolean? {\n  if (isEmpty())\n    return null\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator =\n operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the\n first element and applying [operation] from left to right\n * to current accumulator value and each element.\n *\n * Returns `null` if the array is empty.\n *\n * @param [operation] function that takes current accumulator value and\n an element,\n * and calculates the next accumulator value.\n *\n * @sample\n samples.collections.Collections.Aggregates.reduceOrNull\n\n*/\n\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun\nCharArray.reduceOrNull(operation: (acc: Char, Char) ->\n Char): Char? {\n  if (isEmpty())\n    return null\n  var accumulator = this[0]\n  for (index in 1..lastIndex) {\n    accumulator = operation(accumulator, this[index])\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value\n starting with the last element and applying [operation] from right to left\n * to each element and current accumulator\n value.\n *\n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please\n use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n *\n * @param [operation] function\n that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n *\n * @sample\n samples.collections.Collections.Aggregates.reduceRight\n\n*/\n\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S> Array<out\n T>.reduceRight(operation: (T, acc: S) -> S): S {\n  var index = lastIndex\n  if (index < 0) throw\n UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator:\n S = get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return\n accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to\n left\n * to each element and current accumulator value.\n *\n * Throws an exception if this array is empty. If the\n array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its\n receiver is empty.\n *\n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n *\n * @sample

```

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samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun ByteArray.reduceRight(operation:
(Byte, acc: Byte) -> Byte): Byte {\n  var index = lastIndex\n  if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n  while
(index >= 0) {\n    accumulator = operation(get(index--),
accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and
applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceRightOrNull]
instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes an element and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun ShortArray.reduceRight(operation:
(Short, acc: Short) -> Short): Short {\n  var index = lastIndex\n  if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n  while
(index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates
value starting with the last element and applying [operation] from right to left\n * to each element and current
accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected
way,\n * please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param
[operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun
IntArray.reduceRight(operation: (Int, acc: Int) -> Int): Int {\n  var index = lastIndex\n  if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n  while
(index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n
* to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If the array
can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n * and calculates
the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n *\npublic
inline fun LongArray.reduceRight(operation: (Long, acc: Long) -> Long): Long {\n  var index = lastIndex\n  if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator =
get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Throws an exception if
this array is empty. If the array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It
returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun FloatArray.reduceRight(operation:
(Float, acc: Float) -> Float): Float {\n  var index = lastIndex\n  if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n  while
(index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please
use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function
that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun
DoubleArray.reduceRight(operation: (Double, acc: Double) -> Double): Double {\n  var index = lastIndex\n  if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator =
get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return

```





element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```
public inline fun
IntArray.reduceRightIndexed(operation: (index: Int, Int, acc: Int) -> Int): Int {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}
```

Accumulates value starting with the last element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```
public inline fun
LongArray.reduceRightIndexed(operation: (index: Int, Long, acc: Long) -> Long): Long {
    var index =
lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var
accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index),
accumulator)
        --index
    }
    return accumulator
}
```

Accumulates value starting with the last element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```
public inline fun
FloatArray.reduceRightIndexed(operation: (index: Int, Float, acc: Float) -> Float): Float {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index),
accumulator)
        --index
    }
    return accumulator
}
```

Accumulates value starting with the last element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```
public inline fun
DoubleArray.reduceRightIndexed(operation: (index: Int, Double, acc: Double) -> Double): Double {
    var index =
lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var
accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index),
accumulator)
        --index
    }
    return accumulator
}
```

Accumulates value starting with the last element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```
public inline fun
BooleanArray.reduceRightIndexed(operation: (index: Int, Boolean, acc: Boolean) -> Boolean): Boolean {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be
```

```

reduced.})\n var accumulator = get(index--)\n while (index >= 0) {\n     accumulator = operation(index,
get(index), accumulator)\n     --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with
the last element and applying [operation] from right to left\n * to each element with its index in the original
array and current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty
in an expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n *\npublic inline fun
CharArray.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {\n var index = lastIndex\n
if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.}")\n var accumulator =
get(index--)\n while (index >= 0) {\n     accumulator = operation(index, get(index), accumulator)\n     --index\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation]
from right to left\n * to
each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is
empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun <S,
T : S> Array<out T>.reduceRightIndexedOrNull(operation: (index: Int, T, acc: S) -> S): S? {\n var index =
lastIndex\n if (index < 0) return null\n var accumulator: S = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n     --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n *\n@SinceKotlin("1.4")\npublic inline fun
ByteArray.reduceRightIndexedOrNull(operation: (index: Int, Byte, acc: Byte) -> Byte): Byte? {\n var index =
lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n     --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates
the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun ShortArray.reduceRightIndexedOrNull(operation: (index: Int, Short,
acc: Short) -> Short): Short? {\n var index = lastIndex\n if (index < 0) return null\n var accumulator =
get(index--)\n while (index >= 0) {\n     accumulator = operation(index, get(index), accumulator)\n     --index\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation]
from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the
element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n *\n@SinceKotlin("1.4")\npublic
inline fun IntArray.reduceRightIndexedOrNull(operation: (index: Int, Int, acc: Int) -> Int): Int? {\n var index =
lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n     --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample

```

```

samples.collections.Collections.Aggregates.reduceRightOrNull\n *^@SinceKotlin("1.4")\npublic inline fun
LongArray.reduceRightIndexedOrNull(operation: (index: Int, Long, acc: Long) -> Long): Long? {\n  var index =
lastIndex\n
  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n * Accumulates
value starting with the last element and applying [operation] from right to left\n * to each element with its index in
the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, the element itself and current accumulator value,\n * and
calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n *^@SinceKotlin("1.4")\npublic inline fun
FloatArray.reduceRightIndexedOrNull(operation: (index: Int, Float, acc: Float) -> Float): Float? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n
accumulator = operation(index,
get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n * Accumulates value starting with
the last element and applying [operation] from right to left\n * to each element with its index in the original array
and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function
that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun DoubleArray.reduceRightIndexedOrNull(operation: (index: Int,
Double, acc: Double) -> Double): Double? {\n  var index = lastIndex\n  if (index < 0) return null\n  var
accumulator = get(index--)\n  while (index >= 0) {\n    accumulator = operation(index, get(index),
accumulator)\n    --index\n  }\n  return accumulator\n}\n\n * Accumulates value starting
with the last element and applying [operation] from right to left\n * to each element with its index in the original
array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun BooleanArray.reduceRightIndexedOrNull(operation: (index: Int,
Boolean, acc: Boolean) -> Boolean): Boolean? {\n  var index = lastIndex\n  if (index < 0) return null\n  var
accumulator = get(index--)\n  while (index >= 0) {\n    accumulator = operation(index, get(index),
accumulator)\n    --index\n  }\n  return accumulator\n}\n\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array
and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function
that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*^@SinceKotlin("1.4")\npublic inline fun CharArray.reduceRightIndexedOrNull(operation: (index: Int, Char,
acc: Char) -> Char): Char? {\n  var index = lastIndex\n  if (index < 0) return null\n  var accumulator = get(index-
)\n  while (index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n
return accumulator\n}\n\n * Accumulates value starting with the last element and applying [operation] from
right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes an element and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*^@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Array<out T>.reduceRightOrNull(operation: (T, acc: S) -> S): S? {\n  var index = lastIndex\n  if (index < 0)
return null\n  var accumulator: S = get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--
), accumulator)\n  }\n  return accumulator\n}\n\n * Accumulates value starting with the last element and
applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n
*

```

```

and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
inline fun ByteArray.reduceRightOrNull(operation: (Byte, acc: Byte) -> Byte): Byte? {\n  var index = lastIndex\n
if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ShortArray.reduceRightOrNull(operation: (Short, acc: Short) -> Short): Short? {\n  var index = lastIndex\n  if
(index < 0) return null\n  var accumulator = get(index--)\n
  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
IntArray.reduceRightOrNull(operation: (Int, acc: Int) -> Int): Int? {\n  var index = lastIndex\n  if (index < 0)
return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--),
accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and
applying [operation]
from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n
*\n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
LongArray.reduceRightOrNull(operation: (Long, acc: Long) -> Long): Long? {\n  var index = lastIndex\n  if
(index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
FloatArray.reduceRightOrNull(operation: (Float, acc: Float) -> Float): Float? {\n  var index = lastIndex\n  if
(index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
inline fun DoubleArray.reduceRightOrNull(operation: (Double, acc: Double) -> Double): Double? {\n  var index
= lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n
accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value
starting with the last element and applying [operation] from right to left\n * to each element and current accumulator

```

value.\n \* \n \* Returns `null` if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n

```

*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
BooleanArray.reduceRightOrNull(operation: (Boolean, acc: Boolean) -> Boolean): Boolean? {\n    var index =
lastIndex\n    if (index < 0) return null\n
    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(get(index--),
accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and
applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n

```

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
CharArray.reduceRightOrNull(operation: (Char, acc: Char) -> Char): Char? {\n var index = lastIndex\n if (index
< 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator =
operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/\*\*\n \* Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n \* to each element and current
accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should
not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \*
@sample samples.collections.Collections.Aggregates.runningFold\n

\*\n@SinceKotlin("1.4")\npublic inline fun
<T, R> Array<out T>.runningFold(initial: R, operation: (acc: R, T) -> R): List<R> {\n if (isEmpty()) return
listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n for
(element in this) {\n accumulator = operation(accumulator, element)\n result.add(accumulator)\n }\n
return result\n}\n\n/\*\*\n \* Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n \* to each element and current accumulator value that
starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \*
otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

\*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.runningFold(initial: R,
operation: (acc: R, Byte) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \* Returns a list
containing successive accumulation
values generated by applying [operation] from left to right\n \* to each element and current accumulator value that
starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \*
otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

\*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.runningFold(initial: R,
operation: (acc: R, Short) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \* Returns a list
containing successive accumulation
values generated by applying [operation] from left to right\n \* to each element and current accumulator value that
starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \*
otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current

accumulator value and an element, and calculates the next accumulator value.

`@sample samples.collections.Collections.Aggregates.runningFold`

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.runningFold(initial: R,
operation: (acc: R, Int) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size +
1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive
accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.runningFold(initial: R,
operation: (acc: R, Long) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive
accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.runningFold(initial: R,
operation: (acc: R, Float) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive
accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.runningFold(initial: R,
operation: (acc: R, Double) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result =
ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n
accumulator = operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n *
Returns a list containing
successive accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> BooleanArray.runningFold(initial:
R, operation: (acc: R, Boolean) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result =
ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n
accumulator = operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n *
Returns a
```

list containing successive accumulation values generated by applying [operation] from left to right to each element and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.

@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.

```

@sample samples.collections.Collections.Aggregates.runningFold
*/
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <R> CharArray.runningFold(initial: R,
operation: (acc: R, Char) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(size + 1).apply { add(initial) }
    var accumulator = initial
    for (element in this) {
        accumulator = operation(accumulator, element)
        result.add(accumulator)
    }
    return result
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.


@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.



```

@sample samples.collections.Collections.Aggregates.runningFold
*/
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <T, R> Array<out T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(size + 1).apply { add(initial) }
    var accumulator = initial
    for (index in indices) {
        accumulator = operation(index, accumulator, this[index])
        result.add(accumulator)
    }
    return result
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.


@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.



```

@sample samples.collections.Collections.Aggregates.runningFold
*/
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <R> ByteArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(size + 1).apply { add(initial) }
    var accumulator = initial
    for (index in indices) {
        accumulator = operation(index, accumulator, this[index])
        result.add(accumulator)
    }
    return result
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.


@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.



```

@sample samples.collections.Collections.Aggregates.runningFold
*/
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <R> ShortArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(size + 1).apply { add(initial) }
    var accumulator = initial
    for (index in indices) {
        accumulator = operation(index, accumulator, this[index])
        result.add(accumulator)
    }
    return result
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.


@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.



```

@sample samples.collections.Collections.Aggregates.runningFold
*/
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <R> IntArray.runningFoldIndexed(initial:

```


```


```


```


```



```

R, operation: (index: Int, acc: R, Int) -> R): List<R> {\n  if (isEmpty()) return listOf(initial)\n  val result =
ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n  for (index in indices) {\n
accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return
result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from
left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial]
value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element,
current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningFold\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
LongArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): List<R> {\n  if (isEmpty())
return listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n
for (index in indices) {\n    accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself,
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningFold\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
FloatArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Float) -> R): List<R> {\n  if (isEmpty())
return listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n
for (index in indices) {\n    accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
DoubleArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Double) -> R): List<R> {\n  if
(isEmpty()) return listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator =
initial\n  for (index in indices) {\n    accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
BooleanArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Boolean) -> R): List<R> {\n  if
(isEmpty()) return listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator =
initial\n  for (index in indices) {\n    accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator

```

value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
CharArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): List<R> {\n    if (isEmpty())
return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    result.add(accumulator)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value
and the element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Array<out T>.runningReduce(operation: (acc: S, T) -> S): List<S> {\n    if (isEmpty()) return emptyList()\n    var
accumulator: S = this[0]\n    val result = ArrayList<S>(size).apply { add(accumulator) }\n    for (index in 1 until
size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return
result\n}\n\n/**\n * Returns a list containing
successive accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.runningReduce(operation:
(acc: Byte, Byte) -> Byte): List<Byte> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val
result = ArrayList<Byte>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator =
operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator
value that starts with the first element of this array.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.runningReduce(operation:
(acc: Short, Short) -> Short): List<Short> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val
result = ArrayList<Short>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator =
operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator
value that starts with the first element of this array.\n * \n * @param [operation] function
that takes current accumulator
value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.runningReduce(operation: (acc:
Int, Int) -> Int): List<Int> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result =
ArrayList<Int>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator =
operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator
value that starts with the first element of this array.\n * \n * @param [operation] function
```

that takes current accumulator value and an element, and calculates the next accumulator value.

```

samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")n@kotlin.internal.InlineOnlynpublic inline fun LongArray.runningReduce(operation:
(acc: Long, Long) -> Long): List<Long> {n if (isEmpty()) return emptyList()n var accumulator = this[0]n
val result = ArrayList<Long>(size).apply { add(accumulator) }n for (index in 1 until size) {n accumulator =
operation(accumulator, this[index])n result.add(accumulator)n }n return resultn}n/n/**n * Returns a list
containing successive accumulation values generated by applying [operation] from left to rightn * to each element
and current accumulator value that starts with the first element of this array.n * n * @param [operation] function
that takes current accumulator value and an element, and calculates the next accumulator value.n * n * @sample
samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")n@kotlin.internal.InlineOnlynpublic inline fun FloatArray.runningReduce(operation:
(acc:
Float, Float) -> Float): List<Float> {n if (isEmpty()) return emptyList()n var accumulator = this[0]n val
result = ArrayList<Float>(size).apply { add(accumulator) }n for (index in 1 until size) {n accumulator =
operation(accumulator, this[index])n result.add(accumulator)n }n return resultn}n/n/**n * Returns a list
containing successive accumulation values generated by applying [operation] from left to rightn * to each element
and current accumulator value that starts with the first element of this array.n * n * @param [operation] function
that takes current accumulator value and an element, and calculates the next accumulator value.n * n * @sample
samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")n@kotlin.internal.InlineOnlynpublic inline fun DoubleArray.runningReduce(operation:
(acc: Double, Double) -> Double): List<Double> {n if (isEmpty()) return emptyList()n var accumulator =
this[0]n val
result = ArrayList<Double>(size).apply { add(accumulator) }n for (index in 1 until size) {n accumulator =
operation(accumulator, this[index])n result.add(accumulator)n }n return resultn}n/n/**n * Returns a list
containing successive accumulation values generated by applying [operation] from left to rightn * to each element
and current accumulator value that starts with the first element of this array.n * n * @param [operation] function
that takes current accumulator value and an element, and calculates the next accumulator value.n * n * @sample
samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")n@kotlin.internal.InlineOnlynpublic inline fun BooleanArray.runningReduce(operation:
(acc: Boolean, Boolean) -> Boolean): List<Boolean> {n if (isEmpty()) return emptyList()n var accumulator =
this[0]n val result = ArrayList<Boolean>(size).apply { add(accumulator) }n for (index in 1 until size) {n
accumulator
= operation(accumulator, this[index])n result.add(accumulator)n }n return resultn}n/n/**n * Returns a
list containing successive accumulation values generated by applying [operation] from left to rightn * to each
element and current accumulator value that starts with the first element of this array.n * n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.n * n *
@sample samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")n@kotlin.internal.InlineOnlynpublic inline fun CharArray.runningReduce(operation:
(acc: Char, Char) -> Char): List<Char> {n if (isEmpty()) return emptyList()n var accumulator = this[0]n val
result = ArrayList<Char>(size).apply { add(accumulator) }n for (index in 1 until size) {n accumulator =
operation(accumulator, this[index])n result.add(accumulator)n }n return resultn}n/n/**n * Returns
a list containing successive accumulation values generated by applying [operation] from left to rightn * to each
element, its index in the original array and current accumulator value that starts with the first element of this array.n
* n * Note that `acc` value passed to [operation] function should not be mutated;n * otherwise it would affect the
previous value in resulting list.n * n * @param [operation] function that takes the index of an element, current
accumulator valuen * and the element itself, and calculates the next accumulator value.n * n * @sample
samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")npublic inline fun <S, T :
S> Array<out T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): List<S> {n if (isEmpty()) return

```

```

emptyList()\n  var accumulator: S = this[0]\n  val result = ArrayList<S>(size).apply { add(accumulator) }\n  for
(index in 1 until size) {\n    accumulator = operation(index, accumulator,
this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original
array and current accumulator value that starts with the first element of this array.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*/\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.runningReduceIndexed(operation: (index: Int, acc: Byte, Byte) -> Byte): List<Byte> {\n  if (isEmpty())
return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Byte>(size).apply { add(accumulator)
}\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n
  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element, its index in the original array and current accumulator value that
starts with the first element of this array.\n * \n * @param [operation] function that takes the index of an element,
current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*/\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.runningReduceIndexed(operation: (index: Int, acc: Short, Short) -> Short): List<Short> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Short>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element, its index in the original array and current accumulator value that
starts with the first element of this array.\n * \n * @param [operation] function that takes the index of an element,
current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*/\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.runningReduceIndexed(operation: (index: Int, acc: Int, Int) -> Int): List<Int> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Int>(size).apply { add(accumulator) }\n  for
(index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns
a list containing successive accumulation values generated by applying [operation] from left to right\n * to each
element, its index in the original array and current accumulator value that starts with the first element of this array.\n
\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the
element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*/\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.runningReduceIndexed(operation: (index: Int, acc: Long, Long) -> Long): List<Long> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Long>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n * to each element, its index in the
original array and current accumulator value that starts with the first element of this array.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value\n * and the element itself, and
calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*/\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun

```

FloatArray.runningReduceIndexed(operation: (index: Int, acc: Float, Float) -> Float): List<Float> {\n if (isEmpty()) return emptyList()\n var accumulator = this[0]\n val result = ArrayList<Float>(size).apply { add(accumulator) }\n for (index in 1 until size) {\n accumulator = operation(index, accumulator, this[index])\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \* Returns a list containing successive accumulation values generated

by applying [operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with the first element of this array.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \*

@sample samples.collections.Collections.Aggregates.runningReduce\n

\*\n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun

DoubleArray.runningReduceIndexed(operation: (index: Int, acc: Double, Double) -> Double): List<Double> {\n if (isEmpty()) return emptyList()\n var accumulator = this[0]\n val result = ArrayList<Double>(size).apply { add(accumulator) }\n for (index in 1 until size) {\n accumulator = operation(index, accumulator, this[index])\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \* Returns a list containing successive accumulation values generated by applying

[operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with the first element of this array.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample

samples.collections.Collections.Aggregates.runningReduce\n

\*\n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun

BooleanArray.runningReduceIndexed(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): List<Boolean> {\n if (isEmpty()) return emptyList()\n var accumulator = this[0]\n val result =

ArrayList<Boolean>(size).apply { add(accumulator) }\n for (index in 1 until size) {\n accumulator = operation(index, accumulator, this[index])\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \*

Returns a list containing successive accumulation values generated by applying [operation] from

left to right\n \* to each element, its index in the original array and current accumulator value that starts with the first element of this array.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample

samples.collections.Collections.Aggregates.runningReduce\n

\*\n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun

CharArray.runningReduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): List<Char> {\n if (isEmpty()) return emptyList()\n var accumulator = this[0]\n val result = ArrayList<Char>(size).apply { add(accumulator) }\n for (index in 1 until size) {\n accumulator = operation(index, accumulator, this[index])\n result.add(accumulator)\n }\n return result\n}\n\n/\*\*\n \*

Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element

and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator

value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n

\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun <T, R>

Array<out T>.scan(initial: R, operation: (acc: R, T) -> R): List<R> {\n return runningFold(initial, operation)\n}\n\n/\*\*\n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n

\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n

\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @kotlin.internal.InlineOnly\n public

```

c inline fun <R> ByteArray.scan(initial: R, operation: (acc: R, Byte) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values generated by applying [operation]
 * from left to right to each element and current accumulator value that starts with [initial]
 * value.
 * Note that `acc` value passed to [operation] function should not be mutated;
 * otherwise it would affect the previous value in resulting list.
 * @param [operation] function that takes current accumulator value and an element, and
 * calculates the next accumulator value.
 * @sample samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> ShortArray.scan(initial: R, operation: (acc: R, Short) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values generated by
 * applying [operation] from left to right to each element and current accumulator value that
 * starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated;
 * otherwise it would affect the previous value in resulting list.
 * @param [operation] function that takes current accumulator value
 * and an element, and calculates the next accumulator value.
 * @sample
 * samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> IntArray.scan(initial: R, operation: (acc: R, Int) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values
 * generated by applying [operation] from left to right to each element and current accumulator
 * value that starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated;
 * otherwise it would affect the previous value in resulting list.
 * @param [operation] function that takes current
 * accumulator value and an element, and calculates the next accumulator value.
 * @sample
 * samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> LongArray.scan(initial: R, operation: (acc: R, Long) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values generated by
 * applying [operation] from left to right to each element and current accumulator
 * value that starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be
 * mutated;
 * otherwise it would affect the previous value in resulting list.
 * @param [operation] function that
 * takes current accumulator value and an element, and calculates the next accumulator value.
 * @sample
 * samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> FloatArray.scan(initial: R, operation: (acc: R, Float) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values generated by
 * applying [operation] from left to right to each element and current accumulator value that
 * starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated;
 * otherwise it would affect the previous value in resulting
 * list.
 * @param [operation] function that takes current accumulator value and an element, and
 * calculates the next accumulator value.
 * @sample samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> DoubleArray.scan(initial: R, operation: (acc: R, Double) -> R): List<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a list containing successive accumulation values generated by
 * applying [operation] from left to right to each element and current accumulator value that
 * starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated;
 * otherwise it would affect the previous value in resulting list.
 * @param [operation] function that takes current accumulator value
 * and an element, and calculates the next accumulator value.
 * @sample
 * samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> BooleanArray.scan(initial: R, operation: (acc: R, Boolean) -> R): List<R> {
    return

```

```

runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by
applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial]
value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value
and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun <R> CharArray.scan(initial: R, operation: (acc: R, Char) ->
R): List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original
array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n *
@param [operation] function that takes the index of an element, current accumulator value\n * and the element
itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <T, R>
Array<out T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {\n    return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values
generated by applying [operation] from left to right\n * to each element, its index in the original array and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun <R> ByteArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): List<R> {\n    return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values
generated by applying [operation] from left to right\n * to each element, its index in the original array
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value\n * and the element itself, and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun <R> ShortArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): List<R> {\n    return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values
generated by applying [operation] from left to right\n * to each element, its index in the original array and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed
to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n *
\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element
itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun <R> IntArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): List<R> {\n    return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values
generated by applying [operation] from left to right\n * to each element, its index in the original array and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting
list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the
element itself, and calculates the next accumulator value.\n * \n * @sample

```

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samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): List<R> {\n    return\n    runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element, its index in the original array and current\n * accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should\n * not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]\n * function that takes the index of an element, current accumulator\n * value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample\n * samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Float) -> R): List<R> {\n    return\n    runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element, its index in the original array and current\n * accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should\n * not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]\n * function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the\n * next accumulator value.\n * \n * @sample\n * samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Double) -> R): List<R> {\n    return\n    runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element, its index in the original array and current\n * accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should\n * not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]\n * function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the\n * next accumulator value.\n * \n * @sample\n * samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun <R> BooleanArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Boolean) -> R): List<R> {\n    return\n    runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element, its index in the original array and current\n * accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should\n * not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]\n * function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the\n * next accumulator value.\n * \n * @sample\n * samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun <R> CharArray.scanIndexed(initial:\n    R, operation: (index: Int, acc: R, Char) -> R): List<R> {\n    return\n    runningFoldIndexed(initial,\n    operation)\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the\n * array.\n * \n * @Deprecated("Use sumOf instead.")\n * ReplaceWith("this.sumOf(selector)")\n * @DeprecatedSinceKotlin(warningSince = "1.5")\n * public inline fun <T>\n * Array<out T>.sumBy(selector: (T) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=\n        selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n * applied to each element in the array.\n * \n * @Deprecated("Use sumOf instead.")\n * ReplaceWith("this.sumOf(selector)")\n * @DeprecatedSinceKotlin(warningSince = "1.5")\n * public inline fun\n * ByteArray.sumBy(selector: (Byte) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=\n        selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values

```



```

produced by [selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
ShortArray.sumBy(selector: (Short) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
IntArray.sumBy(selector: (Int) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince
= \"1.5\")\npublic inline fun LongArray.sumBy(selector: (Long) -> Int): Int {\n    var sum: Int = 0\n    for (element
in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced
by [selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
FloatArray.sumBy(selector: (Float) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
DoubleArray.sumBy(selector: (Double) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
BooleanArray.sumBy(selector: (Boolean) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
CharArray.sumBy(selector: (Char) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the
array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun <T>
Array<out T>.sumByDouble(selector: (T) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
ByteArray.sumByDouble(selector: (Byte) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince
= \"1.5\")\npublic inline fun ShortArray.sumByDouble(selector: (Short) -> Double): Double {\n    var sum: Double
= 0.0\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum
of all values produced by [selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf
instead.\", ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline
fun IntArray.sumByDouble(selector: (Int) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic inline fun
LongArray.sumByDouble(selector: (Long) -> Double): Double {\n    var sum: Double = 0.0\n    for (element

```



```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.sumOf(selector: (Double) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.sumOf(selector: (Boolean) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic
inline fun CharArray.sumOf(selector: (Char) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun <T>
Array<out T>.sumOf(selector: (T) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.sumOf(selector: (Byte) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.sumOf(selector: (Short) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic
inline fun IntArray.sumOf(selector: (Int) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.sumOf(selector: (Long) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic
inline fun FloatArray.sumOf(selector: (Float) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.sumOf(selector: (Double) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n

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sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic
inline fun BooleanArray.sumOf(selector: (Boolean) -> Int): Int {\n var sum: Int = 0.toInt()\n for (element in
this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.sumOf(selector: (Char) -> Int): Int {\n var sum: Int = 0.toInt()\n for (element in this) {\n sum +=
selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Array<out T>.sumOf(selector: (T) -> Long): Long {\n var sum: Long = 0.toLong()\n for
(element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.sumOf(selector: (Byte) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in this) {\n
sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun ShortArray.sumOf(selector: (Short) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in
this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.sumOf(selector: (Int) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in this) {\n
sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun LongArray.sumOf(selector: (Long) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in
this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.sumOf(selector: (Float) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in this) {\n
sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.sumOf(selector: (Double) -> Long): Long {\n var sum: Long = 0.toLong()\n for
(element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.sumOf(selector: (Boolean) -> Long): Long {\n  var sum: Long = 0.toLong()\n  for (element in this)
{\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun CharArray.sumOf(selector: (Char) -> Long): Long {\n  var sum: Long = 0.toLong()\n  for (element in
this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.sumOf(selector: (T) -> UInt): UInt {\n
var sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.sumOf(selector: (Byte) -> UInt): UInt {\n  var sum: UInt = 0.toUInt()\n  for (element in
this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.sumOf(selector: (Short) -> UInt): UInt {\n  var
sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n *
Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.sumOf(selector: (Int) -> UInt): UInt {\n  var
sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n *
Returns the sum of all values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.sumOf(selector: (Long) -> UInt): UInt {\n  var
sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n *
Returns the sum of all values produced by [selector] function applied to each
element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.sumOf(selector: (Float) -> UInt): UInt {\n  var
sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n *
Returns the sum of all values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.sumOf(selector: (Double) -> UInt): UInt
{\n  var sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the

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array.\n

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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType\ns::class)\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.sumOf(selector: (Boolean) -> UInt): UInt\n{\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return\n    sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the\n    array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType\ns::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun CharArray.sumOf(selector: (Char) -> UInt): UInt {\n        var sum: UInt = 0.toUInt()\n        for (element in\n            this) {\n            sum += selector(element)\n        }\n        return sum\n    }\n\n    /**\n     * Returns the sum of all values produced by\n    [selector] function applied to each element in the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.sumOf(selector: (T) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n    the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun ByteArray.sumOf(selector: (Byte) -> ULong): ULong {\n        var sum: ULong = 0.toULong()\n        for (element in this) {\n            sum += selector(element)\n        }\n        return sum\n    }\n\n    /**\n     * Returns the sum of all values\n    produced by [selector] function applied to each element in the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.sumOf(selector: (Short) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return\n    sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the\n    array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.sumOf(selector: (Int) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return\n    sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the\n    array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.sumOf(selector: (Long) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return\n    sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy\npes::class)\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.sumOf(selector: (Float) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return\n    sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
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array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.sumOf(selector: (Double) -> ULong):
ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all
values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.sumOf(selector: (Boolean) -> ULong):
ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in
the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic
inline fun CharArray.sumOf(selector: (Char) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns an original collection
containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n
*\npublic fun <T : Any> Array<T?>.requireNonNulls(): Array<T> {\n    for (element in this) {\n        if (element ==
null) {\n            throw IllegalArgumentException("null element found in $this.")\n        }\n    }\n    @Suppress("UNCHECKED_CAST")\n    return this as Array<T>\n}\n\n/**\n * Splits the original array into pair
of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains
elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n\npublic inline fun <T> Array<out
T>.partition(predicate:
(T) -> Boolean): Pair<List<T>, List<T>> {\n    val first = ArrayList<T>()\n    val second = ArrayList<T>()\n    for
(element in this) {\n        if (predicate(element)) {\n            first.add(element)\n        } else {\n
second.add(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of
lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains
elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n\npublic inline fun
ByteArray.partition(predicate: (Byte) -> Boolean): Pair<List<Byte>, List<Byte>> {\n    val first =
ArrayList<Byte>()\n    val second = ArrayList<Byte>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded
`true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n\npublic inline fun
ShortArray.partition(predicate: (Short) -> Boolean): Pair<List<Short>, List<Short>> {\n    val first =
ArrayList<Short>()\n    val second = ArrayList<Short>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n\npublic inline fun
IntArray.partition(predicate: (Int) -> Boolean): Pair<List<Int>, List<Int>> {\n    val first =
ArrayList<Int>()\n    val second = ArrayList<Int>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,

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second)\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun
LongArray.partition(predicate: (Long) -> Boolean): Pair<List<Long>, List<Long>> {\n    val first =
ArrayList<Long>()\n    val second = ArrayList<Long>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first*
list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which
[predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun
FloatArray.partition(predicate: (Float) -> Boolean): Pair<List<Float>, List<Float>> {\n    val first =
ArrayList<Float>()\n    val second = ArrayList<Float>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun
DoubleArray.partition(predicate: (Double) -> Boolean): Pair<List<Double>, List<Double>> {\n    val first =
ArrayList<Double>()\n    val second = ArrayList<Double>()\n    for (element in this) {\n        if
(predicate(element)) {\n            first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains
elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate]
yielded `false`.\n * \n * @sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun
BooleanArray.partition(predicate: (Boolean) -> Boolean): Pair<List<Boolean>,
List<Boolean>> {\n    val first = ArrayList<Boolean>()\n    val second = ArrayList<Boolean>()\n    for (element in
this) {\n        if (predicate(element)) {\n            first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun
CharArray.partition(predicate: (Char) -> Boolean): Pair<List<Char>, List<Char>> {\n    val first =
ArrayList<Char>()\n    val second = ArrayList<Char>()\n    for (element in this) {\n        if (predicate(element)) {\n
first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the
same index.\n * The returned list has length of the shortest collection.\n * \n *
@sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Array<out
T>.zip(other: Array<out R>): List<Pair<T, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a
list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has
length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic
infix fun <R> ByteArray.zip(other: Array<out R>): List<Pair<Byte, R>> {\n    return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ShortArray.zip(other: Array<out
R>): List<Pair<Short, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun
<R> IntArray.zip(other: Array<out R>): List<Pair<Int, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The
returned list has length of the shortest collection.\n * \n * @sample

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samples.collections.Iterables.Operations.zipIterable\n * public infix fun <R> LongArray.zip(other: Array<out
R>): List<Pair<Long, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from
the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n * public infix fun
<R> FloatArray.zip(other: Array<out R>): List<Pair<Float, R>> {\n    return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * public infix fun <R> DoubleArray.zip(other: Array<out
R>): List<Pair<Double, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built
from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n * public infix fun <R>
BooleanArray.zip(other: Array<out R>): List<Pair<Boolean, R>> {\n    return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * public infix fun <R> CharArray.zip(other: Array<out R>):
List<Pair<Char, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the
elements of `this` array and the [other] array with the same index\n * using the provided [transform] function
applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * public inline fun <T, R, V> Array<out
T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {\n    val size = minOf(size, other.size)\n    val
list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return
list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other]
array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The
returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * public inline fun <R, V>
ByteArray.zip(other: Array<out R>, transform: (a: Byte, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i],
other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
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samples.collections.Iterables.Operations.zipIterableWithTransform\n * public inline fun <R, V>
ShortArray.zip(other: Array<out R>, transform: (a: Short, b: R) -> V): List<V> {\n    val
size = minOf(size, other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n
list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements
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samples.collections.Iterables.Operations.zipIterableWithTransform\n * public inline fun <R, V>
IntArray.zip(other: Array<out R>, transform: (a: Int, b: R) -> V): List<V> {\n    val size = minOf(size, other.size)\n
val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return
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The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * public inline fun <R, V>
LongArray.zip(other: Array<out R>, transform: (a: Long, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i],
other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned
list has length of the shortest collection.\n * \n * @sample

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samples.collections.Iterables.Operations.zipIterableWithTransform\n *^public inline fun <R, V>
FloatArray.zip(other: Array<out R>, transform: (a: Float, b: R) -> V): List<V> {\n  val size = minOf(size,
other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i],
other[i]))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the
[other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n *
The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *^public inline fun <R, V>
DoubleArray.zip(other: Array<out R>, transform: (a: Double, b: R) -> V): List<V> {\n  val size = minOf(size,
other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i], other[i]))\n
}\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
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list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*^public inline fun <R, V> BooleanArray.zip(other: Array<out R>, transform: (a: Boolean, b: R) -> V): List<V>
{\n  val size = minOf(size, other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n
list.add(transform(this[i], other[i]))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements
of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each
pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *^public inline fun <R, V>
CharArray.zip(other: Array<out R>, transform: (a: Char, b: R) -> V): List<V> {\n  val size = minOf(size,
other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i], other[i]))\n
}\n  return list\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <T, R> Array<out T>.zip(other: Iterable<R>): List<Pair<T, R>> {\n  return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <R> ByteArray.zip(other: Iterable<R>):
List<Pair<Byte, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the
elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest
collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public
infix fun <R> ShortArray.zip(other: Iterable<R>): List<Pair<Short, R>> {\n  return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <R> IntArray.zip(other: Iterable<R>):
List<Pair<Int, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the
elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest
collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <R>
LongArray.zip(other: Iterable<R>): List<Pair<Long, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n
\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <R> FloatArray.zip(other: Iterable<R>):
List<Pair<Float, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the
elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest
collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *^public infix fun <R>
DoubleArray.zip(other: Iterable<R>): List<Pair<Double, R>> {\n  return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample

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samples.collections.Iterables.Operations.zipIterable\n *\npublic infix fun <R> BooleanArray.zip(other:
Iterable<R>): List<Pair<Boolean, R>> {\n
    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this`
collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n *
@sample samples.collections.Iterables.Operations.zipIterable\n *\npublic infix fun <R> CharArray.zip(other:
Iterable<R>): List<Pair<Char, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values
built from the elements of `this` array and the [other] collection with the same index\n * using the provided
[transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n *
\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline fun <T, R, V>
Array<out T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection
with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned
list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline fun <R, V>
ByteArray.zip(other: Iterable<R>, transform: (a: Byte, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a
list of values built from the elements of `this` array and the [other] collection with the same index\n * using
the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline
fun <R, V> ShortArray.zip(other: Iterable<R>, transform: (a: Short, b: R) -> V): List<V> {\n    val arraySize =
size\n    val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element
in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return
list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the
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length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline fun <R, V>
IntArray.zip(other: Iterable<R>, transform:
(a: Int, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a
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provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline
fun <R, V> LongArray.zip(other: Iterable<R>, transform: (a: Long, b: R) -> V): List<V> {\n    val arraySize =
size\n    val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element
in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other]
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returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *\npublic inline fun <R, V>
FloatArray.zip(other: Iterable<R>, transform: (a: Float, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a
list of values built from the elements of `this` array and the [other] collection with the same index\n * using the
provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest

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collection.\n
 * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n * \n public inline fun <R, V>
DoubleArray.zip(other: Iterable<R>, transform: (a: Double, b: R) -> V): List<V> {\n val arraySize = size\n val
list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other)
{\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n *
Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n *
using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n public inline fun <R, V> BooleanArray.zip(other: Iterable<R>, transform: (a: Boolean, b: R) -> V): List<V> {\n
val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10),
arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n
list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the
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applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n *\n public inline fun <R, V>
CharArray.zip(other: Iterable<R>, transform: (a: Char, b: R) -> V): List<V> {\n val arraySize = size\n val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n
if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a
list of pairs built from the elements of `this` array and the [other] array
with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun ByteArray.zip(other: ByteArray):
List<Pair<Byte, Byte>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from
the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun
ShortArray.zip(other: ShortArray): List<Pair<Short, Short>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n
* Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The
returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun IntArray.zip(other: IntArray):
List<Pair<Int, Int>> {\n
return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and
the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun LongArray.zip(other: LongArray):
List<Pair<Long, Long>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from
the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun
FloatArray.zip(other: FloatArray): List<Pair<Float, Float>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n
* Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The
returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun DoubleArray.zip(other: DoubleArray):
List<Pair<Double, Double>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built
from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun
BooleanArray.zip(other: BooleanArray): List<Pair<Boolean, Boolean>> {\n return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n *\n public infix fun CharArray.zip(other: CharArray):
List<Pair<Char, Char>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built

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from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> ByteArray.zip(other: ByteArray, transform: (a: Byte, b: Byte) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> ShortArray.zip(other: ShortArray, transform: (a: Short, b: Short) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> IntArray.zip(other: IntArray, transform: (a: Int, b: Int) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> LongArray.zip(other: LongArray, transform: (a: Long, b: Long) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> FloatArray.zip(other: FloatArray, transform: (a: Float, b: Float) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> DoubleArray.zip(other: DoubleArray, transform: (a: Double, b: Double) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> BooleanArray.zip(other: BooleanArray, transform: (a: Boolean, b: Boolean) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Returns a list of values built from the elements of `this` array and the [other] array with the same index\n \* using the provided [transform] function applied to each pair of elements.\n \* The returned list has length of the shortest array.\n \* \n \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n \*/\npublic inline fun <V> CharArray.zip(other: CharArray, transform: (a: Char, b: Char) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/\*\*\n \* Appends the string

from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.

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\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample
samples.collections.Collections.Transformations.joinTo\n * ^\npublic fun <T, A : Appendable> Array<out
T>.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\",
limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): A {\n
buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1) buffer.append(separator)\n
        if (limit < 0 || count <= limit) {\n            buffer.appendElement(element, transform)\n        } else break\n    }\n
if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n
return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the
given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value
of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string
(which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * ^\npublic fun
<A : Appendable> ByteArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\",
postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Byte) ->
CharSequence)? = null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count
> 1) buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\n                buffer.append(transform(element))\n            else\n                buffer.append(element.toString())\n        } else break\n    }\n    if (limit >= 0 && count > limit)
buffer.append(truncated)\n    buffer.append(postfix)\n    return buffer\n}\n\n/**\n * Appends the string from all the
elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection
could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will
be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample
samples.collections.Collections.Transformations.joinTo\n * ^\npublic fun <A : Appendable>
ShortArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence
= \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Short) -> CharSequence)? = null): A {\n
buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1) buffer.append(separator)\n
        if (limit < 0 || count <= limit) {\n            if (transform != null)\n                buffer.append(transform(element))\n
            else\n                buffer.append(element.toString())\n        } else break\n    }\n    if (limit >= 0 && count > limit)
buffer.append(truncated)\n    buffer.append(postfix)\n    return buffer\n}\n\n/**\n * Appends the string from all the
elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection
could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will
be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample
samples.collections.Collections.Transformations.joinTo\n * ^\npublic fun <A : Appendable> IntArray.joinTo(buffer:
A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1,
truncated: CharSequence = \"...\", transform: ((Int) ->
CharSequence)? = null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if
(++count > 1) buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\n
                buffer.append(transform(element))\n            else\n                buffer.append(element.toString())\n
        } else break\n    }\n    if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n
return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * ^\npublic fun <A :
Appendable> LongArray.joinTo(buffer: A, separator:
CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated:
CharSequence = \"...\", transform: ((Long) -> CharSequence)? = null): A {\n    buffer.append(prefix)\n    var count =
0\n    for (element in this) {\n        if (++count > 1) buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n

```

```

        if (transform != null)\n            buffer.append(transform(element))\n            else\nbuffer.append(element.toString())\n    } else break\n    }\n    if (limit >= 0 && count > limit)
buffer.append(truncated)\n    buffer.append(postfix)\n    return buffer\n}\n\n/**\n * Appends the string from all the
elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection
could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will
be appended, followed by the [truncated] string (which defaults to
\"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> FloatArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix:
CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Float) -> CharSequence)? =
null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1)
buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\nbuffer.append(transform(element))\n            else\n                buffer.append(element.toString())\n        } else break\n    }\n    if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n    return
buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify
a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the
[truncated] string (which defaults to \"...\").\n * \n * @sample
samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A : Appendable>
DoubleArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix:
CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Double) -> CharSequence)? =
null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1)
buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\nbuffer.append(transform(element))\n            else\n                buffer.append(element.toString())\n        } else break\n    }\n    if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n    return
buffer\n}\n\n/**\n * Appends the string
from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If
the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n *
elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample
samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A : Appendable>
BooleanArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix:
CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Boolean) -> CharSequence)? =
null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1)
buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\nbuffer.append(transform(element))\n            else\n                buffer.append(element.toString())\n        }
else break\n    }\n    if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n    return
buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> CharArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix:
CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Char) -> CharSequence)? =
null): A {\n    buffer.append(prefix)\n    var count = 0\n    for (element in this) {\n        if (++count > 1)
buffer.append(separator)\n        if (limit < 0 || count <= limit) {\n            if (transform != null)\n                buffer.append(transform(element))\n            else\n                buffer.append(element)\n        } else break\n    }\n    if (limit >= 0 && count > limit) buffer.append(truncated)\n    buffer.append(postfix)\n    return
buffer\n}\n\n/**\n * Creates a string from all the elements separated using
[separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can
specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed

```

by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString<T> Array<out
T>.joinToString(separator: CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit:
Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): String {
return
joinTo(StringBuilder(), separator,
prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString ByteArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Byte) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString ShortArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Short) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString IntArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Int) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString LongArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Long) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString FloatArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Float) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied. \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString DoubleArray.joinToString(separator:
CharSequence = '\', '\', prefix: CharSequence = '\', postfix: CharSequence = '\', limit: Int = -1, truncated:
CharSequence = "...", transform: ((Double) -> CharSequence)? = null): String {
return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()}

```

\* Creates a string from all the elements





```

* Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n *^\npublic fun LongArray.asSequence():
Sequence<Long> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n *^\npublic fun FloatArray.asSequence():
Sequence<Float> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n *^\npublic fun DoubleArray.asSequence():
Sequence<Double> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator()
}\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being
iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n *^\npublic fun
BooleanArray.asSequence(): Sequence<Boolean> {\n if (isEmpty()) return emptySequence()\n return Sequence
{ this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements
when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n *^\npublic
fun CharArray.asSequence(): Sequence<Char> {\n if (isEmpty()) return emptySequence()\n return Sequence {
this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfByte")\npublic fun Array<out Byte>.average(): Double {\n var sum:
Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return
if (count == 0) Double.NaN
else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfShort")\npublic fun Array<out Short>.average(): Double {\n var sum:
Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfInt")\npublic fun Array<out Int>.average(): Double {\n var sum: Double
= 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return if (count
== 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfLong")\npublic fun Array<out Long>.average(): Double {\n var sum:
Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfFloat")\npublic fun Array<out Float>.average(): Double {\n var sum:
Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("averageOfDouble")\npublic fun Array<out Double>.average(): Double {\n var sum:
Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n
*\npublic fun ByteArray.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in
this) {\n sum += element\n ++count\n }\n return if (count ==
0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n *^\npublic fun
ShortArray.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n
sum += element\n ++count\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
an average value of elements in the array.\n *^\npublic fun IntArray.average(): Double {\n var sum: Double = 0.0\n
var count: Int = 0\n for (element in this) {\n sum += element\n ++count\n }\n return if (count == 0)
Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n *^\npublic fun
LongArray.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n
sum += element\n ++count\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
an average value of elements in the array.\n *^\npublic fun
FloatArray.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n
sum += element\n ++count\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns

```



```

element.\n * \n * @throws NoSuchElementException if the progression is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n * \n * @SinceKotlin("1.7")\npublic fun IntProgression.last(): Int {\n
if (isEmpty())\n    throw NoSuchElementException("Progression $this is empty.")\n    return this.last\n}\n\n/**\n * Returns the last element.\n * \n * @throws NoSuchElementException if the progression is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n * \n * @SinceKotlin("1.7")\npublic fun
LongProgression.last(): Long {\n    if (isEmpty())\n        throw NoSuchElementException("Progression $this is
empty.")\n    return this.last\n}\n\n/**\n * Returns the last element.\n * \n * @throws NoSuchElementException if
the progression
is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n * \n * @SinceKotlin("1.7")\npublic fun
CharProgression.last(): Char {\n    if (isEmpty())\n        throw NoSuchElementException("Progression $this is
empty.")\n    return this.last\n}\n\n/**\n * Returns the last element, or `null` if the progression is empty.\n * \n *
@sample samples.collections.Collections.Elements.last\n * \n * @SinceKotlin("1.7")\npublic fun
IntProgression.lastOrNull(): Int? {\n    return if (isEmpty()) null else this.last\n}\n\n/**\n * Returns the last element,
or `null` if the progression is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
* \n * @SinceKotlin("1.7")\npublic fun LongProgression.lastOrNull(): Long? {\n    return if (isEmpty()) null else
this.last\n}\n\n/**\n * Returns the last element, or `null` if the progression is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n * \n * @SinceKotlin("1.7")\npublic fun
CharProgression.lastOrNull():
Char? {\n    return if (isEmpty()) null else this.last\n}\n\n/**\n * Returns a random element from this range.\n * \n *
@throws IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun IntRange.random(): Int {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this range.\n * \n * @throws
IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun LongRange.random(): Long {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from
this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun CharRange.random(): Char {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this range using the specified source of
randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\npublic
fun IntRange.random(random: Random): Int {\n    try {\n        return random.nextInt(this)\n    } catch(e:
IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a
random element from this range using the specified source of randomness.\n * \n * @throws
IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\npublic fun
LongRange.random(random: Random): Long {\n    try {\n        return random.nextLong(this)\n    } catch(e:
IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a
random element from this range using the specified source of randomness.\n * \n * @throws
IllegalArgumentException if this range is empty.\n
*\n * \n * @SinceKotlin("1.3")\npublic fun
CharRange.random(random: Random): Char {\n    try {\n        return random.nextInt(first.code, last.code +
1).toChar()\n    } catch(e: IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a random element from this range, or `null` if this range is empty.\n
*\n * \n * @SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun IntRange.randomOrNull(): Int? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random
element from this range, or `null` if this range is empty.\n
*\n * \n * @SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun LongRange.randomOrNull(): Long? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this range, or `null` if this range is empty.\n
*\n * \n * @SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun CharRange.randomOrNull(): Char? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a

```

```

random element from this range using the specified source of randomness, or `null` if this range is empty.
*/@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public
fun IntRange.randomOrNull(random: Random): Int? {
    if (isEmpty()) return null
    return random.nextInt(this)
}
*/
* Returns a random element from this range using the specified source of randomness, or `null` if this range is empty.
*/@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public fun
LongRange.randomOrNull(random: Random): Long? {
    if (isEmpty()) return null
    return random.nextLong(this)
}
*/
* Returns a random element from this range using the specified source of randomness, or `null` if this range is empty.
*/@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public fun
CharRange.randomOrNull(random: Random): Char? {
    if (isEmpty()) return null
    return random.nextInt(first.code, last.code + 1).toChar()
}
*/
* Returns `true` if this range contains the specified [element].
* Always returns `false` if the [element] is `null`.
*/@SinceKotlin("1.3")@kotlin.internal.InlineOnlypublic inline operator fun IntRange.contains(element: Int?): Boolean {
    return element != null && contains(element)
}
*/
* Returns `true` if this range contains the specified [element].
* Always returns `false` if the [element] is `null`.
*/@SinceKotlin("1.3")@kotlin.internal.InlineOnlypublic inline operator fun LongRange.contains(element: Long?): Boolean {
    return element != null && contains(element)
}
*/
* Returns `true` if this range contains the specified [element].
* Always returns `false` if the [element] is `null`.
*/@SinceKotlin("1.3")@kotlin.internal.InlineOnlypublic inline operator fun CharRange.contains(element: Char?): Boolean {
    return element != null && contains(element)
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("intRangeContains")public operator fun ClosedRange<Int>.contains(value: Byte): Boolean {
    return contains(value.toInt())
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("longRangeContains")public operator fun ClosedRange<Long>.contains(value: Byte): Boolean {
    return contains(value.toLong())
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("shortRangeContains")public operator fun ClosedRange<Short>.contains(value: Byte): Boolean {
    return contains(value.toShort())
}
*/
* Checks if the specified [value] belongs to this range.
*/@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")@kotlin.jvm.JvmName("doubleRangeContains")public operator fun ClosedRange<Double>.contains(value: Byte): Boolean {
    return contains(value.toDouble())
}
*/
* Checks if the specified [value] belongs to this range.
*/@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")@kotlin.jvm.JvmName("floatRangeContains")public operator fun ClosedRange<Float>.contains(value: Byte): Boolean {
    return contains(value.toFloat())
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("intRangeContains")@SinceKotlin("1.7")@ExperimentalStdlibApipublic operator fun OpenEndRange<Int>.contains(value: Byte): Boolean {
    return contains(value.toInt())
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("longRangeContains")@SinceKotlin("1.7")@ExperimentalStdlibApipublic operator fun OpenEndRange<Long>.contains(value: Byte): Boolean {
    return contains(value.toLong())
}
*/
* Checks if the specified [value] belongs to this range.
*/@kotlin.jvm.JvmName("shortRangeContains")@SinceKotlin("1.7")@ExperimentalStdlibApipublic operator fun OpenEndRange<Short>.contains(value: Byte): Boolean {
    return

```

```

contains(value.toShort())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@\kotlin.internal.InlineOnly\npublic inline operator fun IntRange.contains(value: Byte): Boolean {\n    return
(this as ClosedRange<Int>).contains(value)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@\kotlin.internal.InlineOnly\npublic inline operator fun LongRange.contains(value: Byte): Boolean {\n    return
(this as ClosedRange<Long>).contains(value)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince
= "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("intRangeContains")\npublic
operator fun ClosedRange<Int>.contains(value: Double): Boolean {\n    return value.toIntExactOrNull().let { if (it
!= null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun
ClosedRange<Long>.contains(value: Double): Boolean {\n    return value.toLongExactOrNull().let { if (it != null)
contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince
= "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("byteRangeContains")\npublic
operator fun ClosedRange<Byte>.contains(value: Double): Boolean {\n    return value.toByteExactOrNull().let { if
(it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("shortRangeContains")\npublic operator fun
ClosedRange<Short>.contains(value: Double): Boolean {\n    return value.toShortExactOrNull().let { if (it != null)
contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun ClosedRange<Float>.contains(value:
Double): Boolean {\n    return
contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value:
Float): Boolean {\n    return value.toIntExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer
and floating point arguments has ambiguous semantics and is going to be
removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince =
"1.5")\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun ClosedRange<Long>.contains(value:
Float): Boolean {\n    return value.toLongExactOrNull().let
{ if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("byteRangeContains")\npublic operator fun
ClosedRange<Byte>.contains(value: Float): Boolean {\n    return value.toByteExactOrNull().let { if (it != null)
contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("shortRangeContains")\npublic operator fun
ClosedRange<Short>.contains(value: Float): Boolean {\n    return value.toShortExactOrNull().let

```



```

ClosedRange<Double>.contains(value: Long): Boolean {\n  return contains(value.toDouble())\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer
and floating point arguments has ambiguous semantics and is going to be
removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince
= "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun
ClosedRange<Float>.contains(value: Long): Boolean {\n  return contains(value.toFloat())\n}\n\n/**\n * Checks if
the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("intRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Int>.contains(value: Long): Boolean {\n  return value.toIntExactOrNull().let { if (it
!= null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("byteRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Byte>.contains(value: Long): Boolean {\n  return value.toByteExactOrNull().let { if
(it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("shortRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Short>.contains(value: Long): Boolean {\n  return value.toShortExactOrNull().let {
if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun IntRange.contains(value: Long): Boolean {\n  return
(this as ClosedRange<Int>).contains(value)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value: Short):
Boolean {\n  return contains(value.toInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun ClosedRange<Long>.contains(value:
Short): Boolean {\n  return contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs to this
range.\n */\n@kotlin.jvm.JvmName("byteRangeContains")\npublic operator fun
ClosedRange<Byte>.contains(value:
Short): Boolean {\n  return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer
and floating point arguments has ambiguous semantics and is going to be
removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince =
"1.5")\n@kotlin.jvm.JvmName("doubleRangeContains")\npublic operator fun
ClosedRange<Double>.contains(value: Short): Boolean {\n  return contains(value.toDouble())\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer
and floating point arguments has ambiguous semantics and is going to be
removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince =
"1.5")\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun ClosedRange<Float>.contains(value:
Short): Boolean {\n  return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this
range.\n
*/\n@kotlin.jvm.JvmName("intRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Int>.contains(value: Short): Boolean {\n  return contains(value.toInt())\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("longRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Long>.contains(value: Short): Boolean {\n  return
contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.jvm.JvmName("byteRangeContains")\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic
operator fun OpenEndRange<Byte>.contains(value: Short): Boolean {\n  return value.toByteExactOrNull().let { if
(it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun IntRange.contains(value: Short): Boolean {\n  return
(this as ClosedRange<Int>).contains(value)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun LongRange.contains(value: Short): Boolean {\n  return

```





\* If the [to] value is greater than `this` value the returned progression is empty.\n \*/\npublic infix fun Int.downTo(to: Short): IntProgression {\n return IntProgression.fromClosedRange(this, to.toInt(), -1)\n}\n\n/\*\*\n \* Returns a progression from this value down to the specified [to] value with the step -1.\n \* \n \* The [to] value should be less than or equal to `this` value.\n

\* If the [to] value is greater than `this` value the returned progression is empty.\n \*/\npublic infix fun Long.downTo(to: Short): LongProgression {\n return LongProgression.fromClosedRange(this, to.toLong(), -1L)\n}\n\n/\*\*\n \* Returns a progression from this value down to the specified [to] value with the step -1.\n \* \n \* The [to] value should be less than or equal to `this` value.\n \* If the [to] value is greater than `this` value the returned progression is empty.\n \*/\npublic infix fun Byte.downTo(to: Short): IntProgression {\n return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/\*\*\n \* Returns a progression from this value down to the specified [to] value with the step -1.\n \* \n \* The [to] value should be less than or equal to `this` value.\n \* If the [to] value is greater than `this` value the returned progression is empty.\n \*/\npublic infix fun Short.downTo(to: Short): IntProgression {\n return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range in the opposite direction with the same step.\n \*/\npublic fun IntProgression.reversed(): IntProgression {\n return IntProgression.fromClosedRange(last, first, -step)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range in the opposite direction with the same step.\n \*/\npublic fun LongProgression.reversed(): LongProgression {\n return LongProgression.fromClosedRange(last, first, -step)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range in the opposite direction with the same step.\n \*/\npublic fun CharProgression.reversed(): CharProgression {\n return CharProgression.fromClosedRange(last, first, -step)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range with the given step.\n \*/\npublic infix fun IntProgression.step(step: Int): IntProgression {\n checkStepIsPositive(step > 0, step)\n return IntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range with the given step.\n \*/\npublic infix fun LongProgression.step(step: Long): LongProgression {\n checkStepIsPositive(step > 0, step)\n return LongProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/\*\*\n \* Returns a progression that goes over the same range with the given step.\n \*/\npublic infix fun CharProgression.step(step: Int): CharProgression {\n checkStepIsPositive(step > 0, step)\n return CharProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\ninternal fun Int.toByteArrayOrNull(): Byte? {\n return if (this in Byte.MIN\_VALUE.toInt()..Byte.MAX\_VALUE.toInt()) this.toByteArray() else null\n}\n\ninternal fun Long.toByteArrayOrNull(): Byte? {\n return if (this in Byte.MIN\_VALUE.toLong()..Byte.MAX\_VALUE.toLong()) this.toByteArray() else null\n}\n\ninternal fun Short.toByteArrayOrNull(): Byte? {\n return if (this in Byte.MIN\_VALUE.toShort()..Byte.MAX\_VALUE.toShort()) this.toByteArray() else null\n}\n\ninternal fun Double.toByteArrayOrNull(): Byte? {\n return if (this in Byte.MIN\_VALUE.toDouble()..Byte.MAX\_VALUE.toDouble()) this.toInt().toByte() else null\n}\n\ninternal fun Float.toByteArrayOrNull(): Byte? {\n return if (this in Byte.MIN\_VALUE.toFloat()..Byte.MAX\_VALUE.toFloat()) this.toInt().toByte() else null\n}\n\ninternal fun Long.toIntExactOrNull(): Int? {\n return if (this in Int.MIN\_VALUE.toLong()..Int.MAX\_VALUE.toLong()) this.toInt() else null\n}\n\ninternal fun Double.toIntExactOrNull(): Int? {\n return if (this in Int.MIN\_VALUE.toDouble()..Int.MAX\_VALUE.toDouble()) this.toInt() else null\n}\n\ninternal fun Float.toIntExactOrNull(): Int? {\n return if (this in Int.MIN\_VALUE.toFloat()..Int.MAX\_VALUE.toFloat()) this.toInt() else null\n}\n\ninternal fun Double.toLongExactOrNull(): Long? {\n return if (this in Long.MIN\_VALUE.toDouble()..Long.MAX\_VALUE.toDouble()) this.toLong() else null\n}\n\ninternal fun Float.toLongExactOrNull(): Long? {\n return if (this in Long.MIN\_VALUE.toFloat()..Long.MAX\_VALUE.toFloat()) this.toLong() else null\n}\n\ninternal fun Int.toShortExactOrNull(): Short? {\n return if (this in Short.MIN\_VALUE.toInt()..Short.MAX\_VALUE.toInt()) this.toShort() else null\n}\n\ninternal fun Long.toShortExactOrNull(): Short? {\n return if (this in Short.MIN\_VALUE.toLong()..Short.MAX\_VALUE.toLong()) this.toShort() else null\n}\n\ninternal fun

Double.toShortExactOrNull(): Short? {\n return if (this in Short.MIN\_VALUE.toDouble()..Short.MAX\_VALUE.toDouble()) this.toInt().toShort() else null\n}\n\ninternal fun Float.toShortExactOrNull(): Short? {\n return if (this in Short.MIN\_VALUE.toFloat()..Short.MAX\_VALUE.toFloat()) this.toInt().toShort() else null\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Int.until(to: Byte): IntRange {\n return this .. (to.toInt() - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Long.until(to: Byte): LongRange {\n return this .. (to.toLong() - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Byte.until(to: Byte): IntRange {\n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Short.until(to: Byte): IntRange {\n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Char.until(to: Char): CharRange {\n if (to <= '\u0000') return CharRange.EMPTY\n return this .. (to - 1).toChar()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Int.until(to: Int): IntRange {\n if (to <= Int.MIN\_VALUE) return IntRange.EMPTY\n return this .. (to - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Long.until(to: Int): LongRange {\n return this .. (to.toLong() - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Byte.until(to: Int): IntRange {\n if (to <= Int.MIN\_VALUE) return IntRange.EMPTY\n return this.toInt() .. (to - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Short.until(to: Int): IntRange {\n if (to <= Int.MIN\_VALUE) return IntRange.EMPTY\n return this.toInt() .. (to - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Int.until(to: Long): LongRange {\n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Long.until(to: Long): LongRange {\n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY\n return this .. (to - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Byte.until(to: Long): LongRange {\n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Short.until(to: Long): LongRange {\n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Int.until(to: Short): IntRange {\n return this .. (to.toInt() - 1).toInt()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\npublic infix fun Long.until(to: Short): LongRange {\n return this .. (to.toLong() - 1).toLong()\n}\n\n/\*\*\n \* Returns a range from this value up to but excluding the specified [to] value.\n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty.\n \*/\n

[to] value is less than or equal to `this` value, then the returned range is empty.

```

public infix fun Byte.until(to: Short): IntRange {
    return this.toInt() .. (to.toInt() - 1).toInt()
}

```

Returns a range from this value up to but excluding the specified [to] value.

If the [to] value is less than or equal to `this` value, then the returned range is empty.

```

public infix fun Short.until(to: Short): IntRange {
    return this.toInt() .. (to.toInt() - 1).toInt()
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun <T : Comparable<T>> T.coerceAtLeast(minimumValue: T): T {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Byte.coerceAtLeast(minimumValue: Byte): Byte {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Short.coerceAtLeast(minimumValue: Short): Short {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Int.coerceAtLeast(minimumValue: Int): Int {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Long.coerceAtLeast(minimumValue: Long): Long {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Float.coerceAtLeast(minimumValue: Float): Float {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not less than the specified [minimumValue].

@return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtLeast

```

```

public fun Double.coerceAtLeast(minimumValue: Double): Double {
    return if (this < minimumValue) minimumValue else this
}

```

Ensures that this value is not greater than the specified [maximumValue].

@return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtMostComparable

```

```

public fun <T : Comparable<T>> T.coerceAtMost(maximumValue: T): T {
    return if (this > maximumValue) maximumValue else this
}

```

Ensures that this value is not greater than the specified [maximumValue].

@return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtMost

```

```

public fun Byte.coerceAtMost(maximumValue: Byte): Byte {
    return if (this > maximumValue) maximumValue else this
}

```

Ensures that this value is not greater than the specified [maximumValue].

@return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtMost

```

```

public fun Short.coerceAtMost(maximumValue: Short): Short {
    return if (this > maximumValue) maximumValue else this
}

```

Ensures that this value is not greater than the specified [maximumValue].

@return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.

@sample

```

samples.comparisons.ComparableOps.coerceAtMost

```

```

public fun Int.coerceAtMost(maximumValue: Int): Int {
    return if (this > maximumValue) maximumValue else this
}

```

Ensures that this value is not

```

greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the
[maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMost\n * \n\npublic fun Long.coerceAtMost(maximumValue: Long):
Long {\n    return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not
greater than the specified [maximumValue].\n *
\n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n *
\n * @sample samples.comparisons.ComparableOps.coerceAtMost\n * \n\npublic fun
Float.coerceAtMost(maximumValue: Float): Float {\n    return if (this > maximumValue) maximumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMost\n * \n\npublic fun Double.coerceAtMost(maximumValue:
Double): Double {\n    return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this
value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range,
or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInComparable\n
\n * \n\npublic fun <T : Comparable<T>> T.coerceIn(minimumValue: T?, maximumValue: T?): T {\n    if
(minimumValue != null && maximumValue != null) {\n        if (minimumValue > maximumValue) throw
IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n        if (this < minimumValue) return minimumValue\n        if (this >
maximumValue) return maximumValue\n    }\n    else {\n        if (minimumValue != null && this <
minimumValue) return minimumValue\n        if (maximumValue != null && this > maximumValue) return
maximumValue\n    }\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n * \n\npublic
fun Byte.coerceIn(minimumValue: Byte, maximumValue: Byte): Byte {\n    if (minimumValue > maximumValue)
throw IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue)
return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n * \n\npublic fun Short.coerceIn(minimumValue: Short,
maximumValue: Short): Short {\n    if (minimumValue > maximumValue) throw
IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue)
return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the
specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or
[minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n * \n\npublic fun
Int.coerceIn(minimumValue: Int, maximumValue: Int): Int {\n    if (minimumValue > maximumValue) throw
IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue)
return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value
is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n * \n\npublic fun
Long.coerceIn(minimumValue: Long, maximumValue: Long): Long {\n    if (minimumValue > maximumValue)
throw IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than

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minimum $minimumValue.)\n if (this < minimumValue) return minimumValue\n if (this > maximumValue)
return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Float.coerceIn(minimumValue: Float,
maximumValue: Float): Float {\n if (minimumValue > maximumValue) throw
IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue
is less than minimum $minimumValue.")\n if (this < minimumValue) return minimumValue\n if (this >
maximumValue) return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the specified
range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this
value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n *
@sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Double.coerceIn(minimumValue:
Double, maximumValue: Double): Double {\n if (minimumValue > maximumValue) throw
IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n if (this < minimumValue) return minimumValue\n if (this > maximumValue)
return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start`
if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n *
@sample samples.comparisons.ComparableOps.coerceInFloatingPointRange\n */\n@SinceKotlin("1.1")\npublic
fun <T : Comparable<T>> T.coerceIn(range: ClosedFloatingPointRange<T>): T {\n if (range.isEmpty()) throw
IllegalArgumentException("Cannot coerce value to an empty range: $range.")\n return when {\n // this <
start equiv to this <= start && !(this >= start)\n range.lessThanOrEqualTo(this, range.start) &&
!range.lessThanOrEqualTo(range.start, this) -> range.start\n // this > end equiv to this >= end && !(this <= end)\n
range.lessThanOrEqualTo(range.endInclusive, this) && !range.lessThanOrEqualTo(this, range.endInclusive) ->
range.endInclusive\n else -> this\n }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start` if this value
is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n *
@sample samples.comparisons.ComparableOps.coerceInComparable\n */\npublic fun <T : Comparable<T>>
T.coerceIn(range: ClosedRange<T>): T {\n if (range is ClosedFloatingPointRange) {\n return
this.coerceIn<T>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value to an
empty range: $range.")\n return when {\n this < range.start -> range.start\n this > range.endInclusive ->
range.endInclusive\n else -> this\n }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive`
if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n
*/\npublic fun Int.coerceIn(range: ClosedRange<Int>): Int {\n if (range is
ClosedFloatingPointRange) {\n return this.coerceIn<Int>(range)\n }\n if (range.isEmpty()) throw
IllegalArgumentException("Cannot coerce value to an empty range: $range.")\n return when {\n this <
range.start -> range.start\n this > range.endInclusive -> range.endInclusive\n else -> this\n }\n}\n\n/**\n *
Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start`
if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n *
@sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Long.coerceIn(range:
ClosedRange<Long>): Long {\n if (range is ClosedFloatingPointRange) {\n return
this.coerceIn<Long>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value
to an empty range: $range.")\n return when {\n this < range.start -> range.start\n this >
range.endInclusive -> range.endInclusive\n else -> this\n }\n}\n\n"/*\n * Copyright 2010-2023 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport

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kotlin.experimental.*\nimport
kotlin.jvm.*\n\n@SinceKotlin("\1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@JvmInline\npublic value class UByte @kotlin.internal.IntrinsicConstEvaluation @PublishedApi internal
constructor(@PublishedApi internal val data: Byte) : Comparable<UByte> {\n\n    companion object {\n        /**\n         * A constant holding the minimum value an instance of UByte can have.\n         */\n        public const val
MIN_VALUE: UByte = UByte(0)\n\n        /**\n         * A constant holding the maximum value an instance of
UByte can have.\n         */\n        public const val MAX_VALUE: UByte = UByte(-1)\n\n        /**\n         * The number of bytes used to represent an instance of UByte in a binary form.\n         */\n        public const val SIZE_BYTES: Int = 1\n\n        /**\n         * The number of bits used to represent an instance of
UByte in a binary form.\n         */\n        public const val SIZE_BITS: Int = 8\n    }\n\n    /**\n     * Compares this
value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a
negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    @Suppress("\u0022OVERRIDE_BY_INLINE\u0022")\n    public override inline operator fun
compareTo(other: UByte): Int = this.toInt().compareTo(other.toInt())\n\n    /**\n     * Compares this value with the
specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if
it's less than other,\n     * or a positive number if it's
greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UShort):
Int = this.toInt().compareTo(other.toInt())\n\n    /**\n     * Compares this value with the specified value for order.\n
     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n
     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun
compareTo(other: UInt): Int = this.toUInt().compareTo(other)\n\n    /**\n     * Compares this value with the
specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if
it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n    /** Adds the
other value to this value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun plus(other: UByte): UInt = this.toUInt().plus(other.toUInt())\n\n    /** Adds the other
value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UShort): UInt =
this.toUInt().plus(other.toUInt())\n\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun plus(other: UInt): UInt = this.toUInt().plus(other)\n\n    /** Adds the other value to this
value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: ULong): ULong =
this.toULong().plus(other)\n\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun minus(other: UByte): UInt = this.toUInt().minus(other.toUInt())\n\n    /** Subtracts the
other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UShort):
UInt = this.toUInt().minus(other.toUInt())\n\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun minus(other: UInt): UInt = this.toUInt().minus(other)\n\n    /** Subtracts the other value
from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: ULong): ULong =
this.toULong().minus(other)\n\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun times(other: UByte): UInt = this.toUInt().times(other.toUInt())\n\n    /** Multiplies this
value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: UShort): UInt
= this.toUInt().times(other.toUInt())\n\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n
    public inline operator fun times(other: UInt): UInt = this.toUInt().times(other)\n\n    /** Multiplies this value by
the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator
fun times(other: ULong): ULong = this.toULong().times(other)\n\n    /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n    @kotlin.internal.InlineOnly\n    public inline operator
fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n\n    /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n    @kotlin.internal.InlineOnly\n    public inline operator
fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n\n    /** Divides this value by the other value,

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truncating the result to an integer that is closer to zero. */n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value, truncating the
result to an integer that is closer to zero. */n @kotlin.internal.InlineOnly\n public inline operator fun div(other:
ULong): ULong = this.toULong().div(other)\n\n
* Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is
always less than the divisor.\n */n @kotlin.internal.InlineOnly\n public inline operator fun rem(other:
UByte): UInt = this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of
this value by the other value.\n * \n * The result is always less than the divisor.\n */n
@kotlin.internal.InlineOnly\n public inline operator fun rem(other: UShort): UInt =
this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the
other value.\n * \n * The result is always less than the divisor.\n */n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: UInt): UInt = this.toUInt().rem(other)\n /**\n * Calculates the remainder of
truncating division of this value by the other value.\n * \n * The result is always
less than the divisor.\n */n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: ULong):
ULong = this.toULong().rem(other)\n\n
/**\n * Divides this value by the other value, flooring the result to an
integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and
truncating division are the same.\n */n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other:
UByte): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this value by the other value, flooring
the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring
division and truncating division are the same.\n */n @kotlin.internal.InlineOnly\n public inline fun
floorDiv(other: UShort): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this value by the other
value, flooring the result to an integer that is closer
to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the
same.\n */n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: UInt): UInt =
this.toUInt().floorDiv(other)\n /**\n * Divides this value by the other value, flooring the result to an integer that
is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division
are the same.\n */n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: ULong): ULong =
this.toULong().floorDiv(other)\n\n
/**\n * Calculates the remainder of flooring division of this value by the
other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders
of flooring division and truncating division are the same.\n */n @kotlin.internal.InlineOnly\n public inline
fun mod(other: UByte): UByte = this.toUInt().mod(other.toUInt()).toUByte()\n
/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is
always less than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating
division are the same.\n */n @kotlin.internal.InlineOnly\n public inline fun mod(other: UShort): UShort =
this.toUInt().mod(other.toUInt()).toUShort()\n /**\n * Calculates the remainder of flooring division of this
value by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the
remainders of flooring division and truncating division are the same.\n */n @kotlin.internal.InlineOnly\n
public inline fun mod(other: UInt): UInt = this.toUInt().mod(other)\n /**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is always less than the divisor.\n * \n
* For unsigned
types, the remainders of flooring division and truncating division are the same.\n */n
@kotlin.internal.InlineOnly\n public inline fun mod(other: ULong): ULong = this.toULong().mod(other)\n\n
/**\n * Returns this value incremented by one.\n * \n * @sample samples.misc.Builtins.inc\n */n
@kotlin.internal.InlineOnly\n public inline operator fun inc(): UByte = UByte(data.inc())\n\n
/**\n * Returns this value decremented by one.\n * \n * @sample samples.misc.Builtins.dec\n */n
@kotlin.internal.InlineOnly\n public inline operator fun dec(): UByte = UByte(data.dec())\n\n
/**\n * Creates a
range from this value to the specified [other] value. */n @kotlin.internal.InlineOnly\n public inline operator fun
rangeTo(other: UByte): UIntRange = UIntRange(this.toUInt(), other.toUInt())\n\n
/**\n * Creates a range from

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this value up to but excluding the specified [other] value.\n
 * If the [other] value is less
than or equal to `this` value, then the returned range is empty.\n
 * @SinceKotlin("1.7")\n
@ExperimentalStdlibApi\n
@kotlin.internal.InlineOnly\n
public inline operator fun rangeUntil(other: UByte):
UIntRange = this.toUInt() until other.toUInt()\n
/** Performs a bitwise AND operation between the two values.
*\n
@kotlin.internal.InlineOnly\n
public inline infix fun and(other: UByte): UByte = UByte(this.data and
other.data)\n
/** Performs a bitwise OR operation between the two values. *\n
@kotlin.internal.InlineOnly\n
public inline infix fun or(other: UByte): UByte = UByte(this.data or other.data)\n
/** Performs a bitwise XOR
operation between the two values. *\n
@kotlin.internal.InlineOnly\n
public inline infix fun xor(other: UByte):
UByte = UByte(this.data xor other.data)\n
/** Inverts the bits in this value. *\n
@kotlin.internal.InlineOnly\n
public inline fun inv(): UByte = UByte(data.inv())\n
/**\n
 * Converts this
[UByte] value to [Byte].\n
 * If this value is less than or equals to [Byte.MAX_VALUE], the resulting
`Byte` value represents\n
 * the same numerical value as this `UByte`. Otherwise the result is negative.\n
 * The resulting `Byte` value has the same binary representation as this `UByte` value.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toByte(): Byte = data\n
/**\n
 * Converts this [UByte] value to
[Short].\n
 * The resulting `Short` value represents the same numerical value as this `UByte`.\n
 * The least significant 8 bits of the resulting `Short` value are the same as the bits of this `UByte` value,\n
 * whereas the most significant 8 bits are filled with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun
toShort(): Short = data.toShort() and 0xFF\n
/**\n
 * Converts this [UByte] value to [Int].\n
 * The
resulting `Int` value represents the same numerical value as
this `UByte`.\n
 * The least significant 8 bits of the resulting `Int` value are the same as the bits of this
`UByte` value,\n
 * whereas the most significant 24 bits are filled with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toInt(): Int = data.toInt() and 0xFF\n
/**\n
 * Converts this
[UByte] value to [Long].\n
 * The resulting `Long` value represents the same numerical value as this
`UByte`.\n
 * The least significant 8 bits of the resulting `Long` value are the same as the bits of this
`UByte` value,\n
 * whereas the most significant 56 bits are filled with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toLong(): Long = data.toLong() and 0xFF\n
/** Returns this
value. *\n
@kotlin.internal.InlineOnly\n
public inline fun toUByte(): UByte = this\n
/**\n
 * Converts this
[UByte] value to [UShort].\n
 * The resulting `UShort` value represents the same numerical
value as this `UByte`.\n
 * The least significant 8 bits of the resulting `UShort` value are the same as the
bits of this `UByte` value,\n
 * whereas the most significant 8 bits are filled with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toUShort(): UShort = UShort(data.toShort() and 0xFF)\n
/**\n
 * Converts this [UByte] value to [UInt].\n
 * The resulting `UInt` value represents the same numerical value
as this `UByte`.\n
 * The least significant 8 bits of the resulting `UInt` value are the same as the bits of this
`UByte` value,\n
 * whereas the most significant 24 bits are filled with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toUInt(): UInt = UInt(data.toInt() and 0xFF)\n
/**\n
 *
Converts this [UByte] value to [ULong].\n
 * The resulting `ULong` value represents the same numerical
value as this `UByte`.\n
 * The least significant 8 bits of the resulting
`ULong` value are the same as the bits of this `UByte` value,\n
 * whereas the most significant 56 bits are filled
with zeros.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toULong(): ULong = ULong(data.toLong()
and 0xFF)\n
/**\n
 * Converts this [UByte] value to [Float].\n
 * The resulting `Float` value represents
the same numerical value as this `UByte`.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toFloat():
Float = this.toInt().toFloat()\n
/**\n
 * Converts this [UByte] value to [Double].\n
 * The resulting
`Double` value represents the same numerical value as this `UByte`.\n
 *\n
@kotlin.internal.InlineOnly\n
public inline fun toDouble(): Double = this.toInt().toDouble()\n
public override fun toString(): String =
toInt().toString()\n
}
\n\n
/**\n
 * Converts this [Byte] value to [UByte].\n
 * If this value is positive, the resulting
`UByte` value represents the same numerical value as
this `Byte`.\n
 * The resulting `UByte` value has the same binary representation as this `Byte` value.\n
 *\n
@SinceKotlin("1.5")\n
@WasExperimental(ExperimentalUnsignedTypes::class)\n
@kotlin.internal.InlineOnly

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public inline fun Byte.toUByte(): UByte = UByte(this)\n/\*\*\n \* Converts this [Short] value to [UByte].\n \* If this value is positive and less than or equals to [UByte.MAX\_VALUE], the resulting `UByte` value represents the same numerical value as this `Short`.\n \* The resulting `UByte` value is represented by the least significant 8 bits of this `Short` value.\n

\*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.toUByte(): UByte = UByte(this.toByte())\n/\*\*\n \* Converts this [Int] value to [UByte].\n \* If this value is positive and less than or equals to [UByte.MAX\_VALUE], the resulting `UByte` value represents the same numerical value as this `Int`.\n \* The resulting `UByte` value is represented by the least significant 8 bits of this `Int` value.\n

\*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Int.toUByte(): UByte = UByte(this.toByte())\n/\*\*\n \* Converts this [Long] value to [UByte].\n \* If this value is positive and less than or equals to [UByte.MAX\_VALUE], the resulting `UByte` value represents the same numerical value as this `Long`.\n \* The resulting `UByte` value is represented by the least significant 8 bits of this `Long` value.\n

\*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Long.toUByte(): UByte = UByte(this.toByte())\n"/\*\n \* Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*/\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport kotlin.experimental.\*\nimport

kotlin.jvm.\*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@JvmInline\npublic value class UInt @kotlin.internal.IntrinsicConstEvaluation @PublishedApi internal constructor(@PublishedApi internal val data: Int) : Comparable<UInt> {\n\n companion object {\n\n /\*\*\n \* A constant holding the minimum value an instance of UInt can have.\n \*/\n public const val MIN\_VALUE: UInt = UInt(0)\n\n /\*\*\n \* A constant holding the maximum value an instance of UInt can have.\n \*/\n public const val MAX\_VALUE: UInt = UInt(-1)\n\n /\*\*\n \* The number of bytes used to represent an instance of UInt in a binary form.\n \*/\n public const val SIZE\_BYTES: Int = 4\n\n /\*\*\n \* The number of bits used to represent an instance of UInt in a binary form.\n \*/\n public const val SIZE\_BITS: Int = 32\n }\n\n /\*\*\n

\* Compares this value with the specified value for order.\n \* Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n \* or a positive number if it's greater than other.\n \*/\n

@kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: UByte): Int = this.compareTo(other.toUInt())\n\n /\*\*\n \* Compares this value with the specified value for order.\n \* Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n \* or a positive number if it's greater than other.\n \*/\n @kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: UShort): Int = this.compareTo(other.toUInt())\n\n /\*\*\n \* Compares this value with the specified value for order.\n \* Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n \* or a positive number if it's greater than

other.\n \*/\n @kotlin.internal.InlineOnly\n @Suppress("OVERRIDE\_BY\_INLINE")\n public override inline operator fun compareTo(other: UInt): Int = uintCompare(this.data, other.data)\n\n /\*\*\n \* Compares this value with the specified value for order.\n \* Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n \* or a positive number if it's greater than other.\n \*/\n

@kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n /\*\*\n \* Adds the other value to this value.\n \*/\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UByte): UInt = this.plus(other.toUInt())\n\n /\*\*\n \* Adds the other value to this value.\n \*/\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UShort): UInt = this.plus(other.toUInt())\n\n /\*\*\n \* Adds the other value to this value.\n \*/\n @kotlin.internal.InlineOnly\n

public inline operator fun plus(other: UInt): UInt = UInt(this.data.plus(other.data))\n\n /\*\*\n \* Adds the other value to this value.\n \*/\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: ULong): ULong =

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this.toULong().plus(other)\n\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UByte): UInt = this.minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UShort): UInt = this.minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UInt): UInt = UInt(this.data.minus(other.data))\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: ULong): ULong = this.toULong().minus(other)\n\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UByte): UInt = this.times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UShort): UInt = this.times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UInt): UInt = UInt(this.data.times(other.data))\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: ULong): ULong = this.toULong().times(other)\n\n /** Divides this value by the other value, truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UByte): UInt = this.div(other.toUInt())\n /** Divides this value by the other value, truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UShort): UInt = this.div(other.toUInt())\n /** Divides this value by the other value, truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UInt): UInt = uintDivide(this, other)\n /** Divides this value by the other value, truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: ULong): ULong = this.toULong().div(other)\n\n /**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UByte): UInt = this.rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UShort): UInt = this.rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UInt): UInt = uintRemainder(this, other)\n /**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n /**\n * Divides this value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: UByte): UInt = this.floorDiv(other.toUInt())\n /**\n * Divides this value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: UShort): UInt = this.floorDiv(other.toUInt())\n /**\n * Divides this value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: UInt): UInt = div(other)\n /**\n * Divides this value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: ULong): ULong = this.toULong().floorDiv(other)\n\n /**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UByte): UByte = this.mod(other.toUInt()).toUByte()\n

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/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is
always less than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating
division are the same.\n * \n @kotlin.internal.InlineOnly\n public inline fun mod(other: UShort): UShort =
this.mod(other.toUInt()).toUShort()\n /**\n * Calculates the remainder
of flooring division of this value by the other value.\n * \n * The result is always less than the divisor.\n * \n
* For unsigned types, the remainders of flooring division and truncating division are the same.\n * \n
@kotlin.internal.InlineOnly\n public inline fun mod(other: UInt): UInt = rem(other)\n /**\n * Calculates the
remainder of flooring division of this value by the other value.\n * \n * The result is always less than the
divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the same.\n
*\n @kotlin.internal.InlineOnly\n public inline fun mod(other: ULong): ULong =
this.toULong().mod(other)\n\n /**\n * Returns this value incremented by one.\n * \n * @sample
samples.misc.Builtins.inc\n * \n @kotlin.internal.InlineOnly\n public inline operator fun inc(): UInt =
UInt(data.inc())\n\n /**\n * Returns this value decremented by one.\n * \n
* @sample samples.misc.Builtins.dec\n * \n @kotlin.internal.InlineOnly\n public inline operator fun dec():
UInt = UInt(data.dec())\n\n /** Creates a range from this value to the specified [other] value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun rangeTo(other: UInt): UIntRange = UIntRange(this,
other)\n\n /**\n * Creates a range from this value up to but excluding the specified [other] value.\n * \n * If
the [other] value is less than or equal to `this` value, then the returned range is empty.\n * \n
@SinceKotlin("1.7")\n @ExperimentalStdlibApi\n @kotlin.internal.InlineOnly\n public inline operator fun
rangeUntil(other: UInt): UIntRange = this until other\n\n /**\n * Shifts this value left by the [bitCount] number
of bits.\n * \n * Note that only the five lowest-order bits of the [bitCount] are used as the shift distance.\n *
The shift distance actually used is therefore always in the range `0..31`.\n
*\n @kotlin.internal.InlineOnly\n public inline infix fun shl(bitCount: Int): UInt = UInt(data shl
bitCount)\n\n /**\n * Shifts this value right by the [bitCount] number of bits, filling the leftmost bits with
zeros.\n * \n * Note that only the five lowest-order bits of the [bitCount] are used as the shift distance.\n *
The shift distance actually used is therefore always in the range `0..31`.\n * \n
@kotlin.internal.InlineOnly\n public inline infix fun shr(bitCount: Int): UInt = UInt(data ushr bitCount)\n\n /** Performs a bitwise AND
operation between the two values. *\n
@kotlin.internal.InlineOnly\n public inline infix fun and(other: UInt):
UInt = UInt(this.data and other.data)\n\n /** Performs a bitwise OR operation between the two values. *\n
@kotlin.internal.InlineOnly\n public inline infix fun or(other: UInt): UInt = UInt(this.data or other.data)\n\n /**
Performs a bitwise XOR operation between the two values. *\n
@kotlin.internal.InlineOnly\n public inline infix fun xor(other: UInt): UInt = UInt(this.data xor other.data)\n\n /**
Inverts the bits in this value. *\n
@kotlin.internal.InlineOnly\n public inline fun inv(): UInt =
UInt(data.inv())\n\n /**\n * Converts this [UInt] value to [Byte].\n * \n * If this value is less than or equals
to [Byte.MAX_VALUE], the resulting `Byte` value represents\n * the same numerical value as this `UInt`.\n
*\n * The resulting `Byte` value is represented by the least significant 8 bits of this `UInt` value.\n * Note that
the resulting `Byte` value may be negative.\n * \n @kotlin.internal.InlineOnly\n public inline fun toByte():
Byte = data.toByte()\n\n /**\n * Converts this [UInt] value to [Short].\n * \n * If this value is less than or
equals to [Short.MAX_VALUE], the resulting `Short` value represents\n * the same numerical value as this
`UInt`.\n * \n * The resulting `Short` value is represented
by the least significant 16 bits of this `UInt` value.\n * Note that the resulting `Short` value may be negative.\n
*\n @kotlin.internal.InlineOnly\n public inline fun toShort(): Short = data.toShort()\n\n /**\n * Converts this
[UInt] value to [Int].\n * \n * If this value is less than or equals to [Int.MAX_VALUE], the resulting `Int` value
represents\n * the same numerical value as this `UInt`. Otherwise the result is negative.\n * \n * The resulting
`Int` value has the same binary representation as this `UInt` value.\n * \n @kotlin.internal.InlineOnly\n public
inline fun toInt(): Int = data\n\n /**\n * Converts this [UInt] value to [Long].\n * \n * The resulting `Long`
value represents the same numerical value as this `UInt`.\n * \n * The least significant 32 bits of the resulting
`Long` value are the same as the bits of this `UInt` value,\n * whereas the most significant 32 bits are filled with

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zeros.\n
    *^n @kotlin.internal.InlineOnly\n    public inline fun toLong(): Long = data.toLong() and 0xFFFF_FFFF\n
/**\n    * Converts this [UInt] value to [UByte].\n    * \n    * If this value is less than or equals to
[UByte.MAX_VALUE], the resulting `UByte` value represents\n    * the same numerical value as this `UInt`.\n
*\n    * The resulting `UByte` value is represented by the least significant 8 bits of this `UInt` value.\n    *^n
@kotlin.internal.InlineOnly\n    public inline fun toUByte(): UByte = data.toUByte()\n    /**\n    * Converts this
[UInt] value to [UShort].\n    * \n    * If this value is less than or equals to [UShort.MAX_VALUE], the resulting
`UShort` value represents\n    * the same numerical value as this `UInt`.\n    * \n    * The resulting `UShort` value is
represented by the least significant 16 bits of this `UInt` value.\n    *^n @kotlin.internal.InlineOnly\n    public
inline fun toUShort(): UShort = data.toUShort()\n    /** Returns
this value. *^n @kotlin.internal.InlineOnly\n    public inline fun toUInt(): UInt = this\n    /**\n    * Converts this
[UInt] value to [ULong].\n    * \n    * The resulting `ULong` value represents the same numerical value as this
`UInt`.\n    * \n    * The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `UInt`
value,\n    * whereas the most significant 32 bits are filled with zeros.\n    *^n @kotlin.internal.InlineOnly\n
public inline fun toULong(): ULong = ULong(data.toLong() and 0xFFFF_FFFF)\n    /**\n    * Converts this
[UInt] value to [Float].\n    * \n    * The resulting value is the closest `Float` to this `UInt` value.\n    * In case when
this `UInt` value is exactly between two `Float`s,\n    * the one with zero at least significant bit of mantissa is
selected.\n    *^n @kotlin.internal.InlineOnly\n    public inline fun toFloat(): Float = this.toDouble().toFloat()\n
/**\n    * Converts this [UInt] value to
[Double].\n    * \n    * The resulting `Double` value represents the same numerical value as this `UInt`.\n    *^n
@kotlin.internal.InlineOnly\n    public inline fun toDouble(): Double = uintToDouble(data)\n\n    public override
fun toString(): String = toLong().toString()\n\n}\n\n/**\n    * Converts this [Byte] value to [UInt].\n    * \n    * If this value
is positive, the resulting `UInt` value represents the same numerical value as this `Byte`.\n    * \n    * The least significant
8 bits of the resulting `UInt` value are the same as the bits of this `Byte` value,\n    * whereas the most significant 24
bits are filled with the sign bit of this value.\n
*\n    *^n @SinceKotlin("1.5")\n    *^n @WasExperimental(ExperimentalUnsignedTypes::class)\n    *^n @kotlin.internal.InlineOnly\n
public inline fun Byte.toUInt(): UInt = UInt(this.toInt())\n\n/**\n    * Converts this [Short] value to [UInt].\n    * \n    * If
this value is positive, the resulting `UInt` value represents the same numerical value as this `Short`.\n    * \n    * The least
significant
16 bits of the resulting `UInt` value are the same as the bits of this `Short` value,\n    * whereas the most significant
16 bits are filled with the sign bit of this value.\n
*\n    *^n @SinceKotlin("1.5")\n    *^n @WasExperimental(ExperimentalUnsignedTypes::class)\n    *^n @kotlin.internal.InlineOnly\n
public inline fun Short.toUInt(): UInt = UInt(this.toInt())\n\n/**\n    * Converts this [Int] value to [UInt].\n    * \n    * If
this value is positive, the resulting `UInt` value represents the same numerical value as this `Int`.\n    * \n    * The resulting
`UInt` value has the same binary representation as this `Int` value.\n
*\n    *^n @SinceKotlin("1.5")\n    *^n @WasExperimental(ExperimentalUnsignedTypes::class)\n    *^n @kotlin.internal.InlineOnly\n
public inline fun Int.toUInt(): UInt = UInt(this)\n\n/**\n    * Converts this [Long] value to [UInt].\n    * \n    * If this value
is positive and less than or equals to [UInt.MAX_VALUE], the resulting `UInt` value represents\n    * the same
numerical value as this `Long`.\n    * \n    * The resulting `UInt`
value is represented by the least significant 32 bits of this `Long` value.\n
*\n    *^n @SinceKotlin("1.5")\n    *^n @WasExperimental(ExperimentalUnsignedTypes::class)\n    *^n @kotlin.internal.InlineOnly\n
public inline fun Long.toUInt(): UInt = UInt(this.toInt())\n\n/**\n    * Converts this [Float] value to [UInt].\n    * \n    *
The fractional part, if any, is rounded down towards zero.\n    * Returns zero if this `Float` value is negative or `NaN`,
[UInt.MAX_VALUE] if it's bigger than `UInt.MAX_VALUE`.\n
*\n    *^n @SinceKotlin("1.5")\n    *^n @WasExperimental(ExperimentalUnsignedTypes::class)\n    *^n @kotlin.internal.InlineOnly\n
public inline fun Float.toUInt(): UInt = doubleToUInt(this.toDouble())\n\n/**\n    * Converts this [Double] value to
[UInt].\n    * \n    * The fractional part, if any, is rounded down towards zero.\n    * Returns zero if this `Double` value is
negative or `NaN`, [UInt.MAX_VALUE] if it's bigger than `UInt.MAX_VALUE`.\n

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*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun Double.toUInt(): UInt = doubleToUInt(this)\n", "/*\n * Copyright 2010-2023 JetBrains s.r.o. and Kotlin\n * Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be\n * found in the license/LICENSE.txt file.\n *\n */\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.experimental\n\nimport\n    kotlin.jvm.*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@JvmInline\npublic value class UShort @kotlin.internal.IntrinsicConstEvaluation @PublishedApi internal\n    constructor(@PublishedApi internal val data: Short) : Comparable<UShort> {\n    companion object {\n        /**\n         * A constant holding the minimum value an instance of UShort can have.\n         */\n        public const val\n        MIN_VALUE: UShort = UShort(0)\n        /**\n         * A constant holding the maximum value an instance of\n         * UShort can have.\n         */\n        public const val MAX_VALUE: UShort = UShort(-1)\n        /**\n         * The number of bytes used to represent an instance of UShort in a binary form.\n         */\n        public const val SIZE_BYTES: Int = 2\n        /**\n         * The number of bits used to represent an instance of\n         * UShort in a binary form.\n         */\n        public const val SIZE_BITS: Int = 16\n    }\n    /**\n     * Compares this\n     * value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a\n     * negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UByte): Int =\n        this.toInt().compareTo(other.toInt())\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a\n     * positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public override inline operator fun compareTo(other: UShort): Int\n    = this.toInt().compareTo(other.toInt())\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a\n     * positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    compareTo(other: UInt): Int = this.toUInt().compareTo(other)\n    /**\n     * Compares this value with the\n     * specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if\n     * it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    compareTo(other: ULong): Int = this.toULong().compareTo(other)\n    /** Adds the\n     * other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UByte): UInt = this.toUInt().plus(other.toUInt())\n    /** Adds the other\n     * value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UShort): UInt =\n        this.toUInt().plus(other.toUInt())\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UInt): UInt = this.toUInt().plus(other)\n    /** Adds the other value to this\n     * value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: ULong): ULong =\n        this.toULong().plus(other)\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    minus(other: UByte): UInt = this.toUInt().minus(other.toUInt())\n    /** Subtracts the\n     * other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    minus(other: UShort):\n    UInt = this.toUInt().minus(other.toUInt())\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    minus(other: UInt): UInt = this.toUInt().minus(other)\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    minus(other: ULong): ULong =\n        this.toULong().minus(other)\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    times(other: UByte): UInt = this.toUInt().times(other.toUInt())\n    /** Multiplies this\n     * value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    times(other: UShort): UInt\n    = this.toUInt().times(other.toUInt())\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n    times(other: UInt): UInt = this.toUInt().times(other)\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator

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fun times(other: ULong): ULong = this.toULong().times(other)\n\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value, truncating the
result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other:
ULong): ULong = this.toULong().div(other)\n\n
/**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is
always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other:
UByte): UInt = this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of
this value by the other value.\n * \n * The result is always less than the divisor.\n */\n
@kotlin.internal.InlineOnly\n public inline operator fun rem(other: UShort): UInt =
this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the
other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: UInt): UInt = this.toUInt().rem(other)\n /**\n * Calculates the remainder of
truncating division of this value by the other value.\n * \n * The result is always
less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: ULong):
ULong = this.toULong().rem(other)\n /**\n * Divides this value by the other value, flooring the result to an
integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and
truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other:
UByte): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this value by the other value, flooring
the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring
division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun
floorDiv(other: UShort): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this value by the other
value, flooring the result to an integer that is closer
to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division are the
same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: UInt): UInt =
this.toUInt().floorDiv(other)\n /**\n * Divides this value by the other value, flooring the result to an integer that
is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and truncating division
are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other: ULong): ULong =
this.toULong().floorDiv(other)\n\n /**\n * Calculates the remainder of flooring division of this value by the
other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders
of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline
fun mod(other: UByte): UByte = this.toUInt().mod(other.toUInt()).toUByte()\n
/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is
always less than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating
division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UShort): UShort =
this.toUInt().mod(other.toUInt()).toUShort()\n /**\n * Calculates the remainder of flooring division of this
value by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the
remainders of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun mod(other: UInt): UInt = this.toUInt().mod(other)\n /**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is always less than the divisor.\n * \n
* For
* For
unsigned types, the remainders of flooring division and truncating division are the same.\n */\n
@kotlin.internal.InlineOnly\n public inline fun mod(other: ULong): ULong = this.toULong().mod(other)\n\n
/**\n * Returns this value incremented by one.\n * \n * @sample samples.misc.Builtins.inc\n */\n

```

```

@kotlin.internal.InlineOnly\n public inline operator fun inc(): UShort = UShort(data.inc())\n\n /**\n *
Returns this value decremented by one.\n *\n * @sample samples.misc.Builtins.dec\n */\n
@kotlin.internal.InlineOnly\n public inline operator fun dec(): UShort = UShort(data.dec())\n\n /** Creates a
range from this value to the specified [other] value. *\n @kotlin.internal.InlineOnly\n public inline operator fun
rangeTo(other: UShort): UIntRange = UIntRange(this.toUInt(), other.toUInt())\n\n /**\n * Creates a range from
this value up to but excluding the specified [other] value.\n *\n * If the [other] value is
less than or equal to `this` value, then the returned range is empty.\n *\n @SinceKotlin("1.7")\n
@ExperimentalStdlibApi\n @kotlin.internal.InlineOnly\n public inline operator fun rangeUntil(other: UShort):
UIntRange = this.toUInt() until other.toUInt()\n\n /** Performs a bitwise AND operation between the two values.
*\n @kotlin.internal.InlineOnly\n public inline infix fun and(other: UShort): UShort = UShort(this.data and
other.data)\n\n /** Performs a bitwise OR operation between the two values. *\n @kotlin.internal.InlineOnly\n
public inline infix fun or(other: UShort): UShort = UShort(this.data or other.data)\n\n /** Performs a bitwise XOR
operation between the two values. *\n @kotlin.internal.InlineOnly\n public inline infix fun xor(other: UShort):
UShort = UShort(this.data xor other.data)\n\n /** Inverts the bits in this value. *\n @kotlin.internal.InlineOnly\n
public inline fun inv(): UShort = UShort(data.inv())\n\n /**\n
* Converts this [UShort] value to [Byte].\n *\n * If this value is less than or equals to [Byte.MAX_VALUE],
the resulting `Byte` value represents\n * the same numerical value as this `UShort`.\n *\n * The resulting
`Byte` value is represented by the least significant 8 bits of this `UShort` value.\n * Note that the resulting `Byte`
value may be negative.\n *\n @kotlin.internal.InlineOnly\n public inline fun toByte(): Byte = data.toByte()\n\n
/**\n * Converts this [UShort] value to [Short].\n *\n * If this value is less than or equals to
[Short.MAX_VALUE], the resulting `Short` value represents\n * the same numerical value as this `UShort` .
Otherwise the result is negative.\n *\n * The resulting `Short` value has the same binary representation as this
`UShort` value.\n *\n @kotlin.internal.InlineOnly\n public inline fun toShort(): Short = data\n\n /**\n *
Converts this [UShort] value to [Int].\n *\n
* The resulting `Int` value represents the same numerical value as this `UShort`.\n *\n * The least significant
16 bits of the resulting `Int` value are the same as the bits of this `UShort` value,\n * whereas the most significant
16 bits are filled with zeros.\n *\n @kotlin.internal.InlineOnly\n public inline fun toInt(): Int = data.toInt()
and 0xFFFF\n\n /**\n * Converts this [UShort] value to [Long].\n *\n * The resulting `Long` value
represents the same numerical value as this `UShort`.\n *\n * The least significant 16 bits of the resulting
`Long` value are the same as the bits of this `UShort` value,\n * whereas the most significant 48 bits are filled
with zeros.\n *\n @kotlin.internal.InlineOnly\n public inline fun toLong(): Long = data.toLong() and
0xFFFF\n\n /**\n * Converts this [UShort] value to [UByte].\n *\n * If this value is less than or equals to
[UByte.MAX_VALUE], the resulting `UByte` value represents\n
* the same numerical value as this `UShort`.\n *\n * The resulting `UByte` value is represented by the least
significant 8 bits of this `UShort` value.\n *\n @kotlin.internal.InlineOnly\n public inline fun toUByte():
UByte = data.toUByte()\n\n /** Returns this value. *\n @kotlin.internal.InlineOnly\n public inline fun
toUShort(): UShort = this\n\n /**\n * Converts this [UShort] value to [UInt].\n *\n * The resulting `UInt`
value represents the same numerical value as this `UShort`.\n *\n * The least significant 16 bits of the resulting
`UInt` value are the same as the bits of this `UShort` value,\n * whereas the most significant 16 bits are filled with
zeros.\n *\n @kotlin.internal.InlineOnly\n public inline fun toUInt(): UInt = UInt(data.toInt() and 0xFFFF)\n\n
/**\n * Converts this [UShort] value to [ULong].\n *\n * The resulting `ULong` value represents the same
numerical value as this `UShort`.\n
*\n * The least significant 16 bits of the resulting `ULong` value are the same as the bits of this `UShort`
value,\n * whereas the most significant 48 bits are filled with zeros.\n *\n @kotlin.internal.InlineOnly\n
public inline fun toULong(): ULong = ULong(data.toLong() and 0xFFFF)\n\n /**\n * Converts this [UShort]
value to [Float].\n *\n * The resulting `Float` value represents the same numerical value as this `UShort`.\n
*\n @kotlin.internal.InlineOnly\n public inline fun toFloat(): Float = this.toInt().toFloat()\n\n /**\n *
Converts this [UShort] value to [Double].\n *\n * The resulting `Double` value represents the same numerical

```



```

value as this `UShort`.
    @kotlin.internal.InlineOnly public inline fun toDouble(): Double =
this.toInt().toDouble()
    public override fun toString(): String = toInt().toString()
}
/**
 * Converts this
 [Byte] value to [UShort].
 * If this value is positive,
 the resulting `UShort` value represents the same numerical value as this `Byte` value,
 * The least significant 8 bits
 of the resulting `UShort` value are the same as the bits of this `Byte` value,
 * whereas the most significant 8 bits
 are filled with the sign bit of this value.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Byte.toUShort(): UShort = UShort(this.toShort())
/**
 * Converts this [Short] value to
 [UShort].
 * If this value is positive, the resulting `UShort` value represents the same numerical value as this
 `Short`.
 * The resulting `UShort` value has the same binary representation as this `Short` value.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Short.toUShort(): UShort = UShort(this)
/**
 * Converts this [Int] value to [UShort].
 * If
 this value is positive and less than or equals to [UShort.MAX_VALUE],
 the resulting `UShort` value represents
 * the same numerical value as this `Int`.
 * The resulting `UShort`
 value is represented by the least significant 16 bits of this `Int` value.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Int.toUShort(): UShort = UShort(this.toShort())
/**
 * Converts this [Long] value to
 [UShort].
 * If this value is positive and less than or equals to [UShort.MAX_VALUE], the resulting `UShort`
 value represents
 * the same numerical value as this `Long`.
 * The resulting `UShort` value is represented by
 the least significant 16 bits of this `Long` value.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Long.toUShort(): UShort = UShort(this.toShort())
/**
 * Copyright 2010-2021 JetBrains s.r.o.
 and Kotlin Programming Language contributors.
 * Use of this source
 code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("CollectionsKt")
@file:OptIn(kotlin.exper
imental.ExperimentalTypeInference::class)
package kotlin.collections
import kotlin.contracts.*
import
kotlin.random.Random
internal object EmptyIterator : ListIterator<Nothing> {
    override fun hasNext():
Boolean = false
    override fun hasPrevious(): Boolean = false
    override fun nextIndex(): Int = 0
    override
fun previousIndex(): Int = -1
    override fun next(): Nothing = throw NoSuchElementException()
    override fun
previous(): Nothing = throw NoSuchElementException()
}
internal object EmptyList : List<Nothing>,
Serializable, RandomAccess {
    private const val serialVersionUID: Long = -7390468764508069838L
    override fun equals(other: Any?): Boolean = other is List<*> && other.isEmpty()
    override fun hashCode(): Int
= 1
    override fun
toString(): String = "[]"
    override val size: Int get() = 0
    override fun isEmpty(): Boolean = true
    override fun contains(element: Nothing): Boolean = false
    override fun containsAll(elements:
Collection<Nothing>): Boolean = elements.isEmpty()
    override fun get(index: Int): Nothing = throw
IndexOutOfBoundsException("Empty list doesn't contain element at index $index.")
    override fun
indexOf(element: Nothing): Int = -1
    override fun lastIndexOf(element: Nothing): Int = -1
    override fun
iterator(): Iterator<Nothing> = EmptyIterator
    override fun listIterator(): ListIterator<Nothing> = EmptyIterator
    override fun listIterator(index: Int): ListIterator<Nothing> {
        if (index != 0) throw
IndexOutOfBoundsException("Index: $index")
        return EmptyIterator
    }
    override fun
subList(fromIndex: Int, toIndex: Int): List<Nothing> {
        if (fromIndex == 0 && toIndex == 0) return this
        throw IndexOutOfBoundsException("fromIndex:
$fromIndex, toIndex: $toIndex")
    }
    private fun readResolve(): Any = EmptyList
}
internal fun <T>
Array<out T>.asCollection(): Collection<T> = ArrayAsCollection(this, isVarargs = false)
private class
ArrayAsCollection<T>(val values: Array<out T>, val isVarargs: Boolean) : Collection<T> {
    override val size:
Int get() = values.size
    override fun isEmpty(): Boolean = values.isEmpty()
    override fun contains(element:
T): Boolean = values.contains(element)
    override fun containsAll(elements: Collection<T>): Boolean =

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elements.all { contains(it) }
override fun iterator(): Iterator<T> = values.iterator() // override hidden toArray
implementation to prevent copying of values array
public fun toArray(): Array<out Any?> =
values.copyToArrayOfAny(isVarargs)
Returns an empty read-only list. The returned list is
serializable (JVM).
@sample samples.collections.Collections.Lists.emptyReadOnlyList
public fun
<T> emptyList(): List<T> = EmptyList
Returns a new read-only list of given elements. The returned list
is serializable (JVM).
@sample samples.collections.Collections.Lists.readOnlyList
public fun <T>
listOf(vararg elements: T): List<T> = if (elements.size > 0) elements.asList() else emptyList()
Returns an
empty read-only list. The returned list is serializable (JVM).
@sample
samples.collections.Collections.Lists.emptyReadOnlyList
@kotlin.internal.InlineOnly
public inline fun <T>
listOf(): List<T> = emptyList()
Returns an empty new [MutableList].
@sample
samples.collections.Collections.Lists.emptyMutableList
@kotlin.internal.InlineOnly
public inline fun <T> mutableListOf(): MutableList<T> =
ArrayList()
Returns an empty new [ArrayList].
@sample
samples.collections.Collections.Lists.emptyArrayList
@kotlin.internal.InlineOnly
public inline fun <T> arrayListOf():
ArrayList<T> = ArrayList()
Returns a new [MutableList] with the given elements.
@sample
samples.collections.Collections.Lists.mutableList
public fun <T> mutableListOf(vararg elements: T):
MutableList<T> =
if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs =
true))
Returns a new [ArrayList] with the given elements.
@sample
samples.collections.Collections.Lists.arrayList
public fun <T> arrayListOf(vararg elements: T): ArrayList<T>
=
if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs = true))
Returns a new read-only list either of single given element, if it is not null, or empty list if the element is null. The
returned list is serializable (JVM).
@sample samples.collections.Collections.Lists.listOfNotNull
public fun
<T : Any> listOfNotNull(element: T?): List<T> = if (element != null) listOf(element) else emptyList()
Returns
a new read-only list only of those given elements, that are not null. The returned list is serializable (JVM).
@sample samples.collections.Collections.Lists.listOfNotNull
public fun <T : Any> listOfNotNull(vararg
elements: T?): List<T> = elements.filterNotNull()
Creates a new read-only list with the specified [size],
where each element is calculated by calling the specified [init] function.
The function [init] is called for
each list element sequentially starting from the first one.
It should return the value for a list element given its
index.
@sample samples.collections.Collections.Lists.readOnlyListFromInitializer
@kotlin.internal.InlineOnly
public inline fun <T> List(size: Int, init: (index: Int) -> T):
List<T> = MutableList(size, init)
Creates a new mutable list with the specified [size], where each element
is calculated by calling the specified [init] function.
The function [init]
is called for each list element sequentially starting from the first one.
It should return the value for a list element
given its index.
@sample samples.collections.Collections.Lists.mutableListFromInitializer
@kotlin.internal.InlineOnly
public inline fun <T> MutableList(size: Int, init: (index:
Int) -> T): MutableList<T> {
val list = ArrayList<T>(size)
repeat(size) { index -> list.add(init(index)) }
return list
}
Builds a new read-only [List] by populating a [MutableList] using the given
[builderAction]
and returning a read-only list with the same elements.
The list passed as a receiver to the
[builderAction] is valid only inside that function.
Using it outside of the function produces an unspecified
behavior.
The returned list is serializable (JVM).
@sample
samples.collections.Builders.Lists.buildListSample
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
@Suppress("DEPRECATION")
public
inline fun <E> buildList(@BuilderInference builderAction: MutableList<E>.() -> Unit): List<E> {
contract {
callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) }
return
buildListInternal(builderAction)
}
@PublishedApi
@kotlin.internal.InlineOnly
ninter

```

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nal expect inline fun <E> buildListInternal(builderAction: MutableList<E>().-> Unit): List<E>\n\n/**\n * Builds a
new read-only [List] by populating a [MutableList] using the given [builderAction]\n * and returning a read-only list
with the same elements.\n * The list passed as a receiver to the [builderAction] is valid only inside that
function.\n * Using it outside of the function produces an unspecified behavior.\n * The returned list is
serializable (JVM).\n * [capacity] is used to hint the expected number of elements added in the
[builderAction].\n * @throws IllegalArgumentException if the given [capacity] is negative.\n
*\n * @sample samples.collections.Builders.Lists.buildListSampleWithCapacity\n
*/\n\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\n@Su
ppress("DEPRECATION")\npublic inline fun <E> buildList(capacity: Int, @BuilderInference builderAction:
MutableList<E>().-> Unit): List<E> {\n    contract { callsInPlace(builderAction,
InvocationKind.EXACTLY_ONCE) }\n    return buildListInternal(capacity,
builderAction)\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal expect inline
fun <E> buildListInternal(capacity: Int, builderAction: MutableList<E>().-> Unit): List<E>\n\n/**\n * Returns an
[IntRange] of the valid indices for this collection.\n * @sample
samples.collections.Collections.Collections.indicesOfCollection\n */\n\npublic val Collection<*>.indices: IntRange\n
get() = 0..size - 1\n\n/**\n * Returns the index of the last item in the list or -1 if the list is empty.\n * @sample
samples.collections.Collections.Collections.lastIndexOfList\n
*/\n\npublic val <T> List<T>.lastIndex: Int\n    get() = this.size - 1\n\n/**\n * Returns `true` if the collection is not
empty.\n * @sample samples.collections.Collections.Collections.collectionIsNotEmpty\n
*/\n\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.isNotEmpty(): Boolean =
!isEmpty()\n\n/**\n * Returns `true` if this nullable collection is either null or empty.\n * @sample
samples.collections.Collections.Collections.collectionOrNullEmpty\n
*/\n\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>?.isNullOrEmpty():
Boolean {\n    contract {\n        returns(false) implies (this@isNullOrEmpty != null)\n    }\n    return this == null ||
this.isEmpty()\n}\n\n/**\n * Returns this Collection if it's not `null` and the empty list otherwise.\n * @sample
samples.collections.Collections.Collections.collectionOrEmpty\n */\n\n@kotlin.internal.InlineOnly\npublic inline fun
<T> Collection<T>?.orEmpty():
Collection<T> = this ?: emptyList()\n\n/**\n * Returns this List if it's not `null` and the empty list otherwise.\n *
@sample samples.collections.Collections.Collections.listOrEmpty\n */\n\n@kotlin.internal.InlineOnly\npublic inline fun
<T> List<T>?.orEmpty(): List<T> = this ?: emptyList()\n\n/**\n * Returns this collection if it's not empty\n * or the
result of calling [defaultValue] function if the collection is empty.\n * @sample
samples.collections.Collections.Collections.collectionIfEmpty\n
*/\n\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifEmpty(defaultValue: () ->
R): R where C : Collection<*>, C : R =\n    if (isEmpty()) defaultValue() else this\n\n/**\n * Checks if all
elements in the specified collection are contained in this collection.\n * Allows to overcome type-safety
restriction of `containsAll` that requires to pass a collection of type `Collection<E>`.\n * @sample
samples.collections.Collections.Collections.collectionContainsAll\n
*/\n\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false warning, extension takes precedence in
some cases\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T>
Collection<T>.containsAll(elements: Collection<T>): Boolean = this.containsAll(elements)\n\n/**\n * Returns a
new list with the elements of this list randomly shuffled\n * using the specified [random] instance as the source of
randomness.\n * @sample\n */\n\n@SinceKotlin("1.3")\npublic fun <T> Iterable<T>.shuffled(random: Random): List<T> =
toMutableList().apply { shuffle(random) }\n\ninternal fun <T> List<T>.optimizeReadOnlyList() = when (size) {\n
    0 -> emptyList()\n    1 -> listOf(this[0])\n    else -> this\n}\n\n/**\n * Searches this list or its range for the provided
[element] using the binary search algorithm.\n * The list is expected to be sorted into ascending order according to
the Comparable natural ordering of its elements,\n * otherwise the result is undefined.\n * @sample\n * If the list contains
multiple

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the element should be inserted,\n * so that the list (or the specified subrange of list) still remains sorted.\n *
@sample samples.collections.Collections.Lists.binarySearchWithComparisonFunction\n *^/npublic fun <T>
List<T>.binarySearch(fromIndex: Int = 0, toIndex: Int = size, comparison: (T) -> Int): Int {\n  rangeCheck(size,
fromIndex, toIndex)\n\n  var low = fromIndex\n  var high = toIndex - 1\n  while (low <= high) {\n    val mid
= (low + high).ushr(1) // safe from overflows\n    val midVal = get(mid)\n    val cmp = comparison(midVal)\n\n    if (cmp < 0)\n      low = mid + 1\n    else if (cmp
> 0)\n      high = mid - 1\n    else\n      return mid // key found\n  }\n  return -(low + 1) // key not
found\n}\n\n/**\n * Checks that `from` and `to` are in\n * the range of [0..size] and throws an appropriate exception,
if they aren't.\n */\nprivate fun rangeCheck(size: Int, fromIndex: Int, toIndex: Int) {\n  when {\n    fromIndex >
toIndex -> throw IllegalArgumentException("\n * fromIndex ($fromIndex) is greater than toIndex ($toIndex).")\n\n    fromIndex < 0 -> throw IndexOutOfBoundsException("\n * fromIndex ($fromIndex) is less than zero.")\n\n    toIndex
> size -> throw IndexOutOfBoundsException("\n * toIndex ($toIndex) is greater than size ($size).")\n\n  }\n}\n\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal expect fun checkIndexOverflow(index: Int):
Int\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal expect fun checkCountOverflow(count: Int):
Int\n\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun throwIndexOverflow() { throw
ArithmeticException("\n * Index
overflow has happened.") }\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun throwCountOverflow() {
throw ArithmeticException("\n * Count overflow has happened.") }\n\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("MapsKt")\n@file:OptIn(kotlin.experimental.
ExperimentalTypeInference::class)\n\npackage kotlin.collections\n\nimport kotlin.contracts.*\n\nprivate object
EmptyMap : Map<Any?, Nothing>, Serializable {\n  private const val serialVersionUID: Long =
8246714829545688274\n\n  override fun equals(other: Any?): Boolean = other is Map<*, *> &&
other.isEmpty()\n\n  override fun hashCode(): Int = 0\n\n  override fun toString(): String = "{}"\n\n  override val
size: Int get() = 0\n\n  override fun isEmpty(): Boolean = true\n\n  override
fun containsKey(key: Any?): Boolean = false\n\n  override fun containsValue(value: Nothing): Boolean = false\n\n
override fun get(key: Any?): Nothing? = null\n\n  override val entries: Set<Map.Entry<Any?, Nothing>> get() =
EmptySet\n\n  override val keys: Set<Any?> get() = EmptySet\n\n  override val values: Collection<Nothing> get() =
EmptyList\n\n  private fun readResolve(): Any = EmptyMap\n}\n\n\n/**\n * Returns an empty read-only map of
specified type.\n * \n * The returned map is serializable (JVM).\n * \n * @sample
samples.collections.Collections.Instantiation.emptyReadOnlyMap\n */\n\npublic fun <K, V> emptyMap(): Map<K, V> =
@Suppress("UNCHECKED_CAST") (EmptyMap as Map<K, V>)\n\n\n/**\n * Returns a new read-only map with
the specified contents, given as a list of pairs\n * where the first value is the key and the second is the value.\n * \n *
If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.\n * \n *
Entries of the map are iterated in
the order they were specified.\n * \n * The returned map is serializable (JVM).\n * \n * @sample
samples.collections.Collections.Instantiation.mapFromPairs\n */\n\npublic fun <K, V> mapOf(vararg pairs: Pair<K, V>):
Map<K, V> =\n  if (pairs.size > 0) pairs.toMap(LinkedHashMap(mapCapacity(pairs.size))) else
emptyMap()\n\n\n/**\n * Returns an empty read-only map.\n * \n * The returned map is serializable (JVM).\n * \n *
@sample samples.collections.Collections.Instantiation.emptyReadOnlyMap\n */\n\n@kotlin.internal.InlineOnly\npublic
inline fun <K, V> mapOf(): Map<K, V> = emptyMap()\n\n\n/**\n * Returns an empty new [MutableMap].\n * \n * \n *
The returned map preserves the entry iteration order.\n * \n * @sample
samples.collections.Collections.Instantiation.emptyMutableMap\n
*/\n\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> mutableMapOf():
MutableMap<K, V> = LinkedHashMap()\n\n\n/**\n * Returns a new [MutableMap] with the specified contents, given
as a list of pairs\n * where the first component is the key

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and the second is the value.  
 \* If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.  
 \* Entries of the map are iterated in the order they were specified.  
 \* @sample samples.collections.maps.instantiation.mutableMapFromPairs

```

@sample
samples.collections.maps.instantiation.emptyMutableMap
*/
public fun <K, V> mutableMapOf(vararg pairs:
Pair<K, V>): MutableMap<K, V> =
  LinkedHashMap<K, V>(mapCapacity(pairs.size)).apply { putAll(pairs)
}
*/
Returns an empty new [HashMap].
*/
@sample
samples.collections.maps.instantiation.emptyHashMap
*/
@SinceKotlin("1.1")
@kotlin.internal.InlineOnly
public inline fun <K, V> hashMapOf(): HashMap<K, V>
= HashMap<K, V>()
*/
Returns a new [HashMap] with the specified contents, given as a list of pairs
where the first component is the key and the second is the value.
*/
@sample
samples.collections.maps.instantiation.hashMapFromPairs
*/
public
fun <K, V> hashMapOf(vararg pairs: Pair<K, V>): HashMap<K, V> = HashMap<K,
V>(mapCapacity(pairs.size)).apply { putAll(pairs) }
*/
Returns an empty new [LinkedHashMap].
*/
@SinceKotlin("1.1")
@kotlin.internal.InlineOnly
public inline fun <K, V> linkedMapOf():
LinkedHashMap<K, V> = LinkedHashMap<K, V>()
*/
Returns a new [LinkedHashMap] with the specified
contents, given as a list of pairs
where the first component is the key and the second is the value.
*/
If
multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.
*/
Entries of the map are iterated in the order they were specified.
*/
@sample
samples.collections.maps.instantiation.linkedMapFromPairs
*/
public fun <K, V> linkedMapOf(vararg pairs:
Pair<K, V>): LinkedHashMap<K, V> = pairs.toMap(LinkedHashMap(mapCapacity(pairs.size)))
*/
Builds
a new read-only [Map] by populating a [MutableMap] using the given [builderAction]
and returning
a read-only map with the same key-value pairs.
*/
The map passed as a receiver to the [builderAction] is valid
only inside that function.
*/
Using it outside of the function produces an unspecified behavior.
*/
Entries of
the map are iterated in the order they were added by the [builderAction].
*/
The returned map is serializable
(JVM).
*/
@sample samples.collections.builders.maps.buildMapSample
*/
@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
@Suppress("DEPRECATION")
public inline fun <K, V> buildMap(@BuilderInference builderAction:
MutableMap<K, V>().->Unit): Map<K, V> {
  contract { callsInPlace(builderAction,
InvocationKind.EXACTLY_ONCE) }
  return
buildMapInternal(builderAction)
}
*/
@PublishedApi
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@kotlin.internal.ExpectInline
fun <K, V> buildMapInternal(builderAction: MutableMap<K, V>().->Unit): Map<K,
V>
*/
Builds a new read-only
[Map] by populating a [MutableMap] using the given [builderAction]
and returning a read-only map with the
same key-value pairs.
*/
The map passed as a receiver to the [builderAction] is valid only inside that
function.
*/
Using it outside of the function produces an unspecified behavior.
*/
[capacity] is used to hint the
expected number of pairs added in the [builderAction].
*/
Entries of the map are iterated in the order they were
added by the [builderAction].
*/
The returned map is serializable (JVM).
*/
@throws
IllegalArgumentException if the given [capacity] is negative.
*/
@sample
samples.collections.builders.maps.buildMapSample
*/
@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
@Suppress("DEPRECATION")
public inline fun <K, V> buildMap(capacity: Int, @BuilderInference builderAction:
MutableMap<K, V>().->Unit): Map<K, V> {
  contract { callsInPlace(builderAction,
InvocationKind.EXACTLY_ONCE)
}
  return buildMapInternal(capacity,
builderAction)
}
*/
@PublishedApi
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@kotlin.internal.ExpectInline
fun <K, V> buildMapInternal(capacity: Int, builderAction: MutableMap<K, V>().->Unit): Map<K, V>
*/
Calculate the initial capacity of a map.
*/
@PublishedApi
@kotlin.internal.ExpectInline
fun mapCapacity(expectedSize: Int):
Int
*/
Returns `true` if this map is not empty.
*/
@sample

```

```

samples.collections.Maps.Usage.mapIsNotEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
Map<out K, V>.isEmpty(): Boolean = !isEmpty()\n\n/**\n * Returns `true` if this nullable map is either null or
empty.\n * @sample samples.collections.Maps.Usage.mapIsNullOrEmpty\n
*/\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>?.isNullOrEmpty(): Boolean {\n    contract {\n        returns(false) implies (this@isNullOrEmpty != null)\n    }\n\n    return this == null || isEmpty()\n}\n\n/**\n * Returns the [Map] if its not `null`, or the empty [Map] otherwise.\n * @sample
samples.collections.Maps.Usage.mapOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<K,
V>?.orElse(): Map<K, V> = this ?: emptyMap()\n\n/**\n * Returns this map if it's not empty\n * or the result of
calling [defaultValue] function if the map is empty.\n * @sample
samples.collections.Maps.Usage.mapIfEmpty\n */\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun <M, R> M.ifEmpty(defaultValue: () -> R): R where M : Map<*, *>, M : R =\n    if (isEmpty())
defaultValue() else this\n\n/**\n * Checks if the map contains the given key.\n * This method allows to use the
`x` in map` syntax for checking whether an object is contained in the map.\n * @sample
samples.collections.Maps.Usage.containsKey\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun
<@kotlin.internal.OnlyInputTypes K, V> Map<out K, V>.contains(key: K): Boolean = containsKey(key)\n\n/**\n
* Returns the value corresponding to the given [key], or `null` if such a key is not present in the map.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <@kotlin.internal.OnlyInputTypes K, V> Map<out K,
V>.get(key: K): V? =\n    @Suppress("UNCHECKED_CAST") (this as Map<K, V>).get(key)\n\n/**\n * Allows
to use the index operator for storing values in a mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline
operator fun <K, V> MutableMap<K, V>.set(key: K, value: V): Unit {\n    put(key, value)\n}\n\n/**\n * Returns
`true` if the map contains the specified [key].\n * Allows to overcome type-safety restriction of `containsKey`
that requires to pass a key of type `K`.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
<@kotlin.internal.OnlyInputTypes K> Map<out K, *>.containsKey(key: K): Boolean =\n    @Suppress("UNCHECKED_CAST") (this as Map<K, *>).containsKey(key)\n\n/**\n * Returns `true` if the map
maps one or more keys to the specified [value].\n */\n    Allows to overcome type-safety restriction of `containsValue` that requires to pass a value of type `V`.\n * @sample samples.collections.Maps.Usage.containsValue\n
*/\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false warning, extension takes precedence in
some cases\n@kotlin.internal.InlineOnly\npublic inline fun <K, @kotlin.internal.OnlyInputTypes V> Map<K,
V>.containsValue(value: V): Boolean = this.containsValue(value)\n\n/**\n * Removes the specified key and its
corresponding value from this map.\n * @return the previous value associated with the key, or `null` if the key
was not present in the map.\n * Allows to overcome type-safety restriction of `remove` that requires to pass a key
of type `K`.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes K, V>
MutableMap<out K, V>.remove(key: K): V? =\n    @Suppress("UNCHECKED_CAST") (this as MutableMap<K,
V>).remove(key)\n\n/**\n * Returns the key component of the map entry.\n * This
method allows to use destructuring declarations when working with maps, for example:\n * ```\n * for ((key, value)
in map) {\n *     // do something with the key and the value\n * }\n * ```\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun <K, V> Map.Entry<K, V>.component1(): K = key\n\n/**\n * Returns the value component of
the map entry.\n * This method allows to use destructuring declarations when working with maps, for
example:\n * ```\n * for ((key, value) in map) {\n *     // do something with the key and the value\n * }\n * ```\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> Map.Entry<K, V>.component2(): V =
value\n\n/**\n * Converts entry to [Pair] with key being first component and value being second.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map.Entry<K, V>.toPair(): Pair<K, V> = Pair(key,
value)\n\n/**\n * Returns the value for the given [key] if the value is present and not `null`.\n * Otherwise, returns
the result of
the [defaultValue] function.\n * @sample samples.collections.Maps.Usage.getOrElse\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<K, V>.getOrElse(key: K, defaultValue: () -> V): V

```





`V>(mapCapacity(size)), transform) // .optimizeReadOnlyMap()`  
 Returns a map containing all key-value pairs with keys matching the given [predicate].  
 The returned map preserves the entry iteration order of the original map.  
 @sample samples.collections.Maps.Filtering.filterKeys  
`public inline fun <K, V> Map<out K, V>.filterKeys(predicate: (K) -> Boolean): Map<K, V> {`  
 `val result = LinkedHashMap<K, V>()`  
 `for (entry in this) {`  
 `if (predicate(entry.key))`  
 `result.put(entry.key, entry.value)`  
 `}`  
 `return result`  
 Returns a map containing all key-value pairs with values matching the given [predicate].  
 The returned map preserves the entry iteration order of the original map.  
 @sample samples.collections.Maps.Filtering.filterValues  
`public inline fun <K, V> Map<out K, V>.filterValues(predicate: (V) -> Boolean): Map<K, V> {`  
 `val result = LinkedHashMap<K, V>()`  
 `for (entry in this) {`  
 `if (predicate(entry.value))`  
 `result.put(entry.key, entry.value)`  
 `}`  
 `return result`  
 Appends all entries matching the given [predicate] into the mutable map given as [destination] parameter.  
 @return the destination map.  
 @sample samples.collections.Maps.Filtering.filterTo  
`public inline fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.filterTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M {`  
 `for (element in this) {`  
 `if (predicate(element))`  
 `destination.put(element.key, element.value)`  
 `}`  
 `return destination`  
 Returns a new map containing all key-value pairs matching the given [predicate].  
 The returned map preserves the entry iteration order of the original map.  
 @sample samples.collections.Maps.Filtering.filter  
`public inline fun <K, V> Map<out K, V>.filter(predicate: (Map.Entry<K, V>) -> Boolean): Map<K, V> {`  
 `return filterTo(LinkedHashMap<K, V>(), predicate)`  
 Appends all entries not matching the given [predicate] into the given [destination].  
 @return the destination map.  
 @sample samples.collections.Maps.Filtering.filterNotTo  
`public inline fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.filterNotTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M {`  
 `for (element in this) {`  
 `if (!predicate(element))`  
 `destination.put(element.key, element.value)`  
 `}`  
 `return destination`  
 Returns a new map containing all key-value pairs not matching the given [predicate].  
 The returned map preserves the entry iteration order of the original map.  
 @sample samples.collections.Maps.Filtering.filterNot  
`public inline fun <K, V> Map<out K, V>.filterNot(predicate: (Map.Entry<K, V>) -> Boolean): Map<K, V> {`  
 `return filterNotTo(LinkedHashMap<K, V>(), predicate)`  
 Returns a new map containing all key-value pairs from the given collection of pairs.  
 The returned map preserves the entry iteration order of the original collection.  
 If any of two pairs would have the same key the last one gets added to the map.  
`public fun <K, V> Iterable<Pair<K, V>>.toMap(): Map<K, V> {`  
 `if (this is Collection) {`  
 `return when (size) {`  
 `0 -> emptyMap()`  
 `1 -> mapOf(if (this is List) this[0] else iterator().next())`  
 `else -> toMap(LinkedHashMap<K, V>(mapCapacity(size)))`  
 `}`  
 `}`  
 `return toMap(LinkedHashMap<K, V>()).optimizeReadOnlyMap()`  
 Populates and returns the [destination] mutable map with key-value pairs from the given collection of pairs.  
`public fun <K, V, M : MutableMap<in K, in V>> Iterable<Pair<K, V>>.toMap(destination: M): M {`  
 `destination.apply {`  
 `putAll(this@toMap)`  
 `}`  
 Returns a new map containing all key-value pairs from the given array of pairs.  
 The returned map preserves the entry iteration order of the original array.  
 If any of two pairs would have the same key the last one gets added to the map.  
`public fun <K, V> Array<out Pair<K, V>>.toMap(): Map<K, V> =`  
 `when (size) {`  
 `0 -> emptyMap()`  
 `1 -> mapOf(this[0])`  
 `else -> toMap(LinkedHashMap<K, V>(mapCapacity(size)))`  
 `}`  
 Populates and returns the [destination] mutable map with key-value pairs from the given array of pairs.  
`public fun <K, V, M : MutableMap<in K, in V>> Array<out Pair<K, V>>.toMap(destination: M): M {`  
 `destination.apply {`  
 `putAll(this@toMap)`  
 `}`  
 Returns a new map containing all key-value pairs from the given sequence of pairs.  
 The returned map preserves the entry iteration order of the original sequence.  
 If any of two pairs would have the same key the last one gets added to the map.  
`public fun <K, V> Sequence<Pair<K, V>>.toMap(): Map<K, V> =`  
 `toMap(LinkedHashMap<K, V>()).optimizeReadOnlyMap()`  
 Populates and returns the [destination] mutable map with key-value pairs

from the given sequence of pairs.

```

public fun <K, V, M : MutableMap<in K, in V>> Sequence<Pair<K, V>>.toMap(destination: M): M =
    destination.apply { putAll(this@toMap) }

```

\* Returns a new read-only map containing all key-value pairs from the original map.

```

public fun <K, V> Map<out K, V>.toMap(): Map<K, V> =
    when (size) {
        0 -> emptyMap()
        1 -> toSingletonMap()
        else -> toMutableMap()
    }

```

\* Returns a new mutable map containing all key-value pairs from the original map.

```

public fun <K, V> Map<out K, V>.toMutableMap(): MutableMap<K, V> =
    LinkedHashMap(this)

```

\* Populates and returns the [destination] mutable map with key-value pairs from the given map.

```

public fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.toMap(destination: M): M =
    destination.apply { putAll(this@toMap) }

```

\* Creates a new read-only map by replacing or adding an entry to this map from a given key-value [pair].

```

public operator fun <K, V> Map<out K, V>.plus(pair: Pair<K, V>): Map<K, V> =
    if (this.isEmpty()) mapOf(pair) else
    LinkedHashMap(this).apply { put(pair.first, pair.second) }

```

\* Creates a new read-only map by replacing or adding entries to this map from a given collection of key-value [pairs].

```

public operator fun <K, V> Map<out K, V>.plus(pairs: Iterable<Pair<K, V>>): Map<K, V> =
    if (this.isEmpty()) pairs.toMap() else
    LinkedHashMap(this).apply { putAll(pairs) }

```

\* Creates a new read-only map by replacing or adding entries to this map from a given array of key-value [pairs].

```

public operator fun <K, V> Map<out K, V>.plus(pairs: Array<out Pair<K, V>>): Map<K, V> =
    if (this.isEmpty()) pairs.toMap() else
    LinkedHashMap(this).apply { putAll(pairs) }

```

\* Creates a new read-only map by replacing or adding entries to this map from a given sequence of key-value [pairs].

```

public operator fun <K, V> Map<out K, V>.plus(pairs: Sequence<Pair<K, V>>): Map<K, V> =
    LinkedHashMap(this).apply { putAll(pairs) }.optimizeReadOnlyMap()

```

\* Creates a new read-only map by replacing or adding entries to this map from another [map].

```

public operator fun <K, V> Map<out K, V>.plus(map: Map<out K, V>): Map<K, V> =
    LinkedHashMap(this).apply { putAll(map) }

```

\* Appends or replaces the given [pair] in this mutable map.

```

@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pair: Pair<K, V>) {
    put(pair.first, pair.second)
}

```

\* Appends or replaces all pairs from the given collection of [pairs] in this mutable map.

```

@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Iterable<Pair<K, V>>) {
    putAll(pairs)
}

```

\* Appends or replaces all pairs from the given array of [pairs] in this mutable map.

```

@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Array<out Pair<K, V>>) {
    putAll(pairs)
}

```

\* Appends or replaces all pairs from the given sequence of [pairs] in this mutable map.

```

@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Sequence<Pair<K, V>>) {
    putAll(pairs)
}

```

\* Appends or replaces all entries from the given [map] in this mutable map.

```

@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(map: Map<K, V>) {
    putAll(map)
}

```

\* Returns a map containing all entries of the original map except the entry with the given [key].

```

@SinceKotlin("1.1")
public operator fun <K, V> Map<out K, V>.minus(key: K): Map<K, V> =
    this.toMutableMap().apply { minusAssign(key) }.optimizeReadOnlyMap()

```

\* Returns a map containing all

```

entries of the original map except those entries
 * the keys of which are contained in the given [keys] collection.
 * The returned map preserves the entry iteration order of the original map.
 * Since Kotlin("1.1")
public operator fun <K, V> Map<out K, V>.minus(keys: Iterable<K>): Map<K, V> =
    this.toMutableMap().apply {
        minusAssign(keys)
    }.optimizeReadOnlyMap()
 * Returns a map containing all entries of the original map
except those entries
 * the keys of which are contained in the given [keys] array.
 * The returned map
preserves the entry iteration order of the original map.
 * Since Kotlin("1.1")
public operator fun <K, V>
Map<out K, V>.minus(keys:
    Array<out K>): Map<K, V> =
    this.toMutableMap().apply {
        minusAssign(keys)
    }.optimizeReadOnlyMap()
 * Returns a map containing all entries of the original map except those entries
 * the keys of which are contained in the given [keys] sequence.
 * The returned map preserves the entry
iteration order of the original map.
 * Since Kotlin("1.1")
public operator fun <K, V> Map<out K,
V>.minus(keys: Sequence<K>): Map<K, V> =
    this.toMutableMap().apply {
        minusAssign(keys)
    }.optimizeReadOnlyMap()
 * Removes the entry with the given [key] from this mutable map.
 * Since Kotlin("1.1")
@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<K,
V>.minusAssign(key: K) {
    remove(key)
}
 * Removes all entries the keys of which are contained in
the given [keys] collection from this mutable map.
 * Since Kotlin("1.1")
@kotlin.internal.InlineOnly
public inline operator fun <K, V> MutableMap<K,
V>.minusAssign(keys:
    Iterable<K>) {
    this.keys.removeAll(keys)
}
 * Removes all entries the keys of which are contained in
the given [keys] array from this mutable map.
 * Since Kotlin("1.1")
@kotlin.internal.InlineOnly
public
inline operator fun <K, V> MutableMap<K, V>.minusAssign(keys: Array<out K>) {
    this.keys.removeAll(keys)
}
 * Removes all entries from the keys of which are contained in the given
[keys] sequence from this mutable map.
 * Since Kotlin("1.1")
@kotlin.internal.InlineOnly
public inline
operator fun <K, V> MutableMap<K, V>.minusAssign(keys: Sequence<K>) {
    this.keys.removeAll(keys)
}
// do not expose for now
@PublishedApi
internal fun <K, V> Map<K,
V>.optimizeReadOnlyMap() = when (size) {
    0 -> emptyMap()
    1 -> toSingletonMapOrSelf()
    else ->
this
}
 * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of
this source code is governed by the Apache 2.0 license that can be found
in the license/LICENSE.txt file.
 *
 * @file:kotlin.jvm.JvmMultifileClass
 * @file:kotlin.jvm.JvmName("SetsKt")
 * @file:OptIn(kotlin.experimental
1.ExperimentalTypeInference::class)
 * package kotlin.collections
 * nimport kotlin.contracts
 * internal object
EmptySet : Set<Nothing>, Serializable {
    private const val serialVersionUID: Long =
3406603774387020532
    override fun equals(other: Any?): Boolean = other is Set<*> && other.isEmpty()
    override fun hashCode(): Int = 0
    override fun toString(): String = ""
    override val size: Int get() = 0
    override fun isEmpty(): Boolean = true
    override fun contains(element: Nothing): Boolean = false
    override
fun containsAll(elements: Collection<Nothing>): Boolean = elements.isEmpty()
    override fun iterator():
Iterator<Nothing> = EmptyIterator
    private fun readResolve(): Any = EmptySet
}
 * Returns an
empty read-only set. The returned set is serializable (JVM).
 * @sample
samples.collections.Collections.Sets.emptyReadOnlySet
 *
 * public fun <T> emptySet(): Set<T> = EmptySet
 * Returns a new read-only set with the given
elements.
 * Elements of the set are iterated in the order they were specified.
 * The returned set is serializable
(JVM).
 * @sample samples.collections.Collections.Sets.readOnlySet
 * public fun <T> setOf(vararg elements:
T): Set<T> = if (elements.size > 0) elements.toSet() else emptySet()
 * Returns an empty read-only set. The
returned set is serializable (JVM).
 * @sample samples.collections.Collections.Sets.emptyReadOnlySet
 *
 * @kotlin.internal.InlineOnly
public inline fun <T> setOf(): Set<T> = emptySet()
 * Returns an empty
new [MutableSet].
 * The returned set preserves the element iteration order.
 * @sample
samples.collections.Collections.Sets.emptyMutableSet
 *
 * @Since Kotlin("1.1")
@kotlin.internal.InlineOnly
public inline fun <T> mutableSetOf(): MutableSet<T> =

```

LinkedHashSet()\n\n/\*\*\n \*

Returns a new [MutableSet] with the given elements.\n \* Elements of the set are iterated in the order they were specified.\n \* @sample samples.collections.Collections.Sets.mutableSet\n \* ^\npublic fun <T> mutableSetOf(vararg elements: T): MutableSet<T> = elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/\*\* Returns an empty new [HashSet].\n \* ^\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T>

hashSetOf(): HashSet<T> = HashSet()\n\n/\*\* Returns a new [HashSet] with the given elements.\n \* ^\npublic fun <T> hashSetOf(vararg elements: T): HashSet<T> =

elements.toCollection(HashSet(mapCapacity(elements.size)))\n\n/\*\*\n \* Returns an empty new [LinkedHashSet].\n\n \* @sample samples.collections.Collections.Sets.emptyLinkedHashSet\n

\* ^\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> linkedSetOf(): LinkedHashSet<T> = LinkedHashSet()\n\n/\*\*\n \* Returns a new [LinkedHashSet] with the given elements.\n \* Elements of the set are iterated

in the order they were specified.\n \* @sample samples.collections.Collections.Sets.linkedHashSet\n \* ^\npublic fun <T> linkedSetOf(vararg elements: T): LinkedHashSet<T> =

elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/\*\*\n \* Returns a new read-only set either with single given element, if it is not null, or empty set if the element is null.\n \* The returned set is serializable (JVM).\n \* @sample samples.collections.Collections.Sets.setOfNotNull\n \* ^\n@SinceKotlin("1.4")\npublic fun <T

: Any> setOfNotNull(element: T?): Set<T> = if (element != null) setOf(element) else emptySet()\n\n/\*\*\n \* Returns a new read-only set only with those given elements, that are not null.\n \* Elements of the set are iterated in the order they were specified.\n \* The returned set is serializable (JVM).\n \* @sample

samples.collections.Collections.Sets.setOfNotNull\n \* ^\n@SinceKotlin("1.4")\npublic fun <T : Any> setOfNotNull(vararg elements: T?): Set<T> {\n return elements.filterNotNullTo(LinkedHashSet())\n}\n\n/\*\*\n \* Builds a new read-only [Set] by populating a [MutableSet] using the given [builderAction]\n \* and returning a read-only set with the same elements.\n \* ^\n \* The set passed as a receiver to the [builderAction] is valid only inside that function.\n \* Using it outside of the function produces an unspecified behavior.\n \* ^\n \* Elements of the set are iterated in the order they were added by the [builderAction].\n \* ^\n \* The returned set is serializable (JVM).\n \* ^\n \* @sample

samples.collections.Builders.Sets.buildSetSample\n \* ^\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\n@Suppress("DEPRECATION")\npublic inline fun <E> buildSet(@BuilderInference builderAction: MutableSet<E>().() -> Unit): Set<E> {\n contract { callsInPlace(builderAction, InvocationKind.EXACTLY\_ONCE) }\n return buildSetInternal(builderAction)\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal expect

inline fun <E> buildSetInternal(builderAction: MutableSet<E>().() -> Unit): Set<E>\n\n/\*\*\n \* Builds a new read-only [Set] by populating a [MutableSet] using the given [builderAction]\n \* and returning a read-only set with the same elements.\n \* ^\n \* The set passed as a receiver to the [builderAction] is valid only inside that function.\n \* Using it outside of the function produces an unspecified behavior.\n \* ^\n \* [capacity] is used to hint the expected number of elements added in the [builderAction].\n \* ^\n \* Elements of the set are iterated in the order they were added by the [builderAction].\n \* ^\n \* The returned set is serializable (JVM).\n \* ^\n \* @throws

IllegalArgumentOutOfRangeException if the given [capacity] is negative.\n \* ^\n \* @sample samples.collections.Builders.Sets.buildSetSample\n

\* ^\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\n@Suppress("DEPRECATION")\npublic inline fun <E> buildSet(capacity: Int, @BuilderInference builderAction: MutableSet<E>().() -> Unit): Set<E> {\n contract { callsInPlace(builderAction, InvocationKind.EXACTLY\_ONCE) }\n return buildSetInternal(capacity, builderAction)\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal expect inline fun <E> buildSetInternal(capacity: Int, builderAction: MutableSet<E>().() -> Unit): Set<E>\n\n/\*\*\n \* Returns this Set if it's not `null` and the empty set otherwise.\n \* ^\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>?.orEmpty(): Set<T> = this ?: emptySet()\n\ninternal fun <T> Set<T>.optimizeReadOnlySet() = when (size)

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IllegalArgumentOutOfRangeException if the given [capacity] is negative.\n \* ^\n \* @sample samples.collections.Builders.Sets.buildSetSample\n

```

{\n 0 -> emptySet()\n 1 -> setOf(iterator().next())\n else -> this}\n\n",/*\n * Copyright 2010-2023 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n *\n\n// Auto-generated file. DO NOT
EDIT!\n\npackage kotlin.ranges\n\n/**\n * A range of values of type `Char`.\n
*\n\n@OptIn(ExperimentalStdlibApi::class)\npublic class CharRange(start: Char, endInclusive: Char) :
CharProgression(start, endInclusive, 1), ClosedRange<Char>, OpenEndRange<Char> {\n override val start: Char
get() = first\n override val endInclusive: Char get() = last\n \n @Deprecated("Can throw an exception when
it's impossible to represent the value with Char type, for example, when the range includes MAX_VALUE. It's
recommended to use 'endInclusive' property that doesn't throw.")\n @SinceKotlin("1.7")\n
@ExperimentalStdlibApi\n override val endExclusive: Char get() {\n if (last == Char.MAX_VALUE)
error("Cannot return the exclusive upper bound of a range that includes MAX_VALUE.")\n return last + 1\n
}\n\n override fun contains(value: Char): Boolean = first <= value && value <= last\n\n /**\n * Checks
whether the range is empty.\n *\n * The range is empty if its start value is greater than the end value.\n
*\n\n override
fun isEmpty(): Boolean = first > last\n\n override fun equals(other: Any?): Boolean =\n other is CharRange
&& (isEmpty() && other.isEmpty()) ||\n first == other.first && last == other.last)\n\n override fun hashCode():
Int =\n if (isEmpty()) -1 else (31 * first.code + last.code)\n\n override fun toString(): String =
"$first..$last"\n\n companion object {\n /** An empty range of values of type Char. *\n public val
EMPTY: CharRange = CharRange(1.toChar(), 0.toChar())\n }\n}\n\n/**\n * A range of values of type `Int`.\n
*\n\n@OptIn(ExperimentalStdlibApi::class)\npublic class IntRange(start: Int, endInclusive: Int) :
IntProgression(start, endInclusive, 1), ClosedRange<Int>, OpenEndRange<Int> {\n override val start: Int get() =
first\n override val endInclusive: Int get() = last\n \n @Deprecated("Can throw an exception when it's
impossible to represent the value with Int type, for example, when the range includes MAX_VALUE.
It's recommended to use 'endInclusive' property that doesn't throw.")\n @SinceKotlin("1.7")\n
@ExperimentalStdlibApi\n override val endExclusive: Int get() {\n if (last == Int.MAX_VALUE)
error("Cannot return the exclusive upper bound of a range that includes MAX_VALUE.")\n return last + 1\n
}\n\n override fun contains(value: Int): Boolean = first <= value && value <= last\n\n /**\n * Checks
whether the range is empty.\n *\n * The range is empty if its start value is greater than the end value.\n
*\n\n override fun isEmpty(): Boolean = first > last\n\n override fun equals(other: Any?): Boolean =\n other is
IntRange && (isEmpty() && other.isEmpty()) ||\n first == other.first && last == other.last)\n\n override fun
hashCode(): Int =\n if (isEmpty()) -1 else (31 * first + last)\n\n override fun toString(): String =
"$first..$last"\n\n companion object {\n /** An empty range of values of type
Int. *\n public val EMPTY: IntRange = IntRange(1, 0)\n }\n}\n\n/**\n * A range of values of type `Long`.\n
*\n\n@OptIn(ExperimentalStdlibApi::class)\npublic class LongRange(start: Long, endInclusive: Long) :
LongProgression(start, endInclusive, 1), ClosedRange<Long>, OpenEndRange<Long> {\n override val start:
Long get() = first\n override val endInclusive: Long get() = last\n \n @Deprecated("Can throw an exception
when it's impossible to represent the value with Long type, for example, when the range includes MAX_VALUE.
It's recommended to use 'endInclusive' property that doesn't throw.")\n @SinceKotlin("1.7")\n
@ExperimentalStdlibApi\n override val endExclusive: Long get() {\n if (last == Long.MAX_VALUE)
error("Cannot return the exclusive upper bound of a range that includes MAX_VALUE.")\n return last + 1\n
}\n\n override fun contains(value: Long): Boolean = first <= value && value <= last\n\n /**\n * Checks
whether the
range is empty.\n *\n * The range is empty if its start value is greater than the end value.\n
*\n\n override
fun isEmpty(): Boolean = first > last\n\n override fun equals(other: Any?): Boolean =\n other is LongRange
&& (isEmpty() && other.isEmpty()) ||\n first == other.first && last == other.last)\n\n override fun hashCode():
Int =\n if (isEmpty()) -1 else (31 * (first xor (first ushr 32)) + (last xor (last ushr 32))).toInt()\n\n override fun
toString(): String = "$first..$last"\n\n companion object {\n /** An empty range of values of type Long. *\n
public val EMPTY: LongRange = LongRange(1, 0)\n }\n}\n\n",/*\n * Copyright 2010-2018 JetBrains s.r.o.

```

and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n

```

*\n\n@file:kotlin.jvm.JvmMultifileClass\n\n@file:kotlin.jvm.JvmName("\\StringsKt")\n\n@file:Suppress("\\PLATFORM_CLASS_MAPPED_TO_KOTLIN")\n\n\npackage
kotlin.text\n\n/**\n * Parses the string as a signed [Byte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n\n@SinceKotlin("1.1")\n\npublic fun String.toByteOrNull(): Byte? =
toByteOrNull(radix = 10)\n\n/**\n * Parses the string as a signed [Byte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n@SinceKotlin("1.1")\n\npublic fun
String.toByteOrNull(radix: Int): Byte? {\n    val int = this.toIntOrNull(radix) ?: return null\n    if (int <
Byte.MIN_VALUE || int > Byte.MAX_VALUE) return null\n    return int.toByte()\n}\n\n/**\n * Parses the string as
a [Short] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n\n@SinceKotlin("1.1")\n\npublic fun String.toShortOrNull(): Short? = toShortOrNull(radix
= 10)\n\n/**\n * Parses the string as a [Short] number and returns the result\n * or `null` if the string is not a valid
representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string
to number conversion.\n */\n\n@SinceKotlin("1.1")\n\npublic fun String.toShortOrNull(radix: Int): Short? {\n    val int
= this.toIntOrNull(radix) ?: return null\n    if (int < Short.MIN_VALUE || int > Short.MAX_VALUE) return null\n
return int.toShort()\n}\n\n/**\n * Parses the string as an [Int] number and returns the result\n * or `null` if the string
is not a valid representation of a number.\n */\n\n@SinceKotlin("1.1")\n\npublic fun String.toIntOrNull(): Int? =
toIntOrNull(radix = 10)\n\n/**\n * Parses the string as an [Int] number and returns the result\n * or `null` if the
string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a
valid radix for string to number conversion.\n */\n\n@SinceKotlin("1.1")\n\npublic
fun String.toIntOrNull(radix: Int): Int? {\n    checkRadix(radix)\n\n    val length = this.length\n    if (length == 0)
return null\n\n    val start: Int\n    val isNegative: Boolean\n    val limit: Int\n\n    val firstChar = this[0]\n    if
(firstChar < '0') { // Possible leading sign\n        if (length == 1) return null // non-digit (possible sign) only, no
digits after\n\n        start = 1\n\n        if (firstChar == '-') {\n            isNegative = true\n            limit =
Int.MIN_VALUE\n        } else if (firstChar == '+') {\n            isNegative = false\n            limit = -
Int.MAX_VALUE\n        } else\n            return null\n    } else {\n        start = 0\n        isNegative = false\n        limit
= -Int.MAX_VALUE\n    }\n\n    val limitForMaxRadix = (-Int.MAX_VALUE) / 36\n    var limitBeforeMul =
limitForMaxRadix\n    var result = 0\n    for (i in start until length) {\n        val digit = digitOf(this[i], radix)\n\n        if (digit
< 0) return null\n        if (result < limitBeforeMul) {\n            if (limitBeforeMul == limitForMaxRadix) {\n
limitBeforeMul = limit / radix\n\n                if (result < limitBeforeMul) {\n                    return null\n                }\n
            } else {\n                return null\n            }\n        }\n        result *= radix\n\n        if (result < limit + digit) return
null\n\n        result -= digit\n    }\n\n    return if (isNegative) result else -result\n}\n\n/**\n * Parses the string as
a [Long] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n\n@SinceKotlin("1.1")\n\npublic fun String.toLongOrNull(): Long? = toLongOrNull(radix = 10)\n\n/**\n * Parses
the string as a [Long] number and returns the result\n * or `null` if the string is not a valid representation of a
number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number
conversion.\n */\n\n@SinceKotlin("1.1")\n\npublic
fun String.toLongOrNull(radix: Int): Long? {\n    checkRadix(radix)\n\n    val length = this.length\n    if (length ==
0) return null\n\n    val start: Int\n    val isNegative: Boolean\n    val limit: Long\n\n    val firstChar = this[0]\n    if
(firstChar < '0') { // Possible leading sign\n        if (length == 1) return null // non-digit (possible sign) only, no
digits after\n\n        start = 1\n\n        if (firstChar == '-') {\n            isNegative = true\n            limit =
Long.MIN_VALUE\n        } else if (firstChar == '+') {\n            isNegative = false\n            limit = -
Long.MAX_VALUE\n        } else\n            return null\n    } else {\n        start = 0\n        isNegative = false\n        limit
= -Long.MAX_VALUE\n    }\n\n    val limitForMaxRadix = (-Long.MAX_VALUE) / 36\n    var limitBeforeMul =
limitForMaxRadix\n    var result = 0L\n    for (i in start until length) {\n        val digit =

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digitOf(this[i], radix)\n\n    if
    (digit < 0) return null\n\n    if (result < limitBeforeMul) {\n\n        if (limitBeforeMul == limitForMaxRadix) {\n\n            limitBeforeMul = limit / radix\n\n            if (result < limitBeforeMul) {\n\n                return null\n\n            }\n\n        } else {\n\n            return null\n\n        }\n\n    }\n\n    result *= radix\n\n    if (result < limit + digit)
return null\n\n    result -= digit\n\n    }\n\n    return if (isNegative) result else -result\n\n}\n\n\ninternal fun
numberFormatError(input: String): Nothing = throw NumberFormatException("Invalid number format:
'$input')\n\n"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.time\n\nimport kotlin.contracts.*\nimport kotlin.jvm.JvmInline\nimport kotlin.math.*\n\n/**\n * Represents the amount of time
one instant of time is away from another instant.\n * A negative duration is possible in a situation when the
second instant is earlier than the first one.\n * The type can store duration values up to 1146 years with
nanosecond precision,\n * and up to 1146 million years with millisecond precision.\n * If a duration-returning
operation provided in `kotlin.time` produces a duration value that doesn't fit into the above range,\n * the returned
`Duration` is infinite.\n * An infinite duration value [Duration.INFINITE] can be used to represent infinite
timeouts.\n * To construct a duration use either the extension function [toDuration],\n * or the extension
properties [hours], [minutes], [seconds], and so on,\n * available on [Int], [Long], and [Double] numeric types.\n
*\n * To get the value of this duration expressed in a particular [duration units][DurationUnit]\n * use the functions
[toInt], [toLong], and [toDouble]\n * or the properties [inWholeHours], [inWholeMinutes],
[inWholeSeconds], [inWholeNanoseconds], and so on.\n
*/\n\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\n@JvmInline\npublic value class
Duration internal constructor(private val rawValue: Long) : Comparable<Duration> {\n\n    private val value: Long
get() = rawValue shr 1\n\n    private inline val unitDiscriminator: Int get() = rawValue.toInt() and 1\n\n    private fun
isInNanos() = unitDiscriminator == 0\n\n    private fun isInMillis() = unitDiscriminator == 1\n\n    private val
storageUnit get() = if (isInNanos()) DurationUnit.NANOSECONDS else DurationUnit.MILLISECONDS\n\n    init
{\n\n        if (durationAssertionsEnabled) {\n\n            if (isInNanos()) {\n\n                if (value !in -
MAX_NANOS..MAX_NANOS) throw AssertionError("$value ns is out of nanoseconds range")\n\n            } else
{\n\n                if (value !in -MAX_MILLIS..MAX_MILLIS) throw AssertionError("$value ms is out of milliseconds
range")\n\n                if (value in -MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS)\n\n                    throw
AssertionError("$value ms is denormalized")\n\n            }\n\n        }\n\n    }\n\n    companion object {\n\n        /**
The duration equal to exactly 0 seconds. */\n\n        public val ZERO: Duration = Duration(0L)\n\n        /** The
duration whose value is positive infinity. It is useful for representing timeouts that should never expire. */\n\n
public val INFINITE: Duration = durationOfMillis(MAX_MILLIS)\n\n        internal val NEG_INFINITE: Duration =
durationOfMillis(-MAX_MILLIS)\n\n        /** Converts the given time duration [value] expressed in the specified
[sourceUnit] into the specified [targetUnit]. */\n\n        @ExperimentalTime\n\n        public fun convert(value: Double,
sourceUnit: DurationUnit, targetUnit: DurationUnit): Double =\n\n            convertDurationUnit(value, sourceUnit,
targetUnit)\n\n        // Duration construction extension properties in Duration companion scope\n\n        /** Returns a
[Duration] equal to this [Int] number of nanoseconds. */\n\n        @kotlin.internal.InlineOnly\n\n        public inline val Int.nanoseconds get() =
toDuration(DurationUnit.NANOSECONDS)\n\n        /** Returns a [Duration] equal to this [Long] number of
nanoseconds. */\n\n        @kotlin.internal.InlineOnly\n\n        public inline val Long.nanoseconds get() =
toDuration(DurationUnit.NANOSECONDS)\n\n        /**\n\n         * Returns a [Duration] equal to this [Double]
number of nanoseconds.\n\n         * Depending on its magnitude, the value is rounded to an integer number of
nanoseconds or milliseconds.\n\n         * @throws IllegalArgumentException if this [Double] value is
`NaN`.\n\n         */\n\n        @kotlin.internal.InlineOnly\n\n        public inline val Double.nanoseconds get() =
toDuration(DurationUnit.NANOSECONDS)\n\n        /** Returns a [Duration] equal to this [Int] number of
microseconds. */\n\n        @kotlin.internal.InlineOnly\n\n        public inline val Int.microseconds get() =
toDuration(DurationUnit.MICROSECONDS)\n\n

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    /** Returns a [Duration] equal to this [Long] number of microseconds. */
    @kotlin.internal.InlineOnly
    public inline val Long.microseconds get() = toDuration(DurationUnit.MICROSECONDS)

    /** Returns a [Duration] equal to this [Double] number of microseconds. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.microseconds get() = toDuration(DurationUnit.MICROSECONDS)

    /** Returns a [Duration] equal to this [Int] number of milliseconds. */
    @kotlin.internal.InlineOnly
    public inline val Int.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)

    /** Returns a [Duration] equal to this [Long] number of milliseconds. */
    @kotlin.internal.InlineOnly
    public inline val Long.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)

    /** Returns a [Duration] equal to this [Double] number of milliseconds. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)

    /** Returns a [Duration] equal to this [Int] number of seconds. */
    @kotlin.internal.InlineOnly
    public inline val Int.seconds get() = toDuration(DurationUnit.SECONDS)

    /** Returns a [Duration] equal to this [Long] number of seconds. */
    @kotlin.internal.InlineOnly
    public inline val Long.seconds get() = toDuration(DurationUnit.SECONDS)

    /** Returns a [Duration] equal to this [Double] number of seconds. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.seconds get() = toDuration(DurationUnit.SECONDS)

    /** Returns a [Duration] equal to this [Int] number of minutes. */
    @kotlin.internal.InlineOnly
    public inline val Int.minutes get() = toDuration(DurationUnit.MINUTES)

    /** Returns a [Duration] equal to this [Long] number of minutes. */
    @kotlin.internal.InlineOnly
    public inline val Long.minutes get() = toDuration(DurationUnit.MINUTES)

    /** Returns a [Duration] equal to this [Double] number of minutes. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.minutes get() = toDuration(DurationUnit.MINUTES)

    /** Returns a [Duration] equal to this [Int] number of hours. */
    @kotlin.internal.InlineOnly
    public inline val Int.hours get() = toDuration(DurationUnit.HOURS)

    /** Returns a [Duration] equal to this [Long] number of hours. */
    @kotlin.internal.InlineOnly
    public inline val Long.hours get() = toDuration(DurationUnit.HOURS)

    /** Returns a [Duration] equal to this [Double] number of hours. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.hours get() = toDuration(DurationUnit.HOURS)

    /** Returns a [Duration] equal to this [Int] number of days. */
    @kotlin.internal.InlineOnly
    public inline val Int.days get() = toDuration(DurationUnit.DAYS)

    /** Returns a [Duration] equal to this [Long] number of days. */
    @kotlin.internal.InlineOnly
    public inline val Long.days get() = toDuration(DurationUnit.DAYS)

    /** Returns a [Duration] equal to this [Double] number of days. Depending on its magnitude, the value is rounded to an integer number of nanoseconds or milliseconds. @throws
    IllegalArgumentException if this [Double] value is NaN. */
    @kotlin.internal.InlineOnly
    public inline val Double.days get() = toDuration(DurationUnit.DAYS)

    // deprecated static factory functions
    /** Returns a [Duration] representing the specified [value] number of nanoseconds. @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Int.nanoseconds' extension property from Duration.Companion instead.", ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))
    @DeprecatedSinceKotlin(warningSince = "1.6",

```



```

errorSince = `1.8`)
    public fun nanoseconds(value: Int): Duration =
value.toDuration(DurationUnit.NANOSECONDS)
    /** Returns a [Duration] representing the specified
[value] number of nanoseconds. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Long.nanoseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`, errorSince = `1.8`)
    public fun nanoseconds(value: Long):
Duration = value.toDuration(DurationUnit.NANOSECONDS)
    /** Returns a [Duration]
representing the specified
[value] number of nanoseconds.
    * @throws IllegalArgumentException if the provided `Double`
[value] is `NaN`. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Double.nanoseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`,
errorSince = `1.8`)
    public fun nanoseconds(value: Double): Duration =
value.toDuration(DurationUnit.NANOSECONDS)
    /** Returns a [Duration] representing the specified
[value] number of microseconds. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Int.microseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.microseconds", "kotlin.time.Duration.Companion.microseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`, errorSince = `1.8`)
    public fun microseconds(value: Int): Duration = value.toDuration(DurationUnit.MICROSECONDS)
    /**
Returns a [Duration] representing the specified [value] number of microseconds. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Long.microseconds' extension property from
Duration.Companion instead.",
ReplaceWith("value.microseconds",
"kotlin.time.Duration.Companion.microseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`,
errorSince = `1.8`)
    public fun microseconds(value: Long): Duration =
value.toDuration(DurationUnit.MICROSECONDS)
    /** Returns a [Duration] representing the
specified [value] number of microseconds.
    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Double.microseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.microseconds", "kotlin.time.Duration.Companion.microseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`, errorSince = `1.8`)
    public fun microseconds(value:
Double): Duration = value.toDuration(DurationUnit.MICROSECONDS)
    /** Returns a [Duration]
representing the specified [value] number of milliseconds. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Int.milliseconds' extension property from Duration.Companion
instead.",
ReplaceWith("value.milliseconds", "kotlin.time.Duration.Companion.milliseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`, errorSince = `1.8`)
    public fun milliseconds(value: Int):
Duration = value.toDuration(DurationUnit.MILLISECONDS)
    /** Returns a [Duration] representing the
specified [value] number of milliseconds.
    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Long.milliseconds' extension
property from Duration.Companion instead.",
ReplaceWith("value.milliseconds",
"kotlin.time.Duration.Companion.milliseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`,
errorSince = `1.8`)
    public fun milliseconds(value: Long): Duration =
value.toDuration(DurationUnit.MILLISECONDS)
    /** Returns a [Duration] representing the
specified [value] number of milliseconds.
    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`. */
    @SinceKotlin("1.5")
    @ExperimentalTime
    @Deprecated("Use 'Double.milliseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.milliseconds", "kotlin.time.Duration.Companion.milliseconds"))
    @DeprecatedSinceKotlin(warningSince = `1.6`, errorSince = `1.8`)
    public fun milliseconds(value:
Double): Duration = value.toDuration(DurationUnit.MILLISECONDS)
    /** Returns a [Duration]

```

```

representing the specified [value] number of seconds. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Int.seconds' extension property from Duration.Companion instead.",  

ReplaceWith("value.seconds", "kotlin.time.Duration.Companion.seconds"))  

@DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun seconds(value: Int):  

Duration = value.toDuration(DurationUnit.SECONDS)  

    /** Returns a [Duration] representing the specified  

[value] number of seconds. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use  

'Long.seconds' extension property from Duration.Companion instead.", ReplaceWith("value.seconds",  

"kotlin.time.Duration.Companion.seconds"))  

    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince =  

"1.8")  

    public fun seconds(value: Long): Duration = value.toDuration(DurationUnit.SECONDS)  

    /**  

* Returns a [Duration]  

representing the specified [value] number of seconds.  

    *  

    * @throws IllegalArgumentException if the  

provided `Double` [value] is `NaN`.  

    *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Double.seconds' extension property from Duration.Companion instead.",  

ReplaceWith("value.seconds", "kotlin.time.Duration.Companion.seconds"))  

@DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun seconds(value: Double):  

Duration = value.toDuration(DurationUnit.SECONDS)  

    /** Returns a [Duration] representing the  

specified [value] number of minutes. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Int.minutes' extension property from Duration.Companion instead.",  

ReplaceWith("value.minutes", "kotlin.time.Duration.Companion.minutes"))  

@DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun minutes(value:  

Int): Duration = value.toDuration(DurationUnit.MINUTES)  

    /** Returns a [Duration] representing the  

specified [value] number of minutes. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Long.minutes' extension property from Duration.Companion instead.",  

ReplaceWith("value.minutes", "kotlin.time.Duration.Companion.minutes"))  

@DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun minutes(value: Long):  

Duration = value.toDuration(DurationUnit.MINUTES)  

    /**  

* Returns a [Duration] representing the  

specified [value] number of minutes.  

    *  

    * @throws IllegalArgumentException if the provided `Double`  

[value] is `NaN`.  

    *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use  

'Double.minutes' extension property from Duration.Companion instead.", ReplaceWith("value.minutes",  

"kotlin.time.Duration.Companion.minutes"))  

    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun minutes(value:  

Double): Duration = value.toDuration(DurationUnit.MINUTES)  

    /** Returns a [Duration] representing the  

specified [value] number of hours. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Int.hours' extension property from Duration.Companion instead.",  

ReplaceWith("value.hours", "kotlin.time.Duration.Companion.hours"))  

@DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")  

    public fun hours(value: Int): Duration  

= value.toDuration(DurationUnit.HOURS)  

    /** Returns a [Duration] representing the specified [value]  

number of hours. *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use  

'Long.hours' extension property from Duration.Companion instead.", ReplaceWith("value.hours",  

"kotlin.time.Duration.Companion.hours"))  

    @DeprecatedSinceKotlin(warningSince  

= "1.6", errorSince = "1.8")  

    public fun hours(value: Long): Duration =  

value.toDuration(DurationUnit.HOURS)  

    /**  

* Returns a [Duration] representing the specified  

[value] number of hours.  

    *  

    * @throws IllegalArgumentException if the provided `Double` [value] is  

`NaN`.  

    *  

    @SinceKotlin("1.5")  

    @ExperimentalTime  

    @Deprecated("Use 'Double.hours'  

extension property from Duration.Companion instead.", ReplaceWith("value.hours",  

"kotlin.time.Duration.Companion.hours"))  

    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince =  

"1.8")  

    public fun hours(value: Double): Duration = value.toDuration(DurationUnit.HOURS)  

    /**  

Returns a [Duration] representing the specified [value] number of days. *  

    @SinceKotlin("1.5")

```

```

@ExperimentalTime\n    @Deprecated("Use 'Int.days' extension property from Duration.Companion instead.",
ReplaceWith("value.days"),
    "kotlin.time.Duration.Companion.days"))\n    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince =
"1.8")\n    public fun days(value: Int): Duration = value.toDuration(DurationUnit.DAYS)\n\n    /** Returns a
[Duration] representing the specified [value] number of days. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Long.days' extension property from Duration.Companion
instead.", ReplaceWith("value.days", "kotlin.time.Duration.Companion.days"))\n    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince = "1.8")\n    public fun days(value: Long):
Duration = value.toDuration(DurationUnit.DAYS)\n\n    /**\n    * Returns a [Duration] representing the
specified [value] number of days.\n    *\n    * @throws IllegalArgumentException if the provided `Double`
[value] is `NaN`.\n    */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use
'Double.days' extension property from Duration.Companion instead.", ReplaceWith("value.days",
"kotlin.time.Duration.Companion.days"))\n    @DeprecatedSinceKotlin(warningSince = "1.6", errorSince =
"1.8")\n    public fun days(value: Double): Duration = value.toDuration(DurationUnit.DAYS)\n\n    /**\n    * Parses a string that represents a duration and returns the parsed [Duration] value.\n    *\n    * The following
formats are accepted:\n    *\n    * - ISO-8601 Duration format, e.g. `P1DT2H3M4.058S`, see [toIsoString] and
[parseIsoString].\n    * - The format of string returned by the default [Duration.toString] and `toString` in a
specific unit,\n    * e.g. `10s`, `1h 30m` or `-(1h 30m)`.\n    *\n    * @throws IllegalArgumentException if
the string doesn't represent a duration in any of the supported formats.\n    * @sample
samples.time.Durations.parse\n    */\n    public fun parse(value: String): Duration
= try {\n        parseDuration(value, strictIso = false)\n    } catch (e: IllegalArgumentException) {\n
throw IllegalArgumentException("Invalid duration string format: '$value'.", e)\n    }\n\n    /**\n    * Parses
a string that represents a duration in a restricted ISO-8601 composite representation\n    * and returns the parsed
[Duration] value.\n    * Composite representation is a relaxed version of ISO-8601 duration format that
supports\n    * negative durations and negative values of individual components.\n    *\n    * The following
restrictions are imposed:\n    *\n    * - The only allowed non-time designator is days (`D`). `Y` (years), `W`
(weeks), and `M` (months) are not supported.\n    * - Day is considered to be exactly 24 hours (24-hour clock
time scale).\n    * - Alternative week-based representation `[P][number][W]` is not supported.\n    *\n    * @throws IllegalArgumentException
if the string doesn't represent a duration in ISO-8601 format.\n    * @sample
samples.time.Durations.parseIsoString\n    */\n    public fun parseIsoString(value: String): Duration = try {\n
        parseDuration(value, strictIso = true)\n    } catch (e: IllegalArgumentException) {\n        throw
IllegalArgumentException("Invalid ISO duration string format: '$value'.", e)\n    }\n\n    /**\n    * Parses a
string that represents a duration and returns the parsed [Duration] value,\n    * or `null` if the string doesn't
represent a duration in any of the supported formats.\n    *\n    * The following formats are accepted:\n    *\n    * - Restricted ISO-8601 duration composite representation, e.g. `P1DT2H3M4.058S`, see [toIsoString] and
[parseIsoString].\n    * - The format of string returned by the default [Duration.toString] and `toString` in a
specific unit,\n    * e.g. `10s`, `1h 30m` or `-(1h 30m)`.\n    *\n    * @sample samples.time.Durations.parse\n    */\n    public fun parseOrNull(value: String): Duration? =
try {\n        parseDuration(value, strictIso = false)\n    } catch (e: IllegalArgumentException) {\n        null\n
    }\n\n    /**\n    * Parses a string that represents a duration in restricted ISO-8601 composite representation\n    * and returns the parsed [Duration] value or `null` if the string doesn't represent a duration in the format\n    * acceptable by [parseIsoString].\n    *\n    * @sample samples.time.Durations.parseIsoString\n    */\n    public fun parseIsoStringOrNull(value: String): Duration? = try {\n
        parseDuration(value, strictIso = true)\n    } catch (e: IllegalArgumentException) {\n        null\n    }\n\n    // arithmetic operators\n\n    /** Returns
the negative of this value. */\n    public operator fun unaryMinus(): Duration = durationOf(-value,
unitDiscriminator)\n\n

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/**\n * Returns a duration whose value is the sum of this and [other] duration values.\n * \n * @throws
IllegalArgumentException if the operation results in an undefined value for the given arguments,\n * e.g. when
adding infinite durations of different sign.\n */\n public operator fun plus(other: Duration): Duration {\n
when {\n this.isInfinite() -> {\n if (other.isFinite() || (this.rawValue xor other.rawValue >= 0))\n
return this\n else\n throw IllegalArgumentException("Summing infinite durations of
different signs yields an undefined result.")\n }\n other.isInfinite() -> return other\n }\n\n
return when {\n this.unitDiscriminator == other.unitDiscriminator -> {\n val result = this.value +
other.value // never overflows long, but can overflow long63\n when {\n isInNanos()
->\n durationOfNanosNormalized(result)\n else ->\n
durationOfMillisNormalized(result)\n }\n }\n this.isInMillis() ->\n
addValuesMixedRanges(this.value, other.value)\n else ->\n addValuesMixedRanges(other.value,
this.value)\n }\n }\n\n private fun addValuesMixedRanges(thisMillis: Long, otherNanos: Long): Duration
{\n val otherMillis = nanosToMillis(otherNanos)\n val resultMillis = thisMillis + otherMillis\n return if
(resultMillis in -MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n val otherNanoRemainder =
otherNanos - millisToNanos(otherMillis)\n durationOfNanos(millisToNanos(resultMillis) +
otherNanoRemainder)\n } else {\n durationOfMillis(resultMillis.coerceIn(-MAX_MILLIS,
MAX_MILLIS))\n }\n }\n\n /**\n * Returns a duration whose value is the difference
between this and [other] duration values.\n * \n * @throws IllegalArgumentException if the operation results in
an undefined value for the given arguments,\n * e.g. when subtracting infinite durations of the same sign.\n */\n
public operator fun minus(other: Duration): Duration = this + (-other)\n\n /**\n * Returns a duration whose
value is this duration value multiplied by the given [scale] number.\n * \n * @throws IllegalArgumentException
if the operation results in an undefined value for the given arguments,\n * e.g. when multiplying an infinite
duration by zero.\n */\n public operator fun times(scale: Int): Duration {\n if (isInfinite()) {\n return
when {\n scale == 0 -> throw IllegalArgumentException("Multiplying infinite duration by zero yields an
undefined result.")\n scale > 0 -> this\n else -> -this\n }\n }\n if (scale == 0)
return ZERO\n\n val value = value\n val result = value * scale\n return if (isInNanos()) {\n if (value in
(MAX_NANOS / Int.MIN_VALUE)..(-MAX_NANOS / Int.MIN_VALUE)) {\n // can't overflow nanos
range for any scale\n durationOfNanos(result)\n } else {\n if (result / scale == value) {\n
durationOfNanosNormalized(result)\n } else {\n val millis = nanosToMillis(value)\n
val remNanos = value - millisToNanos(millis)\n val resultMillis = millis * scale\n
val totalMillis = resultMillis + nanosToMillis(remNanos * scale)\n if (resultMillis / scale == millis &&
totalMillis xor resultMillis >= 0) {\n durationOfMillis(totalMillis.coerceIn(-
MAX_MILLIS..MAX_MILLIS))\n } else {\n if (value.sign * scale.sign > 0) INFINITE
else NEG_INFINITE\n }\n }\n }\n }\n } else {\n if (result / scale == value) {\n
durationOfMillis(result.coerceIn(-MAX_MILLIS..MAX_MILLIS))\n } else {\n if (value.sign *
scale.sign > 0) INFINITE else NEG_INFINITE\n }\n }\n }\n\n /**\n * Returns a duration whose
value is this duration value multiplied by the given [scale] number.\n * \n * The operation may involve rounding
when the result cannot be represented exactly with a [Double] number.\n * \n * @throws
IllegalArgumentException if the operation results in an undefined value for the given arguments,\n * e.g. when
multiplying an infinite duration by zero.\n */\n public operator fun times(scale: Double): Duration {\n val
intScale = scale.roundToInt()\n if (intScale.toDouble() == scale) {\n return times(intScale)\n }\n\n
val unit = storageUnit\n val result = toDouble(unit)
* scale\n return result.toDuration(unit)\n }\n\n /**\n * Returns a duration whose value is this duration
value divided by the given [scale] number.\n * \n * @throws IllegalArgumentException if the operation results
in an undefined value for the given arguments,\n * e.g. when dividing zero duration by zero.\n */\n
public operator fun div(scale: Int): Duration {\n if (scale == 0) {\n return when {\n isPositive() ->

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INFINITE\n          isNegative() -> NEG_INFINITE\n          else -> throw
IllegalArgumentException("Dividing zero duration by zero yields an undefined result.")\n          }\n          }\n          if
(isInNanos()) {\n          return durationOfNanos(value / scale)\n          } else {\n          if (isInfinite())\n          return this * scale.sign\n          val result = value / scale\n          if (result in -
MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n          val
rem = millisToNanos(value - (result * scale)) / scale\n          return durationOfNanos(millisToNanos(result) +
rem)\n          }\n          return durationOfMillis(result)\n          }\n          }\n          /**\n          * Returns a duration whose
value is this duration value divided by the given [scale] number.\n          *\n          * @throws IllegalArgumentException if
the operation results in an undefined value for the given arguments,\n          * e.g. when dividing an infinite duration by
infinity or zero duration by zero.\n          */\n          public operator fun div(scale: Double): Duration {\n          val intScale =
scale.roundToInt()\n          if (intScale.toDouble() == scale && intScale != 0) {\n          return div(intScale)\n          }\n          val unit = storageUnit\n          val result = toDouble(unit) / scale\n          return result.toDuration(unit)\n          }\n          /** Returns a number that is the ratio of this and [other] duration values. *\n          public operator fun div(other:
Duration): Double
{\n          val coarserUnit = maxOf(this.storageUnit, other.storageUnit)\n          return this.toDouble(coarserUnit) /
other.toDouble(coarserUnit)\n          }\n          /** Returns true, if the duration value is less than zero. *\n          public fun
isNegative(): Boolean = rawValue < 0\n          /** Returns true, if the duration value is greater than zero. *\n          public fun
isPositive(): Boolean = rawValue > 0\n          /** Returns true, if the duration value is infinite. *\n          public fun
isInfinite(): Boolean = rawValue == INFINITE.rawValue || rawValue == NEG_INFINITE.rawValue\n          /**
Returns true, if the duration value is finite. *\n          public fun isFinite(): Boolean = !isInfinite()\n          /** Returns the
absolute value of this value. The returned value is always non-negative. *\n          public val absoluteValue: Duration
get() = if (isNegative()) -this else this\n          override fun compareTo(other: Duration): Int {\n          val compareBits =
this.rawValue xor other.rawValue\n          if (compareBits
< 0 || compareBits.toInt() and 1 == 0) // different signs or same sign/same range\n          return
this.rawValue.compareTo(other.rawValue)\n          // same sign/different ranges\n          val r = this.unitDiscriminator -
other.unitDiscriminator // compare ranges\n          return if (isNegative()) -r else r\n          }\n          /**\n          * Splits this duration into days, hours, minutes, seconds, and nanoseconds and executes
the given [action] with these components.\n          * The result of [action] is returned as the result of this function.\n          *\n          * - `nanoseconds` represents the whole number of nanoseconds in this duration, and its absolute value is less
than 1_000_000_000;\n          * - `seconds` represents the whole number of seconds in this duration, and its absolute
value is less than 60;\n          * - `minutes` represents the whole number of minutes in this duration, and its absolute
value is less than 60;\n          * - `hours` represents the whole number
of hours in this duration, and its absolute value is less than 24;\n          * - `days` represents the whole number of days
in this duration.\n          *\n          * Infinite durations are represented as either [Long.MAX_VALUE] days, or
[Long.MIN_VALUE] days (depending on the sign of infinity),\n          * and zeroes in the lower components.\n          *\n          public inline fun <T> toComponents(action: (days: Long, hours: Int, minutes: Int, seconds: Int, nanoseconds: Int) -
> T): T {\n          contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE) }\n          return
action(inWholeDays, hoursComponent, minutesComponent, secondsComponent, nanosecondsComponent)\n          }\n          /**\n          * Splits this duration into hours, minutes, seconds, and nanoseconds and executes the given [action] with
these components.\n          * The result of [action] is returned as the result of this function.\n          *\n          * - `nanoseconds`
represents the whole number of nanoseconds in this duration, and its absolute value is less
than 1_000_000_000;\n          * - `seconds` represents the whole number of seconds in this duration, and its absolute
value is less than 60;\n          * - `minutes` represents the whole number of minutes in this duration, and its absolute
value is less than 60;\n          * - `hours` represents the whole number of hours in this duration.\n          *\n          * Infinite
durations are represented as either [Long.MAX_VALUE] hours, or [Long.MIN_VALUE] hours (depending on the
sign of infinity),\n          * and zeroes in the lower components.\n          *\n          public inline fun <T> toComponents(action:
(hours: Long, minutes: Int, seconds: Int, nanoseconds: Int) -> T): T {\n          contract { callsInPlace(action,
InvocationKind.EXACTLY_ONCE) }\n          return action(inWholeHours, minutesComponent, secondsComponent,

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nanosecondsComponent)\n } \n\n /**\n * Splits this duration into minutes, seconds, and nanoseconds and
executes the given [action] with these components.\n * The result of [action] is returned
as the result of this function.\n *\n * - `nanoseconds` represents the whole number of nanoseconds in this
duration, and its absolute value is less than 1_000_000_000;\n * - `seconds` represents the whole number of
seconds in this duration, and its absolute value is less than 60;\n * - `minutes` represents the whole number of
minutes in this duration.\n *\n * Infinite durations are represented as either [Long.MAX_VALUE] minutes, or
[Long.MIN_VALUE] minutes (depending on the sign of infinity),\n * and zeroes in the lower components.\n
*\n public inline fun <T> toComponents(action: (minutes: Long, seconds: Int, nanoseconds: Int) -> T): T {\n
contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE) }\n return action(inWholeMinutes,
secondsComponent, nanosecondsComponent)\n } \n\n /**\n * Splits this duration into seconds, and
nanoseconds and executes the given [action] with these components.\n * The result of [action]
is returned as the result of this function.\n *\n * - `nanoseconds` represents the whole number of nanoseconds
in this duration, and its absolute value is less than 1_000_000_000;\n * - `seconds` represents the whole number
of seconds in this duration.\n *\n * Infinite durations are represented as either [Long.MAX_VALUE] seconds,
or [Long.MIN_VALUE] seconds (depending on the sign of infinity),\n * and zero nanoseconds.\n
*\n public inline fun <T> toComponents(action: (seconds: Long, nanoseconds: Int) -> T): T {\n
contract {
callsInPlace(action, InvocationKind.EXACTLY_ONCE) }\n return action(inWholeSeconds,
nanosecondsComponent)\n } \n\n @PublishedApi\n internal val hoursComponent: Int\n get() = if
(isInfinite()) 0 else (inWholeHours % 24).toInt()\n\n @PublishedApi\n internal val minutesComponent: Int\n
get() = if (isInfinite()) 0 else (inWholeMinutes % 60).toInt()\n\n @PublishedApi\n internal val
secondsComponent:
Int\n get() = if (isInfinite()) 0 else (inWholeSeconds % 60).toInt()\n\n @PublishedApi\n internal val
nanosecondsComponent: Int\n get() = when {\n isInfinite() -> 0\n isInMillis() ->
millisToNanos(value % 1_000).toInt()\n else -> (value % 1_000_000_000).toInt()\n } \n\n\n //
conversion to units\n\n /**\n * Returns the value of this duration expressed as a [Double] number of the
specified [unit].\n *\n * The operation may involve rounding when the result cannot be represented exactly with
a [Double] number.\n *\n * An infinite duration value is converted either to [Double.POSITIVE_INFINITY] or
[Double.NEGATIVE_INFINITY] depending on its sign.\n
*\n public fun toDouble(unit: DurationUnit):
Double {\n return when (rawValue) {\n INFINITE.rawValue -> Double.POSITIVE_INFINITY\n
NEG_INFINITE.rawValue -> Double.NEGATIVE_INFINITY\n else -> {\n
// TODO: whether it's ok to convert to Double before scaling\n
convertDurationUnit(value.toDouble(), storageUnit, unit)\n } \n } \n\n /**\n * Returns the value
of this duration expressed as a [Long] number of the specified [unit].\n *\n * If the result doesn't fit in the range
of [Long] type, it is coerced into that range:\n * - [Long.MIN_VALUE] is returned if it's less than
`Long.MIN_VALUE`,\n * - [Long.MAX_VALUE] is returned if it's greater than `Long.MAX_VALUE`. \n
*\n * An infinite duration value is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on
its sign.\n
*\n public fun toLong(unit: DurationUnit): Long {\n
return when (rawValue) {\n INFINITE.rawValue -> Long.MAX_VALUE\n NEG_INFINITE.rawValue -> Long.MIN_VALUE\n
else -> convertDurationUnit(value, storageUnit, unit)\n } \n } \n\n /**\n * Returns the value of this
duration
expressed as an [Int] number of the specified [unit].\n *\n * If the result doesn't fit in the range of [Int] type, it
is coerced into that range:\n * - [Int.MIN_VALUE] is returned if it's less than `Int.MIN_VALUE`,\n * -
[Int.MAX_VALUE] is returned if it's greater than `Int.MAX_VALUE`. \n
*\n * An infinite duration value is
converted either to [Int.MAX_VALUE] or [Int.MIN_VALUE] depending on its sign.\n
*\n public fun
toInt(unit: DurationUnit): Int =\n toLong(unit).coerceIn(Int.MIN_VALUE.toInt(),
Int.MAX_VALUE.toInt()).toInt()\n\n /** The value of this duration expressed as a [Double] number of days.
*\n @ExperimentalTime\n @Deprecated("Use inWholeDays property instead or convert toDouble(DAYS) if a
double value is required.", ReplaceWith("toDouble(DurationUnit.DAYS)"))\n

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@DeprecatedSinceKotlin(warningSince = `1.5`, errorSince = `1.8`)\n public val inDays: Double get() =
toDouble(DurationUnit.DAYS)\n\n /** The value of
this duration expressed as a [Double] number of hours. *\n @ExperimentalTime\n @Deprecated(`Use
inWholeHours property instead or convert toDouble(HOURS) if a double value is required.`),
ReplaceWith(`toDouble(DurationUnit.HOURS)`))\n @DeprecatedSinceKotlin(warningSince = `1.5`,
errorSince = `1.8`)\n public val inHours: Double get() = toDouble(DurationUnit.HOURS)\n\n /** The value of
this duration expressed as a [Double] number of minutes. *\n @ExperimentalTime\n @Deprecated(`Use
inWholeMinutes property instead or convert toDouble(MINUTES) if a double value is required.`),
ReplaceWith(`toDouble(DurationUnit.MINUTES)`))\n @DeprecatedSinceKotlin(warningSince = `1.5`,
errorSince = `1.8`)\n public val inMinutes: Double get() = toDouble(DurationUnit.MINUTES)\n\n /** The
value of this duration expressed as a [Double] number of seconds. *\n @ExperimentalTime\n
@Deprecated(`Use inWholeSeconds property instead or convert toDouble(SECONDS) if
a double value is required.`), ReplaceWith(`toDouble(DurationUnit.SECONDS)`))\n
@DeprecatedSinceKotlin(warningSince = `1.5`, errorSince = `1.8`)\n public val inSeconds: Double get() =
toDouble(DurationUnit.SECONDS)\n\n /** The value of this duration expressed as a [Double] number of
milliseconds. *\n @ExperimentalTime\n @Deprecated(`Use inWholeMilliseconds property instead or convert
toDouble(MILLISECONDS) if a double value is required.`),
ReplaceWith(`toDouble(DurationUnit.MILLISECONDS)`))\n @DeprecatedSinceKotlin(warningSince = `1.5`,
errorSince = `1.8`)\n public val inMilliseconds: Double get() = toDouble(DurationUnit.MILLISECONDS)\n\n
/** The value of this duration expressed as a [Double] number of microseconds. *\n @ExperimentalTime\n
@Deprecated(`Use inWholeMicroseconds property instead or convert toDouble(MICROSECONDS) if a double
value is required.`), ReplaceWith(`toDouble(DurationUnit.MICROSECONDS)`))\n
@DeprecatedSinceKotlin(warningSince
= `1.5`, errorSince = `1.8`)\n public val inMicroseconds: Double get() =
toDouble(DurationUnit.MICROSECONDS)\n\n /** The value of this duration expressed as a [Double] number of
nanoseconds. *\n @ExperimentalTime\n @Deprecated(`Use inWholeNanoseconds property instead or convert
toDouble(NANOSECONDS) if a double value is required.`),
ReplaceWith(`toDouble(DurationUnit.NANOSECONDS)`))\n @DeprecatedSinceKotlin(warningSince =
`1.5`, errorSince = `1.8`)\n public val inNanoseconds: Double get() =
toDouble(DurationUnit.NANOSECONDS)\n\n /**\n * The value of this duration expressed as a [Long]
number of days.\n *\n * An infinite duration value is converted either to [Long.MAX_VALUE] or
[Long.MIN_VALUE] depending on its sign.\n *\n public val inWholeDays: Long\n get() =
toLong(DurationUnit.DAYS)\n\n /**\n * The value of this duration expressed as a [Long] number of hours.\n
*\n * An infinite duration value
is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n *\n public val
inWholeHours: Long\n get() = toLong(DurationUnit.HOURS)\n\n /**\n * The value of this duration
expressed as a [Long] number of minutes.\n *\n * An infinite duration value is converted either to
[Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n *\n public val inWholeMinutes:
Long\n get() = toLong(DurationUnit.MINUTES)\n\n /**\n * The value of this duration expressed as a
[Long] number of seconds.\n *\n * An infinite duration value is converted either to [Long.MAX_VALUE] or
[Long.MIN_VALUE] depending on its sign.\n *\n public val inWholeSeconds: Long\n get() =
toLong(DurationUnit.SECONDS)\n\n /**\n * The value of this duration expressed as a [Long] number of
milliseconds.\n *\n * An infinite duration value is converted either to [Long.MAX_VALUE] or
[Long.MIN_VALUE] depending on its sign.\n
*\n public val inWholeMilliseconds: Long\n get() {\n return if (isInMillis() && isFinite()) value
else toLong(DurationUnit.MILLISECONDS)\n }\n\n /**\n * The value of this duration expressed as a
[Long] number of microseconds.\n *\n * If the result doesn't fit in the range of [Long] type, it is coerced into
that range:\n * - [Long.MIN_VALUE] is returned if it's less than `Long.MIN_VALUE`\n * -

```

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[Long.MAX_VALUE] is returned if it's greater than `Long.MAX_VALUE`.
 * An infinite duration value
is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.
 * public val
inWholeMicroseconds: Long
    get() = toLong(DurationUnit.MICROSECONDS)
 * The value of
this duration expressed as a [Long] number of nanoseconds.
 * If the result doesn't fit in the range of
[Long] type, it is coerced into that range:
 * - [Long.MIN_VALUE] is returned if it's less than
`Long.MIN_VALUE`,
 * - [Long.MAX_VALUE] is returned if it's greater than `Long.MAX_VALUE`.
 * An infinite duration value is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on
its sign.
 * public val inWholeNanoseconds: Long
    get() {
        val value = value
        return
when {
    isInNanos() -> value
    value > Long.MAX_VALUE / NANOS_IN_MILLIS ->
Long.MAX_VALUE
    value < Long.MIN_VALUE / NANOS_IN_MILLIS -> Long.MIN_VALUE
    else -> millisToNanos(value)
}
} // shortcuts
 * Returns the value of this
duration expressed as a [Long] number of nanoseconds.
 * If the value doesn't fit in the range of [Long]
type, it is coerced into that range, see the conversion [Double.toLong] for details.
 * The range of
durations that can be expressed as a `Long` number of nanoseconds is approximately 1292
years.
 * @ExperimentalTime
 * @Deprecated("Use inWholeNanoseconds property instead.",
ReplaceWith("this.inWholeNanoseconds"))
 * @DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")
 * public fun toLongNanoseconds(): Long = inWholeNanoseconds
 * Returns the value of
this duration expressed as a [Long] number of milliseconds.
 * The value is coerced to the range of [Long]
type, if it doesn't fit in that range, see the conversion [Double.toLong] for details.
 * The range of
durations that can be expressed as a `Long` number of milliseconds is approximately 1292 million years.
 * @ExperimentalTime
 * @Deprecated("Use inWholeMilliseconds property instead.",
ReplaceWith("this.inWholeMilliseconds"))
 * @DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")
 * public fun toLongMilliseconds(): Long = inWholeMilliseconds
 * Returns a string
representation of this
duration value
 * expressed as a combination of numeric components, each in its own unit.
 * Each
component is a number followed by the unit abbreviated name: `d`, `h`, `m`, `s`, `5h`, `1d 12h`, `1h 0m
30.340s`.
 * The last component, usually seconds, can be a number with a fractional part.
 * If the
duration is less than a second, it is represented as a single number
 * with one of sub-second units: `ms`
(milliseconds), `us` (microseconds), or `ns` (nanoseconds):
 * `140.884ms`, `500us`, `24ns`.
 * A
negative duration is prefixed with `-` sign and, if it consists of multiple components, surrounded with parentheses:
 * `-12m` and `-(1h 30m)`.
 * Special cases:
 * - an infinite duration is formatted as `"Infinity"` or
`"-Infinity"` without a unit.
 * It's recommended to use [toIsoString] that uses more strict ISO-8601
format instead of this `toString`
 * when you want to
convert a duration to a string in cases of serialization, interchange, etc.
 * @sample
samples.time.Durations.toStringDefault
 * override fun toString(): String = when (rawValue) {
    OL ->
"0s"
    INFINITE.rawValue -> "Infinity"
    NEG_INFINITE.rawValue -> "-Infinity"
    else -> {
        val isNegative = isNegative()
        buildString {
            if (isNegative) append('-')
            absoluteValue.toComponents { days, hours, minutes, seconds, nanoseconds ->
                val hasDays = days !=
0
                val hasHours = hours != 0
                val hasMinutes = minutes != 0
                val
hasSeconds = seconds != 0 || nanoseconds != 0
                var components = 0
                if (hasDays) {
                    append(days).append('d')
                    components++
                }
                if (hasHours ||
(hasDays && (hasMinutes
|| hasSeconds))) {
                    if (components++ > 0) append(' ')
                    append(hours).append('h')
                }
                if
(hasMinutes || (hasSeconds && (hasHours || hasDays))) {
                    if
(components++ > 0) append(' ')
                    append(minutes).append('m')
                }
                if
(hasSeconds) {
                    if (components++ > 0) append(' ')
                    when {
                        seconds != 0 || hasDays || hasHours || hasMinutes ->
appendFractional(seconds, nanoseconds, 9,
"s", isoZeroes = false)
                        nanoseconds >= 1_000_000 ->

```



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appendFractional(nanoseconds / 1_000_000, nanoseconds % 1_000_000, 6, \"ms\", isoZeroes = false)\n
    nanoseconds >= 1_000 ->\n                appendFractional(nanoseconds / 1_000, nanoseconds\n
% 1_000, 3, \"us\", isoZeroes = false)\n                else ->\n
append(nanoseconds).append(\"ns\")\n                }\n                }\n                if (isNegative && components\n
> 1) insert(1, '(').append(')\n                }\n                }\n                }\n                }\n                private fun\n
StringBuilder.appendFractional(whole: Int, fractional: Int, fractionalSize: Int, unit: String, isoZeroes: Boolean) {\n
    append(whole)\n    if (fractional != 0) {\n        append('.')\n        val fracString =\n
fractional.toString().padStart(fractionalSize, '0')\n        val nonZeroDigits = fracString.indexOfLast { it != '0' } +\n
1\n        when {\n            !isoZeroes && nonZeroDigits < 3 -> appendRange(fracString, 0, nonZeroDigits)\n
            else -> appendRange(fracString, 0, ((nonZeroDigits + 2) / 3) * 3)\n        }\n        }\n        append(unit)\n
}\n\n /**\n * Returns a string representation\n
of this duration value expressed in the given [unit]\n * and formatted with the specified [decimals] number of\n
digits after decimal point.\n * Special cases:\n * - an infinite duration is formatted as `\"Infinity\"` or `\"-\n
Infinity\"` without a unit.\n * @param decimals the number of digits after decimal point to show. The value\n
must be non-negative.\n * No more than 12 decimals will be shown, even if a larger number is requested.\n * @return the value of duration in the specified [unit] followed by that unit abbreviated name: `d`, `h`, `m`, `s`,\n
`ms`, `us`, or `ns`.\n * @throws IllegalArgumentException if [decimals] is less than zero.\n * @sample samples.time.Durations.toStringDecimals\n
*/\n public fun toString(unit: DurationUnit, decimals: Int\n
= 0): String {\n    require(decimals >= 0) { \"decimals must be not negative, but was $decimals\" }\n    val\n
number = toDouble(unit)\n
    if (number.isInfinite()) return number.toString()\n    return formatToExactDecimals(number,\n
decimals.coerceAtMost(12)) + unit.shortName()\n }\n\n /**\n * Returns an ISO-8601 based string\n
representation of this duration.\n * The returned value is presented in the format `PTm>s.fS`, where `h`,\n
`m`, `s` are the integer components of this duration (see [toComponents])\n * and `f` is a fractional part of second.\n
Depending on the roundness of the value the fractional part can be formatted with either\n * 0, 3, 6, or 9 decimal\n
digits.\n * The infinite duration is represented as `\"PT9999999999999999H\"` which is larger than any\n
possible finite duration in Kotlin.\n * Negative durations are indicated with the sign `-` in the beginning of\n
the returned string, for example, `\"-PT5M30S\"`.\n * @sample samples.time.Durations.toIsoString\n
*/\n public fun toIsoString(): String = buildString {\n    if (isNegative()) append('-')\n
    append(\"PT\")\n    this@Duration.absoluteValue.toComponents { hours, minutes, seconds, nanoseconds -\n
>\n    @Suppress(\"NAME_SHADOWING\")\n    var hours = hours\n    if (isInfinite()) {\n\n
// use large enough value instead of Long.MAX_VALUE\n    hours = 9_999_999_999_999\n    }\n
    val hasHours = hours != 0L\n    val hasSeconds = seconds != 0 || nanoseconds != 0\n    val hasMinutes =\n
minutes != 0 || (hasSeconds && hasHours)\n    if (hasHours) {\n        append(hours).append('H')\n
}\n    if (hasMinutes) {\n        append(minutes).append('M')\n    }\n    if (hasSeconds ||\n
(!hasHours && !hasMinutes)) {\n        appendFractional(seconds, nanoseconds, 9, \"S\", isoZeroes = true)\n
}\n    }\n }\n\n // constructing from number of units\n// extension functions\n/** Returns a [Duration]\n
equal to this\n
[Int] number of the specified [unit].\n
*/\n @SinceKotlin(\"1.6\")\n @WasExperimental(ExperimentalTime::class)\n public fun Int.toDuration(unit:\n
DurationUnit): Duration {\n    return if (unit <= DurationUnit.SECONDS) {\n\n
durationOfNanos(convertDurationUnitOverflow(this.toLong(), unit, DurationUnit.NANOSECONDS))\n    } else {\n
    toLong().toDuration(unit)\n }\n\n /** Returns a [Duration] equal to this [Long] number of the specified [unit].\n
*/\n @SinceKotlin(\"1.6\")\n @WasExperimental(ExperimentalTime::class)\n public fun Long.toDuration(unit:\n
DurationUnit): Duration {\n    val maxNsInUnit = convertDurationUnitOverflow(MAX_NANOS,\n
DurationUnit.NANOSECONDS, unit)\n    if (this in -maxNsInUnit..maxNsInUnit) {\n        return\n
durationOfNanos(convertDurationUnitOverflow(this, unit, DurationUnit.NANOSECONDS))\n    } else {\n        val\n
millis = convertDurationUnit(this, unit, DurationUnit.MILLISECONDS)\n        return

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durationOfMillis(millis.coerceIn(-MAX_MILLIS, MAX_MILLIS))\n } }\n\n**\n
* Returns a [Duration] equal to this [Double] number of the specified [unit].\n *\n * Depending on its magnitude,
the value is rounded to an integer number of nanoseconds or milliseconds.\n *\n * @throws
IllegalArgumentException if this `Double` value is `NaN`.\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic fun Double.toDuration(unit:
DurationUnit): Duration { \n val valueInNs = convertDurationUnit(this, unit, DurationUnit.NANOSECONDS)\n
require(!valueInNs.isNaN()) { `Duration value cannot be NaN.` } \n val nanos = valueInNs.roundToLong()\n
return if (nanos in -MAX_NANOS..MAX_NANOS) {\n durationOfNanos(nanos)\n } else {\n val millis =
convertDurationUnit(this, unit, DurationUnit.MILLISECONDS).roundToLong()\n
durationOfMillisNormalized(millis)\n } }\n\n// constructing from number of units\n// deprecated extension
properties\n\n** Returns a [Duration] equal to this [Int] number of nanoseconds.
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use
`Int.nanoseconds` extension property from Duration.Companion instead.", ReplaceWith("this.nanoseconds",
`kotlin.time.Duration.Companion.nanoseconds`))\n@DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")\npublic val Int.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n** Returns a
[Duration] equal to this [Long] number of nanoseconds.
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Long.nanoseconds` extension property from
Duration.Companion instead.", ReplaceWith("this.nanoseconds",
`kotlin.time.Duration.Companion.nanoseconds`))\n@DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")\npublic val Long.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n**\n * Returns a
[Duration] equal to this [Double] number of nanoseconds.\n *\n * @throws IllegalArgumentException if this
[Double] value is `NaN`.\n *\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use
`Double.nanoseconds` extension property from Duration.Companion instead.", ReplaceWith("this.nanoseconds",
`kotlin.time.Duration.Companion.nanoseconds`))\n@DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")\npublic val Double.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n** Returns a
[Duration] equal to this [Int] number of microseconds.
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Int.microseconds` extension property from
Duration.Companion instead.", ReplaceWith("this.microseconds",
`kotlin.time.Duration.Companion.microseconds`))\n@DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")\npublic val Int.microseconds get() = toDuration(DurationUnit.MICROSECONDS)\n\n** Returns a
[Duration] equal to this [Long] number of microseconds.
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Long.microseconds` extension property
from Duration.Companion instead.", ReplaceWith("this.microseconds",
`kotlin.time.Duration.Companion.microseconds`))\n@DeprecatedSinceKotlin(warningSince
= "1.5", errorSince = "1.8")\npublic val Long.microseconds get() =
toDuration(DurationUnit.MICROSECONDS)\n\n**\n * Returns a [Duration] equal to this [Double] number of
microseconds.\n *\n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Double.microseconds` extension property
from Duration.Companion instead.", ReplaceWith("this.microseconds",
`kotlin.time.Duration.Companion.microseconds`))\n@DeprecatedSinceKotlin(warningSince = "1.5", errorSince =
"1.8")\npublic val Double.microseconds get() = toDuration(DurationUnit.MICROSECONDS)\n\n** Returns a
[Duration] equal to this [Int] number of milliseconds.
*\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Int.milliseconds` extension property from
Duration.Companion instead.", ReplaceWith("this.milliseconds",
`kotlin.time.Duration.Companion.milliseconds`))\n@DeprecatedSinceKotlin(warningSince
= "1.5", errorSince = "1.8")\npublic val Int.milliseconds get() =
toDuration(DurationUnit.MILLISECONDS)\n\n** Returns a [Duration] equal to this [Long] number of
milliseconds. *\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use `Long.milliseconds` extension

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property from Duration.Companion instead.\", ReplaceWith(\"this.milliseconds\",
\"kotlin.time.Duration.Companion.milliseconds\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Long.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)\n\n/** Returns a
[Duration] equal to this [Double] number of milliseconds.\n * \n * @throws IllegalArgumentException if this
[Double] value is `NaN`.\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Double.milliseconds' extension property from Duration.Companion instead.\", ReplaceWith(\"this.milliseconds\",
\"kotlin.time.Duration.Companion.milliseconds\")\n@DeprecatedSinceKotlin(warningSince
= \"1.5\", errorSince = \"1.8\")\npublic val Double.milliseconds get() =
toDuration(DurationUnit.MILLISECONDS)\n\n/** Returns a [Duration] equal to this [Int] number of seconds.
*\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Int.seconds' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Int.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/** Returns a [Duration] equal to
this [Long] number of seconds. *\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Long.seconds' extension property from Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Long.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/** Returns a [Duration]
equal to this
[Double] number of seconds.\n * \n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.seconds' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Double.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/** Returns a [Duration]
equal to this [Int] number of minutes. *\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Int.minutes' extension property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Int.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/** Returns a [Duration] equal to
this [Long] number of minutes. *\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Long.minutes' extension property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Long.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/** Returns a [Duration]
equal to this [Double] number of minutes.\n * \n * @throws IllegalArgumentException if this [Double] value is
`NaN`.\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.minutes' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Double.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/** Returns a [Duration]
equal to this [Int] number of hours. *\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Int.hours' extension property from Duration.Companion instead.\", ReplaceWith(\"this.hours\",
\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Int.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to this
[Long] number of hours. *\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Long.hours'
extension property from Duration.Companion instead.\", ReplaceWith(\"this.hours\",
\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Long.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to
this [Double] number of hours.\n * \n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.hours' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.hours\",
\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =

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\"1.8\")\npublic
    val Double.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to this [Int]
number of days. */\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Int.days' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Int.days get() = toDuration(DurationUnit.DAYS)\n\n/** Returns a [Duration] equal to this
[Long] number of days. */\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Long.days'
extension property from Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Long.days get() = toDuration(DurationUnit.DAYS)\n\n/**\n * Returns a [Duration] equal to this
[Double] number of days.\n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Double.days' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\", errorSince =
\"1.8\")\npublic val Double.days get() = toDuration(DurationUnit.DAYS)\n\n/** Returns a duration whose value
is the specified [duration] value multiplied by this number.
*/\n@SinceKotlin(\"1.6\")\n@WasExperimental(ExperimentalTime::class)\n@kotlin.internal.InlineOnly\npublic
inline operator fun Int.times(duration: Duration): Duration = duration * this\n\n/**\n * Returns a duration whose
value is the specified [duration] value multiplied by this number.\n * The operation may involve rounding when
the result cannot be represented exactly with a [Double] number.\n * @throws IllegalArgumentException if the
operation results in a `NaN` value.\n
*/\n@SinceKotlin(\"1.6\")\n@WasExperimental(ExperimentalTime::class)\n@kotlin.internal.InlineOnly\npublic
inline operator fun Double.times(duration: Duration): Duration = duration * this\n\n\nprivate fun
parseDuration(value: String, strictIso: Boolean): Duration {\n    var length = value.length\n    if (length == 0) throw
IllegalArgumentException(\"The string is empty\")\n    var index = 0\n    var result = Duration.ZERO\n    val
infinityString = \"Infinity\"\n    when (value[index]) {\n        '+', '-' -> index++\n    }\n    val hasSign = index > 0\n    val isNegative = hasSign && value.startsWith('-')\n    when {\n        length <= index ->\n            throw
IllegalArgumentException(\"No components\")\n        value[index] == 'P' -> {\n            if (++index == length) throw
IllegalArgumentException()\n            val nonDigitSymbols = \"+-.\", var isTimeComponent = false\n            var prevUnit: DurationUnit? = null\n            while (index < length) {\n                if (value[index] == 'T') {\n                    if (isTimeComponent
|| ++index == length) throw IllegalArgumentException()\n                    isTimeComponent = true\n                }\n                continue\n            }\n            val component = value.substringWhile(index) { it in '0'..'9' || it in nonDigitSymbols
}\n            if (component.isEmpty()) throw IllegalArgumentException()\n            index += component.length\n            val unitChar = value.getOrNull(index) { throw IllegalArgumentException(\"Missing unit for value
$component\") }\n            index++\n            val unit = durationUnitByIsoChar(unitChar, isTimeComponent)\n            if (prevUnit != null && prevUnit <= unit) throw IllegalArgumentException(\"Unexpected order of duration
components\")\n            prevUnit = unit\n            val dotIndex = component.indexOf('.')\n            if (unit ==
DurationUnit.SECONDS && dotIndex > 0) {\n                val whole = component.substring(0, dotIndex)\n                result += parseOverLongIsoComponent(whole).toDuration(unit)\n                result += component.substring(dotIndex).toDouble().toDuration(unit)\n            } else {\n                result += parseOverLongIsoComponent(component).toDuration(unit)\n            }\n            }\n            strictIso
->\n                throw IllegalArgumentException()\n            value.regionMatches(index, infinityString, 0, length =
maxOf(length - index, infinityString.length), ignoreCase = true) -> {\n                result = Duration.INFINITE\n            }\n            else -> {\n                // parse default string format\n                var prevUnit: DurationUnit? = null\n                var
afterFirst = false\n                var allowSpaces = !hasSign\n                if (hasSign && value[index] == '(' && value.last()
== ')') {\n                    allowSpaces = true\n                    if (++index == --length) throw IllegalArgumentException(\"No
components\")\n                }\n                while (index < length) {\n                    if

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(afterFirst && allowSpaces) {\n                index = value.skipWhile(index) { it == ' ' }\n                }\n
afterFirst = true\n                val component = value.substringWhile(index) { it in '0'..'9' || it == '.' }\n                if
(component.isEmpty()) throw IllegalArgumentException()\n                index += component.length\n                val
unitName = value.substringWhile(index) { it in 'a'..'z' }\n                index += unitName.length\n                val unit =
durationUnitByShortName(unitName)\n                if (prevUnit != null && prevUnit <= unit) throw
IllegalArgumentException("Unexpected order of duration components")\n                prevUnit = unit\n                val
dotIndex = component.indexOf('.')\n                if (dotIndex > 0) {\n                val whole = component.substring(0,
dotIndex)\n                result += whole.toLong().toDuration(unit)\n                result +=
component.substring(dotIndex).toDouble().toDuration(unit)\n
                if (index < length) throw IllegalArgumentException("Fractional component must be last")\n
} else {\n                result += component.toLong().toDuration(unit)\n                }\n                }\n                }\n
return if (isNegative) -result else result\n}\n\nprivate fun parseOverLongIsoComponent(value: String): Long {\n
val length = value.length\n    var startIndex = 0\n    if (length > 0 && value[0] in "+-") startIndex++\n    if ((length
- startIndex) > 16 && (startIndex..value.lastIndex).all { value[it] in '0'..'9' }) {\n        // all chars are digits, but more
than ceiling(log10(MAX_MILLIS / 1000)) of them\n        return if (value[0] == '-') Long.MIN_VALUE else
Long.MAX_VALUE\n    }\n    // TODO: replace with just toLong after min JDK becomes 8\n    return if
(value.startsWith("+")) value.drop(1).toLong() else value.toLong()\n}\n\nprivate inline fun
String.substringWhile(startIndex: Int, predicate:
(Char) -> Boolean): String =\n    substring(startIndex, skipWhile(startIndex, predicate))\nprivate inline fun
String.skipWhile(startIndex: Int, predicate: (Char) -> Boolean): Int {\n    var i = startIndex\n    while (i < length &&
predicate(this[i])) i++\n    return i\n}\n\n// The ranges are chosen so that they are:\n// - symmetric relative to
zero: this greatly simplifies operations with sign, e.g. unaryMinus and minus.\n// - non-overlapping, but adjacent:
the first value that doesn't fit in nanos range, can be exactly represented in millis.\n\ninternal const val
NANOS_IN_MILLIS = 1_000_000\n// maximum number duration can store in nanosecond range\ninternal const
val MAX_NANOS = Long.MAX_VALUE / 2 / NANOS_IN_MILLIS * NANOS_IN_MILLIS - 1 // ends in
..._999_999\n// maximum number duration can store in millisecond range, also encodes an infinite value\ninternal
const val MAX_MILLIS = Long.MAX_VALUE / 2\n// MAX_NANOS expressed in milliseconds\nprivate const val
MAX_NANOS_IN_MILLIS
= MAX_NANOS / NANOS_IN_MILLIS\nprivate fun nanosToMillis(nanos: Long): Long = nanos /
NANOS_IN_MILLIS\nprivate fun millisToNanos(millis: Long): Long = millis * NANOS_IN_MILLIS\nprivate
fun durationOfNanos(normalNanos: Long) = Duration(normalNanos shl 1)\nprivate fun
durationOfMillis(normalMillis: Long) = Duration((normalMillis shl 1) + 1)\nprivate fun durationOf(normalValue:
Long, unitDiscriminator: Int) = Duration((normalValue shl 1) + unitDiscriminator)\nprivate fun
durationOfNanosNormalized(nanos: Long) =\n    if (nanos in -MAX_NANOS..MAX_NANOS) {\n
durationOfNanos(nanos)\n    } else {\n        durationOfMillis(nanosToMillis(nanos))\n    }\nprivate fun
durationOfMillisNormalized(millis: Long) =\n    if (millis in -
MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n        durationOfNanos(millisToNanos(millis))\n    }
else {\n        durationOfMillis(millis.coerceIn(-MAX_MILLIS, MAX_MILLIS))\n    }\n\ninternal expect val
durationAssertionsEnabled: Boolean\n\ninternal expect
fun formatToExactDecimals(value: Double, decimals: Int): String\n\ninternal expect fun formatUpToDecimals(value:
Double, decimals: Int): String\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmName("UnsignedKt")\npackage
kotlin\n\n@PublishedApi\ninternal fun uintCompare(v1: Int, v2: Int): Int = (v1 xor
Int.MIN_VALUE).compareTo(v2 xor Int.MIN_VALUE)\n@PublishedApi\ninternal fun ulongCompare(v1: Long,
v2: Long): Int = (v1 xor Long.MIN_VALUE).compareTo(v2 xor Long.MIN_VALUE)\n\n@PublishedApi\ninternal
fun uintDivide(v1: UInt, v2: UInt): UInt = (v1.toLong() / v2.toLong()).toUInt()\n\n@PublishedApi\ninternal fun
uintRemainder(v1: UInt, v2: UInt): UInt = (v1.toLong() % v2.toLong()).toUInt()\n\n// Division and remainder are

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*\/n@Target(AnnotationTarget.CONSTRUCTOR, AnnotationTarget.FUNCTION,
AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.7")\ninternal
annotation class IntrinsicConstEvaluation\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n
*\/n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("CollectionsKt")\n\npackage
kotlin.collections\n\n/**\n * Given an [iterator] function constructs an [Iterable] instance that returns values through
the [Iterator]\n * provided by that function.\n * @sample samples.collections.Iterables.Building.iterable\n
*\/n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable(crossinline iterator: () -> Iterator<T>): Iterable<T>
= object : Iterable<T> {\n    override fun iterator(): Iterator<T> = iterator()\n}\n\n/**\n * A wrapper over another
[Iterable] (or any other object that can produce an [Iterator]) that returns\n * an indexing iterator.\n *\/ninternal class
IndexedIterable<out T>(private val iteratorFactory: () -> Iterator<T>) : Iterable<IndexedValue<T>> {\n    override
fun iterator(): Iterator<IndexedValue<T>> = IndexingIterator(iteratorFactory())\n}\n\n\n/**\n * Returns the size of
this iterable if it is known, or
`null` otherwise.\n *\/n@PublishedApi\ninternal fun <T> Iterable<T>.collectionSizeOrNull(): Int? = if (this is
Collection<*>) this.size else null\n\n/**\n * Returns the size of this iterable if it is known, or the specified [default]
value otherwise.\n *\/n@PublishedApi\ninternal fun <T> Iterable<T>.collectionSizeOrDefault(default: Int): Int = if
(this is Collection<*>) this.size else default\n\n\n/**\n * Returns a single list of all elements from all collections in
the given collection.\n * @sample samples.collections.Iterables.Operations.flattenIterable\n *\/npublic fun <T>
Iterable<Iterable<T>>.flatten(): List<T> {\n    val result = ArrayList<T>()\n    for (element in this) {\n
result.addAll(element)\n    }\n    return result\n}\n\n/**\n * Returns a pair of lists, where\n * *first* list is built from
the first values of each pair from this collection,\n * *second* list is built from the second values of each pair from
this collection.\n * @sample samples.collections.Iterables.Operations.unzipIterable\n
*\/npublic fun <T, R> Iterable<Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n    val expectedSize =
collectionSizeOrDefault(10)\n    val listT = ArrayList<T>(expectedSize)\n    val listR =
ArrayList<R>(expectedSize)\n    for (pair in this) {\n        listT.add(pair.first)\n        listR.add(pair.second)\n    }\n
return listT to listR\n}\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\/n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("SequencesKt")\n\npackage
kotlin.sequences\n\nimport kotlin.random.Random\n\n/**\n * Given an [iterator] function constructs a [Sequence]
that returns values through the [Iterator]\n * provided by that function.\n * The values are evaluated lazily, and the
sequence is potentially infinite.\n *\/n * @sample samples.collections.Sequences.Building.sequenceFromIterator\n
*\/n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence(crossinline iterator: () -> Iterator<T>):
Sequence<T> = object : Sequence<T> {\n    override fun iterator(): Iterator<T> = iterator()\n}\n\n/**\n * Creates a
sequence that returns all elements from this iterator. The sequence is constrained to be iterated only once.\n *\/n *
@sample samples.collections.Sequences.Building.sequenceFromIterator\n *\/npublic fun <T>
Iterator<T>.asSequence(): Sequence<T> = Sequence { this }.constrainOnce()\n\n/**\n * Creates a sequence that
returns the specified values.\n *\/n * @sample samples.collections.Sequences.Building.sequenceOfValues\n
*\/npublic fun <T> sequenceOf(vararg elements: T): Sequence<T> = if (elements.isEmpty()) emptySequence() else
elements.asSequence()\n\n/**\n * Returns an empty sequence.\n *\/npublic fun <T> emptySequence():
Sequence<T> = EmptySequence\n\nprivate object EmptySequence : Sequence<Nothing>,\nDropTakeSequence<Nothing> {\n    override fun iterator():
Iterator<Nothing> = EmptyIterator\n    override fun drop(n: Int) = EmptySequence\n    override fun take(n: Int) =
EmptySequence\n}\n\n/**\n * Returns this sequence if it's not `null` and the empty sequence otherwise.\n *
@sample samples.collections.Sequences.Usage.sequenceOrElse\n
*\/n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>?.orElse():
Sequence<T> = this ?: emptySequence()\n\n\n/**\n * Returns a sequence that iterates through the elements either of

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this sequence\n * or, if this sequence turns out to be empty, of the sequence returned by [defaultValue] function.\n
*\n * @sample samples.collections.Sequences.Usage.sequenceIfEmpty\n *^\n@SinceKotlin("1.3")\npublic fun
<T> Sequence<T>.isEmpty(defaultValue: () -> Sequence<T>): Sequence<T> = sequence {\n    val iterator =
this@isEmpty.iterator()\n    if (iterator.hasNext()) {\n        yieldAll(iterator)\n    } else {\n
yieldAll(defaultValue())\n    }\n}\n\n/>\n * Returns a sequence
of all elements from all sequences in this sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n *
@sample samples.collections.Sequences.Transformations.flattenSequenceOfSequences\n *^\npublic fun <T>
Sequence<Sequence<T>>.flatten(): Sequence<T> = flatten { it.iterator() }\n\n/>\n * Returns a sequence of all
elements from all iterables in this sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n *
@sample samples.collections.Sequences.Transformations.flattenSequenceOfLists\n
*^\n@kotlin.jvm.JvmName("flattenSequenceOfIterable")\npublic fun <T> Sequence<Iterable<T>>.flatten():
Sequence<T> = flatten { it.iterator() }\n\nprivate fun <T, R> Sequence<T>.flatten(iterator: (T) -> Iterator<R>):
Sequence<R> {\n    if (this is TransformingSequence<*, *>) {\n        return (this as TransformingSequence<*,
T>).flatten(iterator)\n    }\n    return FlatteningSequence(this, { it }, iterator)\n}\n\n/>\n * Returns a pair of lists,
where\n * *first* list
is built from the first values of each pair from this sequence,\n * *second* list is built from the second values of
each pair from this sequence.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Sequences.Transformations.unzip\n *^\npublic fun <T, R> Sequence<Pair<T, R>>.unzip():
Pair<List<T>, List<R>> {\n    val listT = ArrayList<T>()\n    val listR = ArrayList<R>()\n    for (pair in this) {\n
listT.add(pair.first)\n        listR.add(pair.second)\n    }\n    return listT to listR\n}\n\n/>\n * Returns a sequence that
yields elements of this sequence randomly shuffled.\n *\n * Note that every iteration of the sequence returns
elements in a different order.\n *\n * The operation is _intermediate_ and _stateful_.\n
*^\n@SinceKotlin("1.4")\npublic fun <T> Sequence<T>.shuffled(): Sequence<T> = shuffled(Random)\n\n/>\n * Returns a sequence that yields elements of this sequence randomly shuffled\n * using the specified [random]
instance as the source of randomness.\n
*\n * Note that every iteration of the sequence returns elements in a different order.\n *\n * The operation is
_intermediate_ and _stateful_.\n *^\n@SinceKotlin("1.4")\npublic fun <T> Sequence<T>.shuffled(random:
Random): Sequence<T> = sequence<T> {\n    val buffer = toMutableList()\n    while (buffer.isNotEmpty()) {\n
val j = random.nextInt(buffer.size)\n        val last = buffer.removeLast()\n        val value = if (j < buffer.size)
buffer.set(j, last) else last\n        yield(value)\n    }\n}\n\n/>\n * A sequence that returns the values from the
underlying [sequence] that either match or do not match\n * the specified [predicate].\n *\n * @param sendWhen If
`true`, values for which the predicate returns `true` are returned. Otherwise,\n * values for which the predicate
returns `false` are returned\n *^\ninternal class FilteringSequence<T>(\n    private val sequence: Sequence<T>,\n    private val sendWhen: Boolean = true,\n    private val predicate: (T) -> Boolean\n)
: Sequence<T> {\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val iterator =
sequence.iterator()\n        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue\n        var nextItem: T?
= null\n        private fun calcNext() {\n            while (iterator.hasNext()) {\n                val item = iterator.next()\n
                if (predicate(item) == sendWhen) {\n                    nextItem = item\n                    nextState = 1\n
                }\n            }\n            nextState = 0\n        }\n        override fun next(): T {\n            if (nextState
== -1)\n                calcNext()\n            if (nextState == 0)\n                throw NoSuchElementException()\n            val
result = nextItem\n            nextItem = null\n            nextState = -1\n            @Suppress("UNCHECKED_CAST")\n
                return result as T\n            }\n        }\n        override fun hasNext(): Boolean {\n
            if (nextState == -1)\n                calcNext()\n            return nextState == 1\n        }\n    }\n}\n\n/>\n * A
sequence which returns the results of applying the given [transformer] function to the values\n * in the underlying
[sequence].\n *^\ninternal class TransformingSequence<T, R>(\n    constructor(private val sequence: Sequence<T>,\n    private val transformer: (T) -> R) : Sequence<R> {\n    override fun iterator(): Iterator<R> = object : Iterator<R> {\n
        val iterator = sequence.iterator()\n        override fun next(): R {\n            return transformer(iterator.next())\n
        }\n        override fun hasNext(): Boolean {\n            return iterator.hasNext()\n        }\n    }\n}\n\ninternal fun <E>

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flatten(iterator: (R) -> Iterator<E>): Sequence<E> {\n    return FlatteningSequence<T, R, E>(sequence,
transformer, iterator)\n    }\n}\n\n/**\n * A sequence which returns the results of applying the given [transformer]
function to the values\n * in the underlying
[sequence], where the transformer function takes the index of the value in the underlying\n * sequence along with
the value itself.\n */\ninternal class TransformingIndexedSequence<T, R>\nconstructor(private val sequence:
Sequence<T>, private val transformer: (Int, T) -> R) : Sequence<R> {\n    override fun iterator(): Iterator<R> =
object : Iterator<R> {\n        val iterator = sequence.iterator()\n        var index = 0\n        override fun next(): R {\n            return transformer(checkIndexOverflow(index++), iterator.next())\n        }\n    }\n}\n\n    override fun hasNext():
Boolean {\n        return iterator.hasNext()\n    }\n}\n}\n\n/**\n * A sequence which combines values from
the underlying [sequence] with their indices and returns them as\n * [IndexedValue] objects.\n */\ninternal class
IndexingSequence<T>\nconstructor(private val sequence: Sequence<T>) : Sequence<IndexedValue<T>> {\n    override fun iterator(): Iterator<IndexedValue<T>> = object : Iterator<IndexedValue<T>>
{\n        val iterator = sequence.iterator()\n        var index = 0\n        override fun next(): IndexedValue<T> {\n            return IndexedValue(checkIndexOverflow(index++), iterator.next())\n        }\n    }\n}\n\n    override fun hasNext():
Boolean {\n        return iterator.hasNext()\n    }\n}\n}\n\n/**\n * A sequence which takes the values from
two parallel underlying sequences, passes them to the given\n * [transform] function and returns the values returned
by that function. The sequence stops returning\n * values as soon as one of the underlying sequences stops returning
values.\n */\ninternal class MergingSequence<T1, T2, V>\nconstructor(\n    private val sequence1:
Sequence<T1>,\n    private val sequence2: Sequence<T2>,\n    private val transform: (T1, T2) -> V)\n : Sequence<V> {\n    override fun iterator(): Iterator<V> = object : Iterator<V> {\n        val iterator1 =
sequence1.iterator()\n        val iterator2 = sequence2.iterator()\n        override
fun next(): V {\n            return transform(iterator1.next(), iterator2.next())\n        }\n    }\n}\n\n    override fun hasNext():
Boolean {\n        return iterator1.hasNext() && iterator2.hasNext()\n    }\n}\n}\n\ninternal class
FlatteningSequence<T, R, E>\nconstructor(\n    private val sequence: Sequence<T>,\n    private val transformer: (T)
-> R,\n    private val iterator: (R) -> Iterator<E>)\n : Sequence<E> {\n    override fun iterator(): Iterator<E> = object
: Iterator<E> {\n        val iterator = sequence.iterator()\n        var itemIterator: Iterator<E>? = null\n        override
fun next(): E {\n            if (!ensureItemIterator())\n                throw NoSuchElementException()\n            return
itemIterator!!.next()\n        }\n    }\n}\n\n    override fun hasNext(): Boolean {\n        return ensureItemIterator()\n    }\n}\n\n    private fun ensureItemIterator(): Boolean {\n        if (itemIterator?.hasNext() == false)\n            itemIterator = null\n    }\n\n    while (itemIterator == null) {\n        if (!iterator.hasNext()) {\n            return false\n        } else
{\n            val element = iterator.next()\n            val nextItemIterator = iterator(transformer(element))\n            if (nextItemIterator.hasNext()) {\n                itemIterator = nextItemIterator\n                return true\n            }\n        }\n    }\n}\n}\n\ninternal fun <T, C, R>
flatMapIndexed(source: Sequence<T>, transform: (Int, T) -> C, iterator: (C) -> Iterator<R>): Sequence<R> =\nsequence {\n    var index = 0\n    for (element in source) {\n        val result =
transform(checkIndexOverflow(index++), element)\n        yieldAll(iterator(result))\n    }\n}\n}\n\n/**\n * A
sequence that supports drop(n) and take(n) operations\n */\ninternal interface DropTakeSequence<T> :
Sequence<T> {\n\n    fun drop(n: Int): Sequence<T>\n    fun take(n: Int): Sequence<T>}\n}\n\n/**\n * A sequence that skips [startIndex]
values from the underlying [sequence]\n * and stops returning values right before [endIndex], i.e. stops at `endIndex
- 1`\n */\ninternal class SubSequence<T>(\n    private val sequence: Sequence<T>,\n    private val startIndex: Int,\n    private val endIndex: Int)\n : Sequence<T>, DropTakeSequence<T> {\n    init {\n        require(startIndex >= 0) {\n            \"startIndex should be non-negative, but is $startIndex\"\n        }\n        require(endIndex >= 0) {\n            \"endIndex should be
non-negative, but is $endIndex\"\n        }\n        require(endIndex >= startIndex) {\n            \"endIndex should be not less than
startIndex, but was $endIndex < $startIndex\"\n        }\n    }\n\n    private val count: Int get() = endIndex - startIndex\n\n    override fun drop(n: Int): Sequence<T> = if (n >= count) emptySequence() else SubSequence(sequence, startIndex
+ n, endIndex)\n\n    override fun take(n: Int): Sequence<T> = if (n >=

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count) this else SubSequence(sequence, startIndex, startIndex + n)\n\n  override fun iterator() = object :
Iterator<T> {\n\n    val iterator = sequence.iterator()\n    var position = 0\n\n    // Shouldn't be called from
constructor to avoid premature iteration\n    private fun drop() {\n        while (position < startIndex &&
iterator.hasNext()) {\n            iterator.next()\n            position++\n        }\n    }\n\n    override fun
hasNext(): Boolean {\n        drop()\n        return (position < endIndex) && iterator.hasNext()\n    }\n\n    override fun next(): T {\n        drop()\n        if (position >= endIndex)\n            throw
NoSuchElementException()\n        position++\n        return iterator.next()\n    }\n}\n}\n\n**\n * A
sequence that returns at most [count] values from the underlying [sequence], and stops returning values\n * as soon
as that count is reached.\n *\n\ninternal class
TakeSequence<T>(\n    private val sequence: Sequence<T>,\n    private val count: Int\n) : Sequence<T>,\nDropTakeSequence<T> {\n\n    init {\n        require(count >= 0) { "count must be non-negative, but was $count." }\n    }\n\n    override fun drop(n: Int): Sequence<T> = if (n >= count) emptySequence() else
SubSequence(sequence, n, count)\n\n    override fun take(n: Int): Sequence<T> = if (n >= count) this else
TakeSequence(sequence, n)\n\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        var left =
count\n        val iterator = sequence.iterator()\n\n        override fun next(): T {\n            if (left == 0)\n                throw
NoSuchElementException()\n            left--\n            return iterator.next()\n        }\n\n        override fun hasNext():
Boolean {\n            return left > 0 && iterator.hasNext()\n        }\n    }\n}\n\n**\n * A sequence that returns values
from the underlying [sequence] while the [predicate] function returns\n * `true`,
and stops returning values once the function returns `false` for the next element.\n *\n\ninternal class
TakeWhileSequence<T>\n\nconstructor(\n    private val sequence: Sequence<T>,\n    private val predicate: (T) ->
Boolean\n) : Sequence<T> {\n\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val iterator =
sequence.iterator()\n        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue\n        var nextItem: T?
= null\n\n        private fun calcNext() {\n            if (iterator.hasNext()) {\n                val item = iterator.next()\n                if (predicate(item)) {\n                    nextState = 1\n                    nextItem = item\n                    return\n                }\n                nextState = 0\n            }\n\n            override fun next(): T {\n                if (nextState == -1)\n                    calcNext() // will change nextState\n                if (nextState == 0)\n                    throw NoSuchElementException()\n                @SuppressWarnings("UNCHECKED_CAST")\n                val result = nextItem as T\n                // Clean next to avoid
keeping reference on yielded instance\n                nextItem = null\n                nextState = -1\n                return result\n            }\n\n            override fun hasNext(): Boolean {\n                if (nextState == -1)\n                    calcNext() // will change
nextState\n                return nextState == 1\n            }\n        }\n    }\n}\n\n**\n * A sequence that skips the specified number of
values from the underlying [sequence] and returns\n * all values after that.\n *\n\ninternal class DropSequence<T>(\n    private val sequence: Sequence<T>,\n    private val count: Int\n) : Sequence<T>,\nDropTakeSequence<T> {\n\n    init {\n        require(count >= 0) { "count must be non-negative, but was $count." }\n    }\n\n    override fun drop(n:
Int): Sequence<T> = (count + n).let { n1 -> if (n1 < 0) DropSequence(this, n) else DropSequence(sequence, n1) }\n\n    override fun take(n: Int): Sequence<T>
= (count + n).let { n1 -> if (n1 < 0) TakeSequence(this, n) else SubSequence(sequence, count, n1) }\n\n    override
fun iterator(): Iterator<T> = object : Iterator<T> {\n        val iterator = sequence.iterator()\n        var left = count\n\n        // Shouldn't be called from constructor to avoid premature iteration\n        private fun drop() {\n            while (left
> 0 && iterator.hasNext()) {\n                iterator.next()\n                left--\n            }\n        }\n\n        override fun
next(): T {\n            drop()\n            return iterator.next()\n        }\n\n        override fun hasNext(): Boolean {\n            drop()\n            return iterator.hasNext()\n        }\n    }\n}\n\n**\n * A sequence that skips the values from the
underlying [sequence] while the given [predicate] returns `true` and returns\n * all values after that.\n *\n\ninternal
class DropWhileSequence<T>\n\nconstructor(\n    private val sequence: Sequence<T>,\n    private val predicate:
(T) -> Boolean\n) : Sequence<T> {\n\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val
iterator = sequence.iterator()\n        var dropState: Int = -1 // -1 for not dropping, 1 for nextItem, 0 for normal
iteration\n        var nextItem: T? = null\n\n        private fun drop() {\n            while (iterator.hasNext()) {\n                val item = iterator.next()\n                if (!predicate(item)) {\n                    nextItem = item\n                    dropState =
1\n                    return\n                }\n            }\n\n            dropState = 0\n        }\n\n        override fun next(): T {\n

```

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if (dropState == -1)\n        drop()\n\n        if (dropState == 1) {\n
@Suppress(\\"UNCHECKED_CAST\")\n        val result = nextItem as T\n        nextItem = null\n
dropState = 0\n        return result\n        }\n        return iterator.next()\n        }\n\n        override
fun hasNext(): Boolean {\n        if (dropState == -1)\n            drop()\n            return dropState == 1 ||
iterator.hasNext()\n        }\n    }\n\ninternal class DistinctSequence<T, K>(private val source: Sequence<T>,
private val keySelector: (T) -> K) : Sequence<T> {\n    override fun iterator(): Iterator<T> =
DistinctIterator(source.iterator(), keySelector)\n}\n\nprivate class DistinctIterator<T, K>(private val source:
Iterator<T>, private val keySelector: (T) -> K) : AbstractIterator<T>() {\n    private val observed =
HashSet<K>()\n    override fun computeNext() {\n        while (source.hasNext()) {\n            val next =
source.next()\n            val key = keySelector(next)\n            if (observed.add(key)) {\n                setNext(next)\n            }\n            return\n        }\n        done()\n    }\n}\n\nprivate class GeneratorSequence<T : Any>(private val
getInitialValue: () -> T?, private val getNextValue: (T) -> T?) : Sequence<T>
{\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        var nextItem: T? = null\n        var nextState:
Int = -2 // -2 for initial unknown, -1 for next unknown, 0 for done, 1 for continue\n        private fun calcNext() {\n            nextItem = if (nextState == -2) getInitialValue() else getNextValue(nextItem!!)\n            nextState = if
(nextItem == null) 0 else 1\n        }\n        override fun next(): T {\n            if (nextState < 0)\n                calcNext()\n            if (nextState == 0)\n                throw NoSuchElementException()\n            val result =
nextItem as T\n            // Do not clean nextItem (to avoid keeping reference on yielded instance) -- need to keep
state for getNextValue\n            nextState = -1\n            return result\n        }\n        override fun hasNext():
Boolean {\n            if (nextState < 0)\n                calcNext()\n            return nextState == 1\n        }\n    }\n}\n\n/**\n * Returns a
wrapper sequence that provides values of this sequence, but ensures it can be iterated only one time.\n * The
operation is _intermediate_ and _stateless_.\n * [IllegalStateException] is thrown on iterating the returned
sequence for the second time and the following times.\n */\npublic fun <T> Sequence<T>.constrainOnce():
Sequence<T> {\n    // as? does not work in js\n    //return this as? ConstrainedOnceSequence<T> ?:\n    ConstrainedOnceSequence(this)\n    return if (this is ConstrainedOnceSequence<T>) this else
ConstrainedOnceSequence(this)\n}\n\n/**\n * Returns a sequence which invokes the function to calculate the next
value on each iteration until the function returns `null`.\n * The returned sequence is constrained to be iterated
only once.\n * @see constrainOnce\n * @see kotlin.sequences.sequence\n * @sample
samples.collections.Sequences.Building.generateSequence\n */\npublic fun <T : Any>
generateSequence(nextFunction: () -> T?): Sequence<T> {\n    return GeneratorSequence(nextFunction,
{ nextFunction() }).constrainOnce()\n}\n\n/**\n * Returns a sequence defined by the starting value [seed] and the
function [nextFunction],\n * which is invoked to calculate the next value based on the previous one on each
iteration.\n * The sequence produces values until it encounters first `null` value.\n * If [seed] is `null`, an empty
sequence is produced.\n * The sequence can be iterated multiple times, each time starting with [seed].\n * @see
kotlin.sequences.sequence\n * @sample
samples.collections.Sequences.Building.generateSequenceWithSeed\n */\npublic fun <T : Any> generateSequence(seed: T?,
nextFunction: (T) -> T?): Sequence<T> =\n    if (seed == null)\n        EmptySequence\n    else\n        GeneratorSequence({ seed }, nextFunction)\n\n/**\n * Returns a sequence defined by the function [seedFunction],
which is invoked to produce the starting value,\n * and the [nextFunction], which
is invoked to calculate the next value based on the previous one on each iteration.\n * The sequence produces
values until it encounters first `null` value.\n * If [seedFunction] returns `null`, an empty sequence is produced.\n *
The sequence can be iterated multiple times.\n * @see kotlin.sequences.sequence\n * @sample
samples.collections.Sequences.Building.generateSequenceWithLazySeed\n */\npublic fun <T : Any>
generateSequence(seedFunction: () -> T?, nextFunction: (T) -> T?): Sequence<T> =\n    GeneratorSequence(seedFunction, nextFunction)\n\n"/>\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be

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found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("PreconditionsKt")\n\npackage
kotlin\n\nimport kotlin.contracts.contract\n\n/**\n * Throws an [IllegalArgumentException] if the [value] is false.\n
*\n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun require(value: Boolean): Unit {\n    contract {\n        returns()
implies value\n    }\n    require(value) { "Failed requirement." }\n}\n\n/**\n * Throws an
[IllegalArgumentException] with the result of calling [lazyMessage] if the [value] is false.\n *\n * @sample
samples.misc.Preconditions.failRequireWithLazyMessage\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun
require(value: Boolean, lazyMessage: () -> Any): Unit {\n    contract {\n        returns() implies value\n    }\n    if
(!value) {\n        val message = lazyMessage()\n        throw IllegalArgumentException(message.toString())\n    }\n}\n\n/**\n * Throws an [IllegalArgumentException] if the [value] is null. Otherwise returns the not null value.\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> requireNotNull(value: T?): T {\n    contract {\n
returns() implies (value != null)\n    }\n    return requireNotNull(value) { "Required value was null." }\n}\n\n/**\n * Throws an
[IllegalArgumentException] with the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the
not null value.\n *\n * @sample samples.misc.Preconditions.failRequireNotNullWithLazyMessage\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> requireNotNull(value: T?, lazyMessage: () -> Any): T
{\n    contract {\n        returns() implies (value != null)\n    }\n    if (value == null) {\n        val message =
lazyMessage()\n        throw IllegalArgumentException(message.toString())\n    } else {\n        return value\n    }\n}\n\n/**\n * Throws an [IllegalStateException] if the [value] is false.\n *\n * @sample
samples.misc.Preconditions.failCheckWithLazyMessage\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun
check(value: Boolean): Unit {\n    contract {\n        returns() implies value\n    }\n    check(value) { "Check failed." }\n}\n\n/**\n * Throws
an [IllegalStateException] with the result of calling [lazyMessage] if the [value] is false.\n *\n * @sample
samples.misc.Preconditions.failCheckWithLazyMessage\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun
check(value: Boolean, lazyMessage: () -> Any): Unit {\n    contract {\n        returns() implies value\n    }\n    if
(!value) {\n        val message = lazyMessage()\n        throw IllegalStateException(message.toString())\n    }\n}\n\n/**\n * Throws an [IllegalStateException] if the [value] is null. Otherwise\n * returns the not null value.\n
*\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n *\n\n@kotlin.internal.InlineOnly\npublic
inline fun <T : Any> checkNotNull(value: T?): T {\n    contract {\n        returns() implies (value != null)\n    }\n    return checkNotNull(value) { "Required value was null." }\n}\n\n/**\n * Throws an [IllegalStateException] with
the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the not null value.\n
*\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n *\n\n@kotlin.internal.InlineOnly\npublic
inline fun <T : Any> checkNotNull(value: T?, lazyMessage: () -> Any): T {\n    contract {\n        returns() implies
(value != null)\n    }\n    if (value == null) {\n        val message = lazyMessage()\n        throw
IllegalStateException(message.toString())\n    } else {\n        return value\n    }\n}\n\n/**\n * Throws an
[IllegalStateException] with the given [message].\n *\n * @sample samples.misc.Preconditions.failWithError\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun error(message: Any): Nothing = throw
IllegalStateException(message.toString())\n"}\n\n/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage kotlin.collections\n\n/\n\n// NOTE: THIS FILE IS AUTO-GENERATED
by the GenerateStandardLib.kt\n//\n
See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.js.*\nimport
primitiveArrayConcat\nimport withType\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n *
Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds
of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n *\n\npublic actual fun <T>
Array<out T>.elementAt(index: Int): T {\n    return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, size: $size") }\n}\n\n/**\n * Returns an element at the given

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[index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n * \n public actual fun ByteArray.elementAt(index: Int): Byte
{\n   return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")}
}\n}\n\n/**\n * Returns an element
at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n
* @sample samples.collections.Collections.Elements.elementAt\n * \n public actual fun
ShortArray.elementAt(index: Int): Short {\n   return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, size: $size")} }\n}\n\n/**\n * Returns an element at the given
[index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n * \n public actual fun IntArray.elementAt(index: Int): Int {\n
return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")} }\n}\n\n/**\n
* Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n * \n public actual fun
LongArray.elementAt(index: Int): Long {\n
return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")}
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n * \n public
actual fun FloatArray.elementAt(index: Int): Float {\n   return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, size: $size")} }\n}\n\n/**\n * Returns an element at the given
[index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n * \n public actual fun DoubleArray.elementAt(index: Int):
Double {\n   return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")}
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this
array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n * \n public actual fun
BooleanArray.elementAt(index: Int): Boolean {\n   return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, size: $size")} }\n}\n\n/**\n * Returns an element at the given
[index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n * \n public actual fun CharArray.elementAt(index: Int): Char
{\n   return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")}
}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n * \n public actual fun <T> Array<out T>.asList():
List<T> {\n   return ArrayList<T>(this.unsafeCast<Array<Any?>>())}\n}\n\n/**\n * Returns a [List] that wraps the
original array.\n * \n @kotlin.internal.InlineOnly\n public actual inline fun ByteArray.asList(): List<Byte> {\n
return this.unsafeCast<Array<Byte>>().asList()}\n}\n\n/**\n
* Returns a [List] that wraps the original array.\n * \n @kotlin.internal.InlineOnly\n public actual inline fun
ShortArray.asList(): List<Short> {\n   return this.unsafeCast<Array<Short>>().asList()}\n}\n\n/**\n * Returns a
[List] that wraps the original array.\n * \n @kotlin.internal.InlineOnly\n public actual inline fun IntArray.asList():
List<Int> {\n   return this.unsafeCast<Array<Int>>().asList()}\n}\n\n/**\n * Returns a [List] that wraps the original
array.\n * \n @kotlin.internal.InlineOnly\n public actual inline fun LongArray.asList(): List<Long> {\n   return
this.unsafeCast<Array<Long>>().asList()}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
* \n @kotlin.internal.InlineOnly\n public actual inline fun FloatArray.asList(): List<Float> {\n   return
this.unsafeCast<Array<Float>>().asList()}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
* \n @kotlin.internal.InlineOnly\n public actual inline fun DoubleArray.asList(): List<Double>
{\n   return this.unsafeCast<Array<Double>>().asList()}\n}\n\n/**\n * Returns a [List] that wraps the original
array.\n * \n @kotlin.internal.InlineOnly\n public actual inline fun BooleanArray.asList(): List<Boolean> {\n   return
this.unsafeCast<Array<Boolean>>().asList()}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
* \n public actual fun CharArray.asList(): List<Char> {\n   return object : AbstractList<Char>(), RandomAccess {\n
override val size: Int get() = this@asList.size\n   override fun isEmpty(): Boolean = this@asList.isEmpty()}\n
}

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    override fun contains(element: Char): Boolean = this@asList.contains(element)\n
    override fun get(index: Int): Char {\n
        AbstractList.checkElementIndex(index, size)\n
        return this@asList[index]\n
    }\n
    override fun indexOf(element: Char): Int {\n
        @Suppress("USELESS_CAST")\n
        if ((element as Any?) !is Char) return -1\n
        return this@asList.indexOf(element)\n
    }\n
    override fun lastIndexOf(element: Char): Int {\n
        @Suppress("USELESS_CAST")\n
        if ((element as Any?) !is Char) return -1\n
        return this@asList.lastIndexOf(element)\n
    }\n
}

Returns `true` if the two specified arrays are *deeply* equal to one another,\n
* i.e. contain the same number of the same elements in the same order.\n
* If two corresponding elements are nested arrays, they are also compared deeply.\n
* If any of arrays contains itself on any nesting level the behavior is undefined.\n
* The elements of other types are compared for equality with the [equals][Any.equals] function.\n
* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*/\n
@SinceKotlin("1.1")\n
@kotlin.internal.LowPriorityInOverloadResolution\n
public actual infix fun <T> Array<out T>.contentDeepEquals(other: Array<out T>): Boolean {\n
    return this.contentDeepEquals(other)\n
}\n
*/\n
* Returns `true` if the two specified arrays are *deeply* equal to one another,\n
* i.e. contain the same number of the same elements in the same order.\n
* The specified arrays are also considered deeply equal if both are `null`.\n
* If two corresponding elements are nested arrays, they are also compared deeply.\n
* If any of arrays contains itself on any nesting level the behavior is undefined.\n
* The elements of other types are compared for equality with the [equals][Any.equals] function.\n
* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*/\n
@SinceKotlin("1.4")\n
@library("arrayDeepEquals")\n
public actual infix fun <T> Array<out T>?.contentDeepEquals(other: Array<out T>?): Boolean {\n
    definedExternally\n
}\n
*/\n
* Returns a hash code based on the contents of this array as if it is [List].\n
* Nested arrays are treated as lists too.\n
* If any of arrays contains itself on any nesting level the behavior is undefined.\n
*/\n
@SinceKotlin("1.1")\n
@kotlin.internal.LowPriorityInOverloadResolution\n
public actual fun <T> Array<out T>.contentDeepHashCode(): Int {\n
    return this.contentDeepHashCode()\n
}\n
*/\n
* Returns a hash code based on the contents of this array as if it is [List].\n
* Nested arrays are treated as lists too.\n
* If any of arrays contains itself on any nesting level the behavior is undefined.\n
*/\n
@SinceKotlin("1.4")\n
@library("arrayDeepHashCode")\n
public actual fun <T> Array<out T>?.contentDeepHashCode(): Int {\n
    definedExternally\n
}\n
*/\n
* Returns a string representation of the contents of this array as if it is a [List].\n
* Nested arrays are treated as lists too.\n
* If any of arrays contains itself on any nesting level that reference\n
* is rendered as `[...]` to prevent recursion.\n
* @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n
*/\n
@SinceKotlin("1.1")\n
@kotlin.internal.LowPriorityInOverloadResolution\n
public actual fun <T> Array<out T>.contentDeepToString(): String {\n
    return this.contentDeepToString()\n
}\n
*/\n
* Returns a string representation of the contents of this array as if it is a [List].\n
* Nested arrays are treated as lists too.\n
* If any of arrays contains itself on any nesting level that reference\n
* is rendered as `[...]` to prevent recursion.\n
* @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n
*/\n
@SinceKotlin("1.4")\n
@library("arrayDeepToString")\n
public actual fun <T> Array<out T>?.contentDeepToString(): String {\n
    definedExternally\n
}\n
*/\n
* Returns `true` if the two specified arrays are *structurally* equal to one another,\n
* i.e. contain the same number of the same elements in the same order.\n
* The elements are compared for equality with the [equals][Any.equals] function.\n
* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*/\n
@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n
@SinceKotlin("1.1")\n
@DeprecatedSinceKotlin(hiddenSince = "1.4")\n
public actual infix fun <T> Array<out T>.contentEquals(other: Array<out T>): Boolean {\n
    return this.contentEquals(other)\n
}\n
*/\n
* Returns `true` if the two specified arrays are *structurally* equal to one another,\n
* i.e. contain the same number of the same elements in the same order.\n
* The elements are compared for equality with the [equals][Any.equals]

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function.  
 \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 ByteArray.contentEquals(other: ByteArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns  
 `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of the same elements in the same order.  
 \* The elements are compared for equality with the [equals][Any.equals] function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 ShortArray.contentEquals(other: ShortArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns  
 `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of the  
 same elements in the same order.  
 \* The elements are compared for equality with the [equals][Any.equals]  
 function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince  
 = "1.4")  
 public actual infix fun  
 IntArray.contentEquals(other: IntArray): Boolean {  
 return  
 this.contentEquals(other)  
 }  
 }  
 \* Returns `true` if the two specified arrays are \*structurally\* equal to one  
 another,  
 \* i.e. contain the same number of the same elements in the same order.  
 \* The elements are  
 compared for equality with the [equals][Any.equals] function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 LongArray.contentEquals(other: LongArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns  
 `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of the  
 same elements in the same order.  
 \* The elements are compared for equality with  
 the [equals][Any.equals] function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 FloatArray.contentEquals(other: FloatArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns  
 `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of the  
 same elements in the same order.  
 \* The elements are compared for equality with the [equals][Any.equals]  
 function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 DoubleArray.contentEquals(other: DoubleArray): Boolean {  
 return  
 this.contentEquals(other)  
 }  
 }  
 \* Returns `true` if the two specified arrays are \*structurally\* equal to  
 one another,  
 \* i.e. contain the same number of the same elements in the same order.  
 \* The elements are  
 compared for equality with the [equals][Any.equals] function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 BooleanArray.contentEquals(other: BooleanArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of  
 the same elements in the same order.  
 \* The elements are compared for equality with the [equals][Any.equals]  
 function.  
 \* For floating point numbers it means that `NaN` is equal to itself and  
 `-0.0` is not equal to `0.0`.  
 \*  
 @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation  
 warning.")  
 @SinceKotlin("1.1")  
 @DeprecatedSinceKotlin(hiddenSince = "1.4")  
 public actual infix fun  
 CharArray.contentEquals(other: CharArray): Boolean {  
 return this.contentEquals(other)  
 }  
 }  
 \* Returns  
 `true` if the two specified arrays are \*structurally\* equal to one another,  
 \* i.e. contain the same number of the  
 same elements in the same order.  
 \* The elements are compared for equality with the [equals][Any.equals]

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function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun <T> Array<out T>?.contentEquals(other: Array<out T>?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun ByteArray?.contentEquals(other: ByteArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun ShortArray?.contentEquals(other: ShortArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun IntArray?.contentEquals(other: IntArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun LongArray?.contentEquals(other: LongArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun FloatArray?.contentEquals(other: FloatArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun DoubleArray?.contentEquals(other: DoubleArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun BooleanArray?.contentEquals(other: BooleanArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun CharArray?.contentEquals(other: CharArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n *\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual fun <T> Array<out T>.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n

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*\/n@Deprecated(\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual fun
ByteArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on
the contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual fun
ShortArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual fun
IntArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual fun
LongArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid deprecation
warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual fun
FloatArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code
based on the contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid
deprecation warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual
fun DoubleArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code
based on the contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid
deprecation warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual
fun BooleanArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code
based on the contents of this array as if it is [List].\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to avoid
deprecation warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic actual
fun CharArray.contentHashCode(): Int {\n    return this.contentHashCode()\n}\n\n/**\n * Returns a hash code based
on the contents
of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun <T>
Array<out T>?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
ByteArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the contents
of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
ShortArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
IntArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the contents
of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic
actual fun LongArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on
the contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual
fun FloatArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
DoubleArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
BooleanArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a hash code based on the
contents of this array as if it is [List].\n */\n@SinceKotlin(\n1.4\n)\n@library(\narrayHashCode\n)\npublic actual fun
CharArray?.contentHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a string representation of the
contents of the specified array as if it is [List].\n */\n@sample
samples.collections.Arrays.ContentOperations.contentToString\n */\n@Deprecated(\nUse Kotlin compiler 1.4 to
avoid deprecation warning.\n)\n@SinceKotlin(\n1.1\n)\n@DeprecatedSinceKotlin(hiddenSince = \n1.4\n)\npublic
actual fun <T> Array<out T>.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a

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string representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun ByteArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*^n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual fun
ShortArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun IntArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince
= "1.4")\npublic actual fun LongArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n *
Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun FloatArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun DoubleArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of
the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun BooleanArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n *^n@Deprecated("Use Kotlin compiler 1.4 to
avoid deprecation warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
actual fun CharArray.contentToString(): String {\n    return this.contentToString()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*^n@SinceKotlin("1.4")\n@library("arrayToString")\npublic
actual fun <T> Array<out T>?.contentToString(): String {\n    definedExternally\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*^n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun ByteArray?.contentToString(): String
{\n    definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*^n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun ShortArray?.contentToString(): String
{\n    definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*^n@SinceKotlin("1.4")\n@library("arrayToString")\npublic

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actual fun IntArray?.contentToString(): String {\n  definedExternally\n}\n\n/**\n * Returns a string representation
of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun LongArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun FloatArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun DoubleArray?.contentToString():
String {\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as
if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun BooleanArray?.contentToString():
String {\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as
if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun CharArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that
array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it
overlaps with the destination range.\n * \n * @param destination the array to copy to.\n *
@param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the
beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the
subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex
> endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array
starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices
range.\n * \n * @return the [destination] array.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT
_ARGUMENTS")\npublic actual inline fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset:
Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T> {\n  arrayCopy(this,
destination, destinationOffset, startIndex, endIndex)\n  return destination\n}\n\n/**\n * Copies this array or its
subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the
[destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param
destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0
by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param
endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this
array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange
doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is
out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT
_ARGUMENTS")\npublic actual inline fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): ByteArray {\n  arrayCopy(this.unsafeCast<Array<Byte>>(),
destination.unsafeCast<Array<Byte>>(), destinationOffset, startIndex, endIndex)\n  return destination\n}\n\n/**\n *
Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass
the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n *
\n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array
to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n *
@param endIndex the

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end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n

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*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ShortArray {\n    arrayCopy(this.unsafeCast<Array<Short>>(), destination.unsafeCast<Array<Short>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun IntArray.copyInto(destination: IntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): IntArray {\n    arrayCopy(this.unsafeCast<Array<Int>>(), destination.unsafeCast<Array<Int>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun LongArray.copyInto(destination: LongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): LongArray {\n    arrayCopy(this.unsafeCast<Array<Long>>(), destination.unsafeCast<Array<Long>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n
```

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_ARGUMENTS`)
public actual inline fun FloatArray.copyInto(destination: FloatArray, destinationOffset: Int = 0,
startIndex:
Int = 0, endIndex: Int = size): FloatArray {
    arrayCopy(this.unsafeCast<Array<Float>>(),
destination.unsafeCast<Array<Float>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun DoubleArray.copyInto(destination: DoubleArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): DoubleArray {
    arrayCopy(this.unsafeCast<Array<Double>>(),
destination.unsafeCast<Array<Double>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun BooleanArray.copyInto(destination: BooleanArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): BooleanArray {
    arrayCopy(this.unsafeCast<Array<Boolean>>(),
destination.unsafeCast<Array<Boolean>>(),
destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun CharArray.copyInto(destination: CharArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): CharArray {
    arrayCopy(this.unsafeCast<Array<Char>>(),
destination.unsafeCast<Array<Char>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Returns new array which is a copy of the original array.
 * @sample samples.collections.Arrays.CopyOfOperations.copyOf
 */
@Suppress("ACTUAL_WITHOUT_EXPECT", "NOTHING_TO_INLINE")
public actual inline fun <T> Array<out T>.copyOf(): Array<T> {
    return

```

```

this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOf\n *\n@Suppress("NOTHING_TO_INLINE")\npublic
actual inline fun
ByteArray.copyOf(): ByteArray {\n    return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a
copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun ShortArray.copyOf(): ShortArray {\n
return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n *
@sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun IntArray.copyOf(): IntArray {\n    return
this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOf\n *\npublic actual fun LongArray.copyOf(): LongArray {\n
return withType("LongArray", this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the
original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun FloatArray.copyOf(): FloatArray {\n
return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n *
@sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun DoubleArray.copyOf(): DoubleArray {\n
return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n *
@sample samples.collections.Arrays.CopyOfOperations.copyOf\n *\npublic actual fun BooleanArray.copyOf():
BooleanArray {\n    return withType("BooleanArray", this.asDynamic().slice())\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*\npublic actual fun CharArray.copyOf(): CharArray {\n    return withType("CharArray",
this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of
the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero
values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the
[newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are
filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n
*\npublic actual fun ByteArray.copyOf(newSize: Int): ByteArray {\n    require(newSize >= 0) { "Invalid new array
size: $newSize." }\n    return fillFrom(this, ByteArray(newSize))\n}\n\n/**\n * Returns new array which is a copy
of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero
values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the
[newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are
filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n
*\npublic actual fun IntArray.copyOf(newSize: Int): IntArray {\n    require(newSize >= 0) { "Invalid new array
size:
$newSize." }\n    return fillFrom(this, IntArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the
original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values
if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the
[newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are
filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n
*\npublic actual fun LongArray.copyOf(newSize: Int): LongArray {\n    require(newSize >= 0) { "Invalid new

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array size: \$newSize.\n } \n return withType(\"LongArray\", arrayCopyResize(this, newSize, 0L))\n}\n\n/\*\*\n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \npublic actual fun

FloatArray.copyOf(newSize: Int): FloatArray {\n require(newSize >= 0) { \"Invalid new array size: \$newSize.\" }\n }\n return fillFrom(this, FloatArray(newSize))\n}\n\n/\*\*\n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* The copy is either truncated or padded at the end with zero values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \npublic actual fun

DoubleArray.copyOf(newSize: Int): DoubleArray {\n require(newSize >= 0) { \"Invalid new array size: \$newSize.\" }\n }\n return fillFrom(this, DoubleArray(newSize))\n}\n\n/\*\*\n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* The copy is either truncated or padded at the end with `false` values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `false` values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \npublic actual fun

BooleanArray.copyOf(newSize: Int): BooleanArray {\n require(newSize >= 0) { \"Invalid new array size: \$newSize.\" }\n }\n return withType(\"BooleanArray\", arrayCopyResize(this, newSize, false))\n}\n\n/\*\*\n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* The copy is either truncated or padded at the end with null char (`\u0000`) values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with null char (`\u0000`) values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n \* \npublic actual fun

CharArray.copyOf(newSize: Int): CharArray {\n require(newSize >= 0) { \"Invalid new array size: \$newSize.\" }\n }\n return withType(\"CharArray\", fillFrom(this, CharArray(newSize)))\n}\n\n/\*\*\n \* Returns new array which is a copy of the original array, resized to the given [newSize].\n \* The copy is either truncated or padded at the end with `null` values if necessary.\n \* \n \* - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n \* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `null` values.\n \* \n \* @sample samples.collections.Arrays.CopyOfOperations.resizingCopyOf\n \* \n@Suppress(\"ACTUAL\_WITHOUT\_EXPECT\")\npublic actual fun <T> Array<out T>.copyOf(newSize: Int): Array<T?> {\n require(newSize >= 0) { \"Invalid new array size: \$newSize.\" }\n }\n return arrayCopyResize(this, newSize, null)\n}\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \* \n@Suppress(\"ACTUAL\_WITHOUT\_EXPECT\")\npublic actual fun <T> Array<out T>.copyOfRange(fromIndex: Int, toIndex: Int): Array<T> {\n AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n }\n return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \* \npublic actual fun ByteArray.copyOfRange(fromIndex: Int, toIndex: Int): ByteArray {\n

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AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive)
to copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
actual fun ShortArray.copyOfRange(fromIndex: Int, toIndex: Int): ShortArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\npublic
actual fun IntArray.copyOfRange(fromIndex: Int, toIndex: Int): IntArray {\n
AbstractList.checkRangeIndexes(fromIndex,
toIndex, size)\n  return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a
copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to
copy.\n * @param toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException
if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\npublic actual fun
LongArray.copyOfRange(fromIndex: Int, toIndex: Int): LongArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return withType(<code>"LongArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified
range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n * @param
toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException
if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\npublic actual fun
FloatArray.copyOfRange(fromIndex: Int, toIndex: Int): FloatArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\npublic
actual fun DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\npublic
actual fun BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return withType(<code>"BooleanArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified
range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n * @param
toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n */\n\npublic actual fun CharArray.copyOfRange(fromIndex: Int, toIndex: Int): CharArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  return withType(<code>"CharArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Fills this array or its subrange with the specified
[element] value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param

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toIndex the end of the range (exclusive) to fill, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun <T> Array<T>.fill(element: T, fromIndex: Int = 0, toIndex: Int =
size): Unit {\n  AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex,
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun ByteArray.fill(element: Byte, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
 * Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of
the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this
array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun ShortArray.fill(element: Short, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
 * Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the
range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this
array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun IntArray.fill(element: Int, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
 * Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the
range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this
array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun LongArray.fill(element: Long, fromIndex:
Int = 0, toIndex: Int = size): Unit {\n  AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n
  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element]
value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the
end of the range (exclusive) to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun FloatArray.fill(element: Float, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
 * Fills this array or its subrange with the specified [element] value.\n * \n * @param
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range
(exclusive) to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex]
is greater than [toIndex].\n

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*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun DoubleArray.fill(element: Double, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
* Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range
(inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun BooleanArray.fill(element: Boolean, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n
* Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range
(inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun CharArray.fill(element:
Char, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  AbstractList.checkRangeIndexes(fromIndex, toIndex,
size)\n  nativeFill(element, fromIndex, toIndex);\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("ACTUAL_WITHOUT_EXPECT",
"NOTHING_TO_INLINE")\npublic actual inline operator fun <T> Array<out T>.plus(element: T): Array<T> {\n
return this.asDynamic().concat(arrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline
operator fun ByteArray.plus(element: Byte): ByteArray {\n  return plus(byteArrayOf(element))\n}\n\n/**\n *
Returns an array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun ShortArray.plus(element: Short):
ShortArray {\n  return plus(shortArrayOf(element))\n}\n\n/**\n
* Returns an array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun IntArray.plus(element: Int):
IntArray {\n  return plus(intArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline
operator fun LongArray.plus(element: Long): LongArray {\n  return plus(longArrayOf(element))\n}\n\n/**\n *
Returns an array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun FloatArray.plus(element: Float):
FloatArray {\n  return plus(floatArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline
operator fun DoubleArray.plus(element:
Double): DoubleArray {\n  return plus(doubleArrayOf(element))\n}\n\n/**\n * Returns an array containing all
elements of the original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic
actual inline operator fun BooleanArray.plus(element: Boolean): BooleanArray {\n  return
plus(booleanArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then
the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun
CharArray.plus(element: Char): CharArray {\n  return plus(charArrayOf(element))\n}\n\n/**\n * Returns an array
containing all elements of the original array and then all elements of the given [elements] collection.\n
*\n@Suppress("ACTUAL_WITHOUT_EXPECT")\npublic actual operator fun <T> Array<out T>.plus(elements:
Collection<T>): Array<T> {\n  return arrayPlusCollection(this, elements)\n}\n\n/**\n * Returns an array
containing all elements of the original

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array and then all elements of the given [elements] collection.

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    *^/npublic actual operator fun
    ByteArray.plus(elements: Collection<Byte>): ByteArray {
        return fillFromCollection(this.copyOf(size +
        elements.size), this.size, elements)
    }
    * Returns an array containing all elements of the original array and
    then all elements of the given [elements] collection.
    *^/npublic actual operator fun ShortArray.plus(elements:
    Collection<Short>): ShortArray {
        return fillFromCollection(this.copyOf(size + elements.size), this.size,
        elements)
    }
    * Returns an array containing all elements of the original array and then all elements of the
    given [elements] collection.
    *^/npublic actual operator fun IntArray.plus(elements: Collection<Int>): IntArray {
        return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)
    }
    * Returns an array
    containing all elements of the original array and then all elements of the given [elements] collection.
    *^/npublic actual operator fun LongArray.plus(elements: Collection<Long>): LongArray {
        return
        arrayPlusCollection(this, elements)
    }
    * Returns an array containing all elements of the original array and
    then all elements of the given [elements] collection.
    *^/npublic actual operator fun FloatArray.plus(elements:
    Collection<Float>): FloatArray {
        return fillFromCollection(this.copyOf(size + elements.size), this.size,
        elements)
    }
    * Returns an array containing all elements of the original array and then all elements of the
    given [elements] collection.
    *^/npublic actual operator fun DoubleArray.plus(elements: Collection<Double>):
    DoubleArray {
        return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)
    }
    * Returns an array containing all elements of the original array and then all elements of the given [elements]
    collection.
    *^/npublic actual operator fun BooleanArray.plus(elements: Collection<Boolean>): BooleanArray {
        return
        arrayPlusCollection(this, elements)
    }
    * Returns an array containing all elements of the original
    array and then all elements of the given [elements] collection.
    *^/npublic actual operator fun
    CharArray.plus(elements: Collection<Char>): CharArray {
        return fillFromCollection(this.copyOf(size +
        elements.size), this.size, elements)
    }
    * Returns an array containing all elements of the original array and
    then all elements of the given [elements] array.
    *^/n@Suppress("ACTUAL_WITHOUT_EXPECT",
    "NOTHING_TO_INLINE")
    npublic actual inline operator fun <T> Array<out T>.plus(elements: Array<out T>):
    Array<T> {
        return this.asDynamic().concat(elements)
    }
    * Returns an array containing all elements of
    the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun ByteArray.plus(elements:
    ByteArray): ByteArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array containing all elements of the original array and then all elements of the given [elements]
    array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun ShortArray.plus(elements:
    ShortArray): ShortArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array
    containing all elements of the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun IntArray.plus(elements: IntArray):
    IntArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array containing all elements of
    the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun LongArray.plus(elements:
    LongArray): LongArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array
    containing all elements of the original array and then all elements
    of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun
    FloatArray.plus(elements: FloatArray): FloatArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array containing all elements of the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun DoubleArray.plus(elements:
    DoubleArray): DoubleArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array
    containing all elements of the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic actual inline operator fun BooleanArray.plus(elements:
    BooleanArray): BooleanArray {
        return primitiveArrayConcat(this, elements)
    }
    * Returns an array
    containing all elements of the original array and then all elements of the given [elements] array.
    *^/n@Suppress("NOTHING_TO_INLINE")
    npublic

```

```

actual inline operator fun CharArray.plus(elements: CharArray): CharArray {
    return primitiveArrayConcat(this, elements)
}

Returns an array containing all elements of the original array and then the given [element].

@Suppress("ACTUAL_WITHOUT_EXPECT", "NOTHING_TO_INLINE")
public actual inline fun <T> Array<out T>.plusElement(element: T): Array<T> {
    return this.asDynamic().concat(arrayOf(element))
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun IntArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

public actual fun LongArray.sort(): Unit {
    @Suppress("DEPRECATION")
    if (size > 1) sort { a: Long, b: Long -> a.compareTo(b) }
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun ByteArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun ShortArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun DoubleArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun FloatArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place.

@sample
samples.collections.Arrays.Sorting.sortArray

@library("primitiveArraySort")
public actual fun CharArray.sort(): Unit {
    definedExternally
}

Sorts the array in-place according to the natural order of its elements.

The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

@sample
samples.collections.Arrays.Sorting.sortArrayOfComparable

public actual fun <T : Comparable<T>> Array<out T>.sort(): Unit {
    if (size > 1) sortArray(this)
}

Sorts the array in-place according to the order specified by the given [comparison] function.

The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

@Deprecated("Use sortWith instead", ReplaceWith("this.sortWith(Comparator(comparison))"))
@DeprecatedSinceKotlin(warningSince = "1.6")
public fun <T> Array<out T>.sort(comparison: (a: T, b: T) -> Int): Unit {
    if (size > 1) sortArrayWith(this, comparison)
}

Sorts a range in the array in-place.

The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample
samples.collections.Arrays.Sorting.sortRangeOfArrayOfComparable

@SinceKotlin("1.4")
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun <T : Comparable<T>> Array<out T>.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    sortArrayWith(this, fromIndex, toIndex, naturalOrder())
}

Sorts a range in the array in-place.

@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.

@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample
samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun ByteArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    val subarray = this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<ByteArray>()
    subarray.sort()
}

Sorts a range in the array in-place.

@param fromIndex the start of the range (inclusive) to sort, 0 by default.

```

```

@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException
if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun ShortArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<ShortArray>()\n    subarray.sort()\n}\n\n**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun IntArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<IntArray>()\n    subarray.sort()\n}\n\n**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun LongArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex,
toIndex, size)\n    sortArrayWith(this.unsafeCast<Array<Long>>(), fromIndex, toIndex,
naturalOrder())\n}\n\n**\n * Sorts a range in the array in-place.\n * \n * @param fromIndex the start of the range
(inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n *
@sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun FloatArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<FloatArray>()\n    subarray.sort()\n}\n\n**\n * Sorts a
range in the array
in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the
end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun DoubleArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<DoubleArray>()\n    subarray.sort()\n}\n\n**\n * Sorts
a range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort,

```

```

size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or
[toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than
[toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@\n@SinceKotlin("1.4")\n@\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic
actual fun CharArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<CharArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts the
array in-place according to the order specified by the given [comparison] function.\n * \n@\n@Deprecated("Use other
sorting functions from the Standard Library")\n@\n@DeprecatedSinceKotlin(warningSince =
"1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun ByteArray.sort(noinline comparison: (a: Byte, b: Byte) ->
Int): Unit
{\n    nativeSort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparison] function.\n * \n@\n@Deprecated("Use other sorting functions from the Standard
Library")\n@\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun
ShortArray.sort(noinline comparison: (a: Short, b: Short) -> Int): Unit {\n    nativeSort(comparison)\n}\n\n/**\n *
Sorts the array in-place according to the order specified by the given [comparison] function.\n
*\n@\n@Deprecated("Use other sorting functions from the Standard
Library")\n@\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun
IntArray.sort(noinline comparison: (a: Int, b: Int) -> Int): Unit {\n    nativeSort(comparison)\n}\n\n/**\n * Sorts the
array in-place according to the order specified by the given [comparison] function.\n * \n@\n@Deprecated("Use other
sorting functions from the Standard Library")\n@\n@DeprecatedSinceKotlin(warningSince
= "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun LongArray.sort(noinline comparison: (a: Long, b: Long) -
> Int): Unit {\n    nativeSort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by
the given [comparison] function.\n * \n@\n@Deprecated("Use other sorting functions from the Standard
Library")\n@\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun
FloatArray.sort(noinline comparison: (a: Float, b: Float) -> Int): Unit {\n    nativeSort(comparison)\n}\n\n/**\n *
Sorts the array in-place according to the order specified by the given [comparison] function.\n
*\n@\n@Deprecated("Use other sorting functions from the Standard
Library")\n@\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun
DoubleArray.sort(noinline comparison: (a: Double, b: Double) -> Int): Unit {\n
nativeSort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order
specified by the given [comparison] function.\n * \n@\n@Deprecated("Use other sorting functions from the Standard
Library")\n@\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun
CharArray.sort(noinline comparison: (a: Char, b: Char) -> Int): Unit {\n    nativeSort(comparison)\n}\n\n/**\n *
Sorts the array in-place according to the order specified by the given [comparator].\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n * \n@\n\npublic actual fun <T>
Array<out T>.sortWith(comparator: Comparator<in T>): Unit {\n    if (size > 1) sortArrayWith(this,
comparator)\n}\n\n/**\n * Sorts a range in the array in-place with the given [comparator].\n * \n * The sort is
_stable_. It means that equal elements preserve their order relative to each other after sorting.\n * \n *
@param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range
(exclusive)
to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@\n@SinceKotlin("1.4")\n@\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic
actual fun <T> Array<out T>.sortWith(comparator: Comparator<in T>, fromIndex: Int = 0, toIndex: Int = size):
Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    sortArrayWith(this, fromIndex, toIndex,
comparator)\n}\n\n/**\n * Returns a typed object array containing all of the elements of this primitive array.\n

```

```

*^/npublic actual fun ByteArray.toTypedArray(): Array<Byte> {n  return js("[\]").slice.call(this)n}\n/n/**\n *
Returns a *typed* object array containing all of the elements of this primitive array.\n *^/npublic actual fun
ShortArray.toTypedArray(): Array<Short> {n  return js("[\]").slice.call(this)n}\n/n/**\n
* Returns a *typed* object array containing all of the elements of this primitive array.\n *^/npublic actual fun
IntArray.toTypedArray(): Array<Int> {n  return js("[\]").slice.call(this)n}\n/n/**\n * Returns a *typed* object
array containing all of the elements of this primitive array.\n *^/npublic actual fun LongArray.toTypedArray():
Array<Long> {n  return js("[\]").slice.call(this)n}\n/n/**\n * Returns a *typed* object array containing all of the
elements of this primitive array.\n *^/npublic actual fun FloatArray.toTypedArray(): Array<Float> {n  return
js("[\]").slice.call(this)n}\n/n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun DoubleArray.toTypedArray(): Array<Double> {n  return
js("[\]").slice.call(this)n}\n/n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun BooleanArray.toTypedArray(): Array<Boolean> {n  return
js("[\]").slice.call(this)n}\n/n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun CharArray.toTypedArray(): Array<Char> {n  return Array(size) { index ->
this[index] }n}\n/n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*^/n@file:kotlin.jvm.JvmName("ComparisonsKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
kotlin.comparisons\n/n/**\n * Compares two values using the specified functions [selectors] to calculate the result
of the comparison.\n * The functions are called sequentially, receive the given values [a] and [b] and return
[Comparable]\n * objects. As soon as the [Comparable] instances returned by a function for [a] and [b] values do
not\n * compare as equal, the result of that comparison is returned.\n * \n * @sample
samples.comparisons.Comparisons.compareValuesByWithSelectors\n
*^/npublic fun <T> compareValuesBy(a: T, b: T, vararg selectors: (T) -> Comparable<*>?): Int {n
require(selectors.size > 0)\n  return compareValuesByImpl(a, b, selectors)\n}\n\nprivate fun <T>
compareValuesByImpl(a: T, b: T, selectors: Array<out (T) -> Comparable<*>?): Int {n  for (fn in selectors) {\n
  val v1 = fn(a)\n  val v2 = fn(b)\n  val diff = compareValues(v1, v2)\n  if (diff != 0) return diff\n  }\n
return 0\n}\n/n/**\n * Compares two values using the specified [selector] function to calculate the result of the
comparison.\n * The function is applied to the given values [a] and [b] and return [Comparable] objects.\n * The
result of comparison of these [Comparable] instances is returned.\n * \n * @sample
samples.comparisons.Comparisons.compareValuesByWithSingleSelector\n *^/n@kotlin.internal.InlineOnly\n\npublic
inline fun <T> compareValuesBy(a: T, b: T, selector: (T) -> Comparable<*>?): Int {n
  return compareValues(selector(a), selector(b))\n}\n/n/**\n * Compares two values using the specified [selector]
function to calculate the result of the comparison.\n * The function is applied to the given values [a] and [b] and
return objects of type K which are then being\n * compared with the given [comparator].\n * \n * @sample
samples.comparisons.Comparisons.compareValuesByWithComparator\n *^/n@kotlin.internal.InlineOnly\n\npublic
inline fun <T, K> compareValuesBy(a: T, b: T, comparator: Comparator<in K>, selector: (T) -> K): Int {n  return
comparator.compare(selector(a), selector(b))\n}\n/n//// Not so useful without type inference for receiver of
expression\n//// compareValuesWith(v1, v2, compareBy { it.prop1 } thenByDescending { it.prop2 })\n////**\n/
Compares two values using the specified [comparator].\n/ **^/n@Suppress("NOTHING_TO_INLINE")\n/public
inline fun <T> compareValuesWith(a: T, b: T, comparator: Comparator<T>): Int = comparator.compare(a,
b)\n/^\n/n/**\n * Compares
two nullable [Comparable] values. Null is considered less than any value.\n * \n * @sample
samples.comparisons.Comparisons.compareValues\n *^/npublic fun <T : Comparable<*>> compareValues(a: T?, b:
T?): Int {n  if (a === b) return 0\n  if (a == null) return -1\n  if (b == null) return 1\n}\n
@Suppress("UNCHECKED_CAST")\n  return (a as Comparable<Any>).compareTo(b)\n}\n/n/**\n * Creates a
comparator using the sequence of functions to calculate a result of comparison.\n * The functions are called
sequentially, receive the given values `a` and `b` and return [Comparable]\n * objects. As soon as the [Comparable]

```

instances returned by a function for `a` and `b` values do not compare as equal, the result of that comparison is returned from the [Comparator].

```

@sample samples.comparisons.Comparisons.compareByWithSelectors
public fun <T> compareBy(vararg selectors: (T) -> Comparable<*>?): Comparator<T> {
    require(selectors.size > 0)
    return Comparator { a, b -> compareValuesByImpl(a, b, selectors) }
}

```

Creates a comparator using the function to transform value to a [Comparable] instance for comparison.

```

@sample samples.comparisons.Comparisons.compareByWithSingleSelector
public inline fun <T> compareBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
    Comparator { a, b -> compareValuesBy(a, b, selector) }

```

Creates a comparator using the [selector] function to transform values being compared and then applying the specified [comparator] to compare transformed values.

```

@sample samples.comparisons.Comparisons.compareByWithComparator
public inline fun <T, K> compareBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
    Comparator { a, b -> compareValuesBy(a, b, comparator, selector) }

```

Creates a descending comparator using the function to transform value to a [Comparable] instance for comparison.

```

@sample samples.comparisons.Comparisons.compareByDescendingWithSingleSelector
public inline fun <T> compareByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
    Comparator { a, b -> compareValuesBy(b, a, selector) }

```

Creates a descending comparator using the [selector] function to transform values being compared and then applying the specified [comparator] to compare transformed values. Note that an order of [comparator] is reversed by this wrapper.

```

@sample samples.comparisons.Comparisons.compareByDescendingWithComparator
public inline fun <T, K> compareByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
    Comparator { a, b -> compareValuesBy(b, a, comparator, selector) }

```

Creates a comparator comparing values after the primary comparator defined them equal. It uses the function to transform value to a [Comparable] instance for comparison.

```

@sample samples.comparisons.Comparisons.thenBy
public inline fun <T> Comparator<T>.thenBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
    Comparator { a, b -> {
        val previousCompare = this@thenBy.compare(a, b)
        if (previousCompare != 0) previousCompare else compareValuesBy(a, b, selector)
    } }

```

Creates a comparator comparing values after the primary comparator defined them equal. It uses the [selector] function to transform values and then compares them with the given [comparator].

```

@sample samples.comparisons.Comparisons.thenByWithComparator
public inline fun <T, K> Comparator<T>.thenBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
    Comparator { a, b -> {
        val previousCompare = this@thenBy.compare(a, b)
        if (previousCompare != 0) previousCompare else compareValuesBy(a, b, comparator, selector)
    } }

```

Creates a descending comparator using the primary comparator and the function to transform value to a [Comparable] instance for comparison.

```

@sample samples.comparisons.Comparisons.thenByDescending
public inline fun <T> Comparator<T>.thenByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
    Comparator { a, b -> {
        val previousCompare = this@thenByDescending.compare(a, b)
        if (previousCompare != 0) previousCompare else compareValuesBy(b, a, selector)
    } }

```

Creates a descending comparator comparing values after the primary comparator defined them equal. It uses the [selector] function to transform values and then compares them with the given [comparator].

```

@sample samples.comparisons.Comparisons.thenByDescendingWithComparator
public inline fun <T, K> Comparator<T>.thenByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
    Comparator { a, b -> {
        val previousCompare = this@thenByDescending.compare(a, b)
        if (previousCompare != 0) previousCompare else

```



```

compareValuesBy(b, a, comparator, selector)\n } \n\n/**\n * Creates a comparator using the primary comparator
and function to calculate a result of comparison.\n *\n * @sample
samples.comparisons.Comparisons.thenComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T>
Comparator<T>.thenComparator(crossinline comparison: (a: T, b: T) -> Int): Comparator<T> =\n Comparator { a,
b ->\n     val previousCompare = this@thenComparator.compare(a, b)\n     if (previousCompare != 0)
previousCompare else comparison(a, b)\n } \n\n/**\n * Combines this comparator and the given [comparator] such
that the latter is applied only\n * when the former considered values equal.\n *\n * @sample
samples.comparisons.Comparisons.then\n */\npublic infix
fun <T> Comparator<T>.then(comparator: Comparator<in T>): Comparator<T> =\n Comparator { a, b ->\n
val previousCompare = this@then.compare(a, b)\n     if (previousCompare != 0) previousCompare else
comparator.compare(a, b)\n } \n\n/**\n * Combines this comparator and the given [comparator] such that the latter
is applied only\n * when the former considered values equal.\n *\n * @sample
samples.comparisons.Comparisons.thenDescending\n */\npublic infix fun <T>
Comparator<T>.thenDescending(comparator: Comparator<in T>): Comparator<T> =\n Comparator<T> { a, b -
->\n     val previousCompare = this@thenDescending.compare(a, b)\n     if (previousCompare != 0)
previousCompare else comparator.compare(b, a)\n } \n\n// Not so useful without type inference for receiver of
expression\n/**\n * Extends the given [comparator] of non-nullable values to a comparator of nullable values\n *
considering `null` value less than any other value.\n * Non-null values are compared with
the provided [comparator].\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n
*/\npublic fun <T : Any> nullsFirst(comparator: Comparator<in T>): Comparator<T?> =\n Comparator { a, b ->\n
when {\n     a === b -> 0\n     a == null -> -1\n     b == null -> 1\n     else ->
comparator.compare(a, b)\n } \n } \n\n/**\n * Provides a comparator of nullable [Comparable] values\n *
considering `null` value less than any other value.\n * Non-null values are compared according to their [natural
order][naturalOrder].\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastComparator\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <T : Comparable<T>> nullsFirst(): Comparator<T?> =
nullsFirst(naturalOrder())\n\n/**\n * Extends the given [comparator] of non-nullable values to a comparator of
nullable values\n * considering `null` value greater than any other value.\n * Non-null values are compared with the
provided [comparator].\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n
*/\npublic fun <T : Any>
nullsLast(comparator: Comparator<in T>): Comparator<T?> =\n Comparator { a, b ->\n     when {\n     a
=== b -> 0\n     a == null -> 1\n     b == null -> -1\n     else -> comparator.compare(a, b)\n     }\n } \n\n/**\n * Provides a comparator of nullable [Comparable] values\n * considering `null` value greater than any
other value.\n * Non-null values are compared according to their [natural order][naturalOrder].\n *\n * @sample
samples.comparisons.Comparisons.nullsFirstLastComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun
<T : Comparable<T>> nullsLast(): Comparator<T?> = nullsLast(naturalOrder())\n\n/**\n * Returns a comparator
that compares [Comparable] objects in natural order.\n *\n * The natural order of a `Comparable` type here means
the order established by its `compareTo` function.\n *\n * @sample
samples.comparisons.Comparisons.naturalOrderComparator\n
*/\npublic fun <T : Comparable<T>> naturalOrder(): Comparator<T> = @Suppress("UNCHECKED_CAST")
(NaturalOrderComparator as Comparator<T>)\n\n/**\n * Returns a comparator that compares [Comparable] objects
in reversed natural order.\n *\n * The natural order of a `Comparable` type here means the order established by its
`compareTo` function.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n
*/\npublic fun <T : Comparable<T>> reverseOrder(): Comparator<T> = @Suppress("UNCHECKED_CAST")
(ReverseOrderComparator as Comparator<T>)\n\n/**\n * Returns a comparator that imposes the reverse ordering
of this comparator.\n *\n * @sample samples.comparisons.Comparisons.reversed\n
*/\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\npublic fun <T> Comparator<T>.reversed():
Comparator<T> = when (this) {\n     is ReversedComparator -> this.comparator\n     NaturalOrderComparator ->
@Suppress("UNCHECKED_CAST") (ReverseOrderComparator

```

```

as Comparator<T>)\n ReverseOrderComparator -> @Suppress("UNCHECKED_CAST")
(NaturalOrderComparator as Comparator<T>)\n else -> ReversedComparator(this)\n}\n\nprivate class
ReversedComparator<T>(public val comparator: Comparator<T>) : Comparator<T> {\n override fun compare(a:
T, b: T): Int = comparator.compare(b, a)\n @Suppress("VIRTUAL_MEMBER_HIDDEN")\n fun reversed():
Comparator<T> = comparator\n}\n\nprivate object NaturalOrderComparator : Comparator<Comparable<Any>> {\n
override fun compare(a: Comparable<Any>, b: Comparable<Any>): Int = a.compareTo(b)\n
@Suppress("VIRTUAL_MEMBER_HIDDEN")\n fun reversed(): Comparator<Comparable<Any>> =
ReverseOrderComparator\n}\n\nprivate object ReverseOrderComparator : Comparator<Comparable<Any>> {\n
override fun compare(a: Comparable<Any>, b: Comparable<Any>): Int = b.compareTo(a)\n
@Suppress("VIRTUAL_MEMBER_HIDDEN")\n fun reversed(): Comparator<Comparable<Any>> =
NaturalOrderComparator\n}\n", "/*\n * Copyright
2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StandardKt")\n\npackage kotlin\n\nimport
kotlin.contracts.*\n\n/**\n * An exception is thrown to indicate that a method body remains to be implemented.\n
*\n\npublic class NotImplementedError(message: String = "An operation is not implemented.") :
Error(message)\n\n/**\n * Always throws [NotImplementedError] stating that operation is not implemented.\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun TODO(): Nothing = throw NotImplementedError()\n\n/**\n *
Always throws [NotImplementedError] stating that operation is not implemented.\n * \n * @param reason a string
explaining why the implementation is missing.\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun TODO(reason:
String): Nothing = throw NotImplementedError("An
operation is not implemented: $reason")\n\n\n/**\n * Calls the specified function [block] and returns its result.\n
*\n * For detailed usage information see the documentation for [scope
functions](https://kotlinlang.org/docs/reference/scope-functions.html#run).\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun <R> run(block: () -> R): R {\n contract {\n
callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return block()\n}\n\n/**\n * Calls the specified
function [block] with `this` value as its receiver and returns its result.\n * \n * For detailed usage information see the
documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#run).\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> T.run(block: T.() -> R): R {\n contract {\n
callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return block()\n}\n\n/**\n * Calls the specified
function [block] with the given [receiver] as its receiver and returns
its result.\n * \n * For detailed usage information see the documentation for [scope
functions](https://kotlinlang.org/docs/reference/scope-functions.html#with).\n
*\n\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> with(receiver: T, block: T.() -> R): R {\n contract {\n
callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return receiver.block()\n}\n\n\n/**\n * Calls the
specified function [block] with `this` value as its receiver and returns `this` value.\n * \n * For detailed usage
information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-
functions.html#apply).\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun <T> T.apply(block: T.() -> Unit): T {\n
contract {\n callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n block()\n return
this\n}\n\n\n/**\n * Calls the specified function [block] with `this` value as its argument and returns `this` value.\n
*\n * For detailed usage information see the documentation
for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#also).\n
*\n\n@kotlin.internal.InlineOnly\n@SinceKotlin("1.1")\npublic inline fun <T> T.also(block: (T) -> Unit): T {\n
contract {\n callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n block(this)\n return
this\n}\n\n\n/**\n * Calls the specified function [block] with `this` value as its argument and returns its result.\n
*\n * For detailed usage information see the documentation for [scope
functions](https://kotlinlang.org/docs/reference/scope-functions.html#let).\n * \n\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> T.let(block: (T) -> R): R {\n contract {\n callsInPlace(block,

```

```

InvocationKind.EXACTLY_ONCE)\n } \n return block(this)\n}\n\n/**\n * Returns `this` value if it satisfies the
given [predicate] or `null`, if it doesn't.\n * \n * For detailed usage information see the documentation for [scope
functions](https://kotlinlang.org/docs/reference/scope-functions.html#takeif-and-takeunless).\n
*\n@\n@kotlin.internal.InlineOnly\n@SinceKotlin("1.1")\npublic inline fun <T> T.takeIf(predicate: (T) -> Boolean):
T? {\n contract {\n callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)\n } \n return if
(predicate(this)) this else null\n}\n\n/**\n * Returns `this` value if it _does not_ satisfy the given [predicate] or
`null`, if it does.\n * \n * For detailed usage information see the documentation for [scope
functions](https://kotlinlang.org/docs/reference/scope-functions.html#takeif-and-takeunless).\n
*\n@\n@kotlin.internal.InlineOnly\n@SinceKotlin("1.1")\npublic inline fun <T> T.takeUnless(predicate: (T) ->
Boolean): T? {\n contract {\n callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)\n } \n return if
(!predicate(this)) this else null\n}\n\n/**\n * Executes the given function [action] specified number of [times].\n * \n
* A zero-based index of current iteration is passed as a parameter to [action].\n * \n *
*\n@\n@sample samples.misc.ControlFlow.repeat\n*\n@\n@kotlin.internal.InlineOnly\npublic inline fun repeat(times: Int,
action: (Int) -> Unit) {\n contract { callsInPlace(action) } \n\n for (index in 0 until times) {\n action(index)\n
}\n}\n\n"/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n*\npackage kotlin.comparisons\n\n/\n/\n NOTE: THIS FILE IS AUTO-GENERATED by the
GenerateStandardLib.kt\n/\n See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\nimport
kotlin.js.\n\n/**\n * Returns the greater of two values.\n * \n * If values are equal, returns the first one.\n
*\n@\n@SinceKotlin("1.1")\npublic actual fun <T : Comparable<T>> maxOf(a: T, b: T): T {\n return if (a >= b) a
else b\n}\n\n/**\n * Returns the greater of two values.\n
*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic
actual inline fun maxOf(a: Byte, b: Byte): Byte {\n return maxOf(a.toInt(),
b.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the greater of two values.\n
*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Short, b: Short): Short
{\n return maxOf(a.toInt(), b.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the greater of two values.\n
*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Int, b: Int): Int {\n
return JsMath.max(a, b)\n}\n\n/**\n * Returns the greater of two values.\n
*\n@\n@SinceKotlin("1.1")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun maxOf(a: Long, b:
Long): Long {\n return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n * \n * If either value
is `NaN`, returns `NaN`.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun
maxOf(a: Float, b: Float): Float {\n return JsMath.max(a, b)\n}\n\n/**\n * Returns the
greater of two values.\n * \n * If either value is `NaN`, returns `NaN`.\n
*\n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Double, b: Double):
Double {\n return JsMath.max(a, b)\n}\n\n/**\n * Returns the greater of three values.\n * \n * If there are multiple
equal maximal values, returns the first of them.\n * \n*\n@\n@SinceKotlin("1.1")\npublic actual fun <T :
Comparable<T>> maxOf(a: T, b: T, c: T): T {\n return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater
of three values.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Byte,
b: Byte, c: Byte): Byte {\n return JsMath.max(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Byte>()\n}\n\n/**\n *
Returns the greater of three values.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline
fun maxOf(a: Short, b: Short, c: Short): Short {\n return JsMath.max(a.toInt(), b.toInt(),
c.toInt()).unsafeCast<Short>()\n}\n\n/**\n *
Returns the greater of three values.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual
inline fun maxOf(a: Int, b: Int, c: Int): Int {\n return JsMath.max(a, b, c)\n}\n\n/**\n * Returns the greater of three
values.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Long, b: Long,
c: Long): Long {\n return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n * \n * If any
value is `NaN`, returns `NaN`.\n * \n*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun
maxOf(a: Float, b: Float, c: Float): Float {\n return JsMath.max(a, b, c)\n}\n\n/**\n * Returns the greater of three

```

values. If any value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun maxOf(a: Double, b: Double, c: Double): Double {
    return JsMath.max(a, b, c)
}

```

Returns the greater of the given values. If there are multiple equal maximal values, returns the first of them.

```

*SinceKotlin("1.4") public actual fun <T : Comparable<T>> maxOf(a: T, vararg other: T): T {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values.

```

*SinceKotlin("1.4") public actual fun maxOf(a: Byte, vararg other: Byte): Byte {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values.

```

*SinceKotlin("1.4") public actual fun maxOf(a: Short, vararg other: Short): Short {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values.

```

*SinceKotlin("1.4") public actual fun maxOf(a: Int, vararg other: Int): Int {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values.

```

*SinceKotlin("1.4") public actual fun maxOf(a: Long, vararg other: Long): Long {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values. If any value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.4") public actual fun maxOf(a: Float, vararg other: Float): Float {
    var max = a
    for (e in other) max = maxOf(max, e)
    return max
}

```

Returns the greater of the given values. If any value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.4") public actual fun minOf(a: Double, vararg other: Double): Double {
    var min = a
    for (e in other) min = minOf(min, e)
    return min
}

```

Returns the smaller of two values. If values are equal, returns the first one.

```

*SinceKotlin("1.1") public actual fun <T : Comparable<T>> minOf(a: T, b: T): T {
    return if (a <= b) a else b
}

```

Returns the smaller of two values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Byte, b: Byte): Byte {
    return minOf(a.toInt(), b.toInt()).unsafeCast<Byte>()
}

```

Returns the smaller of two values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Short, b: Short): Short {
    return minOf(a.toInt(), b.toInt()).unsafeCast<Short>()
}

```

Returns the smaller of two values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Int, b: Int): Int {
    return JsMath.min(a, b)
}

```

Returns the smaller of two values.

```

*SinceKotlin("1.1")@Suppress("NOTHING_TO_INLINE") public actual inline fun minOf(a: Long, b: Long): Long {
    return if (a <= b) a else b
}

```

Returns the smaller of two values. If either value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Float, b: Float): Float {
    return JsMath.min(a, b)
}

```

Returns the smaller of two values. If either value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Double, b: Double): Double {
    return JsMath.min(a, b)
}

```

Returns the smaller of three values. If there are multiple equal minimal values, returns the first of them.

```

*SinceKotlin("1.1") public actual fun <T : Comparable<T>> minOf(a: T, b: T, c: T): T {
    return minOf(a, minOf(b, c))
}

```

Returns the smaller of three values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Byte, b: Byte, c: Byte): Byte {
    return JsMath.min(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Byte>()
}

```

Returns the smaller of three values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Short, b: Short, c: Short): Short {
    return JsMath.min(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Short>()
}

```

Returns the smaller of three values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Int, b: Int, c: Int): Int {
    return JsMath.min(a, b, c)
}

```

Returns the smaller of three values.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Long, b: Long, c: Long): Long {
    return minOf(a, minOf(b, c))
}

```

Returns the smaller of three values. If any value is `NaN`, returns `NaN`.

```

*SinceKotlin("1.1")@kotlin.internal.InlineOnly public actual inline fun minOf(a: Float, b: Float, c: Float): Float {
    return JsMath.min(a, b, c)
}

```

Returns the smaller of three values. If any value is `NaN`, returns `NaN`.

```

*^@SinceKotlin("1.1")^@kotlin.internal.InlineOnly^public actual inline fun minOf(a: Double, b: Double, c:
Double): Double {^n    return JsMath.min(a, b, c)^n}^n/^**^n * Returns the smaller of the given values.^n * ^n * If
there are multiple
    equal minimal values, returns the first of them.^n *^@SinceKotlin("1.4")^public actual fun <T :
Comparable<T>> minOf(a: T, vararg other: T): T {^n    var min = a^n    for (e in other) min = minOf(min, e)^n
return min^n}^n/^**^n * Returns the smaller of the given values.^n *^@SinceKotlin("1.4")^public actual fun
minOf(a: Byte, vararg other: Byte): Byte {^n    var min = a^n    for (e in other) min = minOf(min, e)^n    return
min^n}^n/^**^n * Returns the smaller of the given values.^n *^@SinceKotlin("1.4")^public actual fun minOf(a:
Short, vararg other: Short): Short {^n    var min = a^n    for (e in other) min = minOf(min, e)^n    return
min^n}^n/^**^n * Returns the smaller of the given values.^n *^@SinceKotlin("1.4")^public actual fun minOf(a:
Int, vararg other: Int): Int {^n    var min = a^n    for (e in other) min = minOf(min, e)^n    return min^n}^n/^**^n *
Returns the smaller of the given values.^n *^@SinceKotlin("1.4")^public actual fun minOf(a:
    Long, vararg other: Long): Long {^n    var min = a^n    for (e in other) min = minOf(min, e)^n    return
min^n}^n/^**^n * Returns the smaller of the given values.^n * ^n * If any value is `NaN`, returns `NaN`.^n
*^@SinceKotlin("1.4")^public actual fun minOf(a: Float, vararg other: Float): Float {^n    var min = a^n    for (e
in other) min = minOf(min, e)^n    return min^n}^n/^**^n * Returns the smaller of the given values.^n * ^n * If any
value is `NaN`, returns `NaN`.^n *^@SinceKotlin("1.4")^public actual fun minOf(a: Double, vararg other:
Double): Double {^n    var min = a^n    for (e in other) min = minOf(min, e)^n    return min^n}^n/^**^n * Copyright
2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.^n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.^n *^@n// Auto-generated file. DO NOT
EDIT!^n^package kotlin^n^import kotlin.experimental.*^n^import
kotlin.jvm.*^n^@SinceKotlin("1.5")^@WasExperimental(ExperimentalUnsignedTypes::class)^n^@JvmInline^npu
blic
    value class ULong @kotlin.internal.IntrinsicConstEvaluation @PublishedApi internal constructor(@PublishedApi
internal val data: Long) : Comparable<ULong> {^n^n    companion object {^n        /**^n         * A constant holding
the minimum value an instance of ULong can have.^n        *^@n        public const val MIN_VALUE: ULong =
        ULong(0)^n^n        /**^n         * A constant holding the maximum value an instance of ULong can have.^n        *^@n
        public const val MAX_VALUE: ULong = ULong(-1)^n^n        /**^n         * The number of bytes used to represent
an instance of ULong in a binary form.^n        *^@n        public const val SIZE_BYTES: Int = 8^n^n        /**^n         *
The number of bits used to represent an instance of ULong in a binary form.^n        *^@n        public const val
SIZE_BITS: Int = 64^n    }^n^n    /**^n     * Compares this value with the specified value for order.^n     *
Returns zero if this value is equal to the specified other value, a negative number if it's less than other,^n     * or a
positive number if it's greater than other.^n     *^@n     @kotlin.internal.InlineOnly^n     public inline operator fun
compareTo(other: UByte): Int = this.compareTo(other.toULong())^n^n    /**^n     * Compares this value with the
specified value for order.^n     * Returns zero if this value is equal to the specified other value, a negative number if
it's less than other,^n     * or a positive number if it's greater than other.^n     *^@n     @kotlin.internal.InlineOnly^n
public inline operator fun compareTo(other: UShort): Int = this.compareTo(other.toULong())^n^n    /**^n     *
Compares this value with the specified value for order.^n     * Returns zero if this value is equal to the specified other
value, a negative number if it's less than other,^n     * or a positive number if it's greater than other.^n     *^@n
    @kotlin.internal.InlineOnly^n    public inline
        operator fun compareTo(other: UInt): Int = this.compareTo(other.toULong())^n^n    /**^n     * Compares this value
with the specified value for order.^n     * Returns zero if this value is equal to the specified other value, a negative
number if it's less than other,^n     * or a positive number if it's greater than other.^n     *^@n
    @kotlin.internal.InlineOnly^n    @Suppress("OVERRIDE_BY_INLINE")^n    public override inline operator fun
compareTo(other: ULong): Int = ulongCompare(this.data, other.data)^n^n    /** Adds the other value to this value.
*^@n    @kotlin.internal.InlineOnly^n    public inline operator fun plus(other: UByte): ULong =
this.plus(other.toULong())^n^n    /** Adds the other value to this value. *^@n    @kotlin.internal.InlineOnly^n    public
inline operator fun plus(other: UShort): ULong = this.plus(other.toULong())^n^n    /** Adds the other value to this

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value. *^n @kotlin.internal.InlineOnly^n public inline operator fun plus(other: UInt): ULong =
this.plus(other.toULong())^n
/** Adds the other value to this value. *^n @kotlin.internal.InlineOnly^n public inline operator fun plus(other:
ULong): ULong = ULong(this.data.plus(other.data))^n^n /** Subtracts the other value from this value. *^n
@kotlin.internal.InlineOnly^n public inline operator fun minus(other: UByte): ULong =
this.minus(other.toULong())^n /** Subtracts the other value from this value. *^n @kotlin.internal.InlineOnly^n
public inline operator fun minus(other: UShort): ULong = this.minus(other.toULong())^n /** Subtracts the other
value from this value. *^n @kotlin.internal.InlineOnly^n public inline operator fun minus(other: UInt): ULong =
this.minus(other.toULong())^n /** Subtracts the other value from this value. *^n @kotlin.internal.InlineOnly^n
public inline operator fun minus(other: ULong): ULong = ULong(this.data.minus(other.data))^n^n /** Multiplies
this value by the other value. *^n @kotlin.internal.InlineOnly^n
public inline operator fun times(other: UByte): ULong = this.times(other.toULong())^n /** Multiplies this value
by the other value. *^n @kotlin.internal.InlineOnly^n public inline operator fun times(other: UShort): ULong =
this.times(other.toULong())^n /** Multiplies this value by the other value. *^n @kotlin.internal.InlineOnly^n
public inline operator fun times(other: UInt): ULong = this.times(other.toULong())^n /** Multiplies this value by
the other value. *^n @kotlin.internal.InlineOnly^n public inline operator fun times(other: ULong): ULong =
ULong(this.data.times(other.data))^n^n /** Divides this value by the other value, truncating the result to an integer
that is closer to zero. *^n @kotlin.internal.InlineOnly^n public inline operator fun div(other: UByte): ULong =
this.div(other.toULong())^n /** Divides this value by the other value, truncating the result to an integer that is
closer to zero. *^n @kotlin.internal.InlineOnly^n
public inline operator fun div(other: UShort): ULong = this.div(other.toULong())^n /** Divides this value by the
other value, truncating the result to an integer that is closer to zero. *^n @kotlin.internal.InlineOnly^n public
inline operator fun div(other: UInt): ULong = this.div(other.toULong())^n /** Divides this value by the other
value, truncating the result to an integer that is closer to zero. *^n @kotlin.internal.InlineOnly^n public inline
operator fun div(other: ULong): ULong = ulongDivide(this, other)^n^n /**^n * Calculates the remainder of
truncating division of this value by the other value.^n *^n * The result is always less than the divisor.^n *^n
@kotlin.internal.InlineOnly^n public inline operator fun rem(other: UByte): ULong = this.rem(other.toULong())^n
/**^n * Calculates the remainder of truncating division of this value by the other value.^n *^n * The result is
always less than the divisor.^n *^n
@kotlin.internal.InlineOnly^n public inline operator fun rem(other: UShort): ULong =
this.rem(other.toULong())^n /**^n * Calculates the remainder of truncating division of this value by the other
value.^n *^n * The result is always less than the divisor.^n *^n @kotlin.internal.InlineOnly^n public
inline operator fun rem(other: UInt): ULong = this.rem(other.toULong())^n /**^n * Calculates the remainder of
truncating division of this value by the other value.^n *^n * The result is always less than the divisor.^n *^n
@kotlin.internal.InlineOnly^n public inline operator fun rem(other: ULong): ULong = ulongRemainder(this,
other)^n^n /**^n * Divides this value by the other value, flooring the result to an integer that is closer to negative
infinity.^n *^n * For unsigned types, the results of flooring division and truncating division are the same.^n
*^n @kotlin.internal.InlineOnly^n public inline fun floorDiv(other:
UByte): ULong = this.floorDiv(other.toULong())^n /**^n * Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.^n *^n * For unsigned types, the results of flooring division
and truncating division are the same.^n *^n @kotlin.internal.InlineOnly^n public inline fun floorDiv(other:
UShort): ULong = this.floorDiv(other.toULong())^n /**^n * Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.^n *^n * For unsigned types, the results of flooring division
and truncating division are the same.^n *^n @kotlin.internal.InlineOnly^n public inline fun floorDiv(other:
UInt): ULong = this.floorDiv(other.toULong())^n /**^n * Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.^n *^n * For unsigned types, the results of flooring division
and truncating division

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are the same.\n  *^n  @kotlin.internal.InlineOnly\n  public inline fun floorDiv(other: ULong): ULong =
div(other)\n\n  /**\n  * Calculates the remainder of flooring division of this value by the other value.\n  * \n  *
The result is always less than the divisor.\n  * \n  * For unsigned types, the remainders of flooring division and
truncating division are the same.\n  *^n  @kotlin.internal.InlineOnly\n  public inline fun mod(other: UByte):
UByte = this.mod(other.toULong()).toUByte()\n  /**\n  * Calculates the remainder of flooring division of this
value by the other value.\n  * \n  * The result is always less than the divisor.\n  * \n  * For unsigned types, the
remainders of flooring division and truncating division are the same.\n  *^n  @kotlin.internal.InlineOnly\n
public inline fun mod(other: UShort): UShort = this.mod(other.toULong()).toUShort()\n  /**\n  * Calculates the
remainder of flooring division of this value
by the other value.\n  * \n  * The result is always less than the divisor.\n  * \n  * For unsigned types, the
remainders of flooring division and truncating division are the same.\n  *^n  @kotlin.internal.InlineOnly\n
public inline fun mod(other: UInt): UInt = this.mod(other.toULong()).toInt()\n  /**\n  * Calculates the
remainder of flooring division of this value by the other value.\n  * \n  * The result is always less than the
divisor.\n  * \n  * For unsigned types, the remainders of flooring division and truncating division are the same.\n
*\n  *^n  @kotlin.internal.InlineOnly\n  public inline fun mod(other: ULong): ULong = rem(other)\n\n  /**\n  *
Returns this value incremented by one.\n  * \n  * @sample samples.misc.Builtins.inc\n  *^n
@kotlin.internal.InlineOnly\n  public inline operator fun inc(): ULong = ULong(data.inc())\n\n  /**\n  * Returns
this value decremented by one.\n  * \n  * @sample samples.misc.Builtins.dec\n  *^n
@kotlin.internal.InlineOnly\n  public inline operator fun dec(): ULong = ULong(data.dec())\n\n  /**
Creates a range from this value to the specified [other] value. *^n  @kotlin.internal.InlineOnly\n  public inline
operator fun rangeTo(other: ULong): ULongRange = ULongRange(this, other)\n\n  /**\n  * Creates a range from
this value up to but excluding the specified [other] value.\n  * \n  * If the [other] value is less than or equal to
`this` value, then the returned range is empty.\n  *^n  @SinceKotlin("1.7")\n  @ExperimentalStdlibApi\n
@kotlin.internal.InlineOnly\n  public inline operator fun rangeUntil(other: ULong): ULongRange = this until
other\n\n  /**\n  * Shifts this value left by the [bitCount] number of bits.\n  * \n  * Note that only the six
lowest-order bits of the [bitCount] are used as the shift distance.\n  * \n  * The shift distance actually used is
therefore always in the range `0..63`.\n  *^n
@kotlin.internal.InlineOnly\n  public inline infix fun shl(bitCount: Int): ULong = ULong(data shl bitCount)\n\n
/**\n  * Shifts this value right by the [bitCount] number of bits, filling the leftmost bits with zeros.\n  * \n  *
Note that only the six lowest-order bits of the [bitCount] are used as the shift distance.\n  * \n  * The shift
distance actually used is therefore always in the range `0..63`.\n  *^n  @kotlin.internal.InlineOnly\n  public inline infix
fun shr(bitCount: Int): ULong = ULong(data ushr bitCount)\n\n  /** Performs a bitwise AND operation between
the two values. *^n  @kotlin.internal.InlineOnly\n  public inline infix fun and(other: ULong): ULong =
ULong(this.data and other.data)\n\n  /** Performs a bitwise OR operation between the two values. *^n
@kotlin.internal.InlineOnly\n  public inline infix fun or(other: ULong): ULong = ULong(this.data or other.data)\n
/** Performs a bitwise XOR operation between the two values. *^n  @kotlin.internal.InlineOnly\n
public inline infix fun xor(other: ULong): ULong = ULong(this.data xor other.data)\n\n  /** Inverts the bits in
this value. *^n  @kotlin.internal.InlineOnly\n  public inline fun inv(): ULong = ULong(data.inv())\n\n  /**\n  *
Converts this [ULong] value to [Byte].\n  * \n  * If this value is less than or equals to [Byte.MAX_VALUE], the
resulting `Byte` value represents\n  * \n  * the same numerical value as this `ULong`.\n  * \n  * The resulting `Byte`
value is represented by the least significant 8 bits of this `ULong` value.\n  * \n  * Note that the resulting `Byte`
value may be negative.\n  *^n  @kotlin.internal.InlineOnly\n  public inline fun toByte(): Byte = data.toByte()\n
/**\n  * Converts this [ULong] value to [Short].\n  * \n  * If this value is less than or equals to
[Short.MAX_VALUE], the resulting `Short` value represents\n  * \n  * the same numerical value as this `ULong`.\n
*\n  * \n  * The resulting `Short` value is
represented by the least significant 16 bits of this `ULong` value.\n  * \n  * Note that the resulting `Short`
value may be negative.\n  *^n  @kotlin.internal.InlineOnly\n  public inline fun toShort(): Short = data.toShort()\n
/**\n  * Converts this [ULong] value to [Int].\n  * \n  * If this value is less than or equals to [Int.MAX_VALUE], the

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resulting `Int` value represents\n    * the same numerical value as this `ULong`.\n    *\n    * The resulting `Int`
value is represented by the least significant 32 bits of this `ULong` value.\n    * Note that the resulting `Int` value
may be negative.\n    *\n    @kotlin.internal.InlineOnly\n    public inline fun toInt(): Int = data.toInt()\n    /**\n    *
Converts this [ULong] value to [Long].\n    *\n    * If this value is less than or equals to [Long.MAX_VALUE], the
resulting `Long` value represents\n    * the same numerical value as this `ULong`. Otherwise the result is
negative.\n    *\n    * The resulting `Long`
value has the same binary representation as this `ULong` value.\n    *\n    @kotlin.internal.InlineOnly\n    public
inline fun toLong(): Long = data\n    /**\n    * Converts this [ULong] value to [UByte].\n    *\n    * If this value
is less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n    * the same numerical
value as this `ULong`.\n    *\n    * The resulting `UByte` value is represented by the least significant 8 bits of this
`ULong` value.\n    *\n    @kotlin.internal.InlineOnly\n    public inline fun toUByte(): UByte = data.toUByte()\n
/**\n    * Converts this [ULong] value to [UShort].\n    *\n    * If this value is less than or equals to
[UShort.MAX_VALUE], the resulting `UShort` value represents\n    * the same numerical value as this `ULong`.\n
*\n    * The resulting `UShort` value is represented by the least significant 16 bits of this `ULong` value.\n    *\n
@kotlin.internal.InlineOnly\n    public inline fun toUShort():
UShort = data.toUShort()\n    /**\n    * Converts this [ULong] value to [UInt].\n    *\n    * If this value is less than
or equals to [UInt.MAX_VALUE], the resulting `UInt` value represents\n    * the same numerical value as this
`ULong`.\n    *\n    * The resulting `UInt` value is represented by the least significant 32 bits of this `ULong`
value.\n    *\n    @kotlin.internal.InlineOnly\n    public inline fun toUInt(): UInt = data.toUInt()\n    /** Returns this
value. *\n    @kotlin.internal.InlineOnly\n    public inline fun toULong(): ULong = this\n    /**\n    * Converts
this [ULong] value to [Float].\n    *\n    * The resulting value is the closest `Float` to this `ULong` value.\n    * In
case when this `ULong` value is exactly between two `Float`s,\n    * the one with zero at least significant bit of
mantissa is selected.\n    *\n    @kotlin.internal.InlineOnly\n    public inline fun toFloat(): Float =
this.toDouble().toFloat()\n    /**\n    * Converts this
[ULong] value to [Double].\n    *\n    * The resulting value is the closest `Double` to this `ULong` value.\n    * In
case when this `ULong` value is exactly between two `Double`s,\n    * the one with zero at least significant bit of
mantissa is selected.\n    *\n    @kotlin.internal.InlineOnly\n    public inline fun toDouble(): Double =
ulongToDouble(data)\n    public override fun toString(): String = ulongToString(data)\n}\n\n/**\n    * Converts
this [Byte] value to [ULong].\n    *\n    * If this value is positive, the resulting `ULong` value represents the same
numerical value as this `Byte`.\n    *\n    * The least significant 8 bits of the resulting `ULong` value are the same as the
bits of this `Byte` value,\n    * whereas the most significant 56 bits are filled with the sign bit of this value.\n
*\n    @SinceKotlin("1.5")\n    @WasExperimental(ExperimentalUnsignedTypes::class)\n    @kotlin.internal.InlineOnly\n
public inline fun Byte.toULong(): ULong = ULong(this.toLong())\n    /**\n    * Converts this
[Short] value to [ULong].\n    *\n    * If this value is positive, the resulting `ULong` value represents the same
numerical value as this `Short`.\n    *\n    * The least significant 16 bits of the resulting `ULong` value are the same as
the bits of this `Short` value,\n    * whereas the most significant 48 bits are filled with the sign bit of this value.\n
*\n    @SinceKotlin("1.5")\n    @WasExperimental(ExperimentalUnsignedTypes::class)\n    @kotlin.internal.InlineOnly\n
public inline fun Short.toULong(): ULong = ULong(this.toLong())\n    /**\n    * Converts this [Int] value to [ULong].\n
*\n    * If this value is positive, the resulting `ULong` value represents the same numerical value as this `Int`.\n
*\n    * The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `Int` value,\n
*\n    * whereas the most significant 32 bits are filled with the sign bit of this value.\n
*\n    @SinceKotlin("1.5")\n    @WasExperimental(ExperimentalUnsignedTypes::class)\n    @kotlin.internal.InlineOnly\n
public inline
fun Int.toULong(): ULong = ULong(this.toLong())\n    /**\n    * Converts this [Long] value to [ULong].\n    *\n    * If this
value is positive, the resulting `ULong` value represents the same numerical value as this `Long`.\n    *\n    * The
resulting `ULong` value has the same binary representation as this `Long` value.\n
*\n    @SinceKotlin("1.5")\n    @WasExperimental(ExperimentalUnsignedTypes::class)\n    @kotlin.internal.InlineOnly\n
public inline fun Long.toULong(): ULong = ULong(this)\n    /**\n    * Converts this [Float] value to [ULong].\n    *\n

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an element at the given [index] or `null` if the [index] is out of bounds of this collection.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\npublic fun <T>
Iterable<T>.elementAtOrNull(index: Int): T? {\n    if (this is List)\n        return this.getOrNull(index)\n    if (index <
0)\n        return null\n    val iterator = iterator()\n    var count = 0\n    while (iterator.hasNext()) {\n        val element =
iterator.next()\n        if (index == count++)\n            return element\n    }\n    return null\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this list.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n
*^\n@kotlin.internal.InlineOnly\npublic inline fun <T> List<T>.elementAtOrNull(index: Int): T? {\n    return
this.getOrNull(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such
element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n
*^\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.find(predicate: (T) -> Boolean): T? {\n    return
firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such
element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n
*^\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.findLast(predicate: (T) -> Boolean): T? {\n
return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no
such element was found.\n * \n * @sample samples.collections.Collections.Elements.find\n
*^\n@kotlin.internal.InlineOnly\npublic
inline fun <T> List<T>.findLast(predicate: (T) -> Boolean): T? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the first element.\n * \n * @throws NoSuchElementException if the collection is empty.\n *^\npublic fun
<T> Iterable<T>.first(): T {\n    when (this) {\n        is List -> return this.first()\n        else -> {\n            val iterator =
iterator()\n            if (!iterator.hasNext())\n                throw NoSuchElementException("Collection is empty.")\n            return iterator.next()\n        }\n    }\n}\n\n/**\n * Returns the first element.\n * \n * @throws
NoSuchElementException if the list is empty.\n *^\npublic fun <T> List<T>.first(): T {\n    if (isEmpty())\n        throw NoSuchElementException("List is empty.")\n    return this[0]\n}\n\n/**\n * Returns the first element
matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n *^\npublic
inline fun <T> Iterable<T>.first(predicate: (T) -> Boolean):
T {\n    for (element in this) if (predicate(element)) return element\n    throw
NoSuchElementException("Collection contains no element matching the predicate.")\n}\n\n/**\n * Returns the
first non-null value produced by [transform] function being applied to elements of this collection in iteration order,\n
* or throws [NoSuchElementException] if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*^\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any>
Iterable<T>.firstNotNullOf(transform: (T) -> R?): R {\n    return firstNotNullOfOrNull(transform) ?: throw
NoSuchElementException("No element of the collection was transformed to a non-null value.")\n}\n\n/**\n *
Returns the first non-null value produced by [transform] function being applied to elements of this collection in
iteration order,\n * or `null` if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*^\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any>
Iterable<T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n    for (element in this) {\n        val result =
transform(element)\n        if (result != null) {\n            return result\n        }\n    }\n    return null\n}\n\n/**\n *
Returns the first element, or `null` if the collection is empty.\n *^\npublic fun <T> Iterable<T>.firstOrNull(): T? {\n
when (this) {\n    is List -> {\n        if (isEmpty())\n            return null\n        else\n            return this[0]\n    }\n    else -> {\n        val iterator = iterator()\n        if (!iterator.hasNext())\n            return null\n        return iterator.next()\n    }\n}\n}\n\n/**\n * Returns the first element, or `null` if the list is empty.\n *^\npublic
fun <T> List<T>.firstOrNull(): T? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns
the first element matching the given [predicate], or `null` if element was not found.\n *^\npublic inline fun <T>
Iterable<T>.firstOrNull(predicate: (T) -> Boolean): T? {\n    for (element in this) if (predicate(element)) return
element\n    return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the

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[defaultValue] function if the [index] is out of bounds of this list.\n *^@kotlin.internal.InlineOnly\npublic inline
fun <T> List<T>.getOrNull(index: Int, defaultValue: (Int) -> T): T {\n    return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n/**\n * Returns an element at the given [index] or `null` if the
[index] is out of bounds of this list.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n
*^public fun <T> List<T>.getOrNull(index: Int): T? {\n    return if (index >= 0 && index <= lastIndex) get(index)
else null\n}\n/**\n * Returns first index of [element], or -1 if the collection does
not contain element.\n *^public fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.indexOf(element: T): Int
{\n    if (this is List) return this.indexOf(element)\n    var index = 0\n    for (item in this) {\n
checkIndexOverflow(index)\n        if (element == item)\n            return index\n        index++\n    }\n    return -
1\n}\n/**\n * Returns first index of [element], or -1 if the list does not contain element.\n
*^@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false warning, extension takes precedence in
some cases\npublic fun <@kotlin.internal.OnlyInputTypes T> List<T>.indexOf(element: T): Int {\n    return
indexOf(element)\n}\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the
collection does not contain such element.\n *^public inline fun <T> Iterable<T>.indexOfFirst(predicate: (T) ->
Boolean): Int {\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if
(predicate(item))\n            return index\n        index++\n    }\n    return -1\n}\n/**\n * Returns index of the first element matching the given
[predicate], or -1 if the list does not contain such element.\n *^public inline fun <T>
List<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this) {\n        if
(predicate(item))\n            return index\n        index++\n    }\n    return -1\n}\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the collection does not contain such element.\n *^public inline fun
<T> Iterable<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    var lastIndex = -1\n    var index = 0\n    for (item
in this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n            lastIndex = index\n        index++\n
}\n    return lastIndex\n}\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the list
does not contain such element.\n *^public inline fun <T> List<T>.indexOfLast(predicate:
(T) -> Boolean): Int {\n    val iterator = this.listIterator(size)\n    while (iterator.hasPrevious()) {\n        if
(predicate(iterator.previous())) {\n            return iterator.nextIndex()\n        }\n    }\n    return -1\n}\n/**\n *
Returns the last element.\n * \n * @throws NoSuchElementException if the collection is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n *^public fun <T> Iterable<T>.last(): T {\n    when (this) {\n        is
List -> return this.last()\n        else -> {\n            val iterator = iterator()\n            if (!iterator.hasNext())\n                throw NoSuchElementException("Collection is empty.")\n            var last = iterator.next()\n            while
(iterator.hasNext())\n                last = iterator.next()\n            return last\n        }\n    }\n}\n/**\n * Returns the last
element.\n * \n * @throws NoSuchElementException if the list is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^public fun <T> List<T>.last(): T {\n    if (isEmpty())\n        throw NoSuchElementException("List is
empty.")\n    return this[lastIndex]\n}\n/**\n * Returns the last element matching the given [predicate].\n * \n *
@throws NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n *^public inline fun <T> Iterable<T>.last(predicate: (T) ->
Boolean): T {\n    var last: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element))
{\n            last = element\n            found = true\n        }\n    }\n    if (!found) throw
NoSuchElementException("Collection contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return last as T\n}\n/**\n * Returns the last element matching the
given [predicate].\n * \n * @throws NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^public inline fun <T> List<T>.last(predicate: (T) -> Boolean): T {\n    val iterator = this.listIterator(size)\n
while (iterator.hasPrevious()) {\n        val element = iterator.previous()\n        if (predicate(element)) return
element\n    }\n    throw NoSuchElementException("List contains no element matching the predicate.")\n}\n/**\n *
Returns last index of [element], or -1 if the collection does not contain element.\n *^public fun

```

```

<@kotlin.internal.OnlyInputTypes T> Iterable<T>.lastIndexOf(element: T): Int {
    if (this is List) return this.lastIndexOf(element)
    var lastIndex = -1
    var index = 0
    for (item in this) {
        checkIndexOverflow(index)
        if (element == item)
            lastIndex = index
            index++
    }
    return lastIndex
}
/** Returns last index of [element], or -1 if the list does not contain element.
 *
 * @Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false warning, extension takes precedence in some cases
 */
public fun <@kotlin.internal.OnlyInputTypes T> List<T>.lastIndexOf(element: T): Int {
    return lastIndexOf(element)
}
/** Returns the last element, or `null` if the collection is empty.
 *
 * @sample samples.collections.Collections.Elements.last
 */
public fun <T> Iterable<T>.lastOrNull(): T? {
    when (this) {
        is List -> return if (isEmpty()) null else this[size - 1]
        else -> {
            val iterator = iterator()
            if (!iterator.hasNext())
                return null
            var last = iterator.next()
            while (iterator.hasNext())
                last = iterator.next()
            return last
        }
    }
}
/** Returns the last element, or `null` if the list is empty.
 *
 * @sample samples.collections.Collections.Elements.last
 */
public fun <T> List<T>.lastOrNull(): T? {
    return if (isEmpty()) null else this[size - 1]
}
/** Returns the last element matching the given [predicate], or `null` if no such element was found.
 *
 * @sample samples.collections.Collections.Elements.last
 */
public inline fun <T> Iterable<T>.lastOrNull(predicate: (T) -> Boolean): T? {
    var last: T? = null
    for (element in this) {
        if (predicate(element))
            last = element
    }
    return last
}
/** Returns the last element matching the given [predicate], or `null` if no such element was found.
 *
 * @sample samples.collections.Collections.Elements.last
 */
public inline fun <T> List<T>.lastOrNull(predicate: (T) -> Boolean): T? {
    val iterator = this.listIterator(size)
    while (iterator.hasPrevious()) {
        val element = iterator.previous()
        if (predicate(element))
            return element
    }
    return null
}
/** Returns a random element from this collection.
 *
 * @throws NoSuchElementException if this collection is empty.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
public inline fun <T> Collection<T>.random(): T {
    return random(Random)
}
/** Returns a random element from this collection using the specified source of randomness.
 *
 * @throws NoSuchElementException if this collection is empty.
 */
@SinceKotlin("1.3")
public fun <T> Collection<T>.random(random: Random): T {
    if (isEmpty())
        throw NoSuchElementException("Collection is empty.")
    return elementAt(random.nextInt(size))
}
/** Returns a random element from this collection, or `null` if this collection is empty.
 *
 * @since 1.4
 */
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <T> Collection<T>.randomOrNull(): T? {
    return randomOrNull(Random)
}
/** Returns a random element from this collection using the specified source of randomness, or `null` if this collection is empty.
 *
 * @since 1.4
 */
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> Collection<T>.randomOrNull(random: Random): T? {
    if (isEmpty())
        return null
    return elementAt(random.nextInt(size))
}
/** Returns the single element, or throws an exception if the collection is empty or has more than one element.
 *
 * @public fun <T> Iterable<T>.single(): T {
    when (this) {
        is List -> return this.single()
        else -> {
            val iterator = iterator()
            if (!iterator.hasNext())
                throw NoSuchElementException("Collection is empty.")
            val single = iterator.next()
            if (iterator.hasNext())
                throw IllegalArgumentException("Collection has more than one element.")
            return single
        }
    }
}
/** Returns the single element, or throws an exception if the list is empty or has more than one element.
 *
 * @public fun <T> List<T>.single(): T {
    return when (size) {
        0 -> throw NoSuchElementException("List is empty.")
        1 -> this[0]
        else -> throw IllegalArgumentException("List has more than one element.")
    }
}
/** Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.
 *
 * @public inline fun <T> Iterable<T>.single(predicate: (T) -> Boolean): T {
    var single: T? = null
    var found = false
    for (element in this) {
        if (predicate(element)) {
            if (found)
                throw IllegalArgumentException("Collection contains more than one matching element.")
            single = element
        }
    }
}

```

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    found = true\n    }\n }\n if (!found) throw NoSuchElementException("Collection contains no element
matching the predicate.")\n @Suppress("UNCHECKED_CAST")\n return single as T\n}\n\n/**\n * Returns
single element, or `null` if the collection is empty or has more than one element.\n */\npublic fun <T>
Iterable<T>.singleOrNull(): T? {\n    when (this) {\n        is List -> return if (size == 1) this[0] else null\n
        else -> {\n            val iterator = iterator()\n            if (!iterator.hasNext())\n                return null\n            val single
= iterator.next()\n            if (iterator.hasNext())\n                return null\n            return single\n        }\n    }\n}\n\n/**\n * Returns single element, or `null` if the list is empty or has more than one element.\n */\npublic fun
<T> List<T>.singleOrNull(): T? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element
matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic
inline fun <T> Iterable<T>.singleOrNull(predicate: (T) -> Boolean): T? {\n    var single: T? = null\n    var found =
false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single =
element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns a list
containing
all elements except first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Iterable<T>.drop(n: Int):
List<T> {\n    require(n >= 0) { "Requested element count $n is less than zero." }\n    if (n == 0) return toList()\n
    val list: ArrayList<T>\n    if (this is Collection<*>) {\n        val resultSize = size - n\n        if (resultSize <= 0)\n
            return emptyList()\n        if (resultSize == 1)\n            return listOf(last())\n        list = ArrayList<T>(resultSize)\n
        if (this is List<T>) {\n            if (this is RandomAccess) {\n                for (index in n until size)\n
                    list.add(this[index])\n            } else {\n                for (item in listIterator(n))\n                    list.add(item)\n            }\n
            return list\n        }\n    } else {\n        list = ArrayList<T>()\n    }\n    var count =
0\n    for (item in this) {\n        if (count >= n) list.add(item) else ++count\n    }\n    return
list\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> List<T>.dropLast(n: Int): List<T> {\n
    require(n >= 0) { "Requested element count $n is less than zero." }\n    return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given
[predicate].\n */\n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T>
List<T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n    if (!isEmpty()) {\n        val iterator =
listIterator(size)\n        while (iterator.hasPrevious()) {\n            if (!predicate(iterator.previous())) {\n                return
take(iterator.nextIndex() + 1)\n            }\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first
elements that satisfy the given [predicate].\n */\n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> Iterable<T>.dropWhile(predicate:
(T) -> Boolean): List<T> {\n    var yielding = false\n    val list = ArrayList<T>()\n    for (item in this)\n        if
(yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n
        }\n    return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\n *
@sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun <T> Iterable<T>.filter(predicate: (T)
-> Boolean): List<T> {\n    return filterTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only
elements matching the given [predicate].\n */\n * @param [predicate] function that takes the
index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n *
@sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun <T>
Iterable<T>.filterIndexed(predicate: (index: Int, T) -> Boolean): List<T> {\n    return
filterIndexedTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate] to
the given [destination].\n */\n * @param [predicate] function that takes the index of an element and the element itself\n *
and returns the result of predicate evaluation on the element.\n */\n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n */\npublic inline fun <T, C : MutableCollection<in T>>
Iterable<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n    forEachIndexed { index,

```

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element ->\n    if (predicate(index, element)) destination.add(element)\n    }\n    return destination\n}\n\n/**\n *
Returns a list containing all elements
that are instances of specified type parameter R.\n * \n * @sample
samples.collections.Collections.Filtering.filterIsInstance\n *^\npublic inline fun <reified R>
Iterable<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\n    return
filterIsInstanceTo(ArrayList<R>())\n}\n\n/**\n * Appends all elements that are instances of specified type
parameter R to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterIsInstanceTo\n *^\npublic inline fun <reified R, C :
MutableCollection<in R>> Iterable<*>.filterIsInstanceTo(destination: C): C {\n    for (element in this) if (element is
R) destination.add(element)\n    return destination\n}\n\n/**\n * Returns a list containing all elements not matching
the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n *^\npublic inline fun <T>
Iterable<T>.filterNot(predicate: (T) -> Boolean): List<T> {\n    return filterNotTo(ArrayList<T>(),
predicate)\n}\n\n/**\n * Returns a list
containing all elements that are not `null`.\n * \n * @sample
samples.collections.Collections.Filtering.filterNotNull\n *^\npublic fun <T : Any> Iterable<T?>.filterNotNull():
List<T> {\n    return filterNotNullTo(ArrayList<T>())\n}\n\n/**\n * Appends all elements that are not `null` to the
given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterNotNullTo\n *^\npublic fun <C
: MutableCollection<in T>, T : Any> Iterable<T?>.filterNotNullTo(destination: C): C {\n    for (element in this) if
(element != null) destination.add(element)\n    return destination\n}\n\n/**\n * Appends all elements not matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n *^\npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterNotTo(destination: C, predicate: (T) ->
Boolean): C {\n    for (element in this) if (!predicate(element)) destination.add(element)\n    return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *^\npublic inline fun <T, C : MutableCollection<in T>>
Iterable<T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n    for (element in this) if (predicate(element))
destination.add(element)\n    return destination\n}\n\n/**\n * Returns a list containing elements at indices in the
specified [indices] range.\n * ^\npublic fun <T> List<T>.slice(indices: IntRange): List<T> {\n    if
(indices.isEmpty()) return listOf()\n    return this.subList(indices.start, indices.endInclusive + 1).toList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n * ^\npublic fun <T> List<T>.slice(indices:
Iterable<Int>): List<T> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<T>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return
list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is
negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n *^\npublic fun <T>
Iterable<T>.take(n: Int): List<T> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if
(n == 0) return emptyList()\n    if (this is Collection<T>) {\n        if (n >= size) return toList()\n        if (n == 1) return
listOf(first())\n    }\n    var count = 0\n    val list = ArrayList<T>(n)\n    for (item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list.optimizeReadOnlyList()\n}\n\n/**\n * Returns a list containing
last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n *^\npublic fun <T> List<T>.takeLast(n: Int): List<T> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return
listOf(last())\n    val list = ArrayList<T>(n)\n    if (this is RandomAccess) {\n        for (index in size - n until size)\n            list.add(this[index])\n    } else {\n        for (item in listIterator(size - n))\n            list.add(item)\n    }\n    return
list\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n *^\npublic inline fun <T> List<T>.takeLastWhile(predicate:
(T) -> Boolean): List<T> {\n    if (isEmpty())\n        return emptyList()\n    val iterator = listIterator(size)\n    while
(iterator.hasPrevious()) {\n        if (!predicate(iterator.previous())) {\n            iterator.next()\n            val

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expectedSize = size - iterator.nextIndex()\n      if (expectedSize == 0) return emptyList()\n      return
ArrayList<T>(expectedSize).apply
{\n      while (iterator.hasNext())\n          add(iterator.next())\n      }\n  }\n  return
toList()\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n *\npublic inline fun <T> Iterable<T>.takeWhile(predicate:
(T) -> Boolean): List<T> {\n    val list = ArrayList<T>()\n    for (item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Reverses elements in the list in-place.\n *\npublic
expect fun <T> MutableList<T>.reverse(): Unit\n\n/**\n * Returns a list with elements in reversed order.\n
*\npublic fun <T> Iterable<T>.reversed(): List<T> {\n    if (this is Collection && size <= 1) return toList()\n    val
list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Randomly shuffles elements in this list in-place
using the specified [random]
instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.3")\npublic fun <T> MutableList<T>.shuffle(random: Random): Unit {\n    for (i in lastIndex
downTo 1) {\n        val j = random.nextInt(i + 1)\n        this[j] = this.set(i, this[j])\n    }\n}\n\n/**\n * Sorts elements
in the list in-place according to natural sort order of the value returned by specified [selector] function.\n * \n * The
sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n *\npublic
inline fun <T, R : Comparable<R>> MutableList<T>.sortBy(crossinline selector: (T) -> R?): Unit {\n    if (size > 1)
sortWith(compareBy(selector))\n}\n\n/**\n * Sorts elements in the list in-place descending according to natural sort
order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal
elements preserve their order relative
to each other after sorting.\n *\npublic inline fun <T, R : Comparable<R>>
MutableList<T>.sortByDescending(crossinline selector: (T) -> R?): Unit {\n    if (size > 1)
sortWith(compareByDescending(selector))\n}\n\n/**\n * Sorts elements in the list in-place descending according to
their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to
each other after sorting.\n *\npublic fun <T : Comparable<T>> MutableList<T>.sortDescending(): Unit {\n
sortWith(reverseOrder())\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n *
\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\npublic fun <T : Comparable<T>> Iterable<T>.sorted(): List<T> {\n    if (this is Collection) {\n        if (size <= 1)
return this.toList()\n        @Suppress("UNCHECKED_CAST")\n        return (toArray<Comparable<T>>())
as Array<T>).apply {\n        sort()\n    }.asList()\n    }\n    return toMutableList().apply { sort() }\n}\n\n/**\n * Returns a list of all elements sorted
according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n * \n * @sample
samples.collections.Collections.Sorting.sortedBy\n *\npublic inline fun <T, R : Comparable<R>>
Iterable<T>.sortedBy(crossinline selector: (T) -> R?): List<T> {\n    return
sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural
sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal
elements preserve their order relative to each other after sorting.\n *\npublic inline fun <T, R : Comparable<R>>
Iterable<T>.sortedByDescending(crossinline selector: (T) -> R?): List<T> {\n    return
sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n *
\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\npublic fun <T : Comparable<T>> Iterable<T>.sortedDescending(): List<T> {\n    return sortedWith(reverseOrder())\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n * \n * The sort is _stable_. It means
that equal elements preserve their order relative to each other after sorting.\n *\npublic fun <T>
Iterable<T>.sortedWith(comparator: Comparator<in T>): List<T> {\n    if (this is Collection) {\n        if (size <= 1)
return this.toList()\n        @Suppress("UNCHECKED_CAST")\n        return (toArray<Any?>()) as

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Array<T>).apply { sortWith(comparator) }.asList()\n } \n return toMutableList().apply { sortWith(comparator)
}\n}\n\n/** \n * Returns an array of Boolean containing all of the elements of this collection. \n */ \npublic
fun Collection<Boolean>.toBooleanArray(): BooleanArray { \n val result = BooleanArray(size)\n var index =
0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/** \n * Returns an array of Byte
containing all of the elements of this collection. \n */ \npublic fun Collection<Byte>.toByteArray(): ByteArray { \n
val result = ByteArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return
result\n}\n\n/** \n * Returns an array of Char containing all of the elements of this collection. \n */ \npublic fun
Collection<Char>.toCharArray(): CharArray { \n val result = CharArray(size)\n var index = 0\n for (element in
this)\n result[index++] = element\n return result\n}\n\n/** \n * Returns an array of Double containing all of the
elements of this collection. \n */ \npublic fun Collection<Double>.toDoubleArray(): DoubleArray { \n val result =
DoubleArray(size)\n var index = 0\n for (element
in this)\n result[index++] = element\n return result\n}\n\n/** \n * Returns an array of Float containing all of
the elements of this collection. \n */ \npublic fun Collection<Float>.toFloatArray(): FloatArray { \n val result =
FloatArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return
result\n}\n\n/** \n * Returns an array of Int containing all of the elements of this collection. \n */ \npublic fun
Collection<Int>.toIntArray(): IntArray { \n val result = IntArray(size)\n var index = 0\n for (element in this)\n
result[index++] = element\n return result\n}\n\n/** \n * Returns an array of Long containing all of the elements
of this collection. \n */ \npublic fun Collection<Long>.toLongArray(): LongArray { \n val result =
LongArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return
result\n}\n\n/** \n * Returns an array of Short containing all of the elements of this
collection. \n */ \npublic fun Collection<Short>.toShortArray(): ShortArray { \n val result = ShortArray(size)\n
var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/** \n * Returns a
[Map] containing key-value pairs provided by [transform] function \n * applied to elements of the given collection. \n
* \n * If any of two pairs would have the same key the last one gets added to the map. \n * \n * The returned map
preserves the entry iteration order of the original collection. \n * \n * @sample
samples.collections.Collections.Transformations.associate \n */ \npublic inline fun <T, K, V>
Iterable<T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> { \n val capacity =
mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K,
V>(capacity), transform)\n}\n\n/** \n * Returns a [Map] containing the elements from the given collection indexed
by the key \n * returned from [keySelector] function applied to
each element. \n * \n * If any two elements would have the same key returned by [keySelector] the last one gets
added to the map. \n * \n * The returned map preserves the entry iteration order of the original collection. \n * \n
* @sample samples.collections.Collections.Transformations.associateBy \n */ \npublic inline fun <T, K>
Iterable<T>.associateBy(keySelector: (T) -> K): Map<K, T> { \n val capacity =
mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K,
T>(capacity), keySelector)\n}\n\n/** \n * Returns a [Map] containing the values provided by [valueTransform] and
indexed by [keySelector] functions applied to elements of the given collection. \n * \n * If any two elements would
have the same key returned by [keySelector] the last one gets added to the map. \n * \n * The returned map preserves
the entry iteration order of the original collection. \n * \n * @sample
samples.collections.Collections.Transformations.associateByWithValueTransform \n
*/ \npublic inline fun <T, K, V> Iterable<T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V):
Map<K, V> { \n val capacity = mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return
associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/** \n * Populates and
returns the [destination] mutable map with key-value pairs, \n * where key is provided by the [keySelector] function
applied to each element of the given collection \n * and value is the element itself. \n * \n * If any two elements
would have the same key returned by [keySelector] the last one gets added to the map. \n * \n * @sample
samples.collections.Collections.Transformations.associateByTo \n */ \npublic inline fun <T, K, M : MutableMap<in
K, in T>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K): M { \n for (element in this) { \n

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destination.put(keySelector(element), element)\n } return destination\n\n\n * Populates and returns the
[destination]
mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is
provided by the [valueTransform] function applied to elements of the given collection.\n * \n * If any two elements
would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateByToWithValueTransform\n */\npublic inline fun <T, K,
V, M : MutableMap<in K, in V>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n for (element in this) {\n destination.put(keySelector(element),
valueTransform(element))\n } return destination\n}\n\n\n * Populates and returns the [destination] mutable
map with key-value pairs\n * provided by [transform] function applied to each element of the given collection.\n *
\n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateTo\n
*/\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Iterable<T>.associateTo(destination: M, transform:
(T) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n } return
destination\n}\n\n\n * Returns a [Map] where keys are elements from the given collection and values are\n *
produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one
gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original collection.\n * \n
* @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.3")\npublic
inline fun <K, V> Iterable<K>.associateWith(valueSelector: (K) -> V): Map<K, V> {\n val result =
LinkedHashMap<K, V>(mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16))\n return
associateWithTo(result, valueSelector)\n}\n\n\n * Populates and returns
the [destination] mutable map with key-value pairs for each element of the given collection,\n * where key is the
element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements
are equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n */\n@SinceKotlin("1.3")\npublic inline fun
<K, V, M : MutableMap<in K, in V>> Iterable<K>.associateWithTo(destination: M, valueSelector: (K) -> V): M
{\n for (element in this) {\n destination.put(element, valueSelector(element))\n } return
destination\n}\n\n\n * Appends all elements to the given [destination] collection.\n */\npublic fun <T, C :
MutableCollection<in T>> Iterable<T>.toCollection(destination: C): C {\n for (item in this) {\n
destination.add(item)\n } return destination\n}\n\n\n * Returns a new [HashSet] of all elements.\n
*/\npublic fun <T> Iterable<T>.toHashSet():
HashSet<T> {\n return toCollection(HashSet<T>(mapCapacity(collectionSizeOrDefault(12))))\n}\n\n\n\n *
Returns a [List] containing all elements.\n */\npublic fun <T> Iterable<T>.toList(): List<T> {\n if (this is
Collection) {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(if (this is List) get(0) else
iterator().next())\n else -> this.toMutableList()\n }\n }\n return
this.toMutableList().optimizeReadOnlyList()\n}\n\n\n\n * Returns a new [MutableList] filled with all elements of
this collection.\n */\npublic fun <T> Iterable<T>.toMutableList(): MutableList<T> {\n if (this is Collection<T>)\n
return this.toMutableList()\n return toCollection(ArrayList<T>())\n}\n\n\n\n * Returns a new [MutableList]
filled with all elements of this collection.\n */\npublic fun <T> Collection<T>.toMutableList(): MutableList<T> {\n
return ArrayList(this)\n}\n\n\n\n * Returns a [Set] of all elements.\n * \n * The
returned set preserves the element iteration order of the original collection.\n */\npublic fun <T>
Iterable<T>.toSet(): Set<T> {\n if (this is Collection) {\n return when (size) {\n 0 -> emptySet()\n
1 -> setOf(if (this is List) this[0] else iterator().next())\n else ->
toCollection(LinkedHashSet<T>(mapCapacity(size)))\n }\n }\n return
toCollection(LinkedHashSet<T>()).optimizeReadOnlySet()\n}\n\n\n\n * Returns a single list of all elements
yielded from results of [transform] function being invoked on each element of original collection.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <T, R>
Iterable<T>.flatMap(transform: (T) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(),

```

```

transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original collection.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequence")\npublic inline fun <T, R>
Iterable<T>.flatMap(transform: (T) -> Sequence<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> Iterable<T>.flatMapIndexed(transform: (index: Int, T) -> Iterable<R>): List<R> {\n    return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element\n * and its index in
the original collection.\n * \n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequence")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> Iterable<T>.flatMapIndexed(transform: (index: Int, T) -> Sequence<R>): List<R> {\n    return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original collection, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic
inline
fun <T, R, C : MutableCollection<in R>> Iterable<T>.flatMapIndexedTo(destination: C, transform: (index: Int, T)
-> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list =
transform(checkIndexOverflow(index++), element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element\n * and its index in the original collection, to the given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequenceTo")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Sequence<R>): C {\n    var index = 0\n    for (element in this) {\n        val list =
transform(checkIndexOverflow(index++), element)\n        destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being
invoked on each element of original collection, to the given [destination].\n * \n * @public inline fun <T, R, C :
MutableCollection<in R>> Iterable<T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n    for
(element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original collection, to the given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequenceTo")\npublic inline fun <T, R, C :
MutableCollection<in R>> Iterable<T>.flatMapTo(destination: C, transform: (T) -> Sequence<R>): C {\n    for
(element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Groups elements of the original collection by
the key returned by the given [keySelector] function\n * applied to each element and returns a map where each
group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration
order of the keys produced from the original collection.\n * \n * @sample

```

```

samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <T, K>
Iterable<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n  return groupByTo(LinkedHashMap<K,
MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to
each element of the original collection\n * by the key returned by the given [keySelector] function applied to the
element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The
returned map preserves the entry iteration
  order of the keys produced from the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n *\npublic inline fun <T, K, V>
Iterable<T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups elements
of the original collection by the key returned by the given [keySelector] function\n * applied to each element and
puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n *\npublic inline
fun <T, K, M : MutableMap<in K, MutableList<T>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) ->
K): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list = destination.getOrPut(key) {
ArrayList<T>() }\n    list.add(element)\n  }\n  return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each
element of the original collection\n * by the key returned by the given [keySelector] function applied to the
element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n *
@return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n *\npublic inline fun <T, K, V, M :
MutableMap<in K, MutableList<V>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) { ArrayList<V>() }\n    list.add(valueTransform(element))\n  }\n  return
destination\n}\n\n/**\n * Creates a [Grouping] source from a collection to be used later with one of group-and-fold
operations\n * using the specified [keySelector] function to
  extract a key from each element.\n * \n * @sample samples.collections.Grouping.groupingByEachCount\n
*\n@SinceKotlin("1.1")\npublic inline fun <T, K> Iterable<T>.groupingBy(crossinline keySelector: (T) -> K):
Grouping<T, K> {\n  return object : Grouping<T, K> {\n    override fun sourceIterator(): Iterator<T> =
this@groupingBy.iterator()\n    override fun keyOf(element: T): K = keySelector(element)\n  }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original
collection.\n * \n * @sample samples.collections.Collections.Transformations.map\n *\npublic inline fun <T, R>
Iterable<T>.map(transform: (T) -> R): List<R> {\n  return mapTo(ArrayList<R>(collectionSizeOrDefault(10)),
transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each
element and its index in the original collection.\n * @param [transform] function that takes the index of an
element and the element itself\n * and returns the result of the transform applied to the element.\n *\npublic inline
fun <T, R> Iterable<T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n  return
mapIndexedTo(ArrayList<R>(collectionSizeOrDefault(10)), transform)\n}\n\n/**\n * Returns a list containing only
the non-null results of applying the given [transform] function\n * to each element and its index in the original
collection.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns
the result of the transform applied to the element.\n *\npublic inline fun <T, R : Any>
Iterable<T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {\n  return
mapIndexedNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each
element and its index in the original collection\n * and appends only the non-null results to the given [destination].\n
*\n * @param [transform] function that takes
  the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n
*\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Iterable<T>.mapIndexedNotNullTo(destination:
C, transform: (index: Int, T) -> R?): C {\n  forEachIndexed { index, element -> transform(index, element)?.let {

```



contains no elements, the function returns `true` because there are no elements in it that `_do not_` match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous\_truth) article.

`@sample`

```
samples.collections.Collections.Aggregates.all
public inline fun <T> Iterable<T>.all(predicate: (T) -> Boolean): Boolean {
    if (this is Collection)
        && isEmpty()
    return true
    for (element in this) if (!predicate(element)) return false
    return true
}
```

Returns `true` if collection has at least one element.

`@sample`

```
samples.collections.Collections.Aggregates.any
public fun <T> Iterable<T>.any(): Boolean {
    if (this is Collection) return !isEmpty()
    return iterator().hasNext()
}
```

Returns `true` if at least one element matches the given [predicate].

`@sample`

```
samples.collections.Collections.Aggregates.anyWithPredicate
public inline fun <T> Iterable<T>.any(predicate: (T) -> Boolean): Boolean {
    if (this is Collection && isEmpty()) return false
    for (element in this) if (predicate(element)) return true
    return false
}
```

Returns the number of elements in this collection.

```
public fun <T> Iterable<T>.count(): Int {
    if (this is Collection) return size
    var count = 0
    for (element in this) checkCountOverflow(++count)
    return count
}
```

Returns the number of elements in this collection.

```
public inline fun <T> Collection<T>.count(): Int {
    return size
}
```

Returns the number of elements matching the given [predicate].

```
public inline fun <T> Iterable<T>.count(predicate: (T) -> Boolean): Int {
    if (this is Collection && isEmpty()) return 0
    var count = 0
    for (element in this) if (predicate(element))
        checkCountOverflow(++count)
    return count
}
```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.

Returns the specified [initial] value if the collection is empty.

`@param` [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.

```
public inline fun <T, R> Iterable<T>.fold(initial: R, operation: (acc: R, T) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}
```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original collection.

Returns the specified [initial] value if the collection is empty.

`@param` [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```
public inline fun <T, R> Iterable<T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(checkIndexOverflow(index++), accumulator, element)
    return accumulator
}
```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.

Returns the specified [initial] value if the list is empty.

`@param` [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

```
public inline fun <T, R> List<T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {
    var accumulator = initial
    if (!isEmpty()) {
        val iterator = listIterator(size)
        while (iterator.hasPrevious()) {
            accumulator = operation(iterator.previous(), accumulator)
        }
    }
    return accumulator
}
```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original list and current accumulator value.

Returns the specified [initial] value if the list is empty.

`@param` [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```
public inline fun <T, R> List<T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc: R) -> R): R {
    var accumulator = initial
    if (!isEmpty()) {
        val iterator = listIterator(size)
        while (iterator.hasPrevious()) {
            val index = iterator.previousIndex()
            accumulator = operation(index, iterator.previous(), accumulator)
        }
    }
    return accumulator
}
```

Performs the given [action] on each element.

```
public inline fun <T> Iterable<T>.forEach(action: (T) -> Unit): Unit {
    for (element in this) action(element)
}
```

Performs the given [action] on each element, providing sequential index with the element.

`@param` [action] function that

```

takes the index of an element and the element itself\n * and performs the action on the element.\n */\npublic inline
fun <T> Iterable<T>.forEachIndexed(action: (index: Int, T) -> Unit): Unit {\n    var index = 0\n    for (item in this)
action(checkIndexOverflow(index++), item)\n}\n\n/**\n * Returns the largest element.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * @throws
NoSuchElementException if the collection is empty.\n */\n\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun Iterable<Double>.max(): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        max = maxOf(max, e)\n    }\n    return max\n}\n\n/**\n * Returns the largest element.\n * \n *
If any of elements is `NaN` returns `NaN`.\n * \n * @throws NoSuchElementException if the collection is empty.\n */\n\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun Iterable<Float>.max(): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var max = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        max = maxOf(max, e)\n    }\n    return max\n}\n\n/**\n *
Returns the largest element.\n * \n * @throws NoSuchElementException if the collection is empty.\n */\n\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun <T : Comparable<T>> Iterable<T>.max(): T {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) throw NoSuchElementException()\n    var max = iterator.next()\n    while (iterator.hasNext())
{\n        val e = iterator.next()\n        if (max < e) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the
collection is empty.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS")\npublic inline fun <T, R : Comparable<R>> Iterable<T>.maxBy(selector:
(T) -> R): T {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
maxElem = iterator.next()\n    if (!iterator.hasNext()) return maxElem\n    var maxValue = selector(maxElem)\n    do
{\n        val e = iterator.next()\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n
maxValue = v\n        }\n    } while (iterator.hasNext())\n    return maxElem\n}\n\n/**\n * Returns the first element
yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Iterable<T>.maxByOrNull(selector: (T) -> R): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var maxElem = iterator.next()\n    if (!iterator.hasNext()) return maxElem\n    var
maxValue = selector(maxElem)\n    do {\n        val e = iterator.next()\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    } while
(iterator.hasNext())\n    return maxElem\n}\n\n/**\n * Returns the largest value among all values produced by
[selector] function\n * applied to each element in the collection.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the collection is
empty.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOf(selector: (T) ->
Double): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
maxValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the
collection.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n *
@throws NoSuchElementException if the collection is empty.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOf(selector: (T) ->
Float): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var

```

```

maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all\n * values produced by [selector] function\n * applied to each element in the collection.\n * @throws\n * NoSuchElementException if the\n * collection is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nIterable<T>.maxOf(selector: (T) -> R): R {\n  val iterator = iterator()\n  if (!iterator.hasNext()) throw\n  NoSuchElementException()\n  var maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v\n    = selector(iterator.next())\n    if (maxValue < v) {\n      maxValue = v\n    }\n  }\n  return\n  maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n * If any of values produced by [selector]\n * function is `NaN`, the returned result is `NaN`.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun <T> Iterable<T>.maxOfOrNull(selector: (T) -> Double): Double? {\n  val iterator = iterator()\n  if\n  (!iterator.hasNext()) return null\n  var maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n * If any of values produced by [selector] function is `NaN`, the\n * returned result is `NaN`.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOfOrNull(selector: (T)\n-> Float): Float? {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return null\n  var maxValue =\n  selector(iterator.next())\n  while (iterator.hasNext())\n  {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return\n  maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nIterable<T>.maxOfOrNull(selector: (T) -> R): R? {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return\n  null\n  var maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v =\n    selector(iterator.next())\n    if (maxValue < v) {\n      maxValue = v\n    }\n  }\n  return\n  maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values\n * produced by [selector] function applied to each element in the collection.\n * @throws\n * NoSuchElementException if the collection is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\nIterable<T>.maxOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n  val iterator = iterator()\n  if\n  (!iterator.hasNext()) throw NoSuchElementException()\n  var maxValue = selector(iterator.next())\n  while\n  (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    if (comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value according to the provided\n * [comparator]\n * among all values produced by [selector] function applied to each element in the collection or `null`\n * if there are no elements.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun <T, R> Iterable<T>.maxOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n  val\n  iterator = iterator()\n  if (!iterator.hasNext()) return null\n  var maxValue = selector(iterator.next())\n  while

```





```

return minElem\n    var minValue = selector(minElem)\n    do {\n        val e = iterator.next()\n        val v =
selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    } while
(iterator.hasNext())\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the
given function or `null` if there are no elements.\n */\n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\n\npublic inline fun <T, R :
Comparable<R>> Iterable<T>.minByOrNull(selector: (T) -> R): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var minElem = iterator.next()\n    if (!iterator.hasNext()) return minElem\n    var
minValue = selector(minElem)\n    do {\n        val e = iterator.next()\n        val v = selector(e)\n        if (minValue >
v) {\n            minElem = e\n            minValue = v\n        }\n    } while (iterator.hasNext())\n    return
minElem\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the collection.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n * \n * @throws NoSuchElementException if the collection is empty.\n */\n\n* \n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n\npublic inline fun <T> Iterable<T>.minOf(selector: (T) ->
Double): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the collection.\n * \n * If any of values
produced
by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the
collection is empty.\n */\n\n* \n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n\npublic inline fun <T> Iterable<T>.minOf(selector: (T) ->
Float): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the collection.\n * \n * @throws
NoSuchElementException if the collection is empty.\n */\n\n* \n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n\npublic
inline fun <T, R : Comparable<R>> Iterable<T>.minOf(selector: (T) -> R): R {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) throw NoSuchElementException()\n    var minValue = selector(iterator.next())\n    while
(iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n
        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each element in the collection or `null` if there are no elements.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n */\n\n* \n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n\npublic inline fun <T> Iterable<T>.minOfOrNull(selector: (T)
-> Double): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue
= selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =
minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n * \n * If any
of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */\n\n* \n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n\npublic inline fun <T> Iterable<T>.minOfOrNull(selector: (T)
-> Float): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =
selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =
minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all

```

values produced by [selector] function\n \* applied to each element in the collection or `null` if there are no elements.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>
```

```
Iterable<T>.minOfOrNull(selector: (T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return\n    null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v =\n        selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values\n * produced by [selector] function applied to each element in the collection.\n * \n * @throws
```

```
NoSuchElementException if the collection is empty.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
```

```
inline fun <T, R> Iterable<T>.minOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n    val iterator\n    = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var minValue =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the collection or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>
```

```
Iterable<T>.minOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    val iterator =\n    iterator()\n
```

```
    if (!iterator.hasNext()) return null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any\n * of elements is `NaN` returns `NaN`.\n * \n * @SinceKotlin("1.4")\n * public fun Iterable<Double>.minOrNull():
```

```
Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while\n    (iterator.hasNext()) {\n        val e = iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
```

```
*\n@SinceKotlin("1.4")\npublic fun Iterable<Float>.minOrNull(): Float? {\n    val iterator = iterator()\n    if
```

```
(!iterator.hasNext()) return\n    null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        min =\n        minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Iterable<T>.minOrNull(): T? {\n    val iterator =\n    iterator()\n    if (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (min > e) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having\n * the smallest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the\n * collection is empty.\n
```

```
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun <T> Iterable<T>.minWith(comparator: Comparator<in T>): T {\n    val iterator = iterator()\n
```

```
    if (!iterator.hasNext()) throw NoSuchElementException()\n    var\n    min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (comparator.compare(min,\n        e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to\n * the provided [comparator] or `null` if there are no elements.\n * \n * @SinceKotlin("1.4")\n * public fun <T>
```

```
Iterable<T>.minWithOrNull(comparator: Comparator<in T>): T? {\n    val iterator = iterator()\n    if\n    (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e =\n        iterator.next()\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns `true` if\n * the collection has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n * \n * @public fun
```

```

<T> Iterable<T>.none(): Boolean {\n  if (this is Collection) return isEmpty()\n  return
!iterator().hasNext()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n
 * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun <T>
Iterable<T>.none(predicate: (T) -> Boolean): Boolean {\n  if (this is Collection && isEmpty()) return true\n  for
(element in this) if (predicate(element)) return false\n  return true\n}\n\n/**\n * Performs the given [action] on each
element and returns the collection itself afterwards.\n */\n@SinceKotlin("1.1")\npublic inline fun <T, C :
Iterable<T>> C.onEach(action: (T) -> Unit): C {\n  return apply { for (element in this) action(element)
}\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element,\n * and
returns the collection itself afterwards.\n * @param [action] function that takes the index of an element and the
element itself\n * and performs the action on the element.\n */\n@SinceKotlin("1.4")\npublic inline fun <T, C :
Iterable<T>> C.onEachIndexed(action: (index: Int, T) -> Unit): C {\n  return apply { forEachIndexed(action)
}\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to
current accumulator value and each element.\n * \n * Throws an exception if this collection is empty. If the
collection can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver
is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
*/\npublic inline fun <S, T : S> Iterable<T>.reduce(operation: (acc: S, T) -> S): S {\n  val iterator = this.iterator()\n
if (!iterator.hasNext()) throw UnsupportedOperationException("Empty collection can't be reduced.")\n  var
accumulator: S = iterator.next()\n  while (iterator.hasNext()) {\n    accumulator = operation(accumulator,
iterator.next())\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with the first element and applying [operation] from left to right\n * to current accumulator value and each element
with its index in the original collection.\n * \n * Throws an exception if this collection is empty. If the collection can
be empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the
element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n */\npublic inline fun <S, T : S>
Iterable<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n  val iterator = this.iterator()\n  if
(!iterator.hasNext()) throw UnsupportedOperationException("Empty collection can't be reduced.")\n  var index =
1\n  var accumulator: S = iterator.next()\n  while (iterator.hasNext()) {\n    accumulator =
operation(checkIndexOverflow(index++),
accumulator, iterator.next())\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element with its index
in the original collection.\n * \n * Returns `null` if the collection is empty.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value and the element itself,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*/\n@SinceKotlin("1.4")\npublic inline fun <S, T : S> Iterable<T>.reduceIndexedOrNull(operation: (index: Int,
acc: S, T) -> S): S? {\n  val iterator = this.iterator()\n  if (!iterator.hasNext()) return null\n  var index = 1\n
var accumulator: S = iterator.next()\n  while (iterator.hasNext()) {\n    accumulator =
operation(checkIndexOverflow(index++), accumulator, iterator.next())\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the first element and applying [operation] from left to right\n * to current
accumulator value and each element.\n * \n * Returns `null` if the collection is empty.\n * \n * @param [operation]
function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduceOrNull\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Iterable<T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n  val iterator = this.iterator()\n  if
(!iterator.hasNext()) return null\n  var accumulator: S = iterator.next()\n  while (iterator.hasNext()) {\n
accumulator = operation(accumulator, iterator.next())\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value
starting with the last element and applying [operation] from right to left\n * to each element and current accumulator

```

value.\n \* \n

\* Throws an exception if this list is empty. If the list can be empty in an expected way,\n \* please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceRight\n \* \n \* public inline fun <S, T : S>

```
List<T>.reduceRight(operation: (T, acc: S) -> S): S {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        throw UnsupportedOperationException("Empty list can't be reduced.")\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        accumulator = operation(iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with its index in the original list and current accumulator
```

```
value.\n * \n * Throws an exception if this list is empty. If the list can be empty in an expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n * \n * public inline fun <S, T : S> List<T>.reduceRightIndexed(operation: (index: Int, T, acc: S) -> S): S {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        throw UnsupportedOperationException("Empty list can't be reduced.")\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        val index = iterator.previousIndex()\n        accumulator = operation(index, iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element
```

```
and applying [operation] from right to left\n * to each element with its index in the original list and current accumulator value.\n * \n * Returns `null` if the list is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
```

```
*\n * @SinceKotlin("1.4")\n * public inline fun <S, T : S> List<T>.reduceRightIndexedOrNull(operation: (index: Int, T, acc: S) -> S): S? {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        return null\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        val index = iterator.previousIndex()\n        accumulator = operation(index, iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n
```

```
* to each element and current accumulator value.\n * \n * Returns `null` if the list is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
```

```
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n * public inline fun <S, T : S>
```

```
List<T>.reduceRightOrNull(operation: (T, acc: S) -> S): S? {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        return null\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        accumulator = operation(iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
```

```
[operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed
```

```
to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
```

```
*\n * @SinceKotlin("1.4")\n * public inline fun <T, R> Iterable<T>.runningFold(initial: R, operation: (acc: R, T) -> R): List<R> {\n    val estimatedSize = collectionSizeOrDefault(9)\n    if (estimatedSize == 0) return listOf(initial)\n    val result = ArrayList<R>(estimatedSize + 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n        accumulator = operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from
```

```
left to right\n * to each element, its index in the original collection and current accumulator
```

value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\npublic inline fun <T, R> Iterable<T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {\n    val estimatedSize = collectionSizeOrDefault(9)\n    if (estimatedSize == 0)\n        return listOf(initial)\n    val result = ArrayList<R>(estimatedSize + 1).apply { add(initial) }\n    var index = 0\n    var accumulator = initial\n    for (element in this) {\n        accumulator = operation(index++, accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this collection.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and the element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S> Iterable<T>.runningReduce(operation: (acc: S, T) -> S): List<S> {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) return emptyList()\n    var accumulator: S = iterator.next()\n    val result = ArrayList<S>(collectionSizeOrDefault(10)).apply { add(accumulator) }\n    while (iterator.hasNext()) {\n        accumulator = operation(accumulator, iterator.next())\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original collection and current accumulator value that starts with the first element of this collection.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\npublic inline fun <S, T : S> Iterable<T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): List<S> {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) return emptyList()\n    var accumulator: S = iterator.next()\n    val result = ArrayList<S>(collectionSizeOrDefault(10)).apply {\n        add(accumulator) }\n    var index = 1\n    while (iterator.hasNext()) {\n        accumulator = operation(index++, accumulator, iterator.next())\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <T, R> Iterable<T>.scan(initial: R, operation: (acc: R, T) -> R): List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original collection and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <T, R> Iterable<T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns the sum of all values
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produced by [selector] function applied to each element in the collection.\n */\n@Deprecated("Use sumOf
instead.", ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline
fun <T> Iterable<T>.sumBy(selector: (T) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the collection.\n */\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun <T>
Iterable<T>.sumByDouble(selector: (T) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the collection.\n */\n\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Iterable<T>.sumOf(selector: (T) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the collection.\n */\n\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun <T>
Iterable<T>.sumOf(selector: (T) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the collection.\n */\n\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Iterable<T>.sumOf(selector: (T) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element
in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced
by [selector] function applied to each element in the collection.\n */\n\n*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> UInt): UInt {\n
    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
collection.\n */\n\n*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> ULong): ULong
{\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return
sum\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an
[IllegalArgumentException] if there are any `null` elements.\n */\n\npublic fun <T : Any>
Iterable<T?>.requireNotNulls(): Iterable<T> {\n    for (element in this) {\n        if (element == null) {\n            throw
IllegalArgumentException("null element found in $this.")\n        }\n    }\n    @Suppress("UNCHECKED_CAST")\n    return this as Iterable<T>\n}\n\n/**\n * Returns an original collection
containing all the non-`null` elements, throwing
an [IllegalArgumentException] if there are any `null` elements.\n */\n\npublic fun <T : Any>
List<T?>.requireNotNulls(): List<T> {\n    for (element in this) {\n        if (element == null) {\n            throw
IllegalArgumentException("null element found in $this.")\n        }\n    }\n    @Suppress("UNCHECKED_CAST")\n    return this as List<T>\n}\n\n/**\n * Splits this collection into a list of
lists each not exceeding the given [size].\n * \n * The last list in the resulting list may have fewer elements than the
given [size].\n * \n * @param size the number of elements to take in each list, must be positive and can be greater
than the number of elements in this collection.\n * \n * @sample
samples.collections.Collections.Transformations.chunked\n */\n\n@SinceKotlin("1.2")\npublic fun <T>

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Iterable<T>.chunked(size: Int): List<List<T>> {\n  return windowed(size, size, partialWindows = true)\n}\n\n/**\n * Splits this collection into several lists each not exceeding the given [size]\n * and applies the given [transform] function to an each.\n * \n * @return list of results of the [transform] applied to\n an each list.\n * \n * Note that the list passed to the [transform] function is ephemeral and is valid only inside that\n function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The\n last list may have fewer elements than the given [size].\n * \n * @param size the number of elements to take in each\n list, must be positive and can be greater than the number of elements in this collection.\n * \n * @sample\n samples.text.Strings.chunkedTransform\n */\n\n@SinceKotlin("1.2")\npublic fun <T, R> Iterable<T>.chunked(size:\n Int, transform: (List<T>) -> R): List<R> {\n  return windowed(size, size, partialWindows = true, transform =\n transform)\n}\n\n/**\n * Returns a list containing all elements of the original collection without the first occurrence\n of the given [element].\n */\n\npublic operator fun <T> Iterable<T>.minus(element:\n T): List<T> {\n  val result = ArrayList<T>(collectionSizeOrDefault(10))\n  var removed = false\n  return\n this.filterTo(result) { if (!removed && it == element) { removed = true; false } else true }\n}\n\n/**\n * Returns a\n list containing all elements of the original collection except the elements contained in the given [elements] array.\n */\n\npublic operator fun <T> Iterable<T>.minus(elements: Array<out T>): List<T> {\n  if (elements.isEmpty())\n return this.toList()\n  return this.filterNot { it in elements }\n}\n\n/**\n * Returns a list containing all elements of\n the original collection except the elements contained in the given [elements] collection.\n */\n\npublic operator fun\n <T> Iterable<T>.minus(elements: Iterable<T>): List<T> {\n  val other =\n elements.convertToListIfNotCollection()\n  if (other.isEmpty())\n    return this.toList()\n  return this.filterNot {\n it in other }\n}\n\n/**\n * Returns a list containing all elements of the original collection except\n the elements contained in the given [elements] sequence.\n */\n\npublic operator fun <T>\n Iterable<T>.minus(elements: Sequence<T>): List<T> {\n  val other = elements.toList()\n  if (other.isEmpty())\n    return this.toList()\n  return this.filterNot { it in other }\n}\n\n/**\n * Returns a list containing all elements of the\n original collection without the first occurrence of the given [element].\n */\n\n@kotlin.internal.InlineOnly\npublic\n inline fun <T> Iterable<T>.minusElement(element: T): List<T> {\n  return minus(element)\n}\n\n/**\n * Splits the\n original collection into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * \n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample\n samples.collections.Iterables.Operations.partition\n */\n\npublic inline fun <T> Iterable<T>.partition(predicate: (T) ->\n Boolean): Pair<List<T>, List<T>> {\n  val first = ArrayList<T>()\n  val second = ArrayList<T>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Returns a list containing all elements\n of the original collection and then the given [element].\n */\n\npublic operator fun <T> Iterable<T>.plus(element: T):\n List<T> {\n  if (this is Collection) return this.plus(element)\n  val result = ArrayList<T>()\n  result.addAll(this)\n  result.add(element)\n  return result\n}\n\n/**\n * Returns a list containing all elements of the\n original collection and then the given [element].\n */\n\npublic operator fun <T> Collection<T>.plus(element: T):\n List<T> {\n  val result = ArrayList<T>(size + 1)\n  result.addAll(this)\n  result.add(element)\n  return\n result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given\n [elements] array.\n */\n\npublic operator fun <T> Iterable<T>.plus(elements:\n Array<out T>): List<T> {\n  if (this is Collection) return this.plus(elements)\n  val result = ArrayList<T>()\n  result.addAll(this)\n  result.addAll(elements)\n  return result\n}\n\n/**\n * Returns a list containing all elements\n of the original collection and then all elements of the given [elements] array.\n */\n\npublic operator fun <T>\n Collection<T>.plus(elements: Array<out T>): List<T> {\n  val result = ArrayList<T>(this.size + elements.size)\n  result.addAll(this)\n  result.addAll(elements)\n  return result\n}\n\n/**\n * Returns a list containing all elements\n of the original collection and then all elements of the given [elements] collection.\n */\n\npublic operator fun <T>\n Iterable<T>.plus(elements: Iterable<T>): List<T> {\n  if (this is Collection) return this.plus(elements)\n  val\n result = ArrayList<T>()\n  result.addAll(this)\n  result.addAll(elements)\n  return result\n}\n\n/**\n * Returns a\n list containing all elements of the original

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collection and then all elements of the given [elements] collection.\n */\npublic operator fun <T>
Collection<T>.plus(elements: Iterable<T>): List<T> {\n    if (elements is Collection) {\n        val result =
ArrayList<T>(this.size + elements.size)\n        result.addAll(this)\n        result.addAll(elements)\n        return result\n    } else {\n        val result = ArrayList<T>(this)\n        result.addAll(elements)\n        return result\n    }\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements]
sequence.\n */\npublic operator fun <T> Iterable<T>.plus(elements: Sequence<T>): List<T> {\n    val result =
ArrayList<T>()\n    result.addAll(this)\n    result.addAll(elements)\n    return result\n}\n\n/**\n * Returns a list
containing all elements of the original collection and then all elements of the given [elements] sequence.\n
*/\npublic operator fun <T> Collection<T>.plus(elements: Sequence<T>): List<T> {\n
    val result = ArrayList<T>(this.size + 10)\n    result.addAll(this)\n    result.addAll(elements)\n    return
result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given [element].\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.plusElement(element: T): List<T> {\n    return
plus(element)\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given
[element].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.plusElement(element: T):
List<T> {\n    return plus(element)\n}\n\n/**\n * Returns a list of snapshots of the window of the given [size]\n *
sliding along this collection with the given [step], where each\n * snapshot is a list.\n * \n * Several last lists may
have fewer elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than
the number of elements in this collection.\n * @param size the number of elements to take
in each window\n * @param step the number of elements to move the window forward by on an each step, by
default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by
default `false` which means partial windows won't be preserved\n * \n * @sample
samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin("1.2")\npublic fun <T>
Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): List<List<T>> {\n
    checkWindowSizeStep(size, step)\n    if (this is RandomAccess && this is List) {\n        val thisSize = this.size\n
        val resultCapacity = thisSize / step + if (thisSize % step == 0) 0 else 1\n        val result =
ArrayList<List<T>>(resultCapacity)\n        var index = 0\n        while (index in 0 until thisSize) {\n            val
windowSize = size.coerceAtMost(thisSize - index)\n            if (windowSize < size && !partialWindows) break\n
            result.add(List(windowSize) { this[it
+ index] })\n            index += step\n        }\n        return result\n    }\n    val result = ArrayList<List<T>>()\n
    windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = false).forEach {\n        result.add(it)\n    }\n
    return result\n}\n\n/**\n * Returns a list of results of applying the given [transform] function to\n * an each list
representing a view over the window of the given [size]\n * sliding along this collection with the given [step].\n * \n
* Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n * You
should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * Several last lists may
have fewer elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than
the number of elements in this collection.\n * @param size the number of elements to take in each window\n *
@param step the number of elements to move the window forward
by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the
end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample
samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin("1.2")\npublic fun <T, R>
Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (List<T>) -> R):
List<R> {\n    checkWindowSizeStep(size, step)\n    if (this is RandomAccess && this is List) {\n        val thisSize =
this.size\n        val resultCapacity = thisSize / step + if (thisSize % step == 0) 0 else 1\n        val result =
ArrayList<R>(resultCapacity)\n        val window = MovingSubList(this)\n        var index = 0\n        while (index in 0
until thisSize) {\n            val windowSize = size.coerceAtMost(thisSize - index)\n            if (!partialWindows &&
windowSize < size) break\n            window.move(index, index + windowSize)\n            result.add(transform(window))\n
            index += step\n        }\n        return result\n    }\n    val result =
ArrayList<R>()\n    windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = true).forEach {\n

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result.add(transform(it))\n } \n return result\n}\n\n/**\n * Returns a list of pairs built from the elements of `this`\n collection and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n\n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Iterable<T>.zip(other:\n Array<out R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values\n built from the elements of `this` collection and the [other] array with the same index\n * using the provided\n [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V> Iterable<T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {\n val arraySize = other.size\n val list = ArrayList<V>(minOf(collectionSizeOrDefault(10), arraySize))\n var i =\n 0\n for (element in this) {\n if (i >= arraySize) break\n list.add(transform(element, other[i++]))\n }\n return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] collection with\n the same index.\n * The returned list has length of the shortest collection.\n * \n\n * @sample\n samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Iterable<T>.zip(other:\n Iterable<R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values\n built from the elements of `this` collection and the [other] collection with the same index\n * using the provided\n [transform] function applied to each pair of elements.\n * \n\n * The returned list has length of the shortest collection.\n * \n\n * @sample\n samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V>\n Iterable<T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n val first = iterator()\n val second\n = other.iterator()\n val list = ArrayList<V>(minOf(collectionSizeOrDefault(10),\n other.collectionSizeOrDefault(10)))\n while (first.hasNext() && second.hasNext()) {\n list.add(transform(first.next(), second.next()))\n }\n return list\n}\n\n/**\n * Returns a list of pairs of each two\n adjacent elements in this collection.\n * \n\n * The returned list is empty if this collection contains less than two\n elements.\n * \n\n * @sample samples.collections.Collections.Transformations.zipWithNext\n */\n@SinceKotlin("1.2")\npublic fun <T> Iterable<T>.zipWithNext(): List<Pair<T, T>> {\n return zipWithNext\n { a, b -> a to b }\n}\n\n/**\n * Returns a list containing the results of applying the\n given [transform] function\n * to an each pair of two adjacent elements in this collection.\n * \n\n * The returned list\n is empty if this collection contains less than two elements.\n * \n\n * @sample\n samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n */\n@SinceKotlin("1.2")\npublic\n inline fun <T, R> Iterable<T>.zipWithNext(transform: (a: T, b: T) -> R): List<R> {\n val iterator = iterator()\n if\n (!iterator.hasNext()) return emptyList()\n val result = mutableListOf<R>()\n var current = iterator.next()\n while (iterator.hasNext()) {\n val next = iterator.next()\n result.add(transform(current, next))\n current\n = next\n }\n return result\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and\n using the given [prefix] and [postfix] if supplied.\n * \n\n * If the collection could be huge, you can specify a non-\n negative value of [limit], in which case only the first [limit]\n * elements will be appended,\n followed by the [truncated] string (which defaults to "...").\n * \n\n * @sample\n samples.collections.Collections.Transformations.joinTo\n */\npublic fun <T, A : Appendable>\n Iterable<T>.joinTo(buffer: A, separator: CharSequence = '\n', prefix: CharSequence = \"\", postfix: CharSequence\n = \"\", limit: Int = -1, truncated: CharSequence = "...\", transform: ((T) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n buffer.appendElement(element, transform)\n } else break\n }\n if\n (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if\n supplied.\n * \n\n * If the collection could be huge, you can specify a non-negative value of [limit], in which\n case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to\n "...").\n * \n\n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun <T>\n Iterable<T>.joinToString(separator: CharSequence = '\n', prefix: CharSequence = \"\", postfix: CharSequence =\n \"\", limit: Int = -1, truncated: CharSequence = "...\", transform: ((T) -> CharSequence)? = null): String {\n return

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joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n\n/**\n * Returns this
collection as an [Iterable].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.asIterable():
Iterable<T> {\n    return this\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original collection returning
its elements when being iterated.\n */\n@sample
samples.collections.Sequences.Building.sequenceFromCollection\n */\npublic fun <T> Iterable<T>.asSequence():
Sequence<T> {\n    return Sequence
    { this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfByte")\npublic fun Iterable<Byte>.average(): Double {\n    var sum:
Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfShort")\npublic fun
Iterable<Short>.average(): Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n
sum += element\n        checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum /
count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfInt")\npublic fun Iterable<Int>.average(): Double {\n    var sum: Double =
0.0\n    var count: Int = 0\n    for (element in this) {\n
sum += element\n        checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum /
count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfLong")\npublic fun Iterable<Long>.average(): Double {\n    var sum:
Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfFloat")\npublic fun
Iterable<Float>.average(): Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n
sum += element\n        checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum /
count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfDouble")\npublic fun Iterable<Double>.average():
Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfByte")\npublic fun
Iterable<Byte>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    }\n    return
sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfShort")\npublic fun Iterable<Short>.sum(): Int {\n    var sum: Int = 0\n    for
(element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the
collection.\n */\n@kotlin.jvm.JvmName("sumOfInt")\npublic fun Iterable<Int>.sum(): Int {\n    var sum: Int = 0\n    for
(element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements
in the collection.\n */\n@kotlin.jvm.JvmName("sumOfLong")\npublic fun Iterable<Long>.sum(): Long {\n    var
sum: Long = 0L\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the
sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfFloat")\npublic fun
Iterable<Float>.sum(): Float {\n    var sum: Float = 0.0f\n    for (element in this) {\n        sum += element\n    }\n
return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfDouble")\npublic fun Iterable<Double>.sum(): Double {\n    var sum: Double
= 0.0\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n"/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport
kotlin.comparisons.naturalOrder\nimport
kotlin.random.Random\nimport kotlin.js.arrayBufferIsView\n\n/**\n * Returns the array if it's not `null`, or an
empty array otherwise.\n */\n@sample samples.collections.Arrays.Usage.arrayOrEmpty\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun <T> Array<out T>?.orEmpty(): Array<out T> = this ?

```

```

emptyArray<T>()\n\n/**\n * Returns a *typed* array containing all of the elements of this collection.\n *\n * Allocates an array of runtime type `T` having its size equal to the size of this collection\n * and populates the array with the elements of this collection.\n * @sample
samples.collections.Collections.Collections.collectionToTypedArray\n */\n@kotlin.internal.InlineOnly\npublic
actual inline fun <T> Collection<T>.toArray(): Array<T> =
copyToArray(this)\n\n@JsName("copyToArray")\n@PublishedApi\ninternal fun <T> copyToArray(collection:
Collection<T>): Array<T> {\n    return if (collection.asDynamic().toArray !== undefined)\n        collection.asDynamic().toArray().unsafeCast<Array<T>>()\n    else\n        copyToArrayImpl(collection).unsafeCast<Array<T>>()\n}\n\n@JsName("copyToArrayImpl")\ninternal actual fun
copyToArrayImpl(collection: Collection<*>): Array<Any?> {\n    val array = emptyArray<Any?>()\n    val iterator
= collection.iterator()\n    while (iterator.hasNext())\n        array.asDynamic().push(iterator.next())\n    return
array\n}\n\n@JsName("copyToExistingArrayImpl")\ninternal actual fun <T> copyToArrayImpl(collection:
Collection<*>, array: Array<T>): Array<T> {\n    if (array.size < collection.size)\n        return
copyToArrayImpl(collection).unsafeCast<Array<T>>()\n    val iterator = collection.iterator()\n    var index = 0\n    while (iterator.hasNext()) {\n        array[index++] = iterator.next().unsafeCast<T>()\n    }\n    if (index < array.size)\n        {\n            array[index] = null.unsafeCast<T>()\n        }\n    return array\n}\n\n/**\n * Returns an immutable list
containing only the specified object [element].\n */\npublic
fun <T> listOf(element: T): List<T> =
arrayListOf(element)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual
inline fun <E> buildListInternal(builderAction: MutableList<E>().->Unit): List<E> {\n    return
ArrayList<E>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.Inlin
eOnly\ninternal actual inline fun <E> buildListInternal(capacity: Int, builderAction: MutableList<E>().->Unit):
List<E> {\n    checkBuilderCapacity(capacity)\n    return
ArrayList<E>(capacity).apply(builderAction).build()\n}\n\n/**\n * Returns an immutable set containing only the
specified object [element].\n */\npublic fun <T> setOf(element: T): Set<T> =
hashSetOf(element)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual inline
fun <E> buildSetInternal(builderAction: MutableSet<E>().->Unit): Set<E> {\n    return
LinkedHashSet<E>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.
InlineOnly\ninternal
actual inline fun <E> buildSetInternal(capacity: Int, builderAction: MutableSet<E>().->Unit): Set<E> {\n    return
LinkedHashSet<E>(capacity).apply(builderAction).build()\n}\n\n/**\n * Returns an immutable map, mapping
only the specified key to the\n * specified value.\n */\npublic fun <K, V> mapOf(pair: Pair<K, V>): Map<K, V> =
hashMapOf(pair)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual inline
fun <K, V> buildMapInternal(builderAction: MutableMap<K, V>().->Unit): Map<K, V> {\n    return
LinkedHashMap<K,
V>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninte
rnal actual inline fun <K, V> buildMapInternal(capacity: Int, builderAction: MutableMap<K, V>().->Unit):
Map<K, V> {\n    return LinkedHashMap<K, V>(capacity).apply(builderAction).build()\n}\n\n/**\n * Fills the
list with the provided [value].\n */\npublic fun <T> MutableList<T>.fill(value: T): Unit
{\n    for (index in 0..lastIndex) {\n        this[index] = value\n    }\n}\n\n/**\n * Randomly shuffles elements in this
list.\n */\npublic fun <T> MutableList<T>.shuffle(): Unit = shuffle(Random)\n\n/**\n * Returns a new list with the elements of this list randomly shuffled.\n */\npublic fun
<T> Iterable<T>.shuffled(): List<T> = toMutableList().apply { shuffle() }\n\n/**\n * Sorts elements in the list in-
place according to their natural sort order.\n */\npublic fun <T> MutableList<T>.sort(): Unit = sort()\n\n/**\n * The sort is _stable_. It means that equal elements preserve their
order relative to each other after sorting.\n */\npublic fun <T> MutableList<T>.sortStable(): Unit = sortStable()\n\n@sample samples.collections.Collections.Sorting.sortMutableList\n

```

```

*public actual fun <T : Comparable<T>> MutableList<T>.sort(): Unit {
    collectionsSort(this,
        naturalOrder())
}

/**
 * Sorts elements in the list in-place according to the order specified with
 [comparator].
 * The sort is _stable_. It means that equal elements preserve their order relative to each other
 after sorting.
 * @sample samples.collections.Collections.Sorting.sortMutableListWith
 */
public actual fun
<T> MutableList<T>.sortWith(comparator: Comparator<in T>): Unit {
    collectionsSort(this,
        comparator)
}

private fun <T> collectionsSort(list: MutableList<T>, comparator: Comparator<in T>) {
    if (list.size <= 1) return
    val array = copyToArray(list)
    sortArrayWith(array, comparator)
    for (i in 0 until array.size) {
        list[i] = array[i]
    }
}

internal actual fun <T> arrayOfNulls(reference: Array<T>, size: Int):
Array<T> {
    return
        arrayOfNulls<Any>(size).unsafeCast<Array<T>>()
}

@SinceKotlin("1.3")
@PublishedApi
@JsName("arrayCopy")
internal fun <T> arrayCopy(source: Array<out T>, destination:
Array<in T>, destinationOffset: Int, startIndex: Int, endIndex: Int) {
    AbstractList.checkRangeIndexes(startIndex, endIndex, source.size)
    val rangeSize = endIndex - startIndex
    AbstractList.checkRangeIndexes(destinationOffset, destinationOffset + rangeSize, destination.size)
    if (arrayBufferIsView(destination) && arrayBufferIsView(source)) {
        val subrange =
            source.asDynamic().subarray(startIndex, endIndex)
        destination.asDynamic().set(subrange,
            destinationOffset)
    } else {
        if (source !== destination || destinationOffset <= startIndex) {
            for (index in 0 until rangeSize) {
                destination[destinationOffset + index] = source[startIndex + index]
            }
        } else {
            for (index in rangeSize - 1 downTo 0) {
                destination[destinationOffset + index] =
                    source[startIndex + index]
            }
        }
    }
}

// no singleton map implementation in js, return map as
is

@Suppress("NOTHING_TO_INLINE")
internal
actual inline fun <K, V> Map<K, V>.toSingletonMapOrSelf(): Map<K, V> =
    this
@Suppress("NOTHING_TO_INLINE")
internal actual inline fun <K, V> Map<out K,
V>.toSingletonMap(): Map<K, V> = this.toMutableMap()

@Suppress("NOTHING_TO_INLINE")
internal
actual inline fun <T> Array<out T>.copyToArrayOfAny(isVarargs: Boolean): Array<out Any?> =
    if (isVarargs) // no need to copy vararg array in JS
        this
    else
        this.copyOf()

@PublishedApi
internal actual fun checkIndexOverflow(index: Int): Int {
    if (index < 0)
        throwIndexOverflow()
    return index
}

@PublishedApi
internal actual fun
checkCountOverflow(count: Int): Int {
    if (count < 0)
        throwCountOverflow()
    return count
}

/**
 * JS map and set implementations do not make use of capacities or load factors.
 */
@PublishedApi
internal actual fun mapCapacity(expectedSize: Int) = expectedSize

/**
 * Checks a collection builder function capacity argument.
 * In JS no validation is made in Map/Set constructor
 yet.
 */
@SinceKotlin("1.3")
@PublishedApi
internal fun checkBuilderCapacity(capacity: Int) {
    require(capacity >= 0) { "capacity must be non-negative." }
}

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 Kotlin Programming Language contributors.
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 can be found in the license/LICENSE.txt file.
 */

@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("CollectionsKt")
package
kotlin.collections

/**
 * Returns the given iterator itself. This allows to use an instance of iterator in a `for`
 loop.
 * @sample samples.collections.Iterators.iterator
 */
@kotlin.internal.InlineOnly
public inline operator
fun <T> Iterator<T>.iterator(): Iterator<T> = this

/**
 * Returns an [Iterator] that wraps each element produced
 by the original iterator
 * into an [IndexedValue]
 containing the index of that element and the element itself.
 */
@sample
samples.collections.Iterators.withIndexIterator

public fun <T> Iterator<T>.withIndex():
Iterator<IndexedValue<T>> = IndexingIterator(this)

/**
 * Performs the given [operation] on each element of
 this [Iterator].
 */
@sample
samples.collections.Iterators.forEachIterator

public inline fun <T>
Iterator<T>.forEach(operation: (T) -> Unit): Unit {
    for (element in this) operation(element)
}

/**
 * Iterator transforming original `iterator` into iterator of [IndexedValue], counting index from zero.
 */
internal class
IndexingIterator<out T>(private val iterator: Iterator<T>) : Iterator<IndexedValue<T>> {
    private var index =

```

```

0\n    final override fun hasNext(): Boolean = iterator.hasNext()\n    final override fun next(): IndexedValue<T> =
IndexedValue(checkIndexOverflow(index++), iterator.next())\n}\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n
 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("ComparisonsKt")\n\npackage
kotlin.comparisons\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns the
greater of two values.\n * \n * If values are equal, returns the first one.\n */\n@SinceKotlin("1.1")\npublic expect
fun <T : Comparable<T>> maxOf(a: T, b: T): T\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Byte, b: Byte):
Byte\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic
expect inline fun maxOf(a: Short, b: Short): Short\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic
expect inline fun maxOf(a: Int, b: Int): Int\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Long, b: Long):
Long\n\n/**\n * Returns the greater of two values.\n * \n * If either value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Float, b: Float):
Float\n\n/**\n * Returns the greater of two values.\n * \n * If either value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Double, b: Double):
Double\n\n/**\n * Returns the greater of three values.\n * \n * If there are multiple equal maximal values, returns the
first of them.\n */\n@SinceKotlin("1.1")\npublic expect fun <T : Comparable<T>> maxOf(a: T, b: T, c: T):
T\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic
expect inline fun maxOf(a: Byte, b: Byte, c: Byte): Byte\n\n/**\n * Returns the greater of three values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Short, b: Short, c:
Short): Short\n\n/**\n * Returns the greater of three values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Int, b: Int, c: Int):
Int\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic
expect inline fun maxOf(a: Long, b: Long, c: Long): Long\n\n/**\n * Returns the greater of three values.\n * \n * If
any value is `NaN`, returns `NaN`.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline
fun maxOf(a: Float, b: Float, c: Float): Float\n\n/**\n * Returns the greater of three values.\n * \n * If any value is
`NaN`, returns `NaN`.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a:
Double, b: Double, c:
Double): Double\n\n/**\n * Returns the greater of three values according to the order specified by the given
[comparator].\n * \n * If there are multiple equal maximal values, returns the first of them.\n
*\n@SinceKotlin("1.1")\npublic fun <T> maxOf(a: T, b: T, c: T, comparator: Comparator<in T>): T {\n    return
maxOf(a, maxOf(b, c, comparator), comparator)\n}\n\n/**\n * Returns the greater of two values according to the
order specified by the given [comparator].\n * \n * If values are equal, returns the first one.\n
*\n@SinceKotlin("1.1")\npublic fun <T> maxOf(a: T, b: T, comparator: Comparator<in T>): T {\n    return if
(comparator.compare(a, b) >= 0) a else b\n}\n\n/**\n * Returns the greater of the given values.\n * \n * If there are
multiple equal maximal values, returns the first of them.\n */\n@SinceKotlin("1.4")\npublic expect fun <T :
Comparable<T>> maxOf(a: T, vararg other: T): T\n\n/**\n * Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic
expect fun maxOf(a: Byte, vararg other: Byte): Byte\n\n/**\n * Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic expect fun maxOf(a: Short, vararg other: Short): Short\n\n/**\n * Returns the
greater of the given values.\n */\n@SinceKotlin("1.4")\npublic expect fun maxOf(a: Int, vararg other: Int):
Int\n\n/**\n * Returns the greater of the given values.\n */\n@SinceKotlin("1.4")\npublic expect fun maxOf(a:
Long, vararg other: Long): Long\n\n/**\n * Returns the greater of the given values.\n * \n * If any value is `NaN`,
returns `NaN`.\n */\n@SinceKotlin("1.4")\npublic expect fun maxOf(a: Float, vararg other: Float): Float\n\n/**\n

```

Returns the greater of the given values. `\n * \n * If any value is `NaN`, returns `NaN`.\n`

`*\n@\n@SinceKotlin("1.4")\npublic expect fun maxOf(a: Double, vararg other: Double): Double\n\n**\n * Returns the greater of the given values according to the order specified by the given [comparator].\n * \n * If there are multiple equal maximal values, returns the first of them.\n *\n@\n@SinceKotlin("1.4")\npublic fun <T> maxOf(a: T, vararg other: T, comparator: Comparator<in T>): T {\n var max = a\n for (e in other) if (comparator.compare(max, e) < 0) max = e\n return max\n}\n\n**\n * Returns the smaller of two values.\n * \n * If values are equal, returns the first one.\n *\n@\n@SinceKotlin("1.1")\npublic expect fun <T : Comparable<T>> minOf(a: T, b: T): T\n\n**\n * Returns the smaller of two values.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Byte, b: Byte): Byte\n\n**\n * Returns the smaller of two values.\n`

`*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Short, b: Short): Short\n\n**\n * Returns the smaller of two values.\n`

`*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Int, b: Int): Int\n\n**\n * Returns the smaller of two values.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Long, b: Long): Long\n\n**\n * Returns the smaller of two values.\n * \n * If either value is `NaN`, returns `NaN`.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Float, b: Float): Float\n\n**\n * Returns the smaller of two values.\n * \n * If either value is `NaN`, returns `NaN`.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Double, b: Double): Double\n\n**\n * Returns the smaller of three values.\n * \n * If there are multiple equal minimal values, returns the first of them.\n *\n@\n@SinceKotlin("1.1")\npublic expect fun <T : Comparable<T>> minOf(a: T, b: T, c: T): T\n\n**\n * Returns the smaller of three values.\n`

`*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Byte, b: Byte, c: Byte): Byte\n\n**\n * Returns the smaller of three values.\n`

`*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Short, b: Short, c: Short): Short\n\n**\n * Returns the smaller of three values.\n`

`*\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Int, b: Int, c: Int): Int\n\n**\n * Returns the smaller of three values.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Long, b: Long, c: Long): Long\n\n**\n * Returns the smaller of three values.\n * \n * If any value is `NaN`, returns `NaN`.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Float, b: Float, c: Float): Float\n\n**\n * Returns the smaller of three values.\n * \n * If any value is `NaN`, returns `NaN`.\n *\n@\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Double, b: Double, c: Double): Double\n\n**\n * Returns the smaller of three values according to the order specified by the given [comparator].\n * \n * If there are multiple equal minimal values, returns the first of them.\n *\n@\n@SinceKotlin("1.1")\npublic fun <T> minOf(a: T, b: T, c: T, comparator: Comparator<in T>): T {\n return minOf(a, minOf(b, c, comparator), comparator)\n}\n\n**\n * Returns the smaller of two values according to the order specified by the given [comparator].\n * \n * If values are equal, returns the first one.\n *\n@\n@SinceKotlin("1.1")\npublic fun <T> minOf(a: T, b: T, comparator: Comparator<in T>): T {\n return if (comparator.compare(a, b) <= 0) a else b\n}\n\n**\n * Returns the smaller of the given values.\n * \n * If there are multiple equal minimal values, returns the first of them.\n`

`*\n@\n@SinceKotlin("1.4")\npublic expect fun <T : Comparable<T>> minOf(a: T, vararg other: T): T\n\n**\n * Returns the smaller of the given values.\n *\n@\n@SinceKotlin("1.4")\npublic expect fun minOf(a: Byte, vararg other: Byte): Byte\n\n**\n * Returns the smaller of the given values.\n *\n@\n@SinceKotlin("1.4")\npublic expect fun minOf(a: Short, vararg other: Short): Short\n\n**\n * Returns the smaller of the given values.\n`

`*\n@\n@SinceKotlin("1.4")\npublic expect fun minOf(a: Int, vararg other: Int): Int\n\n**\n * Returns the smaller of the given values.\n *\n@\n@SinceKotlin("1.4")\npublic expect fun minOf(a: Long, vararg other: Long): Long\n\n**\n * Returns the smaller of the given values.\n * \n * If any value is `NaN`, returns `NaN`.\n`

`*\n@\n@SinceKotlin("1.4")\npublic expect fun minOf(a: Float, vararg other: Float): Float\n\n**\n * Returns the`

```

smaller of the given values.\n * \n * If any value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.4")\npublic
expect fun minOf(a: Double, vararg other: Double): Double\n\n/**\n * Returns the smaller of the given values
according to the order specified by the given [comparator].\n * \n * If there are multiple equal minimal values,
returns the first of them.\n *\n@SinceKotlin("1.4")\npublic fun <T> minOf(a: T, vararg other: T, comparator:
Comparator<in T>): T {\n    var
    min = a\n    for (e in other) if (comparator.compare(min, e) > 0) min = e\n    return min\n}\n\n", "/*\n * Copyright
2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("MapsKt")\n\npackage
kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\nimport
kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns the first non-null value produced by
[transform] function being applied to entries of this map in iteration order,\n * or throws
[NoSuchElementException] if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic
inline fun <K, V, R : Any> Map<out K, V>.firstNotNullOf(transform: (Map.Entry<K, V>) -> R?): R {\n    return
firstNotNullOfOrNull(transform) ?: throw NoSuchElementException("No element of the map was transformed to a
non-null value.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to
entries of this map in iteration order,\n * or `null` if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Any> Map<out K,
V>.firstNotNullOfOrNull(transform: (Map.Entry<K, V>) -> R?): R? {\n    for (element in this) {\n        val result =
transform(element)\n        if (result != null) {\n            return result\n        }\n    }\n    return null\n}\n\n/**\n *
Returns a [List] containing all key-value pairs.\n *\npublic fun <K, V> Map<out K, V>.toList(): List<Pair<K, V>>
{\n    if (size == 0)\n        return emptyList()\n    val iterator = entries.iterator()\n    if (!iterator.hasNext())\n        return emptyList()\n    val first = iterator.next()\n    if (!iterator.hasNext())\n        return listOf(first.toPair())\n    val result =
ArrayList<Pair<K, V>>(size)\n    result.add(first.toPair())\n    do {\n        result.add(iterator.next().toPair())\n    }
while (iterator.hasNext())\n    return result\n}\n\n/**\n * Returns a single list of all elements yielded from results of
[transform] function being invoked on each entry of original map.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*\npublic inline fun <K, V, R> Map<out K, V>.flatMap(transform: (Map.Entry<K, V>) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each entry of original map.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequence")\npublic
inline fun <K, V, R> Map<out K, V>.flatMap(transform: (Map.Entry<K, V>) -> Sequence<R>): List<R> {\n    return
flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each entry of original map, to the given [destination].\n *\npublic inline fun
<K, V, R, C : MutableCollection<in R>> Map<out K, V>.flatMapTo(destination: C, transform: (Map.Entry<K, V>)
-> Iterable<R>): C {\n    for (element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being
invoked on each entry of original map, to the given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequenceTo")\npublic
inline fun <K, V, R, C : MutableCollection<in R>> Map<out K, V>.flatMapTo(destination: C, transform:
(Map.Entry<K, V>) -> Sequence<R>): C {\n    for (element in this) {\n        val list = transform(element)\n

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destination.addAll(list) } return destination }

Returns a list containing the results of applying the
given [transform] function to each entry in the original map.
@sample
samples.collections.Maps.Transformations.mapToList
public inline fun <K, V, R> Map<out K,
V>.map(transform: (Map.Entry<K, V>) -> R): List<R> {
return mapTo(ArrayList<R>(size),
transform)}
Returns a list containing only the non-null results of applying the given [transform]
function to each entry in the original map.
@sample
samples.collections.Maps.Transformations.mapNotNull
public inline fun <K, V, R : Any> Map<out K,
V>.mapNotNull(transform:
(Map.Entry<K, V>) -> R?): List<R> {
return mapNotNullTo(ArrayList<R>(), transform)}
Applies
the given [transform] function to each entry in the original map and appends only the non-null results to the
given [destination].
public inline fun <K, V, R : Any, C : MutableCollection<in R>> Map<out K,
V>.mapNotNullTo(destination: C, transform: (Map.Entry<K, V>) -> R?): C {
forEach { element ->
transform(element)?.let { destination.add(it) } }
return destination}
Applies the given [transform]
function to each entry of the original map and appends the results to the given [destination].
public inline
fun <K, V, R, C : MutableCollection<in R>> Map<out K, V>.mapTo(destination: C, transform: (Map.Entry<K, V>)
-> R): C {
for (item in this)
destination.add(transform(item))
return destination}
Returns
`true` if all entries match the given [predicate].
Note that if the map contains no entries,
the function returns `true` because there are no entries in it that _do not_ match the predicate.
See a more
detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth)
article.
@sample samples.collections.Collections.Aggregates.all
public inline fun <K, V> Map<out K,
V>.all(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {
if (isEmpty()) return true
for (element in this)
if (!predicate(element)) return false
return true}
Returns `true` if map has at least one entry.
@sample samples.collections.Collections.Aggregates.any
public fun <K, V> Map<out K, V>.any(): Boolean
{
return !isEmpty()}
Returns `true` if at least one entry matches the given [predicate].
@sample samples.collections.Collections.Aggregates.anyWithPredicate
public inline fun <K, V> Map<out K,
V>.any(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {
if (isEmpty())
return false
for (element in this) if (predicate(element)) return true
return false}
Returns the
number of entries in this map.
@kotlin.internal.InlineOnly
public inline fun <K, V> Map<out K, V>.count():
Int {
return size}
Returns the number of entries matching the given [predicate].
public inline
fun <K, V> Map<out K, V>.count(predicate: (Map.Entry<K, V>) -> Boolean): Int {
if (isEmpty()) return 0
var count = 0
for (element in this) if (predicate(element)) ++count
return count}
Performs the
given [action] on each entry.
@kotlin.internal.HidesMembers
public inline fun <K, V> Map<out K,
V>.forEach(action: (Map.Entry<K, V>) -> Unit): Unit {
for (element in this) action(element)}
Returns the first entry yielding the largest value of the given function.
@throws NoSuchElementException
if the map is empty.
@sample samples.collections.Collections.Aggregates.maxBy
@kotlin.SinceKotlin("1.7")
@kotlin.jvm.JvmName("maxByOrThrow")
@kotlin.internal.InlineOnly
@Suppress
("CONFLICTING_OVERLOADS")
public inline fun <K, V, R : Comparable<R>> Map<out K,
V>.maxBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V> {
return entries.maxBy(selector)}
Returns the first entry yielding the largest value of the given function or `null` if there are no entries.
@sample samples.collections.Collections.Aggregates.maxByOrNull
@kotlin.SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline fun <K, V, R : Comparable<R>> Map<out
K, V>.maxByOrNull(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {
return
entries.maxByOrNull(selector)}
Returns the largest value among all values produced by [selector]
function applied to each entry in the map.
If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.
@throws NoSuchElementException if the map is empty.
@kotlin.SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public

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inline fun <K, V> Map<out K, V>.maxOf(selector: (Map.Entry<K, V>) -> Double): Double {\n  return
entries.maxOf(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each entry in the map.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n * \n * @throws NoSuchElementException if the map is empty.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.maxOf(selector:
(Map.Entry<K, V>) -> Float): Float {\n  return entries.maxOf(selector)\n}\n\n/**\n * Returns the largest value
among all values produced by [selector] function\n * applied to each entry in the map.\n * \n * @throws
NoSuchElementException if the map is empty.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.maxOf(selector: (Map.Entry<K, V>) -> R): R {\n  return entries.maxOf(selector)\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each entry in the map or `null` if there
are no entries.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> Double): Double? {\n  return
entries.maxOfOrNull(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector]
function\n * applied
to each entry in the map or `null` if there are no entries.\n * \n * If any of values produced by [selector] function is
`NaN`, the returned result is `NaN`.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> Float): Float? {\n  return
entries.maxOfOrNull(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> R): R? {\n  return entries.maxOfOrNull(selector)\n}\n\n/**\n *
Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each entry in the map.\n * \n *
@throws NoSuchElementException if the map is empty.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.maxOfWith(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R {\n  return
entries.maxOfWith(comparator, selector)\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each entry in the map or `null` if there
are no entries.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R? {\n  return
entries.maxOfWithOrNull(comparator,
selector)\n}\n\n/**\n * Returns the first entry having the largest value according to the provided [comparator].\n *
\n * @throws NoSuchElementException if the map is empty.\n
*\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@kotlin.internal.InlineOnly\n@Suppress
("CONFLICTING_OVERLOADS")\npublic inline fun <K, V> Map<out K, V>.maxWith(comparator:
Comparator<in Map.Entry<K, V>>): Map.Entry<K, V> {\n  return entries.maxWith(comparator)\n}\n\n/**\n *
Returns the first entry having the largest value according to the provided [comparator] or `null` if there are no

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entries.\n * \n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K,
V>.maxWithOrNull(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n return
entries.maxWithOrNull(comparator)\n }\n\n/**\n * Returns the first entry yielding the smallest value of the given
function.\n * \n * @throws NoSuchElementException if the map is empty.\n *
\n * @sample samples.collections.Collections.Aggregates.minBy\n
*\n @SinceKotlin("1.7")\n @kotlin.jvm.JvmName("minByOrThrow")\n @kotlin.internal.InlineOnly\n @Suppress(
"CONFLICTING_OVERLOADS")\n public inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V> {\n return entries.minBy(selector)\n }\n\n/**\n *
Returns the first entry yielding the smallest value of the given function or `null` if there are no entries.\n * \n *
@sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun <K, V, R : Comparable<R>> Map<out
K, V>.minByOrNull(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n return
entries.minByOrNull(selector)\n }\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each entry in the map.\n * \n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n *
\n * @throws NoSuchElementException if the map is empty.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K, V>.minOf(selector:
(Map.Entry<K, V>) -> Double): Double {\n return entries.minOf(selector)\n }\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each entry in the map.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException
if the map is empty.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K, V>.minOf(selector:
(Map.Entry<K, V>) -> Float): Float {\n return entries.minOf(selector)\n }\n\n/**\n * Returns the smallest value
among all values produced by [selector]
function\n * applied to each entry in the map.\n * \n * @throws NoSuchElementException if the map is empty.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minOf(selector: (Map.Entry<K, V>) -> R): R {\n return entries.minOf(selector)\n }\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each entry in the map or `null` if
there are no entries.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> Double): Double? {\n return
entries.minOfOrNull(selector)\n }\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each entry in the map or `null` if there are no
entries.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> Float): Float? {\n return
entries.minOfOrNull(selector)\n }\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.internal.InlineOnly\n public inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> R): R? {\n return entries.minOfOrNull(selector)\n }\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each entry in the map.\n * \n * @throws NoSuchElementException if the map is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.minOfWith(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R {\n    return
entries.minOfWith(comparator, selector)\n}\n\n/**\n * Returns the smallest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each entry in the map or `null` if there
are no entries.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.minOfWithOrNull(comparator: Comparator<in
R>, selector: (Map.Entry<K, V>) -> R): R? {\n    return entries.minOfWithOrNull(comparator,
selector)\n}\n\n/**\n * Returns the first entry having the smallest value according to the provided [comparator].\n *
\n * @throws NoSuchElementException if the map is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@kotlin.internal.InlineOnly\n@Suppre
ss("CONFLICTING_OVERLOADS")\npublic inline fun <K, V> Map<out K, V>.minWith(comparator:
Comparator<in Map.Entry<K, V>>): Map.Entry<K, V> {\n    return entries.minWith(comparator)\n}\n\n/**\n *
Returns the first entry having the smallest value according to the provided [comparator] or `null` if there are no
entries.\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.minWithOrNull(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n    return
entries.minWithOrNull(comparator)\n}\n\n/**\n * Returns `true` if the map has no entries.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n
*\npublic fun <K, V> Map<out K, V>.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if no
entries match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\npublic inline fun <K, V> Map<out K,
V>.none(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n    if (isEmpty()) return true\n    for (element in
this) if (predicate(element)) return false\n    return true\n}\n\n/**\n * Performs the given [action] on each entry and
returns the map itself afterwards.\n
*\n@SinceKotlin("1.1")\npublic inline fun <K, V, M : Map<out K, V>>
M.onEach(action: (Map.Entry<K, V>) -> Unit): M {\n    return apply { for (element in this) action(element)
}\n}\n\n/**\n * Performs the given [action] on each entry, providing sequential index with the entry,\n * and returns
the map itself afterwards.\n * @param [action] function that takes the index of an entry and the entry itself\n * and
performs
the action on the entry.\n
*\n@SinceKotlin("1.4")\npublic inline fun <K, V, M : Map<out K, V>>
M.onEachIndexed(action: (index: Int, Map.Entry<K, V>) -> Unit): M {\n    return apply {
entries.forEachIndexed(action) }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original map returning
its entries when being iterated.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.asIterable(): Iterable<Map.Entry<K, V>> {\n    return entries\n}\n\n/**\n * Creates a [Sequence] instance that
wraps the original map returning its entries when being iterated.\n
*\npublic fun <K, V> Map<out K,
V>.asSequence(): Sequence<Map.Entry<K, V>> {\n    return entries.asSequence()\n}\n\n", /*\n * Copyright 2010-
2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\npackage kotlin.text\n\n// NOTE:
THIS FILE IS AUTO-GENERATED by the GenerateUnicodeData.kt\n//
See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n// 10 mappings totally\ninternal fun
Char.titlecaseImpl(): String {\n    val uppercase = uppercase()\n    if (uppercase.length > 1) {\n        return if (this ==
"\u0149") uppercase else uppercase[0] + uppercase.substring(1).lowercase()\n    }\n    return
titlecaseChar().toString()\n}\n\n", /*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\npackage kotlin.text\n\n/**\n * Converts this character to lower case using Unicode
mapping rules of the invariant locale.\n
*\n@Deprecated("Use lowercaseChar() instead.")\n
ReplaceWith("lowercaseChar()")\n@DeprecatedSinceKotlin(warningSince =

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\ "1.5")\n@kotlin.internal.InlineOnly\npublic actual inline fun Char.toLowerCase(): Char =
toLowerCaseChar()\n\n/**\n * Converts this character to lower
case using Unicode mapping rules of the invariant locale.\n * This function performs one-to-one character
mapping.\n * To support one-to-many character mapping use the [toLowerCase] function.\n * If this character has no
mapping equivalent, the character itself is returned.\n * \n * @sample samples.text.Chars.toLowerCase\n
*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.toLowerCaseChar(): Char = lowercase()[0]\n\n/**\n * Converts this character to lower case
using Unicode mapping rules of the invariant locale.\n * This function supports one-to-many character mapping,
thus the length of the returned string can be greater than one.\n * For example, ``\u0130'.toLowerCase()` returns
``\u0069\u0307``,\n * where ``\u0130`` is the LATIN CAPITAL LETTER I WITH DOT ABOVE character
(`\u0130`).\n * If this character has no lower case mapping, the result of `toString()` of this char is returned.\n * \n *
@sample samples.text.Chars.toLowerCase\n
*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.lowercase(): String = toString().asDynamic().toLowerCase().unsafeCast<String>()\n\n/**\n
 * Converts this character to upper case using Unicode mapping rules of the invariant locale.\n
*/\n@Deprecated("Use uppercaseChar() instead.",
ReplaceWith("uppercaseChar()"))\n@DeprecatedSinceKotlin(warningSince =
\ "1.5")\n@kotlin.internal.InlineOnly\npublic actual inline fun Char.toUpperCase(): Char =
uppercaseChar()\n\n/**\n * Converts this character to upper case using Unicode mapping rules of the invariant
locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many character
mapping use the [toUpperCase] function.\n * If this character has no mapping equivalent, the character itself is
returned.\n * \n * @sample samples.text.Chars.toUpperCase\n
*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
actual fun Char.uppercaseChar(): Char {\n    val uppercase = uppercase()\n    return if (uppercase.length > 1) this
else uppercase[0]\n}\n\n/**\n * Converts this character to upper case using Unicode mapping rules of the invariant
locale.\n * This function supports one-to-many character mapping, thus the length of the returned string can be
greater than one.\n * For example, ``\uFB00'.uppercase()` returns ``\u0046\u0046``,\n * where ``\uFB00`` is the
LATIN SMALL LIGATURE FF character (`\ufb00`).\n * If this character has no upper case mapping, the result of
`toString()` of this char is returned.\n * \n * @sample samples.text.Chars.toUpperCase\n
*/\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.uppercase(): String = toString().asDynamic().toUpperCase().unsafeCast<String>()\n\n/**\n
 * Converts this character to title case using Unicode mapping rules of the invariant
locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many character
mapping use the [titlecase] function.\n * If this character has no mapping equivalent, the result of calling
[uppercaseChar] is returned.\n * \n * @sample samples.text.Chars.titlecase\n
*/\n@SinceKotlin("1.5")\npublic
actual fun Char.titlecaseChar(): Char = titlecaseCharImpl()\n\n/**\n * Returns `true` if this character is a Unicode
high-surrogate code unit (also known as leading-surrogate code unit).\n */\npublic actual fun
Char.isHighSurrogate(): Boolean = this in
Char.MIN_HIGH_SURROGATE..Char.MAX_HIGH_SURROGATE\n\n/**\n * Returns `true` if this character is a
Unicode low-surrogate code unit (also known as trailing-surrogate code unit).\n */\npublic actual fun
Char.isLowSurrogate(): Boolean = this in
Char.MIN_LOW_SURROGATE..Char.MAX_LOW_SURROGATE\n\n/**\n * Returns the Unicode general
category of this character.\n */\n@SinceKotlin("1.5")\npublic actual val Char.category:
CharCategory\n    get() = CharCategory.valueOf(getCategoryValue())\n\n/**\n * Returns `true` if this character
(Unicode code point) is defined in Unicode.\n * A character is considered to be defined in Unicode if its
[category] is not [CharCategory.UNASSIGNED].\n */\n@SinceKotlin("1.5")\npublic actual fun Char.isDefined():
Boolean {\n    if (this < "\u0080") {\n        return true\n    }\n    return getCategoryValue() !=
CharCategory.UNASSIGNED.value\n}\n\n/**\n * Returns `true` if this character is a letter.\n * A character is

```

```

considered to be a letter if its [category] is [CharCategory.UPPERCASE_LETTER],\n *
[CharCategory.LOWERCASE_LETTER], [CharCategory.TITLECASE_LETTER],
[CharCategory.MODIFIER_LETTER], or [CharCategory.OTHER_LETTER].\n *\n * @sample
samples.text.Chars.isLetter\n *\n@SinceKotlin("1.5")\npublic actual fun Char.isLetter(): Boolean {\n if (this in
'a..'z' || this in 'A..'Z') {\n return true\n }\n if (this < '\u0080') {\n return false\n
}\n return isLetterImpl()\n}\n\n/**\n * Returns `true` if this character is a letter or digit.\n *\n * @see isLetter\n * @see isDigit\n *\n * @sample samples.text.Chars.isLetterOrDigit\n *\n@SinceKotlin("1.5")\npublic actual fun
Char.isLetterOrDigit(): Boolean {\n if (this in 'a..'z' || this in 'A..'Z' || this in '0..'9') {\n return true\n }\n if
(this < '\u0080') {\n return false\n }\n\n return isDigitImpl() || isLetterImpl()\n}\n\n/**\n * Returns `true` if
this character is a digit.\n *\n * A character is considered to be a digit if its [category] is
[CharCategory.DECIMAL_DIGIT_NUMBER].\n *\n * @sample samples.text.Chars.isDigit\n
*\n@SinceKotlin("1.5")\npublic actual fun Char.isDigit(): Boolean {\n if (this in '0..'9') {\n return true\n
}\n if (this < '\u0080') {\n return false\n }\n\n return isDigitImpl()\n}\n\n/**\n * Returns `true` if this
character is upper case.\n *\n * A character is considered to
be an upper case character if its [category] is [CharCategory.UPPERCASE_LETTER],\n * or it has contributory
property `Other_Uppercase` as defined by the Unicode Standard.\n *\n * @sample
samples.text.Chars.isUpperCase\n *\n@SinceKotlin("1.5")\npublic actual fun Char.isUpperCase(): Boolean {\n
if (this in 'A..'Z') {\n return true\n }\n if (this < '\u0080') {\n return false\n }\n\n return
isUpperCaseImpl()\n}\n\n/**\n * Returns `true` if this character is lower case.\n *\n * A character is considered to
be a lower case character if its [category] is [CharCategory.LOWERCASE_LETTER],\n * or it has contributory
property `Other_Lowercase` as defined by the Unicode Standard.\n *\n * @sample
samples.text.Chars.isLowerCase\n *\n@SinceKotlin("1.5")\npublic actual fun Char.isLowerCase(): Boolean {\n
if (this in 'a..'z') {\n return true\n }\n if (this < '\u0080') {\n return false\n }\n\n return
isLowerCaseImpl()\n}\n\n/**\n * Returns
`true` if this character is a title case letter.\n *\n * A character is considered to be a title case letter if its [category] is
[CharCategory.TITLECASE_LETTER].\n *\n * @sample samples.text.Chars.isTitleCase\n
*\n@SinceKotlin("1.5")\npublic actual fun Char.isTitleCase(): Boolean {\n if (this < '\u0080') {\n return
false\n }\n\n return getCategoryValue() == CharCategory.TITLECASE_LETTER.value\n}\n\n/**\n * Returns
`true` if this character is an ISO control character.\n *\n * A character is considered to be an ISO control character if
its [category] is [CharCategory.CONTROL],\n * meaning the Char is in the range `'\u0000'..''\u001F` or in the
range `'\u007F'..''\u009F`. \n *\n * @sample samples.text.Chars.isISOControl\n *\n@SinceKotlin("1.5")\npublic
actual fun Char.isISOControl(): Boolean {\n return this <= '\u001F' || this in '\u007F'..''\u009F'\n}\n\n/**\n *
Determines whether a character is whitespace according to the Unicode standard.\n * Returns `true`
if the character is whitespace.\n *\n * @sample samples.text.Chars.isWhitespace\n *\n@SinceKotlin("1.5")\npublic
actual fun Char.isWhitespace(): Boolean {\n return isWhitespaceImpl()\n}\n\n/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n@SinceKotlin("1.2")\n@Deprecated("Use CharArray.concatToString() instead",
ReplaceWith("chars.concatToString()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5")\npublic actual fun String(chars: CharArray): String {\n var result = ""\n for (char in chars) {\n
result += char\n }\n\n return result\n}\n\n/**\n * Converts the characters from a portion of the specified array to a
string.\n *\n * @throws IndexOutOfBoundsException if either [offset] or [length]
are less than zero\n * or `offset + length` is out of [chars] array bounds.\n
*\n@SinceKotlin("1.2")\n@Deprecated("Use CharArray.concatToString(startIndex, endIndex) instead",
ReplaceWith("chars.concatToString(offset, offset + length)"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5")\npublic actual fun String(chars: CharArray, offset: Int, length: Int): String {\n if (offset < 0 ||
length < 0 || chars.size - offset < length)\n throw IndexOutOfBoundsException("size: ${chars.size}; offset:

```

```

$offset; length: $length`)
    var result = ""
    for (index in offset until offset + length) {
        result +=
chars[index]
    }
    return result
}
Concatenates characters in this [CharArray] into a String.
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun
CharArray.concatToString(): String {
    var result = ""
    for (char in this) {
        result += char
    }
    return result
}
Concatenates characters in this [CharArray] or its subrange into a String.
@param startIndex the
beginning (inclusive) of the subrange of characters, 0 by default.
@param endIndex the end (exclusive) of the
subrange of characters, size of this array by default.
@throws IndexOutOfBoundsException if [startIndex] is
less than zero or [endIndex] is greater than the size of this array.
@throws IllegalArgumentException if
[startIndex] is greater than [endIndex].
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun CharArray.concatToString(startIndex: Int = 0,
endIndex: Int = this.size): String {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, this.size)
    var
result = ""
    for (index in startIndex until endIndex) {
        result += this[index]
    }
    return
result
}
Returns a [CharArray] containing characters of this string.
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun
String.toCharArray(): CharArray {
    return CharArray(length) { get(it) }
}
Returns a [CharArray]
containing characters of this string or its substring.
@param startIndex the beginning (inclusive) of the
substring, 0 by default.
@param endIndex the end (exclusive) of the substring, length of this string by default.
@throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the length
of this string.
@throws IllegalArgumentException if [startIndex] is greater than [endIndex].
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.toCharArray(startIndex: Int = 0, endIndex: Int
= this.length): CharArray {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, length)
    return
CharArray(endIndex - startIndex)
    { get(startIndex + it) }
}
Decodes a string from the bytes in UTF-8 encoding in this array.
Malformed byte sequences are replaced by the replacement char `      `.
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun
ByteArray.decodeToString(): String {
    return decodeUtf8(this, 0, size, false)
}
Decodes a string from
the bytes in UTF-8 encoding in this array or its subrange.
@param startIndex the beginning (inclusive) of the
subrange to decode, 0 by default.
@param endIndex the end (exclusive) of the subrange to decode, size of this
array by default.
@param throwOnInvalidSequence specifies whether to throw an exception on malformed byte
sequence or replace it by the replacement char `      `.
@throws IndexOutOfBoundsException if
[startIndex] is less than zero or [endIndex] is greater than the size of this array.
@throws
IllegalArgumentException if [startIndex] is greater than [endIndex].
@throws CharacterCodingException if the byte array contains malformed UTF-8 byte sequence and
[throwOnInvalidSequence] is true.
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun ByteArray.decodeToString(
    startIndex: Int = 0,
endIndex: Int = this.size,
    throwOnInvalidSequence: Boolean = false): String {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, this.size)
    return decodeUtf8(this, startIndex, endIndex,
throwOnInvalidSequence)
}
Encodes this string to an array of bytes in UTF-8 encoding.
Any
malformed char sequence is replaced by the replacement byte sequence.
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun
String.encodeToByteArray(): ByteArray {
    return encodeUtf8(this, 0, length, false)
}
Encodes this
string or its substring to an array of bytes in UTF-8 encoding.
@param startIndex the beginning (inclusive) of the substring to encode, 0 by default.
@param endIndex
the end (exclusive) of the substring to encode, length of this string by default.
@param throwOnInvalidSequence

```

specifies whether to throw an exception on malformed char sequence or replace.

```

    * @throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the length of this string.
    * @throws IllegalArgumentException if [startIndex] is greater than [endIndex].
    * @throws CharacterCodingException if this string contains malformed char sequence and [throwOnInvalidSequence] is true.

```

```

    * @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    @Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
    public actual fun String.encodeToByteArray(
        startIndex: Int = 0,
        endIndex: Int = this.length,
        throwOnInvalidSequence: Boolean = false
    ): ByteArray {
        AbstractList.checkBoundsIndexes(startIndex,
            endIndex, length)
        return encodeUtf8(this, startIndex, endIndex, throwOnInvalidSequence)
    }

```

Returns a copy of this string converted to upper case using the rules of the default locale.

```

    * @Deprecated("Use uppercase() instead.", ReplaceWith("uppercase()"))
    @DeprecatedSinceKotlin(warningSince = "1.5")
    @kotlin.internal.InlineOnly
    public actual inline fun String.toUpperCase(): String =
        asDynamic().toUpperCase()

```

Returns a copy of this string converted to upper case using Unicode mapping rules of the invariant locale.

```

    * This function supports one-to-many and many-to-one character mapping,
    * thus the length of the returned string can be different from the length of the original string.
    * @sample samples.text.Strings.uppercase

```

```

    * @SinceKotlin("1.5")
    @WasExperimental(ExperimentalStdlibApi::class)
    @kotlin.internal.InlineOnly
    public actual inline fun String.uppercase(): String = asDynamic().toUpperCase()

```

Returns a copy of this string converted to lower case using the rules of the default locale.

```

    * @Deprecated("Use lowercase() instead.", ReplaceWith("lowercase()"))
    @DeprecatedSinceKotlin(warningSince = "1.5")
    @kotlin.internal.InlineOnly
    public actual inline fun String.toLowerCase(): String =
        asDynamic().toLowerCase()

```

Returns a copy of this string converted to lower case using Unicode mapping rules of the invariant locale.

```

    * This function supports one-to-many and many-to-one character mapping,
    * thus the length of the returned string can be different from the length of the original string.
    * @sample samples.text.Strings.lowercase

```

```

    * @SinceKotlin("1.5")
    @WasExperimental(ExperimentalStdlibApi::class)
    @kotlin.internal.InlineOnly
    public actual inline fun String.toLowerCase(): String = asDynamic().toLowerCase()

```

```

    @kotlin.internal.InlineOnly
    @kotlin.js.JsPolyfill("String.prototype.startsWith === undefined") {
        Object.defineProperty(String.prototype, "startsWith", {
            value: function (searchString, position) {
                position = position || 0
                return this.lastIndexOf(searchString, position) === position
            }
        })
    }
    internal inline fun String.nativeStartsWith(s: String, position: Int): Boolean =
        asDynamic().startsWith(s, position)

```

```

    @kotlin.internal.InlineOnly
    @kotlin.js.JsPolyfill("String.prototype.endsWith === undefined") {
        Object.defineProperty(String.prototype, "endsWith", {
            value: function (searchString, position) {
                var subjectString = this.toString()
                if (position === undefined || position > subjectString.length) {
                    position = subjectString.length
                }
                position -= searchString.length
                var lastIndex = subjectString.indexOf(searchString, position)
                return lastIndex !== -1 && lastIndex === position
            }
        })
    }
    internal inline fun String.nativeEndsWith(s: String): Boolean =
        asDynamic().endsWith(s)

```

```

    @kotlin.internal.InlineOnly
    public actual inline fun String.substring(startIndex: Int): String =
        asDynamic().substring(startIndex)
    public actual inline fun String.substring(startIndex: Int, endIndex: Int): String =
        asDynamic().substring(startIndex,
            endIndex)

```

`String.plus()` instead, `ReplaceWith("this + str")`

```

    @DeprecatedSinceKotlin(warningSince = "1.6")
    @kotlin.internal.InlineOnly
    public inline fun String.concat(str: String): String =
        asDynamic().concat(str)

```

`Use Regex.findAll()` instead or invoke `matches()` on `String` dynamically:

```

this.asDynamic().match(regex)\n\n@DeprecatedSinceKotlin(warningSince =
`1.6`\n\n@kotlin.internal.InlineOnly\n\npublic inline fun String.match(regex: String): Array<String>? =
asDynamic().match(regex)\n\n/native public fun String.trim(): String\n\n/TODO: String.replace to implement
effective trimLeading and trimTrailing\n\n@kotlin.internal.InlineOnly\n\ninternal inline fun
String.nativeReplace(pattern: RegExp, replacement: String): String = asDynamic().replace(pattern,
replacement)\n\n/n/**\n * Compares two strings lexicographically, optionally ignoring case differences.\n * If
[ignoreCase] is true, the result of `Char.toUpperCaseChar().toLowerCaseChar()` on each character is compared.\n
*/\n\n@SinceKotlin(`1.2`\n\n@Suppress(`ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS`)\n\npublic
actual fun String.compareTo(other: String, ignoreCase: Boolean = false): Int {\n    if (ignoreCase) {\n        val n1 =
this.length\n        val n2 = other.length\n        val min = minOf(n1, n2)\n        if (min == 0)
return n1 - n2\n        for (index in 0 until min) {\n            var thisChar = this[index]\n            var otherChar =
other[index]\n            if (thisChar != otherChar) {\n                thisChar = thisChar.toUpperCaseChar()\n
otherChar = otherChar.toUpperCaseChar()\n                if (thisChar != otherChar) {\n                    thisChar =
thisChar.toLowerCaseChar()\n                    otherChar = otherChar.toLowerCaseChar()\n                }\n            }
return thisChar.compareTo(otherChar)\n        }\n    }\n    }\n    }\n    }\n    return n1 - n2\n } else {\n    return compareTo(other)\n }\n}\n\n/n/**\n * Returns `true` if the contents
of this char sequence are equal to the contents of the specified [other],\n * i.e. both char sequences contain the same
number of the same characters in the same order.\n */\n * @sample samples.text.Strings.contentEquals\n
*/\n\n@SinceKotlin(`1.5`\n\npublic
actual infix fun CharSequence?.contentEquals(other: CharSequence?): Boolean =
contentEqualsImpl(other)\n\n/n/**\n * Returns `true` if the contents of this char sequence are equal to the contents of
the specified [other], optionally ignoring case difference.\n */\n * @param ignoreCase `true` to ignore character case
when comparing contents.\n */\n * @sample samples.text.Strings.contentEquals\n */\n\n@SinceKotlin(`1.5`\n\npublic
actual fun CharSequence?.contentEquals(other: CharSequence?, ignoreCase: Boolean): Boolean {\n    return if
(ignoreCase)\n        this.contentEqualsIgnoreCaseImpl(other)\n    else\n        this.contentEqualsImpl(other)\n}\n}\n\nprivate val STRING_CASE_INSENSITIVE_ORDER = Comparator<String>
{ a, b -> a.compareTo(b, ignoreCase = true) }\n\n@SinceKotlin(`1.2`\n\npublic actual val
String.Companion.CASE_INSENSITIVE_ORDER: Comparator<String>\n    get() =
STRING_CASE_INSENSITIVE_ORDER\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n\n@file:kotlin.jvm.JvmName(`CharsKt`)\n\npackage kotlin.text\n\n/n/**\n
* Returns the numeric value of the decimal digit that this Char represents.\n * Throws an exception if this Char is
not a valid decimal digit.\n */\n * A Char is considered to represent a decimal digit if [isDigit] is true for the Char.\n
* In this case, the Unicode decimal digit value of the character is returned.\n */\n * @sample
samples.text.Chars.digitToInt\n
*/\n\n@SinceKotlin(`1.5`\n\n@WasExperimental(ExperimentalStdlibApi::class)\n\npublic fun Char.digitToInt(): Int
{\n    return digitOf(this, 10).also {\n        if (it < 0) throw IllegalArgumentException(`Char $this is not a decimal
digit`)\n    }\n}\n}\n\n/n/**\n * Returns the numeric value of the digit that this Char represents in the specified [radix].\n
* Throws an exception if the [radix]
is not in the range `2..36` or if this Char is not a valid digit in the specified [radix].\n */\n * A Char is considered to
represent a digit in the specified [radix] if at least one of the following is true:\n * - [isDigit] is `true` for the Char
and the Unicode decimal digit value of the character is less than the specified [radix]. In this case the decimal digit
value is returned.\n * - The Char is one of the uppercase Latin letters 'A' through 'Z' and its [code] is less than `radix
+ 'A'.code - 10`. In this case, `this.code - 'A'.code + 10` is returned.\n * - The Char is one of the lowercase Latin
letters 'a' through 'z' and its [code] is less than `radix + 'a'.code - 10`. In this case, `this.code - 'a'.code + 10`
is returned.\n * - The Char is one of the fullwidth Latin capital letters '\uFF21' through '\uFF3A' and its [code] is less

```



than `radix + 0xFF21 - 10`. In this case, `this.code - 0xFF21 + 10` is returned.  
The Char is one of the fullwidth Latin small letters `uFF41`

through `uFF5A` and its [code] is less than `radix + 0xFF41 - 10`. In this case, `this.code - 0xFF41 + 10` is returned.  
@sample samples.text.Chars.digitToInt

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Char.digitToInt(radix: Int): Int {\n    return digitToIntOrNull(radix) ?: throw IllegalArgumentException("\Char $this is not a digit in the given radix=$radix")\n}\n\n/**\n * Returns the numeric value of the decimal digit that this Char represents, or `null` if this Char is not a valid decimal digit.\n * A Char is considered to represent a decimal digit if [isDigit] is true for the Char.\n * In this case, the Unicode decimal digit value of the character is returned.\n * @sample samples.text.Chars.digitToIntOrNull\n
```

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Char.digitToIntOrNull(): Int? {\n    return digitOf(this, 10).takeIf { it >= 0 }\n}\n\n/**\n * Returns the numeric value
```

of the digit that this Char represents in the specified [radix], or `null` if this Char is not a valid digit in the specified [radix].  
Throws an exception if the [radix] is not in the range `2..36`.  
A Char is considered to represent a digit in the specified [radix] if at least one of the following is true:  
- [isDigit] is `true` for the Char and the Unicode decimal digit value of the character is less than the specified [radix]. In this case the decimal digit value is returned.  
- The Char is one of the uppercase Latin letters 'A' through 'Z' and its [code] is less than `radix + 'A'.code - 10`. In this case, `this.code - 'A'.code + 10` is returned.  
- The Char is one of the lowercase Latin letters 'a' through 'z' and its [code] is less than `radix + 'a'.code - 10`. In this case, `this.code - 'a'.code + 10` is returned.  
- The Char is one of the fullwidth Latin capital letters `uFF21` through `uFF3A` and its [code] is less than `radix + 0xFF21 - 10`.

In this case, `this.code - 0xFF21 + 10` is returned.  
The Char is one of the fullwidth Latin small letters `uFF41` through `uFF5A` and its [code] is less than `radix + 0xFF41 - 10`. In this case, `this.code - 0xFF41 + 10` is returned.  
@sample samples.text.Chars.digitToIntOrNull

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Char.digitToIntOrNull(radix: Int): Int? {\n    checkRadix(radix)\n    return digitOf(this, radix).takeIf { it >= 0 }\n}\n\n/**\n * Returns the Char that represents this decimal digit.\n * Throws an exception if this value is not in the range `0..9`.\n * If this value is in `0..9`, the decimal digit Char with code `0'.code + this` is returned.\n * @sample samples.text.Chars.digitToChar\n
```

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Int.digitToChar(): Char {\n    if (this in 0..9) {\n        return '0' + this\n    }\n    throw IllegalArgumentException("\Int $this is not a decimal digit")\n}\n\n/**\n * Returns the Char that represents this numeric digit value in the specified [radix].\n * Throws an exception if the [radix] is not in the range `2..36` or if this value is not in the range `0` until [radix].\n * If this value is less than `10`, the decimal digit Char with code `0'.code + this` is returned.  
Otherwise, the uppercase Latin letter with code `A'.code + this - 10` is returned.  
@sample samples.text.Chars.digitToChar\n
```

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Int.digitToChar(radix: Int): Char {\n    if (radix !in 2..36) {\n        throw IllegalArgumentException("Invalid radix: $radix. Valid radix values are in range 2..36")\n    }\n    if (this < 0 || this >= radix) {\n        throw IllegalArgumentException("\Digit $this does not represent a valid digit in radix $radix")\n    }\n    return if (this < 10) {\n        '0' + this\n    } else {\n        'A' + this - 10\n    }\n}\n\n/**\n
```

\* Converts this character to lower case using Unicode mapping rules of the invariant locale.

```
*\n@Deprecated("Use lowercaseChar() instead.")
```

```
ReplaceWith("lowercaseChar()")\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
```

```
Char.toLowerCase(): Char\n\n/**\n * Converts this character to lower case using Unicode mapping rules of the invariant locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many character mapping use the [lowercase] function.\n * If this character has no mapping equivalent, the character itself
```

is returned.  
`@sample samples.text.Chars.lowercase`

`Char.lowercaseChar(): Char`  
 Converts this character to lower case using Unicode mapping rules of the invariant locale.  
 This function supports one-to-many character mapping, thus the length of the returned string can be greater than one.  
 For example, `'\u0130'.lowercase()` returns `''\u0069\u0307''`, where `'\u0130'` is the LATIN CAPITAL LETTER I WITH DOT ABOVE character (`^\u0130`).  
 If this character has no lower case mapping, the result of `toString()` of this char is returned.  
`@sample samples.text.Chars.lowercase`

`Char.lowercase(): String`  
 Converts this character to upper case using Unicode mapping rules of the invariant locale.  
 Use `uppercaseChar()` instead.  
`ReplaceWith("uppercaseChar()")`  
`@DeprecatedSinceKotlin("1.5")`  
 Converts this character to upper case using Unicode mapping rules of the invariant locale.  
 This function performs one-to-one character mapping.  
 To support one-to-many character mapping use the `[uppercase]` function.  
 If this character has no mapping equivalent, the character itself is returned.  
`@sample samples.text.Chars.uppercase`

`Char.uppercaseChar(): Char`  
 Converts this character to upper case using Unicode mapping rules of the invariant locale.  
 This function supports one-to-many character mapping, thus the length of the returned string can be greater than one.  
 For example, `'\uFB00'.uppercase()` returns `''\u0046\u0046''`, where `'\uFB00'` is the LATIN SMALL LIGATURE FF character (`^\ufb00`).  
 If this character has no upper case mapping, the result of `toString()` of this char is returned.  
`@sample samples.text.Chars.uppercase`

`Char.uppercase(): String`  
 Converts this character to title case using Unicode mapping rules of the invariant locale.  
 This function performs one-to-one character mapping.  
 To support one-to-many character mapping use the `[titlecase]` function.  
 If this character has no mapping equivalent, the result of calling `[uppercaseChar]` is returned.  
`@sample samples.text.Chars.titlecase`

`Char.titlecaseChar(): Char`  
 Converts this character to title case using Unicode mapping rules of the invariant locale.  
 This function supports one-to-many character mapping, thus the length of the returned string can be greater than one.  
 For example, `'\uFB00'.titlecase()` returns `''\u0046\u0066''`, where `'\uFB00'` is the LATIN SMALL LIGATURE FF character (`^\ufb00`).  
 If this character has no title case mapping, the result of `[uppercase]` is returned instead.  
`@sample samples.text.Chars.titlecase`

`Char.titlecase(): String = titlecaseImpl()`  
 Concatenates this Char and a String.  
`@sample samples.text.Chars.plus`

`Char.plus(other: String): String = this.toString() + other`  
 Returns `true` if this character is equal to the `[other]` character, optionally ignoring character case.  
 Two characters are considered equal ignoring case if `Char.uppercaseChar().lowercaseChar()` on each character produces the same result.  
`@param ignoreCase true` to ignore character case when comparing characters. By default `false`.  
`@sample samples.text.Chars.equals`

`Char.equals(other: Char, ignoreCase: Boolean = false): Boolean`  
 if `(this == other) return true`  
 if `(!ignoreCase) return false`  
 val `thisUpper = this.uppercaseChar()`  
 val `otherUpper = other.uppercaseChar()`  
 return `thisUpper == otherUpper || thisUpper.lowercaseChar() == otherUpper.lowercaseChar()`  
 Returns `true` if this character is a Unicode surrogate code unit.

`Char.isSurrogate(): Boolean = this in Char.MIN_SURROGATE..Char.MAX_SURROGATE`  
 Returns the Unicode general category of this character.

`Char.category: CharCategory`  
 Returns `true` if this character (Unicode code point) is defined in Unicode.  
 A character is considered to be defined in Unicode if its `[category]` is not `[CharCategory.UNASSIGNED]`.

`Char.isDefined(): Boolean`

```

Boolean\n\n/**\n * Returns `true` if this character is a letter.\n *\n * A character is considered to be a letter if its
[category] is [CharCategory.UPPERCASE_LETTER],\n * [CharCategory.LOWERCASE_LETTER],
[CharCategory.TITLECASE_LETTER], [CharCategory.MODIFIER_LETTER], or
[CharCategory.OTHER_LETTER].\n *\n * @sample samples.text.Chars.isLetter\n
*\n@SinceKotlin("1.5")\npublic expect fun Char.isLetter(): Boolean\n\n/**\n * Returns `true` if this character is a
letter or digit.\n *\n * @see isLetter\n * @see isDigit\n *\n * @sample samples.text.Chars.isLetterOrDigit\n
*\n@SinceKotlin("1.5")\npublic
expect fun Char.isLetterOrDigit(): Boolean\n\n/**\n * Returns `true` if this character is a digit.\n *\n * A character
is considered to be a digit if its [category] is [CharCategory.DECIMAL_DIGIT_NUMBER].\n *\n * @sample
samples.text.Chars.isDigit\n *\n@SinceKotlin("1.5")\npublic expect fun Char.isDigit(): Boolean\n\n/**\n *
Returns `true` if this character is upper case.\n *\n * A character is considered to be an upper case character if its
[category] is [CharCategory.UPPERCASE_LETTER],\n * or it has contributory property `Other_Uppercase` as
defined by the Unicode Standard.\n *\n * @sample samples.text.Chars.isUpperCase\n
*\n@SinceKotlin("1.5")\npublic expect fun Char.isUpperCase(): Boolean\n\n/**\n * Returns `true` if this
character is lower case.\n *\n * A character is considered to be a lower case character if its [category] is
[CharCategory.LOWERCASE_LETTER],\n * or it has contributory property `Other_Lowercase` as defined by the
Unicode Standard.\n
*\n * @sample samples.text.Chars.isLowerCase\n *\n@SinceKotlin("1.5")\npublic expect fun
Char.isLowerCase(): Boolean\n\n/**\n * Returns `true` if this character is a title case letter.\n *\n * A character
is considered to be a title case letter if its [category] is [CharCategory.TITLECASE_LETTER].\n *\n * @sample
samples.text.Chars.isTitleCase\n *\n@SinceKotlin("1.5")\npublic expect fun Char.isTitleCase(): Boolean\n\n/**\n
* Returns `true` if this character is an ISO control character.\n *\n * A character is considered to be an ISO control
character if its [category] is [CharCategory.CONTROL],\n * meaning the Char is in the range `'\u0000'..' \u001F'`
or in the range `'\u007F'..' \u009F'`.\n *\n * @sample samples.text.Chars.isISOControl\n
*\n@SinceKotlin("1.5")\npublic expect fun Char.isISOControl(): Boolean\n\n/**\n * Determines whether a
character is whitespace according to the Unicode standard.\n * Returns `true` if the character is whitespace.\n *\n *
@sample samples.text.Chars.isWhitespace\n
*\npublic expect fun Char.isWhitespace(): Boolean\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n@npackage kotlin\n\n/**\n * Creates a Char with the specified [code],
or throws an exception if the [code] is out of `Char.MIN_VALUE.code`..Char.MAX_VALUE.code`. \n *\n * If the
program that calls this function is written in a way that only valid [code] is passed as the argument,\n * using the
overload that takes a [UShort] argument is preferable (`Char(intValue.toUShort())`).\n * That overload doesn't check
validity of the argument, and may improve program performance when the function is called routinely inside a
loop.\n *\n * @sample samples.text.Chars.charFromCode\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun Char(code:
Int): Char {\n if (code < Char.MIN_VALUE.code || code > Char.MAX_VALUE.code) {\n throw
IllegalArgumentException("Invalid Char code: $code")\n } \n return code.toChar()\n}\n\n/**\n * Creates a Char
with the specified [code].\n *\n * @sample samples.text.Chars.charFromCode\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("NO_ACTUAL_FOR
_EXPECT")\npublic expect fun Char(code: UShort): Char\n\n/**\n * Returns the code of this Char.\n *\n * Code of
a Char is the value it was constructed with, and the UTF-16 code unit corresponding to this Char.\n *\n * @sample
samples.text.Chars.code\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\n@Su
ppress("DEPRECATION")\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline val Char.code: Int get() =
this.toInt()\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code

```

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```

*@\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("\SequencesKt")\n\npackage
kotlin.sequences\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns
`true` if [element] is found in the sequence.\n * \n * The operation is _terminal_.\n * \n * @public operator fun
<@\kotlin.internal.OnlyInputTypes T> Sequence<T>.contains(element: T): Boolean {\n   return indexOf(element)
>= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the
[index] is out of bounds of this sequence.\n * \n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n * \n * @public fun <T> Sequence<T>.elementAt(index: Int): T
{\n   return elementAtOrElse(index) { throw IndexOutOfBoundsException("\Sequence
doesn't contain element at index $index.") }\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this sequence.\n * \n * The operation is
_terminal_.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n * \n * @public fun <T>
Sequence<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n   if (index < 0)\n       return
defaultValue(index)\n   val iterator = iterator()\n   var count = 0\n   while (iterator.hasNext()) {\n       val element
= iterator.next()\n       if (index == count++)\n           return element\n   }\n   return
defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of
this sequence.\n * \n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n * \n * @public fun <T>
Sequence<T>.elementAtOrNull(index: Int): T? {\n   if (index
< 0)\n       return null\n   val iterator = iterator()\n   var count = 0\n   while (iterator.hasNext()) {\n       val
element = iterator.next()\n       if (index == count++)\n           return element\n   }\n   return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * The
operation is _terminal_.\n * \n * @sample samples.collections.Collections.Elements.find\n * \n * @kotlin.internal.InlineOnly\n * \n * @public inline fun <T> Sequence<T>.find(predicate: (T) -> Boolean): T? {\n   return
firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no
such element was found.\n * \n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n * @kotlin.internal.InlineOnly\n * \n * @public inline fun <T>
Sequence<T>.findLast(predicate: (T) -> Boolean): T? {\n   return
lastOrNull(predicate)\n}\n\n/**\n * Returns the first element.\n * \n * The operation
is _terminal_.\n * \n * @throws NoSuchElementException if the sequence is empty.\n * \n * @public fun <T>
Sequence<T>.first(): T {\n   val iterator = iterator()\n   if (!iterator.hasNext())\n       throw
NoSuchElementException("\Sequence is empty.")\n   return iterator.next()\n}\n\n/**\n * Returns the first element
matching the given [predicate].\n * \n * @throws [NoSuchElementException] if no such element is found.\n * \n * The
operation is _terminal_.\n * \n * @public inline fun <T> Sequence<T>.first(predicate: (T) -> Boolean): T {\n   for
(element in this) if (predicate(element)) return element\n   throw NoSuchElementException("\Sequence contains no
element matching the predicate.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function
being applied to elements of this sequence in iteration order,\n * or throws [NoSuchElementException] if no non-
null value was produced.\n * \n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n * \n * @SinceKotlin("1.5")\n * \n * @kotlin.internal.InlineOnly\n * \n * @public inline fun <T, R : Any>
Sequence<T>.firstNotNullOf(transform: (T) -> R?): R {\n   return
firstNotNullOfOrNull(transform) ?: throw
NoSuchElementException("\No element of the sequence was transformed to a non-null value.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to elements of this sequence in
iteration order,\n * or `null` if no non-null value was produced.\n * \n * The operation is _terminal_.\n * \n *
@sample samples.collections.Collections.Transformations.firstNotNullOf\n * \n * @SinceKotlin("1.5")\n * \n * @kotlin.internal.InlineOnly\n * \n * @public inline fun <T, R : Any>
Sequence<T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n   for (element in this) {\n       val result =

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transform(element)\n    if (result != null) {\n        return result\n    }\n    return null\n}\n\nReturns the first element, or `null` if the
sequence is empty.\n * The operation is _terminal_.\n *^/npublic fun <T> Sequence<T>.firstOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        return null\n    return iterator.next()\n}\n\nReturns the first element matching the given [predicate], or `null` if element was not found.\n * The operation is
_terminal_.\n *^/npublic inline fun <T> Sequence<T>.firstOrNull(predicate: (T) -> Boolean): T? {\n    for (element
in this) if (predicate(element)) return element\n    return null\n}\n\nReturns first index of [element], or -1 if
the sequence does not contain element.\n * The operation is _terminal_.\n *^/npublic fun
<@kotlin.internal.OnlyInputTypes T> Sequence<T>.indexOf(element: T): Int {\n    var index = 0\n    for (item in
this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            return index\n        index++\n    }\n    return -1\n}\n\nReturns index of the first element matching the given
[predicate], or -1 if the sequence does not contain such element.\n * The operation is _terminal_.\n *^/npublic
inline fun <T> Sequence<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this)
{\n        checkIndexOverflow(index)\n        if (predicate(item))\n            return index\n        index++\n    }\n    return -
1\n}\n\nReturns index of the last element matching the given [predicate], or -1 if the sequence does not
contain such element.\n * The operation is _terminal_.\n *^/npublic inline fun <T>
Sequence<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    var lastIndex = -1\n    var index = 0\n    for (item in
this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n            lastIndex = index\n            index++\n    }\n    return lastIndex\n}\n\nReturns the last element.\n * The operation is _terminal_.\n * \n * @throws
NoSuchElementException if the sequence is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^/npublic fun <T> Sequence<T>.last(): T {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        throw
NoSuchElementException("Sequence is empty.")\n    var last = iterator.next()\n    while (iterator.hasNext())\n        last = iterator.next()\n    return last\n}\n\nReturns the last element matching the given [predicate].\n * The
operation is _terminal_.\n * \n * @throws NoSuchElementException if no such element is found.\n * \n *
@sample samples.collections.Collections.Elements.last\n
*^/npublic inline fun <T> Sequence<T>.last(predicate: (T)
-> Boolean): T {\n    var last: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element))
{\n            last = element\n            found = true\n        }\n    }\n    if (!found) throw
NoSuchElementException("Sequence contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return last as T\n}\n\nReturns
last index of [element], or -1 if the sequence does not contain element.\n * The operation is _terminal_.\n
*^/npublic fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.lastIndexOf(element: T): Int {\n    var lastIndex
= -1\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            lastIndex = index\n            index++\n    }\n    return lastIndex\n}\n\nReturns the last element, or `null` if the
sequence is empty.\n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^/npublic fun <T> Sequence<T>.lastOrNull(): T? {\n    val iterator
= iterator()\n    if (!iterator.hasNext())\n        return null\n    var last = iterator.next()\n    while (iterator.hasNext())\n        last = iterator.next()\n    return last\n}\n\nReturns the last element matching the given [predicate], or `null`
if no such element was found.\n * The operation is _terminal_.\n * \n *
@sample samples.collections.Collections.Elements.last\n
*^/npublic inline fun <T>
Sequence<T>.lastOrNull(predicate: (T) -> Boolean): T? {\n    var last: T? = null\n    for (element in this) {\n        if
(predicate(element)) {\n            last = element\n        }\n    }\n    return last\n}\n\nReturns the single element,
or throws an exception if the sequence is empty or has more than one element.\n * The operation is _terminal_.\n
*^/npublic fun <T> Sequence<T>.single(): T {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        throw
NoSuchElementException("Sequence is empty.")\n    val single = iterator.next()\n    if (iterator.hasNext())\n        throw
IllegalArgumentException("Sequence has more than one element.")\n    return single\n}\n\nReturns the single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n * The operation is _terminal_.\n *^/npublic inline fun <T> Sequence<T>.single(predicate:

```

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(T) -> Boolean): T {\n  var single: T? = null\n  var found = false\n  for (element in this) {\n    if
(predicate(element)) {\n      if (found) throw IllegalArgumentException("\Sequence contains more than one
matching element.")\n      single = element\n      found = true\n    }\n  }\n  if (!found) throw
NoSuchElementException("\Sequence contains no element matching the predicate.")\n
@Suppress("\UNCHECKED_CAST")\n  return single as T\n}\n\n/**\n * Returns single element, or `null` if the
sequence is empty or has more than one element.\n *\n * The operation is _terminal_.\n */\npublic fun <T>
Sequence<T>.singleOrNull(): T? {\n  val iterator = iterator()\n  if (!iterator.hasNext())\n    return null\n  val
single = iterator.next()\n  if (iterator.hasNext())\n    return null\n  return single\n}\n\n/**\n * Returns the single
element matching the given [predicate], or `null` if element was not found or more than
one element was found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T>
Sequence<T>.singleOrNull(predicate: (T) -> Boolean): T? {\n  var single: T? = null\n  var found = false\n  for
(element in this) {\n    if (predicate(element)) {\n      if (found) return null\n      single = element\n
found = true\n    }\n  }\n  if (!found) return null\n  return single\n}\n\n/**\n * Returns a sequence containing
all elements except first [n] elements.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * @throws
IllegalArgumentException if [n] is negative.\n *\n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Sequence<T>.drop(n: Int):
Sequence<T> {\n  require(n >= 0) { "\Requested element count $n is less than zero." }\n  return when {\n    n
== 0 -> this\n    this is DropTakeSequence -> this.drop(n)\n    else -> DropSequence(this, n)\n  }\n}\n\n/**\n *
Returns a sequence containing
all elements except first elements that satisfy the given [predicate].\n *\n * The operation is _intermediate_ and
_stateless_.\n *\n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T>
Sequence<T>.dropWhile(predicate: (T) -> Boolean): Sequence<T> {\n  return DropWhileSequence(this,
predicate)\n}\n\n/**\n * Returns a sequence containing only elements matching the given [predicate].\n *\n * The
operation is _intermediate_ and _stateless_.\n *\n * @sample samples.collections.Collections.Filtering.filter\n
*/\npublic fun <T> Sequence<T>.filter(predicate: (T) -> Boolean): Sequence<T> {\n  return
FilteringSequence(this, true, predicate)\n}\n\n/**\n * Returns a sequence containing only elements matching the
given [predicate].\n *\n * @param [predicate] function that takes the index of an element and the element itself\n *
and returns the result of predicate evaluation on the element.\n *\n * The operation is _intermediate_ and _stateless_.\n
*\n *\n */\n\n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic fun <T>
Sequence<T>.filterIndexed(predicate: (index: Int, T) -> Boolean): Sequence<T> {\n  // TODO: Rewrite with
generalized MapFilterIndexingSequence\n  return
TransformingSequence(FilteringSequence(IndexingSequence(this), true, { predicate(it.index, it.value) }), { it.value
})\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n */\npublic inline fun <T, C : MutableCollection<in T>>
Sequence<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n  forEachIndexed {
index, element ->\n    if (predicate(index, element)) destination.add(element)\n  }\n  return
destination\n}\n\n/**\n * Returns a sequence containing all elements that are instances of specified type parameter R.\n
*\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample samples.collections.Collections.Filtering.filterIsInstance\n
*/\npublic inline fun <reified R> Sequence<*>.filterIsInstance(): Sequence<@kotlin.internal.NoInfer R> {\n
@Suppress("\UNCHECKED_CAST")\n  return filter { it is R } as Sequence<R>\n}\n\n/**\n * Appends all
elements that are instances of specified type parameter R to the given [destination].\n *\n * The operation is
_terminal_.\n *\n * @sample samples.collections.Collections.Filtering.filterIsInstanceTo\n */\npublic inline fun
<reified R, C : MutableCollection<in R>> Sequence<*>.filterIsInstanceTo(destination: C): C {\n  for (element in
this) if (element is R) destination.add(element)\n  return destination\n}\n\n/**\n * Returns a sequence containing

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```

<K, V> Sequence<K>.associateWith(valueSelector: (K) -> V): Map<K, V> {\n    val result = LinkedHashMap<K,
V>()\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs for each element of the given sequence.\n * where key is the element itself and value is
provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one
overwrites the former value in the map.\n *\n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n */\n\n@SinceKotlin("1.3")\npublic inline fun
<K, V, M : MutableMap<in K, in V>> Sequence<K>.associateWithTo(destination: M, valueSelector: (K) -> V): M
{\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return
destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n *\n * The operation is
_terminal_.\n */\n\npublic fun <T, C : MutableCollection<in T>> Sequence<T>.toCollection(destination: C): C {\n    for (item in
this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/**\n * Returns a new [HashSet] of all
elements.\n *\n * The operation is _terminal_.\n */\n\npublic fun <T> Sequence<T>.toHashSet(): HashSet<T> {\n    return
toCollection(HashSet<T>())\n}\n\n/**\n * Returns a [List] containing all elements.\n *\n * The operation is
_terminal_.\n */\n\npublic fun <T> Sequence<T>.toList(): List<T> {\n    return
this.toMutableList().optimizeReadOnlyList()\n}\n\n/**\n * Returns a new [MutableList] filled with all elements of
this sequence.\n *\n * The operation is _terminal_.\n */\n\npublic fun <T> Sequence<T>.toMutableList():
MutableList<T> {\n    return toCollection(ArrayList<T>())\n}\n\n/**\n * Returns a [Set] of all elements.\n *\n *
The returned set preserves the element iteration order of the original sequence.\n *\n * The operation is
_terminal_.\n */\n\npublic fun <T> Sequence<T>.toSet():
Set<T> {\n    return toCollection(LinkedHashSet<T>()).optimizeReadOnlySet()\n}\n\n/**\n * Returns a single
sequence of all elements from results of [transform] function being invoked on each element of original sequence.\n
*\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIterable")\npublic fun <T, R>
Sequence<T>.flatMap(transform: (T) -> Iterable<R>): Sequence<R> {\n    return FlatteningSequence(this,
transform, Iterable<R>::iterator)\n}\n\n/**\n * Returns a single sequence of all elements from results of [transform]
function being invoked on each element of original sequence.\n *\n * The operation is _intermediate_ and
_stateless_.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\n\npublic fun <T, R>
Sequence<T>.flatMap(transform:
(T) -> Sequence<R>): Sequence<R> {\n    return FlatteningSequence(this, transform,
Sequence<R>::iterator)\n}\n\n/**\n * Returns a single sequence of all elements yielded from results of [transform]
function being invoked on each element\n * and its index in the original sequence.\n *\n * The operation is
_intermediate_ and _stateless_.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\npublic fun <T, R>
Sequence<T>.flatMapIndexed(transform: (index: Int, T) -> Iterable<R>): Sequence<R> {\n    return
flatMapIndexed(this, transform, Iterable<R>::iterator)\n}\n\n/**\n * Returns a single sequence of all elements
yielded from results of [transform] function being invoked on each element\n * and its index in the original
sequence.\n *\n * The operation is _intermediate_
and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequence")\npublic fun <T, R>
Sequence<T>.flatMapIndexed(transform: (index: Int, T) -> Sequence<R>): Sequence<R> {\n    return
flatMapIndexed(this, transform, Sequence<R>::iterator)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original sequence, to the given

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```

[destination].\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapIndexedTo(destination: C, transform:
(index:
Int, T) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list =
transform(checkIndexOverflow(index++), element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element\n * and its index in the original sequence, to the given [destination].\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIndexedSequenceTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Sequence<R>): C {\n    var index = 0\n    for (element in this) {\n        val list =
transform(checkIndexOverflow(index++), element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Appends all elements
yielded from results of [transform] function being invoked on each element of original sequence, to the given
[destination].\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIterableTo")\npublic inline fun <T, R, C :
MutableCollection<in R>> Sequence<T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n    for
(element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original sequence, to the given [destination].\n *\n * The operation is _terminal_.\n
*\n@public inline fun
<T, R, C : MutableCollection<in R>> Sequence<T>.flatMapTo(destination: C, transform: (T) -> Sequence<R>): C
{\n    for (element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Groups elements of the original sequence by
the key returned by the given [keySelector] function\n * applied to each element and returns a map where each
group key is associated with a list of corresponding elements.\n *\n * The returned map preserves the entry iteration
order of the keys produced from the original sequence.\n *\n * The operation is _terminal_.\n
*\n * @sample
samples.collections.Collections.Transformations.groupBy\n *\n@public inline fun <T, K>
Sequence<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n    return groupByTo(LinkedHashMap<K,
MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to
each element of the original sequence\n * by the key returned by the given [keySelector] function applied to the
element\n * and returns a map where each group key is associated with a list of corresponding values.\n *\n * The
returned
map preserves the entry iteration order of the keys produced from the original sequence.\n *\n * The operation is
_terminal_.\n
*\n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\n@public inline fun <T, K, V> Sequence<T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K,
List<V>> {\n    return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,
valueTransform)\n}\n\n/**\n * Groups elements of the original sequence by the key returned by the given
[keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with
a list of corresponding elements.\n *\n * @return The [destination] map.\n *\n * The operation is _terminal_.\n
*\n * @sample
samples.collections.Collections.Transformations.groupBy\n *\n@public inline fun <T, K, M :
MutableMap<in K, MutableList<T>>> Sequence<T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n    for
(element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<T>() }\n        list.add(element)\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original sequence\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to

```



function to each element of the original sequence and appends the results to the given [destination]. The operation is `_terminal_`.

```
public inline fun <T, R, C : MutableCollection<in R>>
Sequence<T>.mapTo(destination: C, transform: (T) -> R): C {
    for (item in this)
        destination.add(transform(item))
    return destination
}
```

Returns a sequence that wraps each element of the original sequence into an [IndexedValue] containing the index of that element and the element itself. The operation is `_intermediate_` and `_stateless_`.

```
public fun <T> Sequence<T>.withIndex():
Sequence<IndexedValue<T>> {
    return IndexingSequence(this)
}
```

Returns a sequence containing only distinct elements from the given sequence. Among equal elements of the given sequence, only the first one will be present in the resulting sequence. The elements in the resulting sequence are in the same order as they were in the source sequence. The operation is `_intermediate_` and `_stateful_`.

```
@sample samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun <T> Sequence<T>.distinct(): Sequence<T> {
    return this.distinctBy { it }
}
```

Returns a sequence containing only elements from the given sequence having distinct keys returned by the given [selector] function. Among elements of the given sequence with equal keys, only the first one will be present in the resulting sequence. The elements in the resulting sequence are in the same order as they were in the source sequence. The operation is `_intermediate_` and `_stateful_`.

```
@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun <T, K>
Sequence<T>.distinctBy(selector: (T) -> K): Sequence<T> {
    return DistinctSequence(this, selector)
}
```

Returns a new [MutableSet] containing all distinct elements from the given sequence. The returned set preserves the element iteration order of the original sequence. The operation is `_terminal_`.

```
public fun <T> Sequence<T>.toMutableSet(): MutableSet<T> {
    val set = LinkedHashSet<T>()
    for (item in this)
        set.add(item)
    return set
}
```

Returns `true` if all elements match the given [predicate]. Note that if the sequence contains no elements, the function returns `true` because there are no elements in it that do not match the predicate. See a more detailed explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous\_truth) article. The operation is `_terminal_`.

```
@sample
samples.collections.Collections.Aggregates.all
public inline fun <T> Sequence<T>.all(predicate: (T) ->
Boolean): Boolean {
    for (element in this) if (!predicate(element)) return false
    return true
}
```

Returns `true` if sequence has at least one element. The operation is `_terminal_`.

```
@sample
samples.collections.Collections.Aggregates.any
public fun <T> Sequence<T>.any(): Boolean {
    return iterator().hasNext()
}
```

Returns `true` if at least one element matches the given [predicate]. The operation is `_terminal_`.

```
@sample samples.collections.Collections.Aggregates.anyWithPredicate
public inline fun <T> Sequence<T>.any(predicate: (T) -> Boolean): Boolean {
    for (element in this) if (predicate(element)) return true
    return false
}
```

Returns the number of elements in this sequence. The operation is `_terminal_`.

```
public fun <T> Sequence<T>.count(): Int {
    var count = 0
    for (element in this) checkCountOverflow(++count)
    return count
}
```

Returns the number of elements matching the given [predicate]. The operation is `_terminal_`.

```
public inline fun <T>
Sequence<T>.count(predicate: (T) -> Boolean): Int {
    var count = 0
    for (element in this) if (predicate(element)) checkCountOverflow(++count)
    return count
}
```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element. Returns the specified [initial] value if the sequence is empty. @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value. The operation is `_terminal_`.

```
public inline fun <T, R> Sequence<T>.fold(initial: R, operation: (acc: R, T) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}
```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original sequence. Returns the specified [initial] value if the sequence is empty. @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value. The operation is `_terminal_`.

```
public inline fun <T, R> Sequence<T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) ->
```



```

maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all\n values produced by [selector] function\n * applied to each element in the sequence.\n * \n * If any of values\n produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n * \n * @throws NoSuchElementException if the sequence is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun <T> Sequence<T>.maxOf(selector: (T) -> Float): Float {\n  val iterator = iterator()\n  if\n (!iterator.hasNext()) throw NoSuchElementException()\n  var maxValue = selector(iterator.next())\n  while\n (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return\n maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the sequence.\n * \n * The operation is _terminal_.\n * \n * @throws NoSuchElementException if\n the sequence is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nSequence<T>.maxOf(selector: (T) -> R): R {\n  val iterator = iterator()\n  if\n (!iterator.hasNext()) throw NoSuchElementException()\n  var maxValue = selector(iterator.next())\n  while\n (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    if (maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector]\n function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of values\n produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.maxOfOrNull(selector:\n(T) -> Double): Double? {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return null\n  var maxValue =\n selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all\n values produced by [selector] function\n * applied to each element in the sequence or `null` if there are no\n elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * The\n operation is _terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.maxOfOrNull(selector:\n(T) -> Float): Float? {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return null\n  var maxValue =\n selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n    maxValue =\n maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced\n by [selector] function\n * applied to each\n element in the sequence or `null` if there are no elements.\n * \n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nSequence<T>.maxOfOrNull(selector: (T) -> R): R? {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return\n null\n  var maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v =\n selector(iterator.next())\n    if (maxValue < v) {\n      maxValue = v\n    }\n  }\n  return\n maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values\n produced by [selector] function applied to each element in the sequence.\n * \n * @throws\n NoSuchElementException if the sequence is empty.\n * \n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic\ninline fun <T, R> Sequence<T>.maxOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n  val\n iterator = iterator()\n  if (!iterator.hasNext()) throw NoSuchElementException()\n  var maxValue =

```

```

selector(iterator.next())\n while (iterator.hasNext()) {\n     val v = selector(iterator.next())\n     if
(comparator.compare(maxValue, v) < 0) {\n         maxValue = v\n     }\n }\n return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the sequence or `null` if there are no elements.\n * \n * The operation is
_terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>
Sequence<T>.maxOfWithOrNull(comparator: Comparator<in R>, selector:
(T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var maxValue =
selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if
(comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
*\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\npublic fun Sequence<Double>.maxOrNull():
Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var max = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        max = maxOf(max, e)\n    }\n    return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
*\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\npublic
fun Sequence<Float>.maxOrNull(): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n
var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        max = maxOf(max, e)\n
    }\n    return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * The operation
is _terminal_.\n
*\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Sequence<T>.maxOrNull(): T? {\n
val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var max = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        if (max < e) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator].\n * \n * The operation is
_terminal_.\n * \n * @throws NoSuchElementException if the sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic
fun <T> Sequence<T>.maxWith(comparator: Comparator<in T>): T {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) throw NoSuchElementException()\n    var max = iterator.next()\n    while (iterator.hasNext())
{\n        val e = iterator.next()\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no
elements.\n * \n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\npublic fun <T>
Sequence<T>.maxWithOrNull(comparator: Comparator<in T>): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n/**\n * Returns the
smallest element.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * The operation
is _terminal_.\n * \n * @throws NoSuchElementException if the sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun Sequence<Double>.min(): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element.\n * \n * If
any of elements is `NaN` returns `NaN`.\n * \n * The operation is _terminal_.\n * \n * @throws
NoSuchElementException if the sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun Sequence<Float>.min(): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n

```





function is `NaN`, the returned result is

```
`NaN`.n *n * The operation is _terminal_.n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minOrNull(selector:\n(T) -> Double): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =\n        minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of\n * values produced by [selector] function is `NaN`, the returned result is `NaN`.n *n * The operation is _terminal_.n\n *n *\n */\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic
```

```
inline fun <T> Sequence<T>.minOrNull(selector: (T) -> Float): Float? {\n    val iterator = iterator()\n    if\n    (!iterator.hasNext()) return null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the\n * sequence or `null` if there are no elements.\n * \n * The operation is _terminal_.n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nSequence<T>.minOrNull(selector: (T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return\n    null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v =\n        selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the\n * smallest value according to the provided [comparator]\n * among all values produced by [selector] function applied\n * to each element in the sequence.\n * \n * @throws NoSuchElementException if the sequence is empty.\n * \n * The\n * operation is _terminal_.n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\nSequence<T>.minOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n    val iterator = iterator()\n    if\n    (!iterator.hasNext()) throw NoSuchElementException\n    var minValue = selector(iterator.next())\n    while\n    (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest\n * value according to the provided [comparator]\n * among all values produced by [selector] function applied to each\n * element in the sequence or `null` if there are no elements.\n * \n * The operation is _terminal_.n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\nSequence<T>.minOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    val iterator =\n    iterator()\n    if (!iterator.hasNext()) return null\n    var minValue = selector(iterator.next())\n    while\n    (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest element or `null` if there are\n * no elements.\n * \n * If any of elements is `NaN` returns `NaN`.n *n * The operation is _terminal_.n
```

```
*\n@SinceKotlin("1.4")\npublic
```

```
fun Sequence<Double>.minOrNull(): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of\n * elements is `NaN` returns `NaN`.n *n * The operation is _terminal_.n\n *n *\n */\n*\n@SinceKotlin("1.4")\npublic fun\nSequence<Float>.minOrNull(): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var\n    min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * The operation is
```

```

_terminal_.\n *^\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Sequence<T>.minOrNull(): T? {\n
val iterator = iterator()\n if (!iterator.hasNext())\n
return null\n var min = iterator.next()\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (min >\n
e) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the\n
provided [comparator].\n *\n * The operation is _terminal_.\n *\n * @throws NoSuchElementException if the\n
sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVER\n
LOADS")\npublic fun <T> Sequence<T>.minWith(comparator: Comparator<in T>): T {\n val iterator =\n
iterator()\n if (!iterator.hasNext()) throw NoSuchElementException()\n var min = iterator.next()\n while\n
(iterator.hasNext()) {\n val e = iterator.next()\n if (comparator.compare(min, e) > 0) min = e\n }\n return\n
min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or\n
`null` if there are no elements.\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\npublic fun <T> Sequence<T>.minWithOrNull(comparator: Comparator<in T>): T? {\n
val iterator = iterator()\n if (!iterator.hasNext()) return null\n var min = iterator.next()\n while\n
(iterator.hasNext()) {\n val e = iterator.next()\n if (comparator.compare(min, e) > 0) min = e\n }\n return\n
min\n}\n\n/**\n * Returns `true` if the sequence has no elements.\n *\n * The operation is _terminal_.\n *\n *\n@sample samples.collections.Collections.Aggregates.none\n *^\npublic fun <T> Sequence<T>.none(): Boolean {\n
return !iterator().hasNext()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n *\n * The\n
operation is _terminal_.\n *\n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n
*\npublic inline fun <T> Sequence<T>.none(predicate: (T) -> Boolean): Boolean {\n for (element in this) if\n
(predicate(element)) return false\n return true\n}\n\n/**\n * Returns a sequence which performs\n
the given [action] on each element of the original sequence as they pass through it.\n *\n * The operation is\n
_intermediate_ and _stateless_.\n *^\n@SinceKotlin("1.1")\npublic fun <T> Sequence<T>.onEach(action: (T) ->\n
Unit): Sequence<T> {\n return map {\n action(it)\n it\n }\n}\n\n/**\n * Returns a sequence which\n
performs the given [action] on each element of the original sequence as they pass through it.\n *\n * @param [action]\n
function that takes the index of an element and the element itself\n * and performs the action on the element.\n *\n * The\n
operation is _intermediate_ and _stateless_.\n *^\n@SinceKotlin("1.4")\npublic fun <T>\n
Sequence<T>.onEachIndexed(action: (index: Int, T) -> Unit): Sequence<T> {\n return mapIndexed { index,\n
element ->\n action(index, element)\n element\n }\n}\n\n/**\n * Accumulates value starting with the first\n
element and applying [operation] from left to right\n * to current accumulator value and each element.\n
*\n * Throws an exception if this sequence is empty. If the sequence can be empty in an expected way,\n * please\n
use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n *\n * @param [operation] function that\n
takes current accumulator value and an element,\n * and calculates the next accumulator value.\n *\n * The\n
operation is _terminal_.\n *\n * @sample samples.collections.Collections.Aggregates.reduce\n *^\npublic inline fun\n
<S, T : S> Sequence<T>.reduce(operation: (acc: S, T) -> S): S {\n val iterator = this.iterator()\n if\n
(!iterator.hasNext()) throw UnsupportedOperationException("Empty sequence can't be reduced.")\n var\n
accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n accumulator = operation(accumulator,\n
iterator.next())\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and\n
applying [operation] from left to right\n * to current accumulator value and each element with its index\n
in the original sequence.\n *\n * Throws an exception if this sequence is empty. If the sequence can be empty in an\n
expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n *\n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n
*\n * and calculates the next accumulator value.\n *\n * The operation is _terminal_.\n *\n * @sample\n
samples.collections.Collections.Aggregates.reduce\n *^\npublic inline fun <S, T : S>\n
Sequence<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n val iterator = this.iterator()\n if\n
(!iterator.hasNext()) throw UnsupportedOperationException("Empty sequence can't be reduced.")\n var index =\n
1\n var accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n accumulator =\n
operation(checkIndexOverflow(index++), accumulator, iterator.next())\n }\n return accumulator\n}\n\n/**\n

```

Accumulates value starting

with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original sequence.\n \* \n \* Returns `null` if the sequence is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* The operation is \_terminal\_.\n \* \n \* @sample

```
samples.collections.Collections.Aggregates.reduceOrNull\n * \n * @SinceKotlin("1.4")\n * public inline fun <S, T : S>\n * Sequence<T>.reduceIndexedOrNull(operation: (index: Int, acc: S, T) -> S): S? {\n *     val iterator = this.iterator()\n *     if (!iterator.hasNext()) return null\n *     var index = 1\n *     var accumulator: S = iterator.next()\n *     while\n *     (iterator.hasNext()) {\n *         accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n *     }\n *     return accumulator\n * }\n * \n * \n * \n * Accumulates value starting with the first element and applying\n * [operation] from left to right\n * to current accumulator value and each element.\n * \n * \n * Returns `null` if the\n * sequence is empty.\n * \n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * \n * The operation is _terminal_.\n * \n * \n * @sample
```

```
samples.collections.Collections.Aggregates.reduceOrNull\n * \n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n * public inline fun <S, T : S>\n * Sequence<T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n *     val iterator = this.iterator()\n *     if\n *     (iterator.hasNext()) return null\n *     var accumulator: S = iterator.next()\n *     while (iterator.hasNext()) {\n *         accumulator = operation(accumulator, iterator.next())\n *     }\n *     return accumulator\n * }\n * \n * \n * \n * Returns a sequence\n * containing successive accumulation values generated by applying [operation] from left to right\n * to each element\n * and current accumulator value that starts with [initial] value.\n * \n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the\n * previous value in resulting sequence.\n * \n * The [initial] value should also be immutable (or should not be mutated)\n * as it may be passed to [operation] function later because of sequence's lazy nature.\n * \n * \n * @param [operation]\n * function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * \n * The\n * operation is _intermediate_ and _stateless_.\n * \n * \n * @sample
```

```
samples.collections.Collections.Aggregates.runningFold\n * \n * @SinceKotlin("1.4")\n * public fun <T, R>\n * Sequence<T>.runningFold(initial: R, operation: (acc: R, T) -> R): Sequence<R> {\n *     return sequence {\n *         yield(initial)\n *         var accumulator = initial\n *         for (element in this@runningFold) {\n *             accumulator =\n *             operation(accumulator, element)\n *             yield(accumulator)\n *         }\n *     }\n * }\n * \n * \n * \n * Returns a sequence\n * containing successive\n * accumulation values generated by applying [operation] from left to right\n * to each element, its index in the\n * original sequence and current accumulator value that starts with [initial] value.\n * \n * \n * Note that `acc` value passed\n * to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting\n * sequence.\n * \n * The [initial] value should also be immutable (or should not be mutated)\n * as it may be passed to\n * [operation] function later because of sequence's lazy nature.\n * \n * \n * @param [operation] function that takes the\n * index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator\n * value.\n * \n * \n * The operation is _intermediate_ and _stateless_.\n * \n * \n * @sample
```

```
samples.collections.Collections.Aggregates.runningFold\n * \n * @SinceKotlin("1.4")\n * public fun <T, R>\n * Sequence<T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): Sequence<R> {\n *     return\n *     sequence {\n *         yield(initial)\n *         var index = 0\n *         var accumulator = initial\n *         for (element in this@runningFoldIndexed)\n *         {\n *             accumulator = operation(checkIndexOverflow(index++), accumulator, element)\n *         }\n *         yield(accumulator)\n *     }\n * }\n * \n * \n * \n * Returns a sequence containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element and current accumulator value that starts\n * with the first element of this sequence.\n * \n * \n * Note that `acc` value passed to [operation] function should not be\n * mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * \n * \n * @param [operation]\n * function that takes current accumulator value and the element, and calculates the next accumulator value.\n * \n * \n * The\n * operation is _intermediate_ and _stateless_.\n * \n * \n * @sample
```

```
samples.collections.Collections.Aggregates.runningFold\n * \n * @SinceKotlin("1.4")\n * public fun <T, R>\n * Sequence<T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): Sequence<R> {\n *     return\n *     sequence {\n *         yield(initial)\n *         var index = 0\n *         var accumulator = initial\n *         for (element in this@runningFoldIndexed)\n *         {\n *             accumulator = operation(checkIndexOverflow(index++), accumulator, element)\n *         }\n *         yield(accumulator)\n *     }\n * }\n * \n * \n * \n * Returns a sequence containing successive accumulation values\n * generated by applying [operation] from left to right\n * to each element and current accumulator value that starts\n * with the first element of this sequence.\n * \n * \n * Note that `acc` value passed to [operation] function should not be\n * mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * \n * \n * @param [operation]\n * function that takes current accumulator value and the element, and calculates the next accumulator value.\n * \n * \n * The\n * operation is _intermediate_ and _stateless_.\n * \n * \n * @sample
```

```

samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
fun <S, T : S> Sequence<T>.runningReduce(operation: (acc: S, T) -> S): Sequence<S> {\n  return sequence {\n
  val iterator = iterator()\n    if (iterator.hasNext()) {\n      var accumulator: S = iterator.next()\n
yield(accumulator)\n      while (iterator.hasNext()) {\n        accumulator = operation(accumulator,
iterator.next())\n        yield(accumulator)\n      }\n    }\n  }\n}\n\n/**\n * Returns a sequence containing
successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in
the original sequence and current accumulator value that starts with the first element of this sequence.\n * \n * Note
that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous
value in resulting sequence.\n * \n * @param [operation] function that takes the index of an element, current
accumulator value\n * and the element itself, and calculates
the next accumulator value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n *\n@SinceKotlin("1.4")\npublic fun <S, T : S>
Sequence<T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): Sequence<S> {\n  return sequence
{\n  val iterator = iterator()\n    if (iterator.hasNext()) {\n      var accumulator: S = iterator.next()\n
yield(accumulator)\n      var index = 1\n      while (iterator.hasNext()) {\n        accumulator =
operation(checkIndexOverflow(index++), accumulator, iterator.next())\n        yield(accumulator)\n      }\n
    }\n  }\n}\n\n/**\n * Returns a sequence containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n *
Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * The [initial] value should
also be immutable (or should not be mutated)\n * as it may be passed to [operation] function later because of
sequence's lazy nature.\n * \n * @param [operation] function that takes current accumulator value and an element,
and calculates the next accumulator value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n *
@sample samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <T, R>
Sequence<T>.scan(initial: R, operation: (acc: R, T) -> R): Sequence<R> {\n  return runningFold(initial,
operation)\n}\n\n/**\n * Returns a sequence containing successive accumulation values generated by applying
[operation] from left to right\n * to each element, its index in the original sequence and current accumulator value
that starts with [initial] value.\n * \n * Note that `acc` value
passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting
sequence.\n * The [initial] value should also be immutable (or should not be mutated)\n * as it may be passed to
[operation] function later because of sequence's lazy nature.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator
value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <T, R>
Sequence<T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): Sequence<R> {\n  return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the sequence.\n * \n * The operation is _terminal_.\n * \n@Deprecated("Use sumOf
instead.", ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic
inline fun <T> Sequence<T>.sumBy(selector: (T) -> Int): Int {\n  var sum: Int = 0\n  for (element in this) {\n
sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the sequence.\n * \n * The operation is _terminal_.\n * \n@Deprecated("Use
sumOf instead.", ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\npublic inline fun <T> Sequence<T>.sumByDouble(selector: (T) -> Double): Double {\n  var sum: Double
= 0.0\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum
of all values produced by [selector] function applied to each element in the sequence.\n * \n * The operation is

```

```

_terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Sequence<T>.sumOf(selector: (T) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the sequence.\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun <T>
Sequence<T>.sumOf(selector: (T) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the sequence.\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> Sequence<T>.sumOf(selector: (T) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for
(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each element in the sequence.\n *\n * The operation is _terminal_.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.sumOf(selector: (T) -> UInt): UInt {\n
var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return
sum\n}\n\n/**\n * Returns the sum of
all values produced by [selector] function applied to each element in the sequence.\n *\n * The operation is
_terminal_.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.sumOf(selector: (T) -> ULong):
ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n
return sum\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an
[IllegalArgumentException] if there are any `null` elements.\n *\n * The operation is _intermediate_ and
_stateless_.\n\n@public fun <T : Any> Sequence<T?.>.requireNonNulls(): Sequence<T> {\n    return map { it ?:
throw IllegalArgumentException("null element found in $this.") }\n}\n\n/**\n * Splits this sequence into a
sequence of lists
each not exceeding the given [size].\n *\n * The last list in the resulting sequence may have fewer elements than
the given [size].\n *\n * @param size the number of elements to take in each list, must be positive and can be
greater than the number of elements in this sequence.\n *\n * The operation is _intermediate_ and _stateful_.\n *\n
* @sample samples.collections.Collections.Transformations.chunked\n\n@SinceKotlin("1.2")\npublic fun <T>
Sequence<T>.chunked(size: Int): Sequence<List<T>> {\n    return windowed(size, size, partialWindows =
true)\n}\n\n/**\n * Splits this sequence into several lists each not exceeding the given [size]\n * and applies the
given [transform] function to an each.\n *\n * @return sequence of results of the [transform] applied to an each
list.\n *\n * Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n
*\n * You should not store it or allow it to escape in some way, unless you made a snapshot
of it.\n *\n * The last list may have fewer elements than the given [size].\n *\n * @param size the number of elements
to take in each list, must be positive and can be greater than the number of elements in this sequence.\n *\n * The
operation is _intermediate_ and _stateful_.\n *\n * @sample samples.text.Strings.chunkedTransform\n\n@SinceKotlin("1.2")\npublic fun <T, R> Sequence<T>.chunked(size: Int, transform: (List<T>) -> R):
Sequence<R> {\n    return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Returns a
sequence containing all elements of the original sequence without the first occurrence of the given
[element].\n *\n * The operation is _intermediate_ and _stateless_.\n\n@public operator fun <T>

```

```

Sequence<T>.minus(element: T): Sequence<T> {\n  return object: Sequence<T> {\n    override fun iterator():
Iterator<T> {\n      var removed = false\n      return this@minus.filter { if (!removed && it == element) {\n
removed = true;\n      false } else true }.iterator()\n    }\n  }\n}\n\n/**\n * Returns a sequence containing all elements of original
sequence except the elements contained in the given [elements] array.\n * \n * Note that the source sequence and the
array being subtracted are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing
any of them between successive calls to `iterator` may affect the result.\n * \n * The operation is _intermediate_ and
_stateful_.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Array<out T>): Sequence<T> {\n  if
(elements.isEmpty()) return this\n  return object: Sequence<T> {\n    override fun iterator(): Iterator<T> {\n
return this@minus.filterNot { it in elements }.iterator()\n    }\n  }\n}\n\n/**\n * Returns a sequence containing
all elements of original sequence except the elements contained in the given [elements] collection.\n * \n * Note that
the source sequence and the collection being subtracted are
iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between
successive calls to `iterator` may affect the result.\n * \n * The operation is _intermediate_ and _stateful_.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Iterable<T>): Sequence<T> {\n  return object:
Sequence<T> {\n    override fun iterator(): Iterator<T> {\n      val other =
elements.convertToListIfNotCollection()\n      if (other.isEmpty())\n        return this@minus.iterator()\n      else\n        return this@minus.filterNot { it in other }.iterator()\n    }\n  }\n}\n\n/**\n * Returns a sequence
containing all elements of original sequence except the elements contained in the given [elements] sequence.\n * \n *
Note that the source sequence and the sequence being subtracted are iterated only when an `iterator` is requested
from\n * the resulting sequence. Changing any of them between successive calls to `iterator`
may affect the result.\n * \n * The operation is _intermediate_ for this sequence and _terminal_ and _stateful_ for
the [elements] sequence.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Sequence<T>):
Sequence<T> {\n  return object: Sequence<T> {\n    override fun iterator(): Iterator<T> {\n      val other =
elements.toList()\n      if (other.isEmpty())\n        return this@minus.iterator()\n      else\n        return this@minus.filterNot { it in other }.iterator()\n    }\n  }\n}\n\n/**\n * Returns a sequence containing all
elements of the original sequence without the first occurrence of the given [element].\n * \n * The operation is
_intermediate_ and _stateless_.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T>
Sequence<T>.minusElement(element: T): Sequence<T> {\n  return minus(element)\n}\n\n/**\n * Splits the
original sequence into pair of lists,\n * where *first* list contains elements for which [predicate] yielded
`true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * The operation is
_terminal_.\n * \n * @sample samples.collections.Sequences.Transformations.partition\n */\npublic inline fun <T>
Sequence<T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {\n  val first = ArrayList<T>()\n  val
second = ArrayList<T>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Returns a sequence
containing all elements of the original sequence and then the given [element].\n * \n * The operation is
_intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(element: T): Sequence<T> {\n
return sequenceOf(this, sequenceOf(element)).flatten()\n}\n\n/**\n * Returns a sequence containing all elements of
original sequence and then all elements of the given [elements] array.\n * \n * Note that the source sequence and the
array being added are iterated only when an `iterator` is requested
from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n *
\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(elements:
Array<out T>): Sequence<T> {\n  return this.plus(elements.asList())\n}\n\n/**\n * Returns a sequence containing
all elements of original sequence and then all elements of the given [elements] collection.\n * \n * Note that the
source sequence and the collection being added are iterated only when an `iterator` is requested from\n * the
resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n * \n * The
operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(elements:
Iterable<T>): Sequence<T> {\n  return sequenceOf(this, elements.asSequence()).flatten()\n}\n\n/**\n

```







Double

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= 0.0\n var count: Int = 0\n for (element in this) {\n     sum += element\n checkCountOverflow(++count)\n } return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfByte")\npublic fun Sequence<Byte>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    } return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfShort")\npublic fun Sequence<Short>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    } return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfInt")\npublic fun Sequence<Int>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    } return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfLong")\npublic fun Sequence<Long>.sum(): Long {\n    var sum: Long = 0L\n    for (element in this) {\n        sum += element\n    } return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfFloat")\npublic fun Sequence<Float>.sum(): Float {\n    var sum: Float = 0.0f\n    for (element in this) {\n        sum += element\n    } return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n */\n * The operation is _terminal_.\n\n*\n@kotlin.jvm.JvmName("sumOfDouble")\npublic fun Sequence<Double>.sum(): Double {\n    var sum: Double = 0.0\n    for (element in this) {\n        sum += element\n    } return sum\n}\n}\n\n"/**\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("SetsKt")\n\npackage kotlin.collections\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns a set containing all elements of the original set except the given [element].\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\npublic operator fun <T> Set<T>.minus(element: T): Set<T> {\n    val result = LinkedHashSet<T>(mapCapacity(size))\n    var removed = false\n    return this.filterTo(result) { if (!removed && it == element) { removed = true; false } else true }\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] array.\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\npublic operator fun <T> Set<T>.minus(elements: Array<out T>): Set<T> {\n    val result = LinkedHashSet<T>(this)\n    result.removeAll(elements)\n    return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] collection.\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\npublic operator fun <T> Set<T>.minus(elements: Iterable<T>): Set<T> {\n    val other = elements.convertToListIfNotCollection()\n    if (other.isEmpty())\n        return this.toSet()\n    if (other is Set)\n        return this.filterNotTo(LinkedHashSet<T>()) { it in other }\n    val result = LinkedHashSet<T>(this)\n    result.removeAll(other)\n    return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] sequence.\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\npublic operator fun <T> Set<T>.minus(elements: Sequence<T>): Set<T> {\n    val result = LinkedHashSet<T>(this)\n    result.removeAll(elements)\n    return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the given [element].\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>.minusElement(element: T): Set<T> {\n    return minus(element)\n}\n\n/**\n * Returns a set containing all elements of the original set and then the given [element] if it isn't already in this set.\n */\n * The returned set preserves the element iteration order of the original set.\n\n*\npublic operator fun <T> Set<T>.plus(element: T): Set<T> {\n    val result =
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LinkedHashSet<T>(mapCapacity(size + 1))\n result.addAll(this)\n result.add(element)\n return
result\n}\n\n/**\n * Returns a set
containing all elements of the original set and the given [elements] array,\n * which aren't already in this set.\n * \n
* The returned set preserves the element iteration order of the original set.\n * \n\npublic operator fun <T>
Set<T>.plus(elements: Array<out T>): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(this.size +
elements.size))\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a set
containing all elements of the original set and the given [elements] collection,\n * which aren't already in this set.\n
* The returned set preserves the element iteration order of the original set.\n * \n\npublic operator fun <T>
Set<T>.plus(elements: Iterable<T>): Set<T> {\n val result =
LinkedHashSet<T>(mapCapacity(elements.collectionSizeOrNull()?.let { this.size + it } ?: this.size * 2))\n
result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of
the original set and the
given [elements] sequence,\n * which aren't already in this set.\n * \n * The returned set preserves the element
iteration order of the original set.\n * \n\npublic operator fun <T> Set<T>.plus(elements: Sequence<T>): Set<T> {\n
val result = LinkedHashSet<T>(mapCapacity(this.size * 2))\n result.addAll(this)\n result.addAll(elements)\n
return result\n}\n\n/**\n * Returns a set containing all elements of the original set and then the given [element] if it
isn't already in this set.\n * \n * The returned set preserves the element iteration order of the original set.\n
* \n\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>.plusElement(element: T): Set<T> {\n return
plus(element)\n}\n\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
kotlin.text\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n/\n\nimport kotlin.random.*\n\n/**\n * Returns a
character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char
sequence.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n * \n\npublic expect fun
CharSequence.elementAt(index: Int): Char\n\n/**\n * Returns a character at the given [index] or the result of calling
the [defaultValue] function if the [index] is out of bounds of this char sequence.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n return if (index >= 0 && index
<= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns a character at the given [index] or `null`
if the [index] is out of bounds of this char sequence.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.elementAtOrNull(index: Int): Char? {\n return this.getOrNull(index)\n}\n\n/**\n * Returns the first
character matching the given [predicate], or `null` if no such character was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.find(predicate: (Char) -> Boolean): Char? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns
the last character matching the given [predicate], or `null` if no such character was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n * \n\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.findLast(predicate: (Char) -> Boolean): Char? {\n return lastOrNull(predicate)\n}\n\n/**\n *
Returns the first character.\n * \n * @throws NoSuchElementException
if the char sequence is empty.\n * \n\npublic fun CharSequence.first(): Char {\n if (isEmpty())\n throw
NoSuchElementException("Char sequence is empty.")\n return this[0]\n}\n\n/**\n * Returns the first character
matching the given [predicate].\n * @throws [NoSuchElementException] if no such character is found.\n * \n\npublic
inline fun CharSequence.first(predicate: (Char) -> Boolean): Char {\n for (element in this) if (predicate(element))
return element\n throw NoSuchElementException("Char sequence contains no character matching the
predicate.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to
characters of this char sequence in iteration order,\n * or throws [NoSuchElementException] if no non-null value

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was produced.\n * \n * @sample samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <R : Any>\n
CharSequence.firstNotNullOf(transform:\n
(Char) -> R?): R {\n    return firstNotNullOfOrNull(transform) ?: throw NoSuchElementException("No element of\n
the char sequence was transformed to a non-null value.")\n}\n\n/**\n * Returns the first non-null value produced by\n
[transform] function being applied to characters of this char sequence in iteration order,\n * or `null` if no non-null\n
value was produced.\n * \n * @sample samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <R : Any>\n
CharSequence.firstNotNullOfOrNull(transform: (Char) -> R?): R? {\n    for (element in this) {\n        val result =\n
transform(element)\n        if (result != null) {\n            return result\n        }\n    }\n    return null\n}\n\n/**\n * Returns the first character, or `null` if the char sequence is empty.\n *\npublic fun CharSequence.firstOrNull():\n
Char? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first character matching the\n
given [predicate], or `null` if character was not found.\n *\npublic inline fun CharSequence.firstOrNull(predicate:\n
(Char) -> Boolean): Char? {\n    for (element in this) if (predicate(element)) return element\n    return\n
null\n}\n\n/**\n * Returns a character at the given [index] or the result of calling the [defaultValue] function if the\n
[index] is out of bounds of this char sequence.\n *\n@kotlin.internal.InlineOnly\npublic inline fun\n
CharSequence.getOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n    return if (index >= 0 && index <=\n
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns a character at the given [index] or `null` if the\n
[index] is out of bounds of this char sequence.\n * \n * @sample\n
samples.collections.Collections.Elements.getOrElseOrNull\n *\npublic fun CharSequence.getOrElseOrNull(index: Int): Char?\n
{\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns index of the first\n
character matching the given [predicate],\n * or -1 if the char sequence does not contain such character.\n *\npublic inline fun\n
CharSequence.indexOfFirst(predicate: (Char) -> Boolean): Int {\n    for (index in indices) {\n        if\n
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last\n
character matching the given [predicate], or -1 if the char sequence does not contain such character.\n *\npublic\n
inline fun CharSequence.indexOfLast(predicate: (Char) -> Boolean): Int {\n    for (index in indices.reversed()) {\n
        if (predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns the last\n
character.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n * \n * @sample\n
samples.text.Strings.last\n *\npublic fun CharSequence.last(): Char {\n    if (isEmpty())\n        throw\n
NoSuchElementException("Char sequence is empty.")\n    return this[lastIndex]\n}\n\n/**\n * Returns the last\n
character\n * matching the given [predicate].\n * \n * @throws NoSuchElementException if no such character is found.\n * \n *\n
@sample samples.text.Strings.last\n *\npublic inline fun CharSequence.last(predicate: (Char) -> Boolean): Char {\n
    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if (predicate(element)) return\n
element\n    }\n    throw NoSuchElementException("Char sequence contains no character matching the\n
predicate.")\n}\n\n/**\n * Returns the last character, or `null` if the char sequence is empty.\n * \n * @sample\n
samples.text.Strings.last\n *\npublic fun CharSequence.lastOrNull(): Char? {\n    return if (isEmpty())\n        null\n
else this[length - 1]\n}\n\n/**\n * Returns the last character matching the given [predicate], or `null` if no such character\n
was found.\n * \n * @sample samples.text.Strings.last\n *\npublic inline fun CharSequence.lastOrNull(predicate:\n
(Char) -> Boolean): Char? {\n    for (index in this.indices.reversed()) {\n        val\n
element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns a\n
random character from this char sequence.\n * \n * @throws NoSuchElementException if this char sequence is\n
empty.\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.random(): Char\n
{\n    return random(Random)\n}\n\n/**\n * Returns a random character from this char sequence using the specified\n
source of randomness.\n * \n * @throws NoSuchElementException if this char sequence is empty.\n *\n*\n@SinceKotlin("1.3")\npublic fun CharSequence.random(random: Random): Char {\n    if (isEmpty())\n        throw\n
NoSuchElementException("Char sequence is empty.")\n    return get(random.nextInt(length))\n}\n\n/**\n *

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Returns a random character from this char sequence, or `null` if this char sequence is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic\ninline fun CharSequence.randomOrNull():\n    Char? {\n        return randomOrNull(Random)\n    }\n\n/**\n * Returns a random character from this char sequence\n * using the specified source of randomness, or `null` if this char sequence is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun\nCharSequence.randomOrNull(random: Random): Char? {\n    if (isEmpty())\n        return null\n    return\n    get(random.nextInt(length))\n}\n\n/**\n * Returns the single character, or throws an exception if the char sequence\n * is empty or has more than one character.\n */\n*\npublic fun CharSequence.single(): Char {\n    return when (length)\n    {\n        0 -> throw NoSuchElementException("Char sequence is empty.")\n        1 -> this[0]\n        else -> throw\n        IllegalArgumentException("Char sequence has more than one element.")\n    }\n}\n\n/**\n * Returns the single\n * character matching the given [predicate], or throws exception if there is no or more than one matching character.\n */\n*\npublic inline fun CharSequence.single(predicate:\n    (Char) -> Boolean): Char {\n    var single: Char? = null\n    var found = false\n    for (element in this) {\n        if\n        (predicate(element)) {\n            if (found) throw IllegalArgumentException("Char sequence contains more than one\n            matching element.")\n            single = element\n            found = true\n        }\n    }\n    if (!found) throw\n    NoSuchElementException("Char sequence contains no character matching the predicate.")\n}\n\n@Suppress("UNCHECKED_CAST")\nreturn single as Char\n}\n\n/**\n * Returns single character, or `null` if\n * the char sequence is empty or has more than one character.\n */\n*\npublic fun CharSequence.singleOrNull(): Char?\n{\n    return if (length == 1) this[0] else null\n}\n\n/**\n * Returns the single character matching the given\n * [predicate], or `null` if character was not found or more than one character was found.\n */\n*\npublic inline fun\nCharSequence.singleOrNull(predicate: (Char) -> Boolean): Char? {\n    var single:\n    Char? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found)\n            return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return\n    single\n}\n\n/**\n * Returns a subsequence of this char sequence with the first [n] characters removed.\n */\n * \n * @throws IllegalArgumentException if [n] is negative.\n */\n * \n * @sample samples.text.Strings.drop\n */\n*\npublic fun\nCharSequence.drop(n: Int): CharSequence {\n    require(n >= 0) { "Requested character count $n is less than zero." }\n    return subSequence(n.coerceAtMost(length), length)\n}\n\n/**\n * Returns a string with the first [n] characters\n * removed.\n */\n * \n * @throws IllegalArgumentException if [n] is negative.\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic fun String.drop(n: Int): String {\n    require(n >= 0) { "Requested character\n    count $n is less than zero." }\n    return substring(n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence with the last [n] characters removed.\n */\n * \n * @throws\n * IllegalArgumentException if [n] is negative.\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic fun\nCharSequence.dropLast(n: Int): CharSequence {\n    require(n >= 0) { "Requested character count $n is less than\n    zero." }\n    return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a string with the last [n] characters\n * removed.\n */\n * \n * @throws IllegalArgumentException if [n] is negative.\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic fun String.dropLast(n: Int): String {\n    require(n >= 0) { "Requested\n    character count $n is less than zero." }\n    return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a\n * subsequence of this char sequence containing all characters except last characters that satisfy the given [predicate].\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic inline fun CharSequence.dropLastWhile(predicate: (Char) ->\n    Boolean):\n    CharSequence {\n    for (index in lastIndex downTo 0)\n        if (!predicate(this[index]))\n            return\n            subSequence(0, index + 1)\n    }\n    return ""\n}\n\n/**\n * Returns a string containing all characters except last\n * characters that satisfy the given [predicate].\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic inline fun\nString.dropLastWhile(predicate: (Char) -> Boolean): String {\n    for (index in lastIndex downTo 0)\n        if\n        (!predicate(this[index]))\n            return substring(0, index + 1)\n    }\n    return ""\n}\n\n/**\n * Returns a subsequence\n * of this char sequence containing all characters except first characters that satisfy the given [predicate].\n */\n * \n * @sample\n * samples.text.Strings.drop\n */\n*\npublic inline fun CharSequence.dropWhile(predicate: (Char) -> Boolean):

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CharSequence {\n  for (index in this.indices)\n    if (!predicate(this[index]))\n      return subSequence(index,
length)\n  return ""\n}\n\n/**\n * Returns a string containing
all characters except first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.drop\n */\npublic inline fun String.dropWhile(predicate: (Char) -> Boolean): String {\n  for (index in this.indices)\n    if (!predicate(this[index]))\n      return substring(index)\n  return ""\n}\n\n/**\n * Returns a char sequence
containing only those characters from the original char sequence that match the given [predicate].\n * \n * @sample
samples.text.Strings.filter\n */\npublic inline fun CharSequence.filter(predicate: (Char) -> Boolean): CharSequence
{\n  return filterTo(StringBuilder(), predicate)\n}\n\n/**\n * Returns a string containing only those characters from
the original string that match the given [predicate].\n * \n * @sample samples.text.Strings.filter\n */\npublic inline
fun String.filter(predicate: (Char) -> Boolean): String {\n  return filterTo(StringBuilder(),
predicate).toString()\n}\n\n/**\n * Returns a char sequence containing
only those characters from the original char sequence that match the given [predicate].\n * @param [predicate]
function that takes the index of a character and the character itself\n * and returns the result of predicate evaluation
on the character.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun
CharSequence.filterIndexed(predicate: (index: Int, Char) -> Boolean): CharSequence {\n  return
filterIndexedTo(StringBuilder(), predicate)\n}\n\n/**\n * Returns a string containing only those characters from the
original string that match the given [predicate].\n * @param [predicate] function that takes the index of a character
and the character itself\n * and returns the result of predicate evaluation on the character.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun String.filterIndexed(predicate: (index:
Int, Char) -> Boolean): String {\n  return filterIndexedTo(StringBuilder(), predicate).toString()\n}\n\n/**\n * Appends all characters matching the given [predicate] to the given [destination].\n * @param [predicate] function
that takes the index of a character and the character itself\n * and returns the result of predicate evaluation on the
character.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n */\npublic inline fun <C :
Appendable> CharSequence.filterIndexedTo(destination: C, predicate: (index: Int, Char) -> Boolean): C {\n
forEachIndexed { index, element ->\n  if (predicate(index, element)) destination.append(element)\n }\n
return destination\n}\n\n/**\n * Returns a char sequence containing only those characters from the original char
sequence that do not match the given [predicate].\n * \n * @sample samples.text.Strings.filterNot\n */\npublic inline
fun CharSequence.filterNot(predicate: (Char) -> Boolean): CharSequence {\n  return filterNotTo(StringBuilder(),
predicate)\n}\n\n/**\n * Returns a string containing only
those characters from the original string that do not match the given [predicate].\n * \n * @sample
samples.text.Strings.filterNot\n */\npublic inline fun String.filterNot(predicate: (Char) -> Boolean): String {\n
return filterNotTo(StringBuilder(), predicate).toString()\n}\n\n/**\n * Appends all characters not matching the given
[predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n */\npublic
inline fun <C : Appendable> CharSequence.filterNotTo(destination: C, predicate: (Char) -> Boolean): C
{\n  for (element in this) if (!predicate(element)) destination.append(element)\n  return destination\n}\n\n/**\n *
Appends all characters matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n */\npublic inline fun <C : Appendable>
CharSequence.filterTo(destination: C, predicate: (Char) -> Boolean): C {\n  for (index in 0 until length) {\n    val
element
= get(index)\n    if (predicate(element)) destination.append(element)\n  }\n  return destination\n}\n\n/**\n * Returns a char sequence containing characters of the original char sequence at the specified range of [indices].\n */\npublic fun
CharSequence.slice(indices: IntRange): CharSequence {\n  if (indices.isEmpty()) return ""\n  return
subSequence(indices)\n}\n\n/**\n * Returns a string containing characters of the original string at the
specified range of [indices].\n */\npublic fun String.slice(indices: IntRange): String {\n  if (indices.isEmpty())
return ""\n  return substring(indices)\n}\n\n/**\n * Returns a char sequence containing characters of the original
char sequence at specified [indices].\n */\npublic fun CharSequence.slice(indices: Iterable<Int>): CharSequence {\n
val size = indices.collectionSizeOrDefault(10)\n  if (size == 0) return ""\n  val result = StringBuilder(size)\n  for (i in indices) {\n    result.append(get(i))\n  }\n}

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return result\n}\n\n/**\n * Returns a string containing characters of the original string at specified [indices].\n
*\n@kotlin.internal.InlineOnly\npublic inline fun String.slice(indices: Iterable<Int>): String {\n    return (this as
CharSequence).slice(indices).toString()\n}\n\n/**\n * Returns a subsequence of this char sequence containing the
first [n] characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
CharSequence.take(n: Int): CharSequence {\n    require(n >= 0) { "\"Requested character count $n is less than zero.\""}\n
    return subSequence(0, n.coerceAtMost(length))\n}\n\n/**\n * Returns a string containing the first [n]
characters from this string, or the entire string if this string is shorter.\n * \n * @throws IllegalArgumentException if
[n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic
fun String.take(n: Int): String {\n    require(n >= 0) { "\"Requested character count $n is less than zero.\""}\n
    return substring(0, n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence containing the last
[n] characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
CharSequence.takeLast(n: Int): CharSequence {\n    require(n >= 0) { "\"Requested character count $n is less than
zero.\""}\n    val length = length\n    return subSequence(length - n.coerceAtMost(length), length)\n}\n\n/**\n *
Returns a string containing the last [n] characters from this string, or the entire string if this string is shorter.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
String.takeLast(n: Int): String {\n    require(n >= 0) { "\"Requested character count $n is less than zero.\""}\n
    val length = length\n    return substring(length -
n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence containing last characters that
satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun
CharSequence.takeLastWhile(predicate: (Char) -> Boolean): CharSequence {\n    for (index in lastIndex downTo 0)
{\n        if (!predicate(this[index])) {\n            return subSequence(index + 1, length)\n        }\n    }\n    return
subSequence(0, length)\n}\n\n/**\n * Returns a string containing last characters that satisfy the given [predicate].\n
*\n * @sample samples.text.Strings.take\n */\npublic inline fun String.takeLastWhile(predicate: (Char) ->
Boolean): String {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return
substring(index + 1)\n        }\n    }\n    return this\n}\n\n/**\n * Returns a subsequence of this char sequence
containing the first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n
*/\npublic inline fun CharSequence.takeWhile(predicate: (Char) -> Boolean): CharSequence {\n    for (index in 0
until length)\n        if (!predicate(get(index))) {\n            return subSequence(0, index)\n        }\n    return
subSequence(0, length)\n}\n\n/**\n * Returns a string containing the first characters that satisfy the given
[predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun String.takeWhile(predicate: (Char) ->
Boolean): String {\n    for (index in 0 until length)\n        if (!predicate(get(index))) {\n            return
substring(0, index)\n        }\n    return this\n}\n\n/**\n * Returns a char sequence with characters in reversed order.\n
*/\npublic fun CharSequence.reversed(): CharSequence {\n    return StringBuilder(this).reverse()\n}\n\n/**\n * Returns a string
with characters in reversed order.\n */\n@kotlin.internal.InlineOnly\npublic
inline fun String.reversed(): String {\n    return (this as CharSequence).reversed().toString()\n}\n\n/**\n * Returns a
[Map] containing key-value pairs provided by [transform] function\n * applied to characters of the given char
sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original char sequence.\n * \n * @sample
samples.text.Strings.associate\n */\npublic inline fun <K, V> CharSequence.associate(transform: (Char) -> Pair<K,
V>): Map<K, V> {\n    val capacity = mapCapacity(length).coerceAtLeast(16)\n    return
associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing the characters
from the given char sequence indexed by the key\n * returned from [keySelector] function applied to each
character.\n * \n * If any two characters would have the same key returned by [keySelector] the last one gets added
to the map.\n * \n * The returned map preserves the entry iteration order of the original char sequence.\n * \n * @sample
samples.text.Strings.associateBy\n */\npublic inline fun <K> CharSequence.associateBy(keySelector: (Char) -> K):

```

```

Map<K, Char> {
    val capacity = mapCapacity(length).coerceAtLeast(16)
    return
    associateByTo(LinkedHashMap<K, Char>(capacity), keySelector)
}

/**
 * Returns a [Map] containing the
 * values provided by [valueTransform] and indexed by [keySelector] functions applied to characters of the given char
 * sequence.
 * If any two characters would have the same key returned by [keySelector] the last one gets added
 * to the map.
 * The returned map preserves the entry iteration order of the original char sequence.
 */
@sample samples.text.Strings.associateByWithValueTransform

public inline fun <K, V>
CharSequence.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {
    val capacity
    = mapCapacity(length).coerceAtLeast(16)
    return
    associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)
}

/**
 * Populates
 * and returns the [destination] mutable map with key-value pairs,
 * where key is provided by the [keySelector]
 * function applied to each character of the given char sequence
 * and value is the character itself.
 * If any two
 * characters would have the same key returned by [keySelector] the last one gets added to the map.
 */
@sample
samples.text.Strings.associateByTo

public inline fun <K, M : MutableMap<in K, in Char>>
CharSequence.associateByTo(destination: M, keySelector: (Char) -> K): M {
    for (element in this) {
        destination.put(keySelector(element), element)
    }
    return destination
}

/**
 * Populates and returns the
 * [destination] mutable map with key-value pairs,
 * where key is provided by the [keySelector] function and
 * value is provided by the [valueTransform] function applied to characters of the given char sequence.
 * If any two
 * characters would have the same key returned by [keySelector] the last one gets added to the map.
 */
@sample
samples.text.Strings.associateByToWithValueTransform

public inline fun <K, V, M :
MutableMap<in K, in V>>
CharSequence.associateByTo(destination: M, keySelector: (Char) -> K,
valueTransform: (Char) -> V): M {
    for (element in this) {
        destination.put(keySelector(element),
valueTransform(element))
    }
    return destination
}

/**
 * Populates and returns the [destination] mutable
 * map with key-value pairs
 * provided by [transform] function applied to each character of the given char
 * sequence.
 * If any of two pairs would have the same key the last one gets added to the map.
 */
@sample
samples.text.Strings.associateTo

public inline fun <K, V, M : MutableMap<in K, in V>>
CharSequence.associateTo(destination: M, transform: (Char) -> Pair<K, V>): M {
    for (element in this) {
        destination += transform(element)
    }
    return destination
}

/**
 * Returns a [Map] where keys are characters from the given char sequence
 * and values are
 * produced by the [valueSelector] function applied to each character.
 * If any two characters
 * are equal, the last one gets added to the map.
 * The returned map preserves the entry iteration order of the
 * original char sequence.
 */
@sample
samples.text.Strings.associateWith

@SinceKotlin("1.3")
public
inline fun <V>
CharSequence.associateWith(valueSelector: (Char) -> V): Map<Char, V> {
    val result =
    LinkedHashMap<Char, V>(mapCapacity(length.coerceAtMost(128)).coerceAtLeast(16))
    return
    associateWithTo(result, valueSelector)
}

/**
 * Populates and returns the [destination] mutable map with key-
 * value pairs for each character of the given char sequence,
 * where key is the character itself and value is provided
 * by the [valueSelector] function applied to that key.
 * If any two characters are equal, the last one
 * overwrites the former value in the map.
 */
@sample
samples.text.Strings.associateWithTo

@SinceKotlin("1.3")
public
inline fun <V, M : MutableMap<in Char, in V>>
CharSequence.associateWithTo(destination: M, valueSelector: (Char) -> V): M {
    for (element in this) {
        destination.put(element, valueSelector(element))
    }
    return destination
}

/**
 * Appends all characters to
 * the given [destination] collection.
 */
public fun <C : MutableCollection<in Char>>
CharSequence.addToCollection(destination: C): C {
    for (item in this) {
        destination.add(item)
    }
    return destination
}

/**
 * Returns a new [HashSet] of all characters.
 */
public fun
CharSequence.toHashSet():
HashSet<Char> {
    return toCollection(HashSet<Char>(mapCapacity(length.coerceAtMost(128))))
}

/**
 * Returns a [List] containing all characters.
 */
public fun
CharSequence.toList(): List<Char> {
    return when
    (length) {
        0 -> emptyList()
        1 -> listOf(this[0])
        else -> this.toMutableList()
    }
}

/**
 * Returns a new [MutableList] filled with
 * all characters of this char sequence.
 */
public fun
CharSequence.toMutableList(): MutableList<Char> {
    return
    ArrayList<Char>(this.toList())
}

```

```

return toCollection(ArrayList<Char>(length))\n\n\n**\n * Returns a [Set] of all characters.\n * \n * The returned
set preserves the element iteration order of the original char sequence.\n */\npublic fun CharSequence.toSet():
Set<Char> {\n    return when (length) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Char>(mapCapacity(length.coerceAtMost(128))))\n    }\n}\n\n\n**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each character of original char
sequence.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>
CharSequence.flatMap(transform: (Char) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n\n**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each character\n * and its index in the original char sequence.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> CharSequence.flatMapIndexed(transform: (index: Int, Char) -> Iterable<R>): List<R> {\n    return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n\n**\n * Appends all elements yielded from results of
[transform] function being invoked on each character\n * and its index in the original char sequence, to the given
[destination].\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic
inline fun <R, C : MutableCollection<in R>> CharSequence.flatMapIndexedTo(destination: C, transform: (index:
Int, Char) -> Iterable<R>): C {\n    var index = 0\n    for (element in this) {\n        val list = transform(index++,
element)\n        destination.addAll(list)\n    }\n    return destination\n}\n\n\n**\n * Appends all elements yielded from
results of [transform] function being invoked on each character of original char sequence, to the given
[destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> CharSequence.flatMapTo(destination: C,
transform: (Char) -> Iterable<R>): C {\n    for (element in this) {\n        val list = transform(element)\n
destination.addAll(list)\n    }\n    return destination\n}\n\n\n**\n * Groups characters of the original char sequence by
the key returned by the given [keySelector] function\n * applied to each character and returns a map where each
group key is associated with
a list of corresponding characters.\n * \n * The returned map preserves the entry iteration order of the keys produced
from the original char sequence.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\npublic inline fun <K> CharSequence.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n    return
groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n\n**\n * Groups values returned by the
[valueTransform] function applied to each character of the original char sequence\n * by the key returned by the
given [keySelector] function applied to the character\n * and returns a map where each group key is associated with
a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced
from the original char sequence.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V>
CharSequence.groupBy(keySelector: (Char) -> K, valueTransform: (Char)
-> V): Map<K, List<V>> {\n    return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,
valueTransform)\n}\n\n\n**\n * Groups characters of the original char sequence by the key returned by the given
[keySelector] function\n * applied to each character and puts to the [destination] map each group key associated
with a list of corresponding characters.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K,
MutableList<Char>>> CharSequence.groupByTo(destination: M, keySelector: (Char) -> K): M {\n    for (element in
this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Char>() }\n
list.add(element)\n    }\n    return destination\n}\n\n\n**\n * Groups values returned by the [valueTransform] function
applied to each character of the original char sequence\n * by the key returned by the given [keySelector] function
applied

```



to the character\n \* and puts to the [destination] map each group key associated with a list of corresponding values.\n \* \n \* @return The [destination] map.\n \* \n \* @sample

```

samples.collections.Collections.Transformations.groupByKeyAndValues\n *
public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> CharSequence.groupByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) { ArrayList<V>() }
        list.add(valueTransform(element))
    }
    return destination
}

```

\n \* Creates a [Grouping] source from a char sequence to be used later with one of group-and-fold operations\n \* using the specified [keySelector] function to extract a key from each character.\n \* \n \* @sample

```

samples.collections.Grouping.groupingByEachCount\n *
@SinceKotlin("1.1")
public inline fun <K> CharSequence.groupingBy(crossinline keySelector: (Char) -> K): Grouping<Char, K> {
    return object : Grouping<Char, K> {
        override fun sourceIterator(): Iterator<Char> = this@groupingBy.iterator()
        override fun keyOf(element: Char): K = keySelector(element)
    }
}

```

\n \* Returns a list containing the results of applying the given [transform] function\n \* to each character in the original char sequence.\n \* \n \* @sample

```

samples.text.Strings.map\n *
public inline fun <R> CharSequence.map(transform: (Char) -> R): List<R> {
    return mapTo(ArrayList<R>(length), transform)
}

```

\n \* Returns a list containing the results of applying the given [transform] function\n \* to each character and its index in the original char sequence.\n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \*

```

public inline fun <R> CharSequence.mapIndexed(transform: (index: Int, Char) -> R): List<R> {
    return mapIndexedTo(ArrayList<R>(length), transform)
}

```

\n \* Returns a list containing only the non-null results of applying the given [transform] function\n \* to each character and its index in the original char sequence.\n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \*

```

public inline fun <R : Any> CharSequence.mapIndexedNotNull(transform: (index: Int, Char) -> R?): List<R> {
    return mapIndexedNotNullTo(ArrayList<R>(), transform)
}

```

\n \* Applies the given [transform] function to each character and its index in the original char sequence\n \* and appends only the non-null results to the given [destination].\n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \*

```

public inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapIndexedNotNullTo(destination: C, transform: (index: Int, Char) -> R?): C {
    forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }
    return destination
}

```

\n \* Applies the given [transform] function to each character and its index in the original char sequence\n \* and appends the results to the given [destination].\n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \*

```

public inline fun <R, C : MutableCollection<in R>> CharSequence.mapIndexedTo(destination: C, transform: (index: Int, Char) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\n \* Returns a list containing only the non-null results of applying the given [transform] function\n \* to each character in the original char sequence.\n \* \n \* @sample

```

samples.collections.Collections.Transformations.mapNotNull\n *
public inline fun <R : Any> CharSequence.mapNotNull(transform: (Char) -> R?): List<R> {
    return mapNotNullTo(ArrayList<R>(), transform)
}

```

\n \* Applies the given [transform] function to each character in the original char sequence\n \* and appends only the non-null results to the given [destination].\n \*

```

public inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapNotNullTo(destination: C, transform: (Char) -> R?): C {
    forEach { element -> transform(element)?.let { destination.add(it) } }
    return destination
}

```

\n \* Applies the given [transform] function to each character of the original char sequence\n \* and appends the results to the given [destination].\n \*

```

public inline fun <R, C : MutableCollection<in R>> CharSequence.mapTo(destination: C, transform: (Char) -> R): C {
    for (item in this)
        destination.add(transform(item))
    return destination
}

```

\n \* Returns a lazy [Iterable] that wraps each character of the original

char sequence into an [IndexedValue] containing the index of that character and the character itself.

```

public fun CharSequence.withIndex(): Iterable<IndexedValue<Char>> {
    return IndexingIterable { iterator() }
}

```

Returns `true` if all characters match the given [predicate]. Note that if the char sequence contains no characters, the function returns `true` because there are no characters in it that do not match the predicate. See a more detailed explanation of this logic concept in [\"Vacuous truth\"]([https://en.wikipedia.org/wiki/Vacuuous\\_truth](https://en.wikipedia.org/wiki/Vacuuous_truth)) article.

@sample

```

samples.collections.Collections.Aggregates.all
public inline fun CharSequence.all(predicate: (Char) -> Boolean): Boolean {
    for (element in this) if (!predicate(element)) return false
    return true
}

```

Returns `true` if char sequence has at least one character.

@sample

```

samples.collections.Collections.Aggregates.any
public fun CharSequence.any(): Boolean {
    return !isEmpty()
}

```

Returns `true` if at least one character matches the given [predicate].

@sample

```

samples.collections.Collections.Aggregates.anyWithPredicate
public inline fun CharSequence.any(predicate: (Char) -> Boolean): Boolean {
    for (element in this) if (predicate(element)) return true
    return false
}

```

Returns the length of this char sequence.

```

@kotlin.internal.InlineOnly
public inline fun CharSequence.count(): Int {
    return length
}

```

Returns the number of characters matching the given [predicate].

```

public inline fun CharSequence.count(predicate: (Char) -> Boolean): Int {
    var count = 0
    for (element in this) if (predicate(element)) ++count
    return count
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each character.

Returns the specified [initial] value if the char sequence is empty.

@param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.

```

public inline fun <R> CharSequence.fold(initial: R, operation: (acc: R, Char) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each character with its index in the original char sequence.

Returns the specified [initial] value if the char sequence is empty.

@param [operation] function that takes the index of a character, current accumulator value and the character itself, and calculates the next accumulator value.

```

public inline fun <R> CharSequence.foldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each character and current accumulator value.

Returns the specified [initial] value if the char sequence is empty.

@param [operation] function that takes a character and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> CharSequence.foldRight(initial: R, operation: (Char, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each character with its index in the original char sequence and current accumulator value.

Returns the specified [initial] value if the char sequence is empty.

@param [operation] function that takes the index of a character, the character itself and current accumulator value, and calculates the next accumulator value.

```

public inline fun <R> CharSequence.foldRightIndexed(initial: R, operation: (index: Int, Char, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Performs the given [action] on each character.

```

public inline fun CharSequence.forEach(action: (Char) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each character, providing sequential index with the character.

@param [action] function that takes the index of a character and the character itself and performs the action on the character.

```

public inline fun CharSequence.forEachIndexed(action: (index:

```

```

Int, Char) -> Unit): Unit { \n  var index = 0 \n  for (item in this) action(index++, item)\n}\n\n/** \n * Returns the
largest character.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow")\n@Suppress("CONFLICTING_OVERLOA
DS")\npublic fun CharSequence.max(): Char { \n  if (isEmpty()) throw NoSuchElementException()\n  var max =
this[0]\n  for (i in 1..lastIndex) { \n    val e = this[i]\n    if (max < e) max = e\n  } \n  return max\n}\n\n/** \n *
Returns the first character yielding the largest value of the given function.\n * \n * @throws
NoSuchElementException if the char sequence is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow")\n@Suppress("CONFLICTING_OVERL
OADS")\npublic inline fun <R : Comparable<R>> CharSequence.maxBy(selector: (Char) -> R): Char { \n  if
(isEmpty()) throw NoSuchElementException()\n
  var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) { \n    val e = this[i]\n    val v = selector(e)\n    if (maxValue <
v) { \n      maxElem = e\n      maxValue = v\n    } \n  } \n  return maxElem\n}\n\n/** \n * Returns the first
character yielding the largest value of the given function or `null` if there are no characters.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> CharSequence.maxByOrNull(selector: (Char) -> R): Char? { \n  if (isEmpty()) return null\n  var
maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) { \n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n      maxElem = e\n      maxValue = v\n    } \n  } \n  return maxElem\n}\n\n/** \n * Returns the largest value among all values
produced by [selector] function\n * applied to each character in the char sequence.\n * \n * If any of values produced
by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the char
sequence is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOf(selector: (Char) ->
Double): Double { \n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for
(i in 1..lastIndex) { \n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  } \n  return
maxValue\n}\n\n/** \n * Returns the largest value among all values produced by [selector] function\n * applied to
each character in the char sequence.\n * \n * If any of values produced
by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the char
sequence is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOf(selector: (Char) ->
Float): Float { \n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for
(i in 1..lastIndex) { \n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  } \n  return
maxValue\n}\n\n/** \n * Returns the largest value among all values produced by [selector] function\n * applied to
each character in the char sequence.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharSequence.maxOf(selector:
(Char) -> R): R { \n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for
(i in 1..lastIndex) { \n    val v = selector(this[i])\n    if (maxValue < v) { \n      maxValue = v\n    } \n  } \n
return maxValue\n}\n\n/** \n * Returns the largest value among all values produced by [selector] function\n *
applied to each character in the char sequence or `null` if there are no characters.\n * \n * If any of values produced
by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOfOrNull(selector:

```

```

(Char) -> Double): Double? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no characters.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOrNull(selector: (Char) -> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no characters.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> CharSequence.maxOrNull(selector: (Char) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each character in the char sequence.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharSequence.maxOfWith(comparator: Comparator<in R>, selector: (Char) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each character in the char sequence or `null` if there are no characters.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharSequence.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest character or `null` if there are no characters.\n */\n@SinceKotlin("1.4")\npublic fun CharSequence.maxOrNull(): Char? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first character having the largest value according to the provided [comparator].\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun CharSequence.maxWith(comparator: Comparator<in Char>): Char {\n  if (isEmpty()) throw NoSuchElementException()\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first character having the largest value according to the provided [comparator] or `null` if there are no characters.\n */\n@SinceKotlin("1.4")\npublic fun CharSequence.maxWithOrNull(comparator: Comparator<in Char>): Char? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the smallest character.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun CharSequence.min(): Char {\n  if (isEmpty()) throw NoSuchElementException()\n  var min = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (min > e) min = e\n  }\n  return min\n}\n\n/**\n * Returns the smallest character or `null` if there are no characters.\n */

```

Returns the first character yielding the smallest value of the given function. \n \* \n \* @throws NoSuchElementException if the char sequence is empty. \n \* \n \* @sample samples.collections.Collections.Aggregates.minBy

```

*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow")\n@Suppress("CONFLICTING_OVERLOADS")\npublic
inline fun <R : Comparable<R>> CharSequence.minBy(selector: (Char) -> R): Char {
    if (isEmpty()) throw NoSuchElementException()
    var minElem = this[0]
    val lastIndex = this.lastIndex
    if (lastIndex == 0) return minElem
    var minValue = selector(minElem)
    for (i in 1..lastIndex) {
        val e = this[i]
        val v = selector(e)
        if (minValue > v) {
            minElem = e
            minValue = v
        }
    }
    return minElem
}

```

\n \* Returns the first character yielding the smallest value of the given function or `null` if there are no characters. \n \* \n \* @sample samples.collections.Collections.Aggregates.minByOrNull

```

*\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> CharSequence.minByOrNull(selector: (Char) -> R): Char? {
    if (isEmpty()) return null
    var minElem = this[0]
    val lastIndex = this.lastIndex
    if (lastIndex == 0) return minElem
    var minValue = selector(minElem)
    for (i in 1..lastIndex) {
        val e = this[i]
        val v = selector(e)
        if (minValue > v) {
            minElem = e
            minValue = v
        }
    }
    return minElem
}

```

\n \* Returns the smallest value among all values produced by [selector] function \n \* applied to each character in the char sequence. \n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`. \n \* \n \* @throws NoSuchElementException if the char sequence is empty. \n

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOf(selector: (Char) -> Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}

```

\n \* Returns the smallest value among all values produced by [selector] function \n \* applied to each character in the char sequence. \n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`. \n \* \n \* @throws NoSuchElementException if the char sequence is empty. \n

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOf(selector: (Char) -> Float): Float {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}

```

\n \* Returns the smallest value among all values produced by [selector] function \n \* applied to each character in the char sequence. \n \* \n \* @throws NoSuchElementException if the char sequence is empty. \n

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> CharSequence.minOf(selector: (Char) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\n \* Returns the smallest value among all values produced by [selector] function \n \* applied to each character in the char sequence or `null` if there are no characters. \n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`. \n

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOfOrNull(selector: (Char) -> Double): Double? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}

```

\n \* Returns the smallest value among all values produced by [selector] function \n \* applied to each character in the char sequence or `null` if there are no characters. \n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`. \n

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOfOrNull(selector:
(Char) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex)
{\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n *
Returns the smallest value among all values produced by [selector] function\n * applied to each character
in the char sequence or `null` if there are no characters.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharSequence.minOfOrNull(selector: (Char) -> R): R? {\n    if (isEmpty()) return null\n    var minValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n
minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each character in the char sequence.\n
*\n * @throws NoSuchElementException if the char sequence is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharSequence.minOfWith(comparator:
Comparator<in R>, selector: (Char) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var
minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each character in the char sequence or `null` if there are no characters.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
CharSequence.minOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n    if (isEmpty())
return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0)
{\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest character or `null` if
there are no characters.\n
*\n@SinceKotlin("1.4")\npublic fun CharSequence.minOrNull(): Char? {\n    if
(isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min =
e\n    }\n    return min\n}\n\n/**\n * Returns the first character having the smallest value according to the provided
[comparator].\n * \n * @throws NoSuchElementException if the char sequence is empty.\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow")\n@Suppress("CONFLICTING_OVER
LOADS")\npublic fun CharSequence.minWith(comparator: Comparator<in Char>): Char {\n    if (isEmpty()) throw
NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first character having
the smallest value according to the provided [comparator] or `null` if there are no characters.\n
*\n@SinceKotlin("1.4")\npublic fun CharSequence.minWithOrNull(comparator: Comparator<in Char>): Char?
{\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns `true` if the char sequence has
no characters.\n * \n * @sample samples.collections.Collections.Aggregates.none\n
*\n@SinceKotlin("1.4")\npublic fun CharSequence.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if no characters match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n@SinceKotlin("1.4")\npublic inline fun CharSequence.none(predicate: (Char) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Performs the given [action] on each character and returns the char sequence
itself afterwards.\n
*\n@SinceKotlin("1.1")\npublic inline fun <S : CharSequence> S.onEach(action: (Char) ->
Unit): S {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given [action] on
each character, providing sequential index with the character,\n * and returns the char sequence itself afterwards.\n
*\n * @param [action] function that takes the index of a character and the character itself\n * and performs the action on
the character.\n
*\n@SinceKotlin("1.4")\npublic inline fun <S : CharSequence> S.onEachIndexed(action: (index:

```

```
Int, Char) -> Unit): S {  
    return apply { forEachIndexed(action) }  
}\n\n\n\n * Accumulates value starting with the first character and applying [operation] from left to right\n * to current accumulator value and each character.\n * \n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and a character,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n * \n\n\n * \n\n\n public inline fun CharSequence.reduce(operation: (acc: Char, Char) -> Char): Char {\n    if (isEmpty())\n        throw UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n\n\n * Accumulates value starting with the first character and applying [operation] from left to right\n * to current accumulator value and each character with its index in the original char sequence.\n * \n * \n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * \n * @param [operation] function that takes the index of a character, current accumulator value and the character itself,\n * and calculates the next accumulator value.\n * \n * \n * @sample samples.collections.Collections.Aggregates.reduce\n * \n\n\n public inline fun CharSequence.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char {\n    if (isEmpty())\n        throw\n        UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n\n\n * Accumulates value starting with the first character and applying [operation] from left to right\n * to current accumulator value and each character with its index in the original char sequence.\n * \n * \n * Returns `null` if the char sequence is empty.\n * \n * \n * @param [operation] function that takes the index of a character, current accumulator value and the character itself,\n * and calculates the next accumulator value.\n * \n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n * \n\n\n * \n\n\n @SinceKotlin("1.4")\n public inline fun CharSequence.reduceIndexedOrNull(operation: (index: Int, acc: Char, Char) -> Char): Char? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n\n\n * Accumulates value starting with the first character and applying [operation] from left to right\n * to current accumulator value and each character.\n * \n * \n * Returns `null` if the char sequence is empty.\n * \n * \n * @param [operation] function that takes current accumulator value and a character,\n * and calculates the next accumulator value.\n * \n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n * \n\n\n * \n\n\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun CharSequence.reduceOrNull(operation: (acc: Char, Char) -> Char): Char? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n\n\n * Accumulates value starting with the last character and applying [operation] from right to left\n * to each character and current accumulator value.\n * \n * \n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * \n * @param [operation] function that takes a character and current accumulator value,\n * and calculates the next accumulator value.\n * \n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n * \n\n\n public inline fun CharSequence.reduceRight(operation: (Char, acc: Char) -> Char): Char {\n    var index = lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n\n\n * Accumulates value starting with the last character and applying [operation] from right to left\n * to each character with its index in the original char sequence and current accumulator value.\n * \n * \n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null`
```

when its receiver is empty.

```

    * @param [operation] function that takes the index of a character, the character
    itself and current accumulator value, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.reduceRight
    * \npublic inline fun
    CharSequence.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {
        var index = lastIndex
        if (index < 0) throw UnsupportedOperationException("Empty char sequence can't be reduced.")
        var accumulator = get(index--)
        while (index >= 0) {
            accumulator = operation(index, get(index), accumulator)
            --index
        }
        return accumulator
    }
    * Accumulates value starting with the last character and applying [operation] from right to left to each character with its index in the original char sequence and current accumulator value.
    * Returns `null` if the char sequence is empty.
    * @param [operation] function that takes the index of a character, the character itself and current accumulator value, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.reduceRightOrNull
    * \n@SinceKotlin("1.4")\npublic inline fun CharSequence.reduceRightIndexedOrNull(operation: (index: Int, Char, acc: Char) -> Char): Char? {
        var index = lastIndex
        if (index < 0) return null
        var accumulator = get(index--)
        while (index >= 0) {
            accumulator = operation(index, get(index), accumulator)
            --index
        }
        return accumulator
    }
    * Accumulates value starting with the last character and applying [operation] from right to left to each character and current accumulator value.
    * Returns `null` if the char sequence is empty.
    * @param [operation] function that takes a character and current accumulator value, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.reduceRightOrNull
    * \n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
    CharSequence.reduceRightOrNull(operation: (Char, acc: Char) -> Char): Char? {
        var index = lastIndex
        if (index < 0) return null
        var accumulator = get(index--)
        while (index >= 0) {
            accumulator = operation(get(index--), accumulator)
        }
        return accumulator
    }
    * Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character and current accumulator value that starts with [initial] value.
    * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
    * @param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.runningFold
    * \n@SinceKotlin("1.4")\npublic inline fun <R> CharSequence.runningFold(initial: R, operation: (acc: R, Char) -> R): List<R> {
        if (isEmpty()) return listOf(initial)
        val result = ArrayList<R>(length + 1).apply { add(initial) }
        var accumulator = initial
        for (element in this) {
            accumulator = operation(accumulator, element)
            result.add(accumulator)
        }
        return result
    }
    * Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character, its index in the original char sequence and current accumulator value that starts with [initial] value.
    * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
    * @param [operation] function that takes the index of a character, current accumulator value and the character itself, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.runningFold
    * \n@SinceKotlin("1.4")\npublic inline fun <R> CharSequence.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): List<R> {
        if (isEmpty()) return listOf(initial)
        val result = ArrayList<R>(length + 1).apply { add(initial) }
        var accumulator = initial
        for (index in indices) {
            accumulator = operation(index, accumulator, this[index])
            result.add(accumulator)
        }
        return result
    }
    * Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character and current accumulator value that starts with the first character of this char sequence.
    * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
    * @param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.
    * @sample samples.collections.Collections.Aggregates.runningReduce
    * \n@SinceKotlin("1.4")\npublic inline fun CharSequence.runningReduce(operation: (acc: Char, Char) -> Char):

```



```

List<Char> {\n  if (isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result =
ArrayList<Char>(length).apply { add(accumulator) }\n  for (index in 1 until length) {\n    accumulator =
operation(accumulator,
  this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n * to each character, its index in the
original char sequence and current accumulator value that starts with the first character of this char sequence.\n * \n
* Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the
previous value in resulting list.\n * \n * @param [operation] function that takes the index of a character, current
accumulator value\n * and the character itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n *\n@SinceKotlin("1.4")\npublic inline fun
CharSequence.runningReduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): List<Char> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result =
ArrayList<Char>(length).apply { add(accumulator) }\n  for (index in 1 until length) {\n    accumulator =
operation(index, accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n *
Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to
each character and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n
* @param [operation] function that takes current accumulator value and a character, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <R>
CharSequence.scan(initial: R, operation: (acc: R, Char) -> R): List<R> {\n  return runningFold(initial,
operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n *
to each character, its index in the original char sequence and current accumulator value that starts with [initial]
value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of a character,
current accumulator value\n * and the character itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <R>
CharSequence.scanIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): List<R> {\n  return
runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each character in the char sequence.\n
*\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
CharSequence.sumBy(selector: (Char) -> Int): Int {\n  var sum: Int = 0\n  for (element in this) {\n    sum +=
selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each character in the char sequence.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
CharSequence.sumByDouble(selector: (Char) -> Double): Double {\n  var sum: Double = 0.0\n  for (element in
this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each character in the char sequence.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic
inline fun CharSequence.sumOf(selector: (Char) -> Double): Double {\n  var sum: Double = 0.toDouble()\n  for
(element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all values
produced by [selector] function applied to each character in the char sequence.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun

```

```

CharSequence.sumOf(selector: (Char) -> Int): Int {
    var sum: Int = 0.toInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

Returns the sum of all values produced by [selector] function applied to each character in the char sequence.

```

* Since Kotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun CharSequence.sumOf(selector: (Char) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

Returns the sum of all values produced by [selector] function applied to each character in the char sequence.

```

* Since Kotlin("1.5")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfUInt")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun CharSequence.sumOf(selector: (Char) -> UInt): UInt {
    var sum: UInt = 0.toUInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

Returns the sum of all values produced by [selector] function applied to each character in the char sequence.

```

* Since Kotlin("1.5")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfULong")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun CharSequence.sumOf(selector: (Char) -> ULong): ULong {
    var sum: ULong = 0.toULong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

Splits this char sequence into a list of strings each not exceeding the given [size]. The last string in the resulting list may have fewer characters than the given [size]. @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence. @sample samples.text.Strings.chunked

```

* Since Kotlin("1.2")
public fun CharSequence.chunked(size: Int): List<String> {
    return windowed(size, size, partialWindows = true)
}

```

Splits this char sequence into several char sequences each not exceeding the given [size] and applies the given [transform] function to an each. @return list of results of the [transform] applied to an each char sequence. Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function. You should not store it or allow it to escape in some way, unless you made a snapshot of it. The last char sequence may have fewer characters than the given [size]. @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence. @sample samples.text.Strings.chunkedTransform

```

* Since Kotlin("1.2")
public fun <R> CharSequence.chunked(size: Int, transform: (CharSequence) -> R): List<R> {
    return windowed(size, size, partialWindows = true, transform = transform)
}

```

Splits this char sequence into a sequence of strings each not exceeding the given [size]. The last string in the resulting sequence may have fewer characters than the given [size]. @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence. @sample samples.collections.Collections.Transformations.chunked

```

* Since Kotlin("1.2")
public fun CharSequence.chunkedSequence(size: Int): Sequence<String> {
    return chunkedSequence(size) { it.toString() }
}

```

Splits this char sequence into several char sequences each not exceeding the given [size] and applies the given [transform] function to an each. @return sequence of results of the [transform] applied to an each char sequence. Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function. You should not store it or allow it to escape in some way, unless you made a snapshot of it. The last char sequence may have fewer characters than the given [size]. @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence. @sample samples.text.Strings.chunkedTransformToSequence

```

* Since Kotlin("1.2")
public fun <R> CharSequence.chunkedSequence(size: Int, transform: (CharSequence) -> R): Sequence<R> {
    return windowedSequence(size, size, partialWindows = true, transform = transform)
}

```

Splits the original char



```

}
}

Returns a sequence of results of applying the given [transform] function to an each char
sequence representing a view over the window of the given [size] sliding along this char sequence with the given
[step]. Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside
that function. You should not store it or allow it to escape in some way, unless you made a snapshot of it.
Several last char sequences may have fewer characters than the given [size]. Both [size] and [step] must
be positive and can be greater than the number of elements in this char sequence. @param size the number of
elements to take in each window @param step the number of elements to move the window forward by on an
each step, by default 1 @param partialWindows controls whether or not to keep partial windows in the end if
any, by default `false` which means partial windows won't be preserved @sample
samples.collections.Sequences.Transformations.averageWindows
@SinceKotlin("1.2")
public fun <R>
CharSequence.windowedSequence(size: Int, step: Int = 1, partialWindows: Boolean = false, transform:
(CharSequence) -> R): Sequence<R> {
    checkWindowSizeStep(size, step)
    val windows = (if
    (partialWindows) indices else 0 until length - size + 1) step step
    return windows.asSequence().map { index ->
        val end = index + size
        val coercedEnd = if (end < 0 || end > length) length else end
        transform(subSequence(index, coercedEnd))
    }
}

Returns a list of pairs built from the characters of `this` and the [other] char sequences with the same
index. The returned list has length of the shortest char sequence. @sample samples.text.Strings.zip
@public infix fun CharSequence.zip(other: CharSequence): List<Pair<Char, Char>> {
    return zip(other) { c1,
    c2 -> c1 to c2 }
}

Returns a list of values built from the characters of `this` and the [other] char
sequences with the same index using the provided [transform] function applied to each pair of characters.
The returned list has length of the shortest char sequence. @sample
samples.text.Strings.zipWithTransform
@public inline fun <V> CharSequence.zip(other: CharSequence,
transform: (a: Char, b: Char) -> V): List<V> {
    val length = minOf(this.length, other.length)
    val list =
    ArrayList<V>(length)
    for (i in 0 until length) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list
of pairs of each two adjacent characters in this char sequence. The returned list is empty if this char
sequence contains less than two characters. @sample
samples.collections.Collections.Transformations.zipWithNext
@SinceKotlin("1.2")
public fun
CharSequence.zipWithNext(): List<Pair<Char, Char>> {
    return zipWithNext { a, b -> a to b }
}

Returns a list containing the results of applying the given [transform] function to an each pair of two adjacent
characters in this char sequence. The returned list is empty if this char sequence contains less than two
characters. @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas
@SinceKotlin("1.2")
public inline fun <R> CharSequence.zipWithNext(transform: (a: Char, b: Char) -> R):
List<R> {
    val size =
    length - 1
    if (size < 1) return emptyList()
    val result = ArrayList<R>(size)
    for (index in 0 until size) {
        result.add(transform(this[index], this[index + 1]))
    }
    return result
}

Creates an [Iterable]
instance that wraps the original char sequence returning its characters when being iterated. @public fun
CharSequence.asIterable(): Iterable<Char> {
    if (this is String && isEmpty()) return emptyList()
    return
    Iterable { this.iterator() }
}

Creates a [Sequence] instance that wraps the original char sequence
returning its characters when being iterated. @public fun CharSequence.asSequence(): Sequence<Char> {
    if
    (this is String && isEmpty()) return emptySequence()
    return Sequence { this.iterator() }
}

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governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("StringsKt")
package
kotlin.text
import kotlin.contracts.contract
import kotlin.jvm.JvmName
Returns a copy of this string
converted to upper case using the rules of the default locale. @Deprecated("Use uppercase() instead.")
ReplaceWith("uppercase()")
@DeprecatedSinceKotlin(warningSince = "1.5")
public expect fun
String.toUpperCase(): String
Returns a copy of this string converted to upper case using Unicode

```

```

mapping rules of the invariant locale.\n * This function supports one-to-many and many-to-one character
mapping,\n * thus the length of the returned string can be different from the length of the original string.\n *
@sample samples.text.Strings.uppercase\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
String.uppercase(): String\n/**\n * Returns a copy of this string converted to lower case using the rules of
the default locale.\n *\n@Deprecated("Use lowercase() instead.",
ReplaceWith("lowercase()"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
String.toLowerCase(): String\n/**\n * Returns a copy of this string converted to lower case using Unicode
mapping rules of the invariant locale.\n * This function supports one-to-many and many-to-one character
mapping,\n * thus the length of the returned string can be different from the length of the original string.\n *
@sample samples.text.Strings.lowercase\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
String.lowercase(): String\n/**\n * Returns a copy of this string having its first letter titlecased using the rules of
the default locale,\n * or the original string if it's empty or already starts with a title case letter.\n * The title case
of a character is usually the same as its upper case with several exceptions.\n * The particular list of characters with
the special title case form depends on the underlying platform.\n *
@sample samples.text.Strings.capitalize\n
*\n@Deprecated("Use replaceFirstChar instead.", ReplaceWith("replaceFirstChar { if (it.isLowerCase())
it.titlecase() else it.toString() }"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
String.capitalize(): String\n/**\n * Returns a copy of this string having its first letter lowercased using the rules of
the default locale,\n * or the original string if it's empty or already starts with a lower case letter.\n *
@sample
samples.text.Strings.decapitalize\n
*\n@Deprecated("Use replaceFirstChar instead.",
ReplaceWith("replaceFirstChar { it.lowercase() }"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic
expect fun String.decapitalize(): String\n/**\n * Returns a sub sequence of this char sequence having leading and
trailing characters matching the [predicate] removed.\n *\npublic inline fun CharSequence.trim(predicate: (Char)
-> Boolean): CharSequence {\n    var startIndex = 0\n    var endIndex = length - 1\n    var startFound = false\n    while (startIndex <= endIndex) {\n        val index = if (!startFound) startIndex else endIndex\n        val match =
predicate(this[index])\n        if (!startFound) {\n            if (!match)\n                startFound = true\n            else\n                startIndex += 1\n        } else {\n            if (!match)\n                break\n            else\n                endIndex -= 1\n        }\n    }\n    return subSequence(startIndex, endIndex + 1)\n}\n/**\n * Returns a string having leading and
trailing characters matching the [predicate] removed.\n *\npublic inline fun String.trim(predicate: (Char) ->
Boolean): String =\n    (this as CharSequence).trim(predicate).toString()\n/**\n * Returns a sub sequence of this
char sequence having leading characters matching the [predicate] removed.\n *\npublic inline fun
CharSequence.trimStart(predicate: (Char)
-> Boolean): CharSequence {\n    for (index in this.indices)\n        if (!predicate(this[index]))\n            return
subSequence(index, length)\n    return ""\n}\n/**\n * Returns a string having leading characters matching the
[predicate] removed.\n *\npublic inline fun String.trimStart(predicate: (Char) -> Boolean): String =\n    (this as
CharSequence).trimStart(predicate).toString()\n/**\n * Returns a sub sequence of this char sequence having
trailing characters matching the [predicate] removed.\n *\npublic inline fun CharSequence.trimEnd(predicate:
(Char) -> Boolean): CharSequence {\n    for (index in this.indices.reversed())\n        if (!predicate(this[index]))\n            return
subSequence(0, index + 1)\n    return ""\n}\n/**\n * Returns a string having trailing characters
matching the [predicate] removed.\n *\npublic inline fun String.trimEnd(predicate: (Char) -> Boolean): String =\n    (this as
CharSequence).trimEnd(predicate).toString()\n/**\n * Returns
a sub sequence of this char sequence having leading and trailing characters from the [chars] array removed.\n
*\npublic fun CharSequence.trim(vararg chars: Char): CharSequence = trim { it in chars }\n/**\n * Returns a
string having leading and trailing characters from the [chars] array removed.\n *\npublic fun String.trim(vararg
chars: Char): String = trim { it in chars }\n/**\n * Returns a sub sequence of this char sequence having leading
characters from the [chars] array removed.\n *\npublic fun CharSequence.trimStart(vararg chars: Char):
CharSequence = trimStart { it in chars }\n/**\n * Returns a string having leading characters from the [chars] array

```

```

removed.\n */\npublic fun String.trimStart(vararg chars: Char): String = trimStart { it in chars }\n\n/**\n * Returns a
sub sequence of this char sequence having trailing characters from the [chars] array removed.\n */\npublic fun
CharSequence.trimEnd(vararg chars: Char): CharSequence = trimEnd { it in chars }\n\n/**\n * Returns
a string having trailing characters from the [chars] array removed.\n */\npublic fun String.trimEnd(vararg chars:
Char): String = trimEnd { it in chars }\n\n/**\n * Returns a sub sequence of this char sequence having leading and
trailing whitespace removed.\n */\npublic fun CharSequence.trim(): CharSequence =
trim(Char::isWhitespace)\n\n/**\n * Returns a string having leading and trailing whitespace removed.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun String.trim(): String = (this as
CharSequence).trim().toString()\n\n/**\n * Returns a sub sequence of this char sequence having leading whitespace
removed.\n */\npublic fun CharSequence.trimStart(): CharSequence = trimStart(Char::isWhitespace)\n\n/**\n *
Returns a string having leading whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
String.trimStart(): String = (this as CharSequence).trimStart().toString()\n\n/**\n * Returns a sub sequence of this
char sequence having trailing whitespace removed.\n */\npublic
fun CharSequence.trimEnd(): CharSequence = trimEnd(Char::isWhitespace)\n\n/**\n * Returns a string having
trailing whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.trimEnd(): String = (this as
CharSequence).trimEnd().toString()\n\n/**\n * Returns a char sequence with content of this char sequence padded at
the beginning\n * to the specified [length] with the specified character or space.\n * @param length the desired
string length.\n * @param padChar the character to pad string with, if it has length less than the [length] specified.
Space is used by default.\n * @return Returns a char sequence of length at least [length] consisting of `this` char
sequence prepended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample
samples.text.Strings.padStart\n */\npublic fun CharSequence.padStart(length: Int, padChar: Char = ' '):
CharSequence {\n if (length < 0)\n throw IllegalArgumentException("Desired length
$length is less than zero.")\n if (length <= this.length)\n return this.subSequence(0, this.length)\n val sb =
StringBuilder(length)\n for (i in 1..(length - this.length))\n sb.append(padChar)\n sb.append(this)\n return
sb\n}\n\n/**\n * Pads the string to the specified [length] at the beginning with the specified character or space.\n *
@param length the desired string length.\n * @param padChar the character to pad string with, if it has length less
than the [length] specified. Space is used by default.\n * @return Returns a string of length at least [length]
consisting of `this` string prepended with [padChar] as many times\n * as are necessary to reach that length.\n *
@sample samples.text.Strings.padStart\n */\npublic fun String.padStart(length: Int, padChar: Char = ' '): String =\n
(this as CharSequence).padStart(length, padChar).toString()\n\n/**\n * Returns a char sequence with content of this
char sequence padded at the end\n * to the specified
[length] with the specified character or space.\n * @param length the desired string length.\n * @param
padChar the character to pad string with, if it has length less than the [length] specified. Space is used by default.\n *
@return Returns a char sequence of length at least [length] consisting of `this` char sequence appended with
[padChar] as many times\n * as are necessary to reach that length.\n * @sample samples.text.Strings.padEnd\n
*/\npublic fun CharSequence.padEnd(length: Int, padChar: Char = ' '): CharSequence {\n if (length < 0)\n
throw IllegalArgumentException("Desired length $length is less than zero.")\n if (length <= this.length)\n
return this.subSequence(0, this.length)\n val sb = StringBuilder(length)\n sb.append(this)\n for (i in
1..(length - this.length))\n sb.append(padChar)\n return sb\n}\n\n/**\n * Pads the string to the specified
[length] at the end with the specified character or space.\n * @param length
the desired string length.\n * @param padChar the character to pad string with, if it has length less than the [length]
specified. Space is used by default.\n * @return Returns a string of length at least [length] consisting of `this`
string appended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample
samples.text.Strings.padEnd\n */\npublic fun String.padEnd(length: Int, padChar: Char = ' '): String =\n (this as
CharSequence).padEnd(length, padChar).toString()\n\n/**\n * Returns `true` if this nullable char sequence is either
`null` or empty.\n * @sample samples.text.Strings.stringOrNullEmpty\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence?.isNullOrEmpty(): Boolean {\n contract {\n
returns(false) implies (this@isNullOrEmpty != null)\n }\n return this == null || this.length == 0\n}\n\n/**\n *

```

Returns `true` if this char sequence is empty (contains no characters).

```

samples.text.Strings.stringIsEmpty
*/@kotlin.internal.InlineOnly
public inline fun CharSequence.isEmpty(): Boolean = length == 0
Returns `true` if this char sequence is not empty.
samples.text.Strings.stringIsNotEmpty
*/@kotlin.internal.InlineOnly
public inline fun CharSequence.isNotEmpty(): Boolean = length > 0
implemented differently in JVM and JS
public fun String.isBlank(): Boolean = length() == 0 || all {
it.isWhitespace() }
Returns `true` if this char sequence is not empty and contains some characters
except of whitespace characters.
samples.text.Strings.stringIsNotBlank
*/@kotlin.internal.InlineOnly
public inline fun CharSequence.isNotBlank(): Boolean = !isBlank()
Returns `true` if this nullable char sequence is either `null` or empty or consists solely of whitespace characters.
samples.text.Strings.stringOrNullBlank
*/@kotlin.internal.InlineOnly
public inline fun
CharSequence?.isNullOrBlank(): Boolean
{
contract {
returns(false) implies (this@isNullOrBlank != null)
}
return this == null ||
this.isBlank()
}
Iterator for characters of the given char sequence.
public operator fun
CharSequence.iterator(): CharIterator = object : CharIterator() {
private var index = 0
public override fun
nextChar(): Char = get(index++)
public override fun hasNext(): Boolean = index < length
}
Returns
the string if it is not `null`, or the empty string otherwise.
*/@kotlin.internal.InlineOnly
public inline fun
String?.orEmpty(): String = this ?: ""
Returns this char sequence if it's not empty
or the result of
calling [defaultValue] function if the char sequence is empty.
samples.text.Strings.stringIfEmpty
*/@SinceKotlin("1.3")
*/@kotlin.internal.InlineOnly
public inline fun <C, R> C.ifEmpty(defaultValue: () ->
R): R where C : CharSequence, C : R =
if (isEmpty()) defaultValue() else
this
Returns this char sequence if it is not empty and doesn't consist solely of whitespace characters,
or the result of calling [defaultValue] function otherwise.
samples.text.Strings.stringIfBlank
*/@SinceKotlin("1.3")
*/@kotlin.internal.InlineOnly
public inline fun <C, R> C.ifBlank(defaultValue: () -> R):
R where C : CharSequence, C : R =
if (isBlank()) defaultValue() else this
Returns the range of valid
character indices for this char sequence.
public val CharSequence.indices: IntRange
get() = 0..length -
1
Returns the index of the last character in the char sequence or -1 if it is empty.
public val
CharSequence.lastIndex: Int
get() = this.length - 1
Returns `true` if this CharSequence has Unicode
surrogate pair at the specified [index].
public fun CharSequence.hasSurrogatePairAt(index: Int): Boolean {
return index in 0..length - 2
&& this[index].isHighSurrogate()
&& this[index + 1].isLowSurrogate()
}
Returns a substring specified by the given [range] of
indices.
public fun String.substring(range: IntRange): String = substring(range.start, range.endInclusive +
1)
Returns a subsequence of this char sequence specified by the given [range] of indices.
public fun
CharSequence.subSequence(range: IntRange): CharSequence = subSequence(range.start, range.endInclusive +
1)
Returns a subsequence of this char sequence.
This extension is chosen only for invocation with
old-named parameters.
Replace parameter names with the same as those of [CharSequence.subSequence].
*/@kotlin.internal.InlineOnly
*/@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false
warning
*/@Deprecated("Use parameters named startIndex and endIndex.", ReplaceWith("subSequence(startIndex
= start, endIndex = end)"))
public inline fun String.subSequence(start: Int, end: Int): CharSequence =
subSequence(start, end)
Returns a substring of chars from a range of this char sequence starting at the [startIndex] and ending right before
the [endIndex].
@param startIndex the start index (inclusive).
@param endIndex the end index
(exclusive). If not specified, the length of the char sequence is used.
*/@kotlin.internal.InlineOnly
public inline
fun CharSequence.substring(startIndex: Int, endIndex: Int = length): String = subSequence(startIndex,
endIndex).toString()
Returns a substring of chars at indices from the specified [range] of this char
sequence.
public fun CharSequence.substring(range: IntRange): String = subSequence(range.start,
range.endInclusive + 1).toString()
Returns a substring before the first occurrence of [delimiter].
If the
string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

```

*^/npublic fun String.substringBefore(delimiter: Char, missingDelimiterValue: String = this): String
{
    val index = indexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(0,
index)
}
/n/n/**
 * Returns a substring before the first occurrence of [delimiter].
 * If the string does not contain
the delimiter, returns [missingDelimiterValue] which defaults to the original string.
*^/npublic fun
String.substringBefore(delimiter: String, missingDelimiterValue: String = this): String {
    val index =
indexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(0, index)
}
/n/n/**
 * Returns
a substring after the first occurrence of [delimiter].
 * If the string does not contain the delimiter, returns
[missingDelimiterValue] which defaults to the original string.
*^/npublic fun String.substringAfter(delimiter:
Char, missingDelimiterValue: String = this): String {
    val index = indexOf(delimiter)
    return if (index == -1)
missingDelimiterValue else substring(index + 1, length)
}
/n/n/**
 * Returns a substring after
the first occurrence of [delimiter].
 * If the string does not contain the delimiter, returns [missingDelimiterValue]
which defaults to the original string.
*^/npublic fun String.substringAfter(delimiter: String,
missingDelimiterValue: String = this): String {
    val index = indexOf(delimiter)
    return if (index == -1)
missingDelimiterValue else substring(index + delimiter.length, length)
}
/n/n/**
 * Returns a substring before the
last occurrence of [delimiter].
 * If the string does not contain the delimiter, returns [missingDelimiterValue] which
defaults to the original string.
*^/npublic fun String.substringBeforeLast(delimiter: Char, missingDelimiterValue:
String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else
substring(0, index)
}
/n/n/**
 * Returns a substring before the last occurrence of [delimiter].
 * If the string does
not contain the delimiter, returns [missingDelimiterValue] which defaults to
the original string.
*^/npublic fun String.substringBeforeLast(delimiter: String, missingDelimiterValue: String =
this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else
substring(0, index)
}
/n/n/**
 * Returns a substring after the last occurrence of [delimiter].
 * If the string does
not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.
*^/npublic fun
String.substringAfterLast(delimiter: Char, missingDelimiterValue: String = this): String {
    val index =
lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(index + 1,
length)
}
/n/n/**
 * Returns a substring after the last occurrence of [delimiter].
 * If the string does not contain
the delimiter, returns [missingDelimiterValue] which defaults to the original string.
*^/npublic fun
String.substringAfterLast(delimiter: String, missingDelimiterValue: String = this): String {
    val index
= lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(index + delimiter.length,
length)
}
/n/n/**
 * Returns a char sequence with content of this char sequence where its part at the given range
* is replaced with the [replacement] char sequence.
 * @param startIndex the index of the first character to be
replaced.
 * @param endIndex the index of the first character after the replacement to keep in the string.
*^/npublic fun CharSequence.replaceRange(startIndex: Int, endIndex: Int, replacement: CharSequence):
CharSequence {
    if (endIndex < startIndex)
        throw IndexOutOfBoundsException("End index ($endIndex)
is less than start index ($startIndex).")
    val sb = StringBuilder()
    sb.appendRange(this, 0, startIndex)
    sb.append(replacement)
    sb.appendRange(this, endIndex, length)
    return sb
}
/n/n/**
 * Replaces the part of
the string at the given range with the [replacement] char sequence.
 * @param startIndex the
index of the first character to be replaced.
 * @param endIndex the index of the first character after the
replacement to keep in the string.
*^/n@kotlin.internal.InlineOnly
public inline fun
String.replaceRange(startIndex: Int, endIndex: Int, replacement: CharSequence): String =
    (this as
CharSequence).replaceRange(startIndex, endIndex, replacement).toString()
/n/n/**
 * Returns a char sequence with
content of this char sequence where its part at the given [range]
* is replaced with the [replacement] char
sequence.
 * The end index of the [range] is included in the part to be replaced.
*^/npublic fun
CharSequence.replaceRange(range: IntRange, replacement: CharSequence): CharSequence =
    replaceRange(range.start, range.endInclusive + 1, replacement)
/n/n/**
 * Replace the part of string at the given
[range] with the [replacement] string.
 * The end index of the [range] is included in the part to be replaced.
*^/n@kotlin.internal.InlineOnly
public inline fun

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String.replaceRange(range: IntRange, replacement: CharSequence): String =\n (this as
CharSequence).replaceRange(range, replacement).toString()\n\n/**\n * Returns a char sequence with content of this
char sequence where its part at the given range is removed.\n *\n * @param startIndex the index of the first
character to be removed.\n *\n * @param endIndex the index of the first character after the removed part to keep in the
string.\n *\n * [endIndex] is not included in the removed part.\n */\npublic fun
CharSequence.removeRange(startIndex: Int, endIndex: Int): CharSequence {\n if (endIndex < startIndex)\n throw
IndexOutOfBoundsException("End index ($endIndex) is less than start index ($startIndex).")\n if
(endIndex == startIndex)\n return this.subSequence(0, length)\n\n val sb = StringBuilder(length - (endIndex -
startIndex))\n sb.appendRange(this, 0, startIndex)\n sb.appendRange(this, endIndex, length)\n return
sb}\n\n/**\n * Removes the part of a
string at a given range.\n *\n * @param startIndex the index of the first character to be removed.\n *\n * @param endIndex
the index of the first character after the removed part to keep in the string.\n *\n * [endIndex] is not included in the
removed part.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.removeRange(startIndex: Int, endIndex:
Int): String =\n (this as CharSequence).removeRange(startIndex, endIndex).toString()\n\n/**\n * Returns a char
sequence with content of this char sequence where its part at the given [range] is removed.\n *\n * The end index of
the [range] is included in the removed part.\n */\npublic fun CharSequence.removeRange(range: IntRange):
CharSequence = removeRange(range.start, range.endInclusive + 1)\n\n/**\n * Removes the part of a string at the
given [range].\n *\n * The end index of the [range] is included in the removed part.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.removeRange(range: IntRange): String =\n (this as
CharSequence).removeRange(range).toString()\n\n * If this char sequence starts with the given [prefix], returns a new char sequence\n * with the prefix removed.
Otherwise, returns a new char sequence with the same characters.\n */\npublic fun
CharSequence.removePrefix(prefix: CharSequence): CharSequence {\n if (startsWith(prefix)) {\n return
subSequence(prefix.length, length)\n }\n return subSequence(0, length)\n}\n\n/**\n * If this string starts with the
given [prefix], returns a copy of this string\n * with the prefix removed. Otherwise, returns this string.\n */\npublic
fun String.removePrefix(prefix: CharSequence): String {\n if (startsWith(prefix)) {\n return
substring(prefix.length)\n }\n return this}\n\n/**\n * If this char sequence ends with the given [suffix], returns
a new char sequence\n * with the suffix removed. Otherwise, returns a new char sequence with the same
characters.\n */\npublic fun CharSequence.removeSuffix(suffix: CharSequence):
CharSequence {\n if (endsWith(suffix)) {\n return subSequence(0, length - suffix.length)\n }\n return
subSequence(0, length)\n}\n\n/**\n * If this string ends with the given [suffix], returns a copy of this string\n * with
the suffix removed. Otherwise, returns this string.\n */\npublic fun String.removeSuffix(suffix: CharSequence):
String {\n if (endsWith(suffix)) {\n return substring(0, length - suffix.length)\n }\n return this}\n\n/**\n * When this char sequence starts with the given [prefix] and ends with the given [suffix],\n * returns a new char
sequence having both the given [prefix] and [suffix] removed.\n *\n * Otherwise returns a new char sequence with the
same characters.\n */\npublic fun CharSequence.removeSurrounding(prefix: CharSequence, suffix: CharSequence):
CharSequence {\n if ((length >= prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n
return subSequence(prefix.length, length - suffix.length)\n }\n return subSequence(0, length)\n}\n\n/**\n * Removes from a string both the given [prefix] and [suffix] if and
only if\n * it starts with the [prefix] and ends with the [suffix].\n *\n * Otherwise returns this string unchanged.\n */\npublic fun String.removeSurrounding(prefix: CharSequence, suffix: CharSequence): String {\n if ((length >=
prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n return substring(prefix.length,
length - suffix.length)\n }\n return this}\n\n/**\n * When this char sequence starts with and ends with the
given [delimiter],\n * returns a new char sequence having this [delimiter] removed both from the start and end.\n *\n * Otherwise returns a new char sequence with the same characters.\n */\npublic fun
CharSequence.removeSurrounding(delimiter: CharSequence): CharSequence = removeSurrounding(delimiter,
delimiter)\n\n/**\n * Removes the given [delimiter] string from both the start and the end of this string\n * if and
only

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if it starts with and ends with the [delimiter].\n * Otherwise returns this string unchanged.\n */\npublic fun
String.removeSurrounding(delimiter: CharSequence): String = removeSurrounding(delimiter, delimiter)\n\n/**\n *
Replace part of string before the first occurrence of given delimiter with the [replacement] string.\n * If the string
does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic
fun String.replaceBefore(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n
val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index,
replacement)\n}\n\n/**\n * Replace part of string before the first occurrence of given delimiter with the
[replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults
to the original string.\n */\npublic fun String.replaceBefore(delimiter: String, replacement:
String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1)
missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/**\n * Replace part of string after the first
occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns
[missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfter(delimiter: Char,
replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if
(index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)\n}\n\n/**\n * Replace part
of string after the first occurrence of given delimiter with the [replacement] string.\n * If the string does not contain
the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun
String.replaceAfter(delimiter: String, replacement: String, missingDelimiterValue:
String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else
replaceRange(index + delimiter.length, length, replacement)\n}\n\n/**\n * Replace part of string after the last
occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns
[missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfterLast(delimiter:
String, replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n
return if (index == -1) missingDelimiterValue else replaceRange(index + delimiter.length, length,
replacement)\n}\n\n/**\n * Replace part of string after the last occurrence of given delimiter with the [replacement]
string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original
string.\n */\npublic fun String.replaceAfterLast(delimiter: Char,
replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n
return if (index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)\n}\n\n/**\n *
Replace part of string before the last occurrence of given delimiter with the [replacement] string.\n * If the string
does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic
fun String.replaceBeforeLast(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n
val index = lastIndexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index,
replacement)\n}\n\n/**\n * Replace part of string before the last occurrence of given delimiter with the
[replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults
to the original string.\n */\npublic fun String.replaceBeforeLast(delimiter: String,
replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n
return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n\n// public fun
String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean): String // JVM- and JS-specific\n// public fun
String.replace(oldValue: String, newValue: String, ignoreCase: Boolean): String // JVM- and JS-specific\n\n/**\n *
Returns a new string obtained by replacing each substring of this char sequence that matches the given regular
expression\n * with the given [replacement].\n * The [replacement] can consist of any combination of literal text
and $-substitutions. To treat the replacement string\n * literally escape it with the
[kotlin.text.Regex.Companion.escapeReplacement] method.\n */\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.replace(regex: Regex, replacement: String): String = regex.replace(this, replacement)\n\n/**\n *
Returns a
new string obtained by replacing each substring of this char sequence that matches the given regular expression\n *
with the result of the given function [transform] that takes [MatchResult] and returns a string to be used as a\n *

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replacement for that match.\n *\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.replace(regex:
Regex, noinline transform: (MatchResult) -> CharSequence): String =\n  regex.replace(this, transform)\n\n/**\n *
Replaces the first occurrence of the given regular expression [regex] in this char sequence with specified
[replacement] expression.\n *\n * @param replacement A replacement expression that can include substitutions. See
[Regex.replaceFirst] for details.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.replaceFirst(regex: Regex, replacement: String): String = regex.replaceFirst(this,
replacement)\n\n/**\n * Returns a copy of this string having its first character replaced with the result of the
specified [transform],\n *\n * or the original string if it's empty.\n *\n * @param transform function that takes the first @character and returns the
result of the transform applied to the character.\n *\n * @sample samples.text.Strings.replaceFirstChar\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@OptIn(kotlin.experimental.Exper
imentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@JvmName("replaceFirstCharWithC
har")\n@kotlin.internal.InlineOnly\npublic inline fun String.replaceFirstChar(transform: (Char) -> Char): String {\n
  return if (isEmpty()) transform(this[0]) + substring(1) else this\n}\n\n/**\n * Returns a copy of this string
having its first character replaced with the result of the specified [transform],\n *\n * or the original string if it's empty.\n
*\n * @param transform function that takes the first character and returns the result of the transform applied to the
character.\n *\n * @sample samples.text.Strings.replaceFirstChar\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@OptIn(kotlin.experimental.Exper
imentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@JvmName("replaceFirstCharWithC
harSequence")\n@kotlin.internal.InlineOnly\npublic
inline fun String.replaceFirstChar(transform: (Char) -> CharSequence): String {\n  return if (isEmpty())
transform(this[0]).toString() + substring(1) else this\n}\n\n/**\n * Returns `true` if this char sequence matches the
given regular expression.\n *\n@kotlin.internal.InlineOnly\npublic inline infix fun CharSequence.matches(regex:
Regex): Boolean = regex.matches(this)\n\n/**\n * Implementation of [regionMatches] for CharSequences.\n *\n
Invoked when it's already known that arguments are not Strings, so that no additional type checks are performed.\n
*\n@internal fun CharSequence.regionMatchesImpl(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int,
ignoreCase: Boolean): Boolean {\n  if ((otherOffset < 0) || (thisOffset < 0) ||
(thisOffset > this.length - length) || (otherOffset > other.length - length)) {\n    return false\n  }\n\n  for (index
in 0 until length) {\n    if (!this[thisOffset + index].equals(other[otherOffset + index], ignoreCase))\n      return
false\n  }\n  return true\n}\n\n/**\n * Returns `true` if this char sequence starts with the specified character.\n
*\n@public fun CharSequence.startsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n  this.length > 0 &&
this[0].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence ends with the specified character.\n
*\n@public fun CharSequence.endsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n  this.length > 0 &&
this[lastIndex].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence starts with the specified
prefix.\n *\n@public fun CharSequence.startsWith(prefix: CharSequence, ignoreCase: Boolean = false): Boolean {\n
  if (!ignoreCase && this is String && prefix is
String)\n    return this.startsWith(prefix)\n  else\n    return regionMatchesImpl(0, prefix, 0, prefix.length,
ignoreCase)\n}\n\n/**\n * Returns `true` if a substring of this char sequence starting at the specified offset
[startIndex] starts with the specified prefix.\n *\n@public fun CharSequence.startsWith(prefix: CharSequence,
startIndex: Int, ignoreCase: Boolean = false): Boolean {\n  if (!ignoreCase && this is String && prefix is String)\n
  return this.startsWith(prefix, startIndex)\n  else\n    return regionMatchesImpl(startIndex, prefix, 0,
prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if this char sequence ends with the specified suffix.\n
*\n@public fun CharSequence.endsWith(suffix: CharSequence, ignoreCase: Boolean = false): Boolean {\n  if
(!ignoreCase && this is String && suffix is String)\n    return this.endsWith(suffix)\n  else\n    return
regionMatchesImpl(length - suffix.length, suffix, 0, suffix.length, ignoreCase)\n}\n\n/**\n * Returns the longest string `prefix` such that this char sequence and [other]
char sequence both start with this prefix,\n *\n * taking care not to split surrogate pairs.\n *\n * If this and [other] have no
common prefix, returns the empty string.\n\n * @param ignoreCase `true` to ignore character case when matching a

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character. By default `false`.
\n * @sample samples.text.Strings.commonPrefixWith
\n * \npublic fun CharSequence.commonPrefixWith(other: CharSequence, ignoreCase: Boolean = false): String {
\n    val shortestLength = minOf(this.length, other.length)
\n    var i = 0
\n    while (i < shortestLength && this[i].equals(other[i], ignoreCase = ignoreCase)) {
\n        i++
\n    }
\n    if (this.hasSurrogatePairAt(i - 1) || other.hasSurrogatePairAt(i - 1)) {
\n        i--
\n    }
\n    return subSequence(0, i).toString()
\n}
\n/n/**
\n * Returns the longest string `suffix` such that this char sequence and [other] char sequence both end with this suffix,
\n * taking care not to split surrogate pairs.
\n * If this and [other] have no common suffix, returns the empty string.
\n *
\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.
\n * @sample samples.text.Strings.commonSuffixWith
\n * \npublic fun CharSequence.commonSuffixWith(other: CharSequence, ignoreCase: Boolean = false): String {
\n    val thisLength = this.length
\n    val otherLength = other.length
\n    val shortestLength = minOf(thisLength, otherLength)
\n    var i = 0
\n    while (i < shortestLength && this[thisLength - i - 1].equals(other[otherLength - i - 1], ignoreCase = ignoreCase)) {
\n        i++
\n    }
\n    if (this.hasSurrogatePairAt(thisLength - i - 1) || other.hasSurrogatePairAt(otherLength - i - 1)) {
\n        i--
\n    }
\n    return subSequence(thisLength - i, thisLength).toString()
\n}
\n/n// indexOfAny()
\n/n/**
\n * Finds the index of the first occurrence of any of the specified [chars] in this char sequence,
\n * starting from the specified [startIndex] and optionally ignoring the case.
\n *
\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.
\n * @return An index of the first occurrence of matched character from [chars] or -1 if none of [chars] are found.
\n *
\n * \npublic fun CharSequence.indexOfAny(chars: CharArray, startIndex: Int = 0, ignoreCase: Boolean = false): Int {
\n    if (!ignoreCase && chars.size == 1 && this is String) {
\n        val char = chars.single()
\n        return nativeIndexOf(char, startIndex)
\n    }
\n    for (index in startIndex.coerceAtLeast(0)..lastIndex) {
\n        val charAtIndex = get(index)
\n        if (chars.any { it.equals(charAtIndex, ignoreCase) })
\n            return index
\n    }
\n    return -1
\n}
\n/n/**
\n * Finds the index of the last occurrence of any of the specified [chars] in this char sequence,
\n * starting from the specified [startIndex] and optionally ignoring the case.
\n *
\n * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.
\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.
\n * @return An index of the last occurrence of matched character from [chars] or -1 if none of [chars] are found.
\n *
\n * \npublic fun CharSequence.lastIndexOfAny(chars: CharArray, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {
\n    if (!ignoreCase && chars.size == 1 && this is String) {
\n        val char = chars.single()
\n        return nativeLastIndexOf(char, startIndex)
\n    }
\n    for (index in startIndex.coerceAtMost(lastIndex) downTo 0) {
\n        val charAtIndex = get(index)
\n        if (chars.any { it.equals(charAtIndex, ignoreCase) })
\n            return index
\n    }
\n    return -1
\n}
\n/nprivate fun CharSequence.indexOf(other: CharSequence, startIndex: Int, endIndex: Int, ignoreCase: Boolean, last: Boolean = false): Int {
\n    val indices = if (!last)
\n        startIndex.coerceAtLeast(0)..endIndex.coerceAtMost(length)
\n    else
\n        startIndex.coerceAtMost(lastIndex) downTo endIndex.coerceAtLeast(0)
\n    if (this is String && other is String) { // smart cast
\n        for (index in indices) {
\n            if (other.regionMatches(0, this, index, other.length, ignoreCase))
\n                return index
\n        }
\n    } else {
\n        for (index in indices) {
\n            if (other.regionMatchesImpl(0, this, index, other.length, ignoreCase))
\n                return index
\n        }
\n    }
\n    return -1
\n}
\n/nprivate fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int, ignoreCase: Boolean, last: Boolean): Pair<Int, String>? {
\n    if (!ignoreCase && strings.size == 1) {
\n        val string = strings.single()
\n        val index = if (!last) indexOf(string, startIndex) else lastIndexOf(string, startIndex)
\n        return if (index < 0) null else index to string
\n    }
\n    val indices = if (!last)
\n        startIndex.coerceAtLeast(0)..length
\n    else
\n        startIndex.coerceAtMost(lastIndex) downTo 0
\n    if (this is String) {
\n        for (index in indices) {
\n            val matchingString = strings.firstOrNull { it.regionMatches(0, this, index, it.length, ignoreCase) }
\n            if (matchingString != null)
\n                return index to matchingString
\n        }
\n    } else {
\n        for (index in indices) {
\n            val matchingString = strings.firstOrNull { it.regionMatchesImpl(0, this, index, it.length, ignoreCase) }
\n            if (matchingString != null)
\n                return index to matchingString
\n        }
\n    }
\n    return null
\n}
\n/n/**
\n * Finds the first occurrence of any of the specified [strings] in this char sequence,
\n * starting from

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the specified [startIndex] and optionally ignoring the case.\n \* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n \* @return A pair of an index of the first occurrence of matched string from [strings] and the string matched\n \* or `null` if none of [strings] are found.\n \* To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n \* the beginning to the end of this string, and finds at each position the first element in [strings]\n \* that matches this string at that position.\n \*/\npublic fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Pair<Int, String>? =\n findAnyOf(strings, startIndex, ignoreCase, last = false)\n\n/\*\*\n \* Finds the last occurrence of any of the specified [strings] in this char sequence,\n \* starting from the specified [startIndex] and optionally ignoring the case.\n \* @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n \* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n \* @return A pair of an index of the last occurrence of matched string from [strings] and the string matched or `null` if none of [strings] are found.\n \* To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n \* the end toward the beginning of this string, and finds at each position the first element in [strings]\n \* that matches this string at that position.\n \*/\npublic fun CharSequence.findLastAnyOf(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Pair<Int, String>? =\n findAnyOf(strings, startIndex, ignoreCase, last = true)\n\n/\*\*\n \* Finds the index of the first occurrence of any of the specified [strings] in this char sequence,\n \* starting from the specified [startIndex] and optionally ignoring the case.\n \* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n \* @return An index of the first occurrence of matched string from [strings] or -1 if none of [strings] are found.\n \* To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n \* the beginning to the end of this string, and finds at each position the first element in [strings]\n \* that matches this string at that position.\n \*/\npublic fun CharSequence.indexOfAny(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Int =\n findAnyOf(strings, startIndex, ignoreCase, last = false)?.first ?: -1\n\n/\*\*\n \* Finds the index of the last occurrence of any of the specified [strings] in this char sequence,\n \* starting from the specified [startIndex] and optionally ignoring the case.\n \* @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n \* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n \* @return An index of the last occurrence of matched string from [strings] or -1 if none of [strings] are found.\n \* To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n \* the end toward the beginning of this string, and finds at each position the first element in [strings]\n \* that matches this string at that position.\n \*/\npublic fun CharSequence.lastIndexOfAny(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int =\n findAnyOf(strings, startIndex, ignoreCase, last = true)?.first ?: -1\n\n/\*\*\n \* Returns the index within this string of the first occurrence of the specified character, starting from the specified [startIndex].\n \* @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n \* @return An index of the first occurrence of [char] or -1 if none is found.\n \*/\npublic fun CharSequence.indexOf(char: Char, startIndex: Int = 0, ignoreCase: Boolean = false): Int {\n return if (ignoreCase || this !is String)\n indexOfAny(charArrayOf(char), startIndex, ignoreCase)\n else\n nativeIndexOf(char, startIndex)\n}\n\n/\*\*\n \* Returns the index within this char sequence of the first occurrence of the specified [string],\n \* starting from the specified [startIndex].\n \* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n \* @return An index of the first occurrence of [string] or -1 if none is found.\n \* @sample samples.text.Strings.indexOf\n \*/\npublic fun CharSequence.indexOf(string: String, startIndex: Int = 0, ignoreCase: Boolean = false): Int {\n return if (ignoreCase || this !is String)\n indexOf(string, startIndex, length, ignoreCase)\n else\n nativeIndexOf(string, startIndex)\n}\n\n/\*\*\n \* Returns the index within this char sequence of the last occurrence of the specified character,\n \* starting from the specified [startIndex].\n \* @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n \*/

```

* @param ignoreCase `true` to ignore character case when matching a character. By default `false`.
* @return An index of the last occurrence of [char] or -1 if none is found.
*/
public fun CharSequence.lastIndexOf(char: Char,
startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {
    return if (ignoreCase || this !is String)
        lastIndexOfAny(charArrayOf(char), startIndex, ignoreCase)
    else
        nativeLastIndexOf(char, startIndex)
}

/**
 * Returns the index within this char sequence of the last occurrence of the specified
 * [string], starting from the specified [startIndex].
 * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.
 * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.
 * @return An index of the last occurrence of [string] or -1 if none is found.
 */
public fun CharSequence.lastIndexOf(string: String,
startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {
    return if (ignoreCase || this !is String)
        indexOf(string, startIndex, 0, ignoreCase, last = true)
    else
        nativeLastIndexOf(string, startIndex)
}

/**
 * Returns `true` if this char sequence contains the specified [other] sequence of characters as
 * a substring.
 * @param ignoreCase `true` to ignore character case when comparing strings. By default `false`.
 */
@Suppress("INAPPLICABLE_OPERATOR_MODIFIER")
public operator fun CharSequence.contains(other: CharSequence, ignoreCase: Boolean = false): Boolean =
    if (other is String)
        indexOf(other, ignoreCase) >= 0
    else
        indexOf(other, 0, length, ignoreCase) >=
0

/**
 * Returns `true` if this char sequence contains the specified character [char].
 * @param ignoreCase `true` to ignore character case when comparing characters. By default `false`.
 */
@Suppress("INAPPLICABLE_OPERATOR_MODIFIER")
public operator fun CharSequence.contains(char: Char, ignoreCase: Boolean = false): Boolean =
    indexOf(char, ignoreCase) >= 0

/**
 * Returns `true` if this char sequence contains at least one match of the
 * specified regular expression [regex].
 */
@kotlin.internal.InlineOnly
public inline operator fun CharSequence.contains(regex: Regex): Boolean = regex.containsMatchIn(this)

//
rangesDelimitedBy
private class DelimitedRangesSequence(
    private val input: CharSequence,
    private val startIndex: Int,
    private val limit: Int,
    private val getNextMatch: CharSequence.(currentIndex: Int) ->
Pair<Int, Int>? : Sequence<IntRange> {
    override fun iterator(): Iterator<IntRange> = object :
Iterator<IntRange> {
        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue
        var currentStartIndex: Int = startIndex.coerceIn(0, input.length)
        var nextSearchIndex: Int = currentStartIndex
        var nextItem:
IntRange? = null
        var counter: Int = 0
        private fun calcNext() {
            if (nextSearchIndex < 0) {
                nextState = 0
                nextItem = null
            } else if (limit > 0 && ++counter >= limit ||
nextSearchIndex > input.length) {
                nextItem = currentStartIndex..input.lastIndex
                nextSearchIndex = -1
            } else {
                val match = input.getNextMatch(nextSearchIndex)
                if (match == null) {
                    nextItem = currentStartIndex..input.lastIndex
                    nextSearchIndex = -1
                } else {
                    val (index, length) = match
                    nextItem =
currentStartIndex until index
                    currentStartIndex = index + length
                    nextSearchIndex =
currentStartIndex + if (length == 0) 1 else 0
                }
            }
            nextState = 1
        }
        override fun next(): IntRange {
            if (nextState == -
1) {
                calcNext()
                if (nextState == 0)
                    throw NoSuchElementException()
                val
result = nextItem as IntRange
                // Clean next to avoid keeping reference on yielded instance
                nextItem = null
                nextState = -1
                return result
            }
            override fun hasNext(): Boolean {
                if (nextState == -1)
                    calcNext()
                return nextState == 1
            }
}

/**
 * Returns a
sequence of index ranges of substrings in this char sequence around occurrences of the specified [delimiters].
 * @param delimiters One or more characters to be used as delimiters.
 * @param startIndex The index to start searching delimiters from. No range having its start value less than [startIndex] is returned.
 * [startIndex] is coerced
to be non-negative and not greater than length of this string.
 * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.
 * @param limit The maximum number of substrings to return. Zero

```

```

by default means no limit is set.\n *\nprivate fun CharSequence.rangesDelimitedBy(delimiters: CharArray,
startIndex: Int = 0, ignoreCase: Boolean = false, limit: Int = 0): Sequence<IntRange> {\n
requireNonNegativeLimit(limit)\n\n    return DelimitedRangesSequence(this, startIndex, limit, { currentIndex ->\n
        indexOfAny(delimiters, currentIndex, ignoreCase = ignoreCase).let { if (it < 0) null else it to 1 } }\n
})\n}\n\n/**\n * Returns a sequence of index ranges of substrings in this char sequence around occurrences of the
specified [delimiters].\n *\n * @param delimiters One or more strings to be used as delimiters.\n *\n * @param
startIndex The index to start searching delimiters from.\n *\n * No range having its start value less than [startIndex] is
returned.\n *\n * [startIndex] is coerced to be non-negative and not greater than length of this string.\n *\n * @param
ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n *\n * @param limit The
maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid ambiguous results
when strings in [delimiters] have characters in common, this method proceeds from\n *\n * the beginning to the end of
this string, and finds at each position the first element in [delimiters]\n *\n * that matches this string at that position.\n
*\n *\nprivate fun CharSequence.rangesDelimitedBy(delimiters: Array<out String>, startIndex: Int = 0, ignoreCase:
Boolean = false, limit: Int = 0): Sequence<IntRange> {\n    requireNonNegativeLimit(limit)\n    val delimitersList =
delimiters.asList()\n    return DelimitedRangesSequence(this, startIndex, limit, { currentIndex ->
        findAnyOf(delimitersList, currentIndex, ignoreCase = ignoreCase, last = false)?.let { it.first
            to it.second.length } })\n}\n\ninternal fun requireNonNegativeLimit(limit: Int) =\n    require(limit >= 0) { "\nLimit
must be non-negative, but was $limit" }\n\n/**\n * Splits this char sequence to a sequence of strings
around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more strings to be used as
delimiters.\n *\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n
*\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid
ambiguous results when strings in [delimiters] have characters in common, this method proceeds from\n *\n * the
beginning to the end of this string, and finds at each position the first element in [delimiters]\n *\n * that matches this
string at that position.\n *\n *\npublic fun CharSequence.splitToSequence(vararg delimiters: String, ignoreCase:
Boolean = false, limit: Int = 0): Sequence<String> =\n    rangesDelimitedBy(delimiters,
ignoreCase = ignoreCase, limit = limit).map { substring(it) }\n\n/**\n * Splits this char sequence to a list of strings
around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more strings to be used as
delimiters.\n *\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n
*\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid
ambiguous results when strings in [delimiters] have characters in common, this method proceeds from\n *\n * the
beginning to the end of this string, and matches at each position the first element in [delimiters]\n *\n * that is equal to a
delimiter in this instance at that position.\n *\n *\npublic fun CharSequence.split(vararg delimiters: String, ignoreCase:
Boolean = false, limit: Int = 0): List<String> {\n    if (delimiters.size == 1) {\n        val delimiter = delimiters[0]\n
if (!delimiter.isEmpty()) {\n            return split(delimiter,
ignoreCase, limit)\n        }\n    }\n    return rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit =
limit).asIterable().map { substring(it) }\n\n/**\n * Splits this char sequence to a sequence of strings around
occurrences of the specified [delimiters].\n *\n * @param delimiters One or more characters to be used as
delimiters.\n *\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n
*\n * @param limit The maximum number of substrings to return.\n *\n *\npublic fun CharSequence.splitToSequence(vararg
delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0): Sequence<String> =\n    rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).map { substring(it) }\n\n/**\n * Splits this
char sequence to a list of strings around occurrences of the specified [delimiters].\n *\n * @param delimiters One or
more characters to be used as delimiters.\n *\n * @param ignoreCase `true` to ignore character case when matching
a delimiter. By default `false`.\n *\n * @param limit The maximum number of substrings to return.\n *\n *\npublic fun
CharSequence.split(vararg delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0): List<String> {\n    if
(delimiters.size == 1) {\n        return split(delimiters[0].toString(), ignoreCase, limit)\n    }\n    return
rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).asIterable().map { substring(it) }\n\n/**\n * Splits this char sequence to a list of strings around occurrences of the specified [delimiter].\n *\n * This is specialized

```

```

version of split which receives single non-empty delimiter and offers better performance
String used as delimiter
@param ignoreCase `true` to ignore character case when matching a delimiter. By
default `false`.
@param limit The maximum number of substrings to return.
private fun
CharSequence.split(delimiter: String, ignoreCase: Boolean, limit: Int): List<String> {
    requireNonNegativeLimit(limit)
    var currentOffset = 0
    var nextIndex = indexOf(delimiter, currentOffset, ignoreCase)
    if (nextIndex == -1 ||
        limit == 1) {
        return listOf(this.toString())
    }
    val isLimited = limit > 0
    val result =
        ArrayList<String>(if (isLimited) limit.coerceAtMost(10) else 10)
    do {
        result.add(substring(currentOffset,
            nextIndex))
        currentOffset = nextIndex + delimiter.length
        // Do not search for next occurrence if we're
        reaching limit
        if (isLimited && result.size == limit - 1) break
        nextIndex = indexOf(delimiter,
            currentOffset, ignoreCase)
    } while (nextIndex != -1)
    result.add(substring(currentOffset, length))
    return result
}

Splits this char sequence to a list of strings around matches of the given regular expression.
@param limit Non-negative value specifying the maximum number of substrings to return.
Zero by default
means no limit is set.
@kotlin.internal.InlineOnly
public inline fun CharSequence.split(regex: Regex, limit: Int = 0): List<String> =
    regex.split(this, limit)

Splits this char sequence to a sequence of strings around matches of the given regular expression.
@param limit Non-negative value specifying the maximum number of substrings to return.
Zero by default means no limit is
set.
@sample samples.text.Strings.splitToSequence
@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun CharSequence.splitToSequence(regex: Regex, limit: Int = 0): Sequence<String> =
    regex.splitToSequence(this, limit)

Splits this char sequence to a sequence of lines delimited by any of the
following character sequences: CRLF, LF or CR.
The lines returned do not include terminating line
separators.
public fun CharSequence.lineSequence(): Sequence<String> = splitToSequence("\\r\\n", "\\n",
    "\\r")

Splits this char
sequence to a list of lines delimited by any of the following character sequences: CRLF, LF or CR.
The
lines returned do not include terminating line separators.
public fun CharSequence.lines(): List<String> =
    lineSequence().toList()

Returns `true` if the contents of this char sequence are equal to the contents of the
specified [other],
i.e. both char sequences contain the same number of the same characters in the same order.
@sample samples.text.Strings.contentEquals
@SinceKotlin("1.5")
public expect infix fun
CharSequence?.contentEquals(other: CharSequence?): Boolean

Returns `true` if the contents of this char
sequence are equal to the contents of the specified [other], optionally ignoring case difference.
@param
ignoreCase `true` to ignore character case when comparing contents.
@sample
samples.text.Strings.contentEquals
@SinceKotlin("1.5")
public expect fun
CharSequence?.contentEquals(other: CharSequence?,
    ignoreCase: Boolean): Boolean

internal fun CharSequence?.contentEqualsIgnoreCaseImpl(other:
    CharSequence?): Boolean {
    if (this is String && other is String) {
        return this.equals(other, ignoreCase =
            true)
    }
    if (this === other) return true
    if (this == null || other == null || this.length != other.length) return
    false
    for (i in 0 until length) {
        if (!this[i].equals(other[i], ignoreCase = true)) {
            return false
        }
    }
    return true
}

internal fun CharSequence?.contentEqualsImpl(other: CharSequence?): Boolean {
    if (this is String && other is String) {
        return this == other
    }
    if (this === other) return true
    if (this
        == null || other == null || this.length != other.length) return false
    for (i in 0 until length) {
        if (this[i] !=
            other[i]) {
            return false
        }
    }
    return true
}

Returns `true` if the content of this
string
is equal to the word `true`, `false` if it is equal to `false`,
and throws an exception otherwise.
There is
also a lenient version of the function available on nullable String, [String?.toBoolean].
Note that this function is
case-sensitive.
@sample samples.text.Strings.toBooleanStrict
@SinceKotlin("1.5")
public fun
String.toBooleanStrict(): Boolean = when (this) {
    "true" -> true
    "false" -> false
    else -> throw
    IllegalArgumentException("The string doesn't represent a boolean value: $this")
}

Returns `true` if the

```



```

content of this string is equal to the word `true`, `false` if it is equal to `false`, `null` otherwise.
There is also a lenient version of the function available on nullable String, [String?.toBoolean].
Note that this function is case-sensitive.
@sample samples.text.Strings.toBooleanStrictOrNull()
@SinceKotlin("1.5")
public fun String.toBooleanStrictOrNull(): Boolean?
= when (this) {
    true -> true
    false -> false
    else -> null
}
/* Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
*/
// Auto-generated file. DO NOT EDIT!
package kotlin

import kotlin.jvm.*
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@JvmInline
public value class UByteArray
@PublishedApi
internal constructor(@PublishedApi internal val storage: ByteArray) :
Collection<UByte> {
    /** Creates a new array of the specified [size], with all elements initialized to zero. */
    public constructor(size: Int) : this(ByteArray(size))
    /** Returns the array element at the given [index]. This method can be called using the index operator. If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified. */
    public operator fun get(index: Int): UByte = storage[index].toUByte()
    /** Sets the element at the given [index] to the given [value]. This method can be called using the index operator. If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified. */
    public operator fun set(index: Int, value: UByte) {
        storage[index] = value.toByte()
    }
    /** Returns the number of elements in the array. */
    public override val size: Int get() = storage.size
    /** Creates an iterator over the elements of the array. */
    public override operator fun iterator(): kotlin.collections.Iterator<UByte> = Iterator(storage)
    private class Iterator(private val array: ByteArray) : kotlin.collections.Iterator<UByte> {
        private var index = 0
        override fun hasNext() = index < array.size
        override fun next() = if (index < array.size) array[index++].toUByte() else throw NoSuchElementException(index.toString())
        override fun contains(element: UByte): Boolean {
            // TODO: Eliminate this check after KT-30016 gets fixed.
            // Currently JS BE does not generate special bridge method for this method.
            @Suppress("USELESS_CAST")
            if ((element as Any?) !is UByte) return false
            return storage.contains(element.toByte())
        }
        override fun containsAll(elements: Collection<UByte>): Boolean {
            return (elements as Collection<*>).all { it is UByte && storage.contains(it.toByte()) }
        }
        override fun isEmpty(): Boolean = this.storage.size == 0
    }
    /** Creates a new array of the specified [size], where each element is calculated by calling the specified [init] function. The function [init] is called for each array element sequentially starting from the first one. It should return the value for an array element given its index. */
}
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun UByteArray(size: Int, init: (Int) -> UByte): UByteArray {
    return UByteArray(ByteArray(size) { index -> init(index).toByte() })
}
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun ubyteArrayOf(vararg elements: UByte): UByteArray = elements
/* Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
*/
// Auto-generated file. DO NOT EDIT!
package kotlin

import kotlin.jvm.*
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@JvmInline
public value class UIntArray
@PublishedApi
internal constructor(@PublishedApi internal val storage: IntArray) :
Collection<UInt> {
    /** Creates a new array of the specified [size], with all elements initialized to zero. */
    public constructor(size: Int) : this(IntArray(size))
    /** Returns the array element at the given [index]. This method can be called using the index operator. If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified. */
    public operator fun get(index: Int): UInt = storage[index].toUInt()
    /** Sets the element at the given [index] to the given [value]. This method can be called using the index operator. If the [index] is

```

```

out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior
is unspecified.\n *^\n public operator fun set(index: Int, value: UInt) {\n storage[index] = value.toInt()\n
}\n\n /** Returns the number of elements in the array. */^\n public override val size: Int get() = storage.size\n\n
/** Creates an iterator over
the elements of the array. */^\n public override operator fun iterator(): kotlin.collections.Iterator<UInt> =
Iterator(storage)\n\n private class Iterator(private val array: IntArray) : kotlin.collections.Iterator<UInt> {\n
private var index = 0\n override fun hasNext() = index < array.size\n override fun next() = if (index <
array.size) array[index++].toInt() else throw NoSuchElementException(index.toString())\n }\n\n override fun
contains(element: UInt): Boolean {\n // TODO: Eliminate this check after KT-30016 gets fixed.\n //
Currently JS BE does not generate special bridge method for this method.\n
@Suppress("USELESS_CAST")\n if ((element as Any?) !is UInt) return false\n\n return
storage.contains(element.toInt())\n }\n\n override fun containsAll(elements: Collection<UInt>): Boolean {\n
return (elements as Collection<*>).all { it is UInt && storage.contains(it.toInt()) }\n }\n\n override fun
isEmpty():
Boolean = this.storage.size == 0\n}\n\n/**\n * Creates a new array of the specified [size], where each element is
calculated by calling the specified\n * [init] function.\n *^\n * The function [init] is called for each array element
sequentially starting from the first one.\n * It should return the value for an array element given its index.\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray(size: Int, init: (Int) -> UInt): UIntArray {\n return UIntArray(IntArray(size) { index ->
init(index).toInt()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
uintArrayOf(vararg elements: UInt): UIntArray = elements\n", "/*\n * Copyright 2010-2023 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n *^\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin\n\nimport kotlin.jvm.*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@JvmInline\npublic
value class UIntArray\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: LongArray) :
Collection<ULong> {\n\n /** Creates a new array of the specified [size], with all elements initialized to zero. */^\n
public constructor(size: Int) : this(LongArray(size))\n\n /**\n * Returns the array element at the given [index].
This method can be called using the index operator.\n *^\n * If the [index] is out of bounds of this array, throws
an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n *^\n public
operator fun get(index: Int): UInt = storage[index].toInt()\n\n /**\n * Sets the element at the given
[index] to the given [value]. This method can be called using the index operator.\n *^\n * If the [index] is out of
bounds of this array, throws an [IndexOutOfBoundsException] except
in Kotlin/JS\n * where the behavior is unspecified.\n *^\n public operator fun set(index: Int, value: UInt)
{\n storage[index] = value.toInt()\n }\n\n /** Returns the number of elements in the array. */^\n public
override val size: Int get() = storage.size\n\n /** Creates an iterator over the elements of the array. */^\n
public
override operator fun iterator(): kotlin.collections.Iterator<ULong> = Iterator(storage)\n\n private class
Iterator(private val array: LongArray) : kotlin.collections.Iterator<ULong> {\n private var index = 0\n
override fun hasNext() = index < array.size\n override fun next() = if (index < array.size)
array[index++].toULong() else throw NoSuchElementException(index.toString())\n }\n\n override fun
contains(element: UInt): Boolean {\n // TODO: Eliminate this check after KT-30016 gets fixed.\n //
Currently JS BE does not generate special bridge method for this method.\n
@Suppress("USELESS_CAST")\n
if ((element as Any?) !is UInt) return false\n\n return storage.contains(element.toInt())\n }\n\n
override fun containsAll(elements: Collection<ULong>): Boolean {\n return (elements as Collection<*>).all { it
is UInt && storage.contains(it.toInt()) }\n }\n\n override fun isEmpty(): Boolean = this.storage.size ==
0\n}\n\n/**\n * Creates a new array of the specified [size], where each element is calculated by calling the
specified\n * [init] function.\n *^\n * The function [init] is called for each array element sequentially starting from the

```

```

first one.\n * It should return the value for an array element given its index.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray(size: Int, init: (Int) -> ULong): ULongArray {\n    return ULongArray(LongArray(size) { index ->
init(index).toLong()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ulongArrayOf(vararg elements: ULong): ULongArray = elements\n", "/*\n * Copyright 2010-2023
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n\n// Auto-generated file. DO NOT
EDIT!\n\npackage kotlin\n\nimport
kotlin.jvm.*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@JvmInline\npublic value class
UShortArray\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: ShortArray) :
Collection<UShort> {\n\n    /** Creates a new array of the specified [size], with all elements initialized to zero. *\n
public constructor(size: Int) : this(ShortArray(size))\n\n    /**\n     * Returns the array element at the given [index].
This method can be called using the index operator.\n     *\n     * If the [index] is out of bounds of this array, throws
an [IndexOutOfBoundsException] except in Kotlin/JS\n     * where
the behavior is unspecified.\n     */\n    public operator fun get(index: Int): UShort = storage[index].toUShort()\n\n
/**\n     * Sets the element at the given [index] to the given [value]. This method can be called using the index
operator.\n     *\n     * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except
in Kotlin/JS\n     * where the behavior is unspecified.\n     */\n    public operator fun set(index: Int, value: UShort)
{\n        storage[index] = value.toShort()\n    }\n\n    /** Returns the number of elements in the array. *\n
public
override val size: Int get() = storage.size\n\n    /** Creates an iterator over the elements of the array. *\n
public
override operator fun iterator(): kotlin.collections.Iterator<UShort> = Iterator(storage)\n\n    private class
Iterator(private val array: ShortArray) : kotlin.collections.Iterator<UShort> {\n        private var index = 0\n
override fun hasNext() = index < array.size\n
override fun next() = if (index < array.size) array[index++].toUShort() else throw
NoSuchElementException(index.toString())\n    }\n\n    override fun contains(element: UShort): Boolean {\n        //
TODO: Eliminate this check after KT-30016 gets fixed.\n        // Currently JS BE does not generate special bridge
method for this method.\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UShort) return
false\n\n        return storage.contains(element.toShort())\n    }\n\n    override fun containsAll(elements:
Collection<UShort>): Boolean {\n        return (elements as Collection<*>).all { it is UShort &&
storage.contains(it.toShort()) }\n    }\n\n    override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n/**\n *
Creates a new array of the specified [size], where each element is calculated by calling the specified\n * [init]
function.\n * \n * The function [init] is called for each array element sequentially starting from the first one.\n * It
should return
the value for an array element given its index.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray(size: Int, init: (Int) -> UShort): UShortArray {\n    return UShortArray(ShortArray(size) { index ->
init(index).toShort()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ushortArrayOf(vararg elements: UShort): UShortArray = elements\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("UArraysKt")\n@file:kotlin.jvm.JvmPacka
geName("kotlin.collections.unsigned")\n\npackage kotlin.collections\n\n\n// NOTE: THIS FILE IS AUTO-
GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport
kotlin.random.*\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns 1st *element*
from the array.\n * \n * If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in

```

Kotlin/JS\n \* where the behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UIntArray.component1(): UInt {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from the array.\n \* \n \* If the  
size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior  
is unspecified.\n \*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline operator fun  
ULongArray.component1(): ULong {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from  
the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in  
Kotlin/JS\n \* where the behavior

is unspecified.\n \*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline operator fun  
UByteArray.component1(): UByte {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from  
the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in  
Kotlin/JS\n \* where the behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component1(): UShort {\n return get(0)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \*  
If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UIntArray.component2(): UInt {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \* If  
the size of this array is  
less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
ULongArray.component2(): ULong {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \*  
If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UByteArray.component2(): UByte {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \*  
If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component2(): UShort {\n return  
get(1)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If the size of this array is less than 3, throws an  
[IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UIntArray.component3(): UInt {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If  
the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
ULongArray.component3(): ULong {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \*  
If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline operator fun  
UByteArray.component3(): UByte {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from  
the array.\n \* \n \* If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in  
Kotlin/JS\n \* where the behavior is unspecified.\n

\*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component3(): UShort {\n return get(2)\n}\n\n/\*\*\n \* Returns 4th \*element\* from the array.\n \* \n \*  
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the  
behavior is unspecified.\n

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UIntArray.component4(): UInt {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the
size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where
the behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
ULongArray.component4(): ULong {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n *
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the
behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UByteArray.component4(): UByte {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n *
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the
behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UShortArray.component4(): UShort {\n    return get(3)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n *
If the size
of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is
unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline operator fun UIntArray.component5(): UInt {\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from the
array.\n * \n * If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n
* where the behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
ULongArray.component5(): ULong {\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n *
If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the
behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UByteArray.component5(): UByte
{\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than
5, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UShortArray.component5(): UShort {\n    return get(4)\n}\n\n/**\n * Returns an element at the given [index] or
throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UIntArray.elementAt(index: Int):
UInt\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun ULongArray.elementAt(index:
Int): ULong\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the
[index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UByteArray.elementAt(index: Int):
UByte\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index]
is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UShortArray.elementAt(index: Int):
UShort\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the
[index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UIntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UInt): UInt {\n    return if (index >= 0 && index
<= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result

```

of calling the [defaultValue] function if the [index] is out of bounds of this array.\n \* \n \* @sample  
samples.collections.Collections.Elements.elementAtOrElse\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

ULongArray.elementAtOrElse(index: Int, defaultValue: (Int) -> ULong): ULong {\n    return if (index >= 0 &&  

index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the  

result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample  

samples.collections.Collections.Elements.elementAtOrElse\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UByteArray.elementAtOrElse(index:  

Int, defaultValue: (Int) -> UByte): UByte {\n    return if (index >= 0 && index <= lastIndex) get(index) else  

defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue]  

function if the [index] is out of bounds of this array.\n * \n * @sample  

samples.collections.Collections.Elements.elementAtOrElse\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UShortArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UShort): UShort {\n    return if (index >= 0 &&  

index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or  

`null` if the [index] is out of bounds of this array.\n * \n * @sample  

samples.collections.Collections.Elements.elementAtOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UIntArray.elementAtOrNull(index: Int): UInt? {\n  

    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of  

bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

ULongArray.elementAtOrNull(index: Int): ULong? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an  

element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample  

samples.collections.Collections.Elements.elementAtOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UByteArray.elementAtOrNull(index: Int): UByte? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an  

element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample  

samples.collections.Collections.Elements.elementAtOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  

inline fun UShortArray.elementAtOrNull(index: Int): UShort? {\n    return this.getOrNull(index)\n}\n\n/**\n *  

Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample  

samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UIntArray.find(predicate: (UInt) -> Boolean): UInt? {\n    return firstOrNull(predicate)\n}\n\n/**\n * Returns the  

first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample  

samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

ULongArray.find(predicate: (ULong) -> Boolean): ULong? {\n    return firstOrNull(predicate)\n}\n\n/**\n *  

Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample  

samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UByteArray.find(predicate: (UByte) -> Boolean): UByte? {\n    return firstOrNull(predicate)\n}\n\n/**\n * Returns  

the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample  

samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  

UShortArray.find(predicate: (UShort) -> Boolean): UShort? {\n    return firstOrNull(predicate)\n}\n\n/**\n *
```

Returns the last element matching the given [predicate], or `null` if no such element was found. \n \* \n \* @sample samples.collections.Collections.Elements.find\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.findLast(predicate: (UInt) -> Boolean): UInt? {\n    return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.findLast(predicate: (ULong) -> Boolean): ULong? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.findLast(predicate: (UByte) -> Boolean): UByte? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.findLast(predicate: (UShort) -> Boolean): UShort? {\n    return
lastOrNull(predicate)\n}\n\n/**\n * Returns the first element.\n * \n * @throws NoSuchElementException if the
array is empty.\n * \n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.first(): UInt {\n    return storage.first().toUInt()\n}\n\n/**\n * Returns the first element.\n * \n *
@throws NoSuchElementException if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.first(): ULong {\n    return storage.first().toULong()\n}\n\n/**\n * Returns the first element.\n * \n *
@throws NoSuchElementException if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.first(): UByte {\n    return storage.first().toUByte()\n}\n\n/**\n * Returns the first element.\n * \n *
@throws
NoSuchElementException if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.first(): UShort {\n    return storage.first().toUShort()\n}\n\n/**\n * Returns the first element matching
the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.first(predicate: (UInt) -> Boolean): UInt {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.first(predicate: (ULong) -> Boolean): ULong {\n    for (element in this) if
(predicate(element)) return element\n    throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.first(predicate: (UByte) -> Boolean): UByte {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.first(predicate: (UShort) -> Boolean): UShort {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no
```

element matching the predicate.}\n}\n\n/\*\*\n \* Returns the first element, or `null` if the array is empty.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.firstOrNull(): UInt? {\n    return\n    if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.firstOrNull(): ULong? {\n    return\n    if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.firstOrNull(): UByte? {\n    return\n    if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.firstOrNull(): UShort? {\n    return\n    if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate], or\n    `null` if element was not found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UIntArray.firstOrNull(predicate: (UInt) -> Boolean): UInt? {\n    for (element in this) if (predicate(element)) return\n    element\n    return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element\n    was not found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic\n    inline fun ULongArray.firstOrNull(predicate: (ULong) -> Boolean): ULong? {\n    for (element in this) if\n    (predicate(element)) return element\n    return null\n}\n\n/**\n * Returns the first element matching the given\n    [predicate], or `null` if element was not found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UByteArray.firstOrNull(predicate: (UByte) -> Boolean): UByte? {\n    for (element in this) if (predicate(element))\n    return element\n    return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UShortArray.firstOrNull(predicate: (UShort) -> Boolean): UShort? {\n    for (element in this) if (predicate(element))\n    return element\n    return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the\n    [defaultValue] function if the [index] is out of bounds of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UIntArray.getOrElse(index: Int, defaultValue: (Int) -> UInt): UInt {\n    return if (index >= 0 && index <=\n    lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of\n    calling the [defaultValue] function if the [index] is out of bounds of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic\n    inline fun ULongArray.getOrElse(index: Int, defaultValue: (Int) -> ULong): ULong {\n    return if (index >= 0 &&\n    index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the\n    result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UByteArray.getOrElse(index: Int, defaultValue: (Int) -> UByte): UByte {\n    return if (index >= 0 && index <=\n    lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of\n    calling the [defaultValue] function if the [index] is out of bounds of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\n    UShortArray.getOrElse(index: Int, defaultValue: (Int) -> UShort): UShort {\n    return if (index >= 0 && index <=\n    lastIndex) get(index)\n    else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of\n    bounds of this array.\n
```

```
*\n * @sample samples.collections.Collections.Elements.getOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.getOrNull(index: Int): UInt? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given\n    [index] or `null` if the [index] is out of bounds of this array.\n
```

```
*\n * @sample\n    samples.collections.Collections.Elements.getOrNull\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.getOrNull(index: Int):\n    ULong? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at
```



the given [index] or `null` if the [index] is out of bounds of this array.\n \* \n \* @sample

samples.collections.Collections.Elements.getOrNull\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.getOrNull(index:
```

```
Int): UByte? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
```

samples.collections.Collections.Elements.getOrNull\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.getOrNull(index: Int):
```

```
UShort? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UIntArray.indexOf(element: UInt): Int {\n    return storage.indexOf(element.toInt())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
ULongArray.indexOf(element: ULong): Int {\n    return storage.indexOf(element.toLong())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.indexOf(element: UByte): Int {\n    return storage.indexOf(element.toByte())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UShortArray.indexOf(element: UShort): Int {\n    return storage.indexOf(element.toShort())\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UIntArray.indexOfFirst(predicate: (UInt) -> Boolean): Int {\n    return storage.indexOfFirst { predicate(it.toUInt()) }\n}\n\n/**\n * Returns index of the first
```

```
element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
ULongArray.indexOfFirst(predicate: (ULong) -> Boolean): Int {\n    return storage.indexOfFirst { predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UByteArray.indexOfFirst(predicate: (UByte) -> Boolean): Int {\n    return storage.indexOfFirst { predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UShortArray.indexOfFirst(predicate: (UShort) -> Boolean): Int {\n    return storage.indexOfFirst { predicate(it.toUShort()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UIntArray.indexOfLast(predicate: (UInt) -> Boolean): Int {\n    return storage.indexOfLast { predicate(it.toUInt()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.indexOfLast(predicate: (ULong) -> Boolean): Int {\n    return storage.indexOfLast { predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UByteArray.indexOfLast(predicate: (UByte) -> Boolean): Int {\n    return storage.indexOfLast { predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
```

```

*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UShortArray.indexOfLast(predicate: (UShort) -> Boolean): Int {^ return storage.indexOfLast {
predicate(it.toUShort()) }^}^n/n/**^n * Returns the last element.^n * ^n * @throws NoSuchElementException if the
array is empty.^n * ^n * @sample samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UIntArray.last(): UInt {^ return storage.last().toUInt()^}^n/n/**^n * Returns the last element.^n * ^n * @throws
NoSuchElementException if the array is empty.^n * ^n * @sample samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public
inline fun ULongArray.last(): ULong {^ return storage.last().toULong()^}^n/n/**^n * Returns the last element.^n
* ^n * @throws NoSuchElementException if the array is empty.^n * ^n * @sample
samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UByteArray.last(): UByte {^ return storage.last().toUByte()^}^n/n/**^n * Returns the last element.^n * ^n *
@throws NoSuchElementException if the array is empty.^n * ^n * @sample
samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UShortArray.last(): UShort {^ return storage.last().toUShort()^}^n/n/**^n * Returns the last element matching
the given [predicate].^n * ^n * @throws NoSuchElementException if no such element is found.^n * ^n * @sample
samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UIntArray.last(predicate: (UInt) -> Boolean): UInt {^ for (index in this.indices.reversed()) {^ val element =
this[index]^n if (predicate(element)) return element^n }^}^n throw NoSuchElementException("Array contains
no element matching the predicate.")^}^n/n/**^n * Returns the last element matching the given [predicate].^n * ^n *
@throws NoSuchElementException if no such element is found.^n * ^n * @sample
samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
ULongArray.last(predicate: (ULong) -> Boolean): ULong {^ for (index in this.indices.reversed()) {^ val
element = this[index]^n if (predicate(element)) return element^n }^}^n throw
NoSuchElementException("Array contains no element matching the predicate.")^}^n/n/**^n * Returns the last
element matching the given [predicate].^n * ^n * @throws NoSuchElementException if no such element is found.^n
* ^n * @sample samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UByteArray.last(predicate: (UByte) -> Boolean): UByte {^ for (index in this.indices.reversed()) {^ val
element = this[index]^n if (predicate(element)) return element^n }^}^n throw
NoSuchElementException("Array contains no element matching the predicate.")^}^n/n/**^n * Returns the last
element matching the given [predicate].^n * ^n * @throws NoSuchElementException if no such element is found.^n
* ^n * @sample samples.collections.Collections.Elements.last^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
UShortArray.last(predicate: (UShort) -> Boolean): UShort {^ for (index in this.indices.reversed()) {^ val
element = this[index]^n
if (predicate(element)) return element^n }^}^n throw NoSuchElementException("Array contains no element
matching the predicate.")^}^n/n/**^n * Returns last index of [element], or -1 if the array does not contain
element.^n *^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline
fun UIntArray.lastIndexOf(element: UInt): Int {^ return storage.lastIndexOf(element.toInt())^}^n/n/**^n *
Returns last index of [element], or -1 if the array does not contain element.^n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun
ULongArray.lastIndexOf(element: ULong): Int {^ return storage.lastIndexOf(element.toLong())^}^n/n/**^n *
Returns last index of [element], or -1 if the array does not contain element.^n

```

```

*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.lastIndexOf(element: UByte): Int {\n    return storage.lastIndexOf(element.toByte())\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.lastIndexOf(element: UShort): Int {\n    return storage.lastIndexOf(element.toShort())\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UIntArray.lastOrNull(): UInt? {\n    return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last
element, or `null` if the array is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun ULongArray.lastOrNull(): ULong? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UByteArray.lastOrNull(): UByte? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UShortArray.lastOrNull(): UShort? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element matching the given [predicate], or
`null` if no such element was found.\n * \n * @sample samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.lastOrNull(predicate: (UInt) -> Boolean): UInt? {\n    for (index in this.indices.reversed()) {\n        val
element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the last
element
matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.lastOrNull(predicate: (ULong) -> Boolean): ULong? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the
last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.lastOrNull(predicate: (UByte) -> Boolean): UByte? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the
last element matching
the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.lastOrNull(predicate: (UShort) -> Boolean): UShort? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns a
random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.random(): UInt {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n
* \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.random(): ULong {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.random(): UByte {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this
array.\n * \n * @throws NoSuchElementException if this array is empty.\n

```

```

*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.random(): UShort {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this
array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UIntArray.random(random: Random): UInt
{\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from
this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is
empty.\n *^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun ULongArray.random(random:
Random): ULong {\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UByteArray.random(random: Random):
UByte {\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic fun UShortArray.random(random: Random):
UShort {\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UIntArray.randomOrNull(): UInt? {\n    return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun ULongArray.randomOrNull(): ULong? {\n    return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UByteArray.randomOrNull():
UByte? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if
this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UShortArray.randomOrNull(): UShort? {\n    return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
public fun UIntArray.randomOrNull(random: Random): UInt? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
public fun ULongArray.randomOrNull(random:
Random): ULong? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns
a random element from this array using the specified source of randomness, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
public fun UByteArray.randomOrNull(random: Random): UByte? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*^@SinceKotlin("1.4")@ExperimentalUnsignedTypes@WasExperimental(ExperimentalStdlibApi::class)\n
public fun UShortArray.randomOrNull(random: Random): UShort? {\n    if (isEmpty())\n        return null\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or
has more than one element.\n

```

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.single(): UInt {\n    return storage.single().toUInt()\n}\n\n/**\n * Returns the single element,
or throws an exception if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.single(): ULong {\n    return storage.single().toULong()\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.single(): UByte {\n    return storage.single().toUByte()\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.single(): UShort {\n    return
storage.single().toUShort()\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws
exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.single(predicate: (UInt) -> Boolean): UInt {\n    var single: UInt? = null\n    var found = false\n    for
(element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as UInt\n}\n\n/**\n * Returns the single element matching
the given [predicate], or throws exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.single(predicate: (ULong) -> Boolean): ULong {\n    var single: ULong? = null\n    var
found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentException("Array contains more than one matching element.")\n            single = element\n
found = true\n        }\n    }\n    if (!found) throw NoSuchElementException("Array contains no element matching
the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as ULong\n}\n\n/**\n * Returns the
single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UByteArray.single(predicate: (UByte) -> Boolean): UByte {\n    var single: UByte? = null\n    var found =
false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentException("Array contains more than one matching element.")\n            single =
element\n            found = true\n        }\n    }\n    if (!found) throw NoSuchElementException("Array contains no
element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as
UByte\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or
more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.single(predicate: (UShort) -> Boolean): UShort {\n    var single: UShort? = null\n    var found = false\n
for (element in this) {\n        if (predicate(element)) {\n            if (found) throw
IllegalArgumentException("Array contains more than one matching element.")\n            single = element\n
found = true\n        }\n    }\n    if (!found) throw NoSuchElementException("Array contains
no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as
UShort\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.singleOrNull(): UInt? {\n    return
if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.singleOrNull(): ULong? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single
element, or `null` if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.singleOrNull(): UByte? {\n

```

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return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n *^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UShortArray.singleOrNull(): UShort? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n *^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UIntArray.singleOrNull(predicate: (UInt) -> Boolean): UInt? {\n    var single: UInt? = null\n    var found =
false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single =
element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n *^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun ULongArray.singleOrNull(predicate: (ULong) -> Boolean): ULong? {\n
    var single: ULong? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n
if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n
return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not
found or more than one element was found.\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.singleOrNull(predicate: (UByte) -> Boolean): UByte? {\n    var single: UByte? = null\n    var found =
false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single =
element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n *^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UShortArray.singleOrNull(predicate: (UShort) -> Boolean): UShort? {\n    var single: UShort? = null\n    var
found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single
= element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns a list
containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n *
\n * @sample samples.collections.Collections.Transformations.drop\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.drop(n: Int): List<UInt> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException\n if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.drop(n: Int): List<ULong> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException\n if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.drop(n: Int): List<UByte> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException\n if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.drop(n: Int): List<UShort>
{\n    require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements\n except last [n] elements.\n * \n * @throws
IllegalArgumentException\n if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*^\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.dropLast(n: Int): List<UInt> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return take((size -

```

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n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.dropLast(n: Int):
List<ULong> {\n
    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.dropLast(n: Int): List<UByte>
{\n
    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.dropLast(n: Int):
List<UShort> {\n
    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.dropLastWhile(predicate: (UInt) -> Boolean): List<UInt> {\n
    for (index in lastIndex downTo 0) {\n
        if (!predicate(this[index])) {\n
            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.dropLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n
    for (index in lastIndex downTo 0) {\n
        if (!predicate(this[index])) {\n
            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the
given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.dropLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n
    for (index in lastIndex downTo 0) {\n
        if (!predicate(this[index])) {\n
            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.dropLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n
    for (index in lastIndex downTo
0) {\n
        if (!predicate(this[index])) {\n
            return
take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first
elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.dropWhile(predicate: (UInt) -> Boolean): List<UInt> {\n
    var yielding = false\n    val list =
ArrayList<UInt>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n
            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing all
elements except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.dropWhile(predicate: (ULong) -> Boolean):

```

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List<ULong> {\n  var yielding = false\n  val list = ArrayList<ULong>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item)) {\n      list.add(item)\n      yielding = true\n    }\n  return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n *\n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.dropWhile(predicate: (UByte) -> Boolean): List<UByte> {\n  var yielding = false\n  val list = ArrayList<UByte>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item)) {\n      list.add(item)\n      yielding = true\n    }\n  return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n *\n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.dropWhile(predicate: (UShort) -> Boolean): List<UShort> {\n  var yielding = false\n  val list = ArrayList<UShort>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item)) {\n      list.add(item)\n      yielding = true\n    }\n  return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n *\n * @sample samples.collections.Collections.Filtering.filter\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.filter(predicate: (UInt) -> Boolean): List<UInt> {\n  return filterTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n *\n * @sample samples.collections.Collections.Filtering.filter\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.filter(predicate: (ULong) -> Boolean): List<ULong> {\n  return filterTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n *\n * @sample samples.collections.Collections.Filtering.filter\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.filter(predicate: (UByte) -> Boolean): List<UByte> {\n  return filterTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n *\n * @sample samples.collections.Collections.Filtering.filter\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.filter(predicate: (UShort) -> Boolean): List<UShort> {\n  return filterTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n *\n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.filterIndexed(predicate: (index: Int, UInt) -> Boolean): List<UInt> {\n  return filterIndexedTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n *\n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.filterIndexed(predicate: (index: Int, ULong) -> Boolean): List<ULong> {\n  return filterIndexedTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n *\n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.filterIndexed(predicate: (index: Int, UByte) -> Boolean): List<UByte> {\n  return filterIndexedTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the

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given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.filterIndexed(predicate: (index: Int, UShort) -> Boolean): List<UShort> {\n return
filterIndexedTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate]
to the given [destination].\n * @param [predicate] function that takes the index of an element and the element
itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UInt>> UIntArray.filterIndexedTo(destination: C, predicate: (index: Int, UInt) -> Boolean): C {
\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n
return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the
given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n *
and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in ULong>> ULongArray.filterIndexedTo(destination: C, predicate: (index: Int, ULong) ->
Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element))
destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <C : MutableCollection<in UByte>> UByteArray.filterIndexedTo(destination: C, predicate: (index: Int,
UByte) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element))
destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UShort>> UShortArray.filterIndexedTo(destination: C, predicate: (index: Int, UShort) ->
Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element))
destination.add(element)\n }\n return destination\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.filterNot(predicate: (UInt) -> Boolean): List<UInt> {\n return filterNotTo(ArrayList<UInt>(),
predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.filterNot(predicate: (ULong) -> Boolean): List<ULong> {\n return filterNotTo(ArrayList<ULong>(),
predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UByteArray.filterNot(predicate: (UByte) -> Boolean): List<UByte> {\n return
filterNotTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the
given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.filterNot(predicate: (UShort) -> Boolean): List<UShort> {\n    return
filterNotTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Appends all elements not matching the given [predicate]
to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UInt>> UIntArray.filterNotTo(destination: C, predicate: (UInt) -> Boolean): C {\n    for
(element in this) if (!predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all elements not matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in ULong>> ULongArray.filterNotTo(destination: C, predicate: (ULong) -> Boolean): C {\n    for
(element in this) if (!predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all elements not matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UByte>> UByteArray.filterNotTo(destination: C, predicate: (UByte) -> Boolean): C {\n    for
(element in this) if (!predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all elements
not matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UShort>> UShortArray.filterNotTo(destination: C, predicate: (UShort) -> Boolean): C {\n    for
(element in this) if (!predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UInt>> UIntArray.filterTo(destination: C, predicate: (UInt) -> Boolean): C {\n    for (element
in this) if (predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all elements
matching the given [predicate] to the given [destination].\n
 * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in ULong>> ULongArray.filterTo(destination: C, predicate: (ULong) -> Boolean): C {\n    for
(element in this) if (predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all
elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UByte>> UByteArray.filterTo(destination: C, predicate: (UByte) -> Boolean): C {\n    for
(element in this) if (predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Appends all
elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UShort>> UShortArray.filterTo(destination: C, predicate: (UShort) -> Boolean): C {\n    for
(element in this) if (predicate(element)) destination.add(element)\n    return destination\n}\n\n/**\n
 * Returns a list
containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.slice(indices: IntRange):
List<UInt> {\n    if (indices.isEmpty()) return listOf()\n    return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n
 * Returns a list containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.slice(indices: IntRange):

```

```

List<ULong> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

* Returns a list containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UByteArray.slice(indices: IntRange): List<UByte> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

* Returns a list containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UShortArray.slice(indices: IntRange): List<UShort> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

* Returns a list containing elements at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UIntArray.slice(indices: Iterable<Int>): List<UInt> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<UInt>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

* Returns a list containing elements at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun ULongArray.slice(indices: Iterable<Int>): List<ULong> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<ULong>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

* Returns a list containing elements at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UByteArray.slice(indices: Iterable<Int>): List<UByte> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<UByte>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

* Returns a list containing elements at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UShortArray.slice(indices: Iterable<Int>): List<UShort> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<UShort>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

* Returns an array containing elements of this array at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UIntArray.sliceArray(indices: Collection<Int>): UIntArray {
    return UIntArray(storage.sliceArray(indices))
}

* Returns an array containing elements of this array at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun ULongArray.sliceArray(indices: Collection<Int>): ULongArray {
    return ULongArray(storage.sliceArray(indices))
}

* Returns an array containing elements of this array at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UByteArray.sliceArray(indices: Collection<Int>): UByteArray {
    return UByteArray(storage.sliceArray(indices))
}

* Returns an array containing elements of this array at specified [indices].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UShortArray.sliceArray(indices: Collection<Int>): UShortArray {
    return UShortArray(storage.sliceArray(indices))
}

* Returns an array containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UIntArray.sliceArray(indices: IntRange): UIntArray {
    return UIntArray(storage.sliceArray(indices))
}

* Returns an array containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun ULongArray.sliceArray(indices: IntRange): ULongArray {
    return ULongArray(storage.sliceArray(indices))
}

* Returns an array containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UByteArray.sliceArray(indices: IntRange): UByteArray {
    return UByteArray(storage.sliceArray(indices))
}

* Returns an array containing elements at indices in the specified [indices] range.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UShortArray.sliceArray(indices: IntRange): UShortArray {
    return

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UShortArray(storage.sliceArray(indices))\n\n/**\n * Returns a list containing first [n] elements.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.take(n: Int): List<UInt> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<UInt>(n)\n
for (item in this) {\n list.add(item)\n if (++count == n)\n break\n }\n return list\n}\n\n/**\n *
Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n *
@sample samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.take(n: Int): List<ULong> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<ULong>(n)\n
for (item in this) {\n list.add(item)\n if (++count == n)\n break\n }\n return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UByteArray.take(n: Int): List<UByte> {\n require(n >= 0) { \"Requested element count $n is less than zero.\"
}\n if (n == 0) return emptyList()\n if (n >= size) return toList()\n if (n == 1) return listOf(this[0])\n var
count = 0\n val list = ArrayList<UByte>(n)\n for (item in this) {\n list.add(item)\n if (++count == n)\n
break\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.take(n: Int): List<UShort> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >=
size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<UShort>(n)\n
for (item in this) {\n list.add(item)\n if (++count == n)\n break\n }\n return list\n}\n\n/**\n *
Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n *
@sample samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.takeLast(n: Int): List<UInt> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size =
size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<UInt>(n)\n
for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last
[n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun ULongArray.takeLast(n: Int): List<ULong> {\n require(n >= 0) { \"Requested element count $n is less than
zero.\" }\n if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return
listOf(this[size - 1])\n val list = ArrayList<ULong>(n)\n for (index in size - n until size)\n
list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.takeLast(n: Int): List<UByte>
{\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val
size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list =
ArrayList<UByte>(n)\n for (index in size - n until size)\n list.add(this[index])\n
return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.takeLast(n: Int): List<UShort>

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{\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  if (n == 0) return emptyList()\n  val size = size\n  if (n >= size) return toList()\n  if (n == 1) return listOf(this[size - 1])\n  val list = ArrayList<UShort>(n)\n  for (index in size - n until size)\n    list.add(this[index])\n  return list\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.takeLastWhile(predicate: (UInt) -> Boolean): List<UInt>\n{\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.takeLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n  for (index in lastIndex downTo 0)\n  {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.takeLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n  for (index\n  in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.takeLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n  for (index in lastIndex downTo 0)\n  {\n    if (!predicate(this[index])) {\n      return drop(index + 1)\n    }\n  }\n  return toList()\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.takeWhile(predicate: (UInt) -> Boolean): List<UInt> {\n  val list = ArrayList<UInt>()\n  for (item in this) {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.takeWhile(predicate: (ULong) -> Boolean): List<ULong> {\n  val list = ArrayList<ULong>()\n  for (item in this) {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.takeWhile(predicate: (UByte) -> Boolean): List<UByte> {\n  val list = ArrayList<UByte>()\n  for (item in this)\n  {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.takeWhile(predicate: (UShort) -> Boolean): List<UShort> {\n  val list = ArrayList<UShort>()\n  for (item in this) {\n    if (!predicate(item))\n      break\n    list.add(item)\n  }\n  return list\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.reverse(): Unit {\n  storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

```

```

ULongArray.reverse(): Unit {\n  storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reverse(): Unit {\n  storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reverse(): Unit {\n  storage.reverse()\n}\n\n/**\n * Reverses elements of the array in the specified
range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end
of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.reverse(fromIndex: Int, toIndex:
Int): Unit {\n  storage.reverse(fromIndex, toIndex)\n}\n\n/**\n * Reverses elements of the array in the specified
range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end
of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n  storage.reverse(fromIndex,
toIndex)\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n * \n * @param fromIndex
the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * \n *
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater
than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n  storage.reverse(fromIndex, toIndex)\n}\n\n/**\n *
Reverses elements of the array in the specified range in-place.\n * \n * @param fromIndex the start of the range
(inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n  storage.reverse(fromIndex, toIndex)\n}\n\n/**\n *
Returns a list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.reversed(): List<UInt> {\n  if
(isEmpty()) return emptyList()\n  val list = toMutableList()\n  list.reverse()\n  return list\n}\n\n/**\n * Returns a
list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.reversed(): List<ULong> {\n  if (isEmpty()) return emptyList()\n  val list = toMutableList()\n
list.reverse()\n  return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.reversed(): List<UByte> {\n  if (isEmpty()) return emptyList()\n  val list = toMutableList()\n
list.reverse()\n  return list\n}\n\n/**\n * Returns
a list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.reversed(): List<UShort> {\n  if (isEmpty()) return emptyList()\n  val list = toMutableList()\n
list.reverse()\n  return list\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reversedArray(): UIntArray {\n  return UIntArray(storage.reversedArray())\n}\n\n/**\n * Returns an
array with elements of this array in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reversedArray(): ULongArray {\n  return ULongArray(storage.reversedArray())\n}\n\n/**\n * Returns
an array with elements of this array in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reversedArray(): UByteArray {\n  return UByteArray(storage.reversedArray())\n}\n\n/**\n * Returns

```

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an array with elements of this array in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.reversedArray(): UShortArray {\n    return
UShortArray(storage.reversedArray())\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random]
instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.shuffle(random: Random): Unit
{\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] =
this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.shuffle(random: Random):
Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] =
this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.shuffle(random: Random):
Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] =
this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.shuffle(random: Random):
Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] =
this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their
natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UIntArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts
elements in the array in-place descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortDescending(): Unit {\n    if
(size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts elements in the array in-place descending
according to their natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.sortDescending(): Unit {\n    if (size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Sorts
elements in the array in-place descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortDescending(): Unit {\n    if
(size > 1) {\n        sort()\n        reverse()\n    }\n}\n\n/**\n * Returns a list of all elements sorted according to their
natural sort
order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sorted(): List<UInt> {\n
return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural
sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sorted():
List<ULong> {\n    return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted
according to their natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun

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UByteArray.sorted(): List<UByte> {\n  return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sorted(): List<UShort> {\n  return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArray(): UIntArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArray(): ULongArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArray(): UByteArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArray(): UShortArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArrayDescending(): UIntArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArrayDescending(): ULongArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArrayDescending(): UByteArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArrayDescending(): UShortArray {\n  if (isEmpty()) return this\n  return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n
*\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedDescending(): List<UInt> {\n  return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n
*\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedDescending(): List<ULong> {\n  return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n
*\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedDescending(): List<UByte> {\n  return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n
*\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedDescending(): List<UShort> {\n  return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns an array of type [ByteArray], which is a view of this array where each element is a signed reinterpretation\n
*\n * of the corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.asByteArray(): ByteArray {\n  return storage\n}\n\n/**\n * Returns an array of type [IntArray], which

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is a view of this array where each element is a signed reinterpretation of the corresponding element of this array.

```

*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.asIntArray(): IntArray {\n    return storage\n}\n\n**\n * Returns a [List] that wraps the original array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic expect fun UIntArray.asList():
List<UInt>\n\n**\n * Returns a [List] that wraps the original array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic expect fun ULongArray.asList():
List<ULong>\n\n**\n * Returns a [List] that wraps the original array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic expect
fun UByteArray.asList(): List<UByte>\n\n**\n * Returns a [List] that wraps the original array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes\npublic expect fun UShortArray.asList():
List<UShort>\n\n**\n * Returns an array of type [LongArray], which is a view of this array where each element is
a signed reinterpretation of the corresponding element of this array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.asLongArray(): LongArray {\n    return storage\n}\n\n**\n * Returns an array of type [ShortArray],
which is a view of this array where each element is a signed reinterpretation of the corresponding element of this
array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.asShortArray(): ShortArray {\n    return storage\n}\n\n**\n * Returns an array of type [UByteArray],
which is a view of this array where each element is an
unsigned reinterpretation of the corresponding element of this array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.asUByteArray(): UByteArray {\n    return UByteArray(this)\n}\n\n**\n * Returns an array of type
[UIntArray], which is a view of this array where each element is an unsigned reinterpretation of the
corresponding element of this array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
IntArray.asUIntArray(): UIntArray {\n    return UIntArray(this)\n}\n\n**\n * Returns an array of type
[ULongArray], which is a view of this array where each element is an unsigned reinterpretation of the
corresponding element of this array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
LongArray.asULongArray(): ULongArray {\n    return ULongArray(this)\n}\n\n**\n * Returns an array of type
[UShortArray],
which is a view of this array where each element is an unsigned reinterpretation of the corresponding element of
this array.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline
fun ShortArray.asUShortArray(): UShortArray {\n    return UShortArray(this)\n}\n\n**\n * Returns `true` if the
two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements
in the same order.\n
*^@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")@SinceKotlin("1.3")@DeprecatedSinceKotlin(hiddenSince =
"1.4")@ExperimentalUnsignedTypes\npublic infix fun UIntArray.contentEquals(other: UIntArray): Boolean {\n
return this.contentEquals(other)\n}\n\n**\n * Returns `true` if the two specified arrays are *structurally* equal to
one another,\n * i.e. contain the same number of the same elements in the same order.\n
*^@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")@SinceKotlin("1.3")@DeprecatedSinceKotlin(hiddenSince =
"1.4")@ExperimentalUnsignedTypes\npublic infix fun ULongArray.contentEquals(other: ULongArray):
Boolean {\n    return this.contentEquals(other)\n}\n\n**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n
*^@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")@SinceKotlin("1.3")@DeprecatedSinceKotlin(hiddenSince =
"1.4")@ExperimentalUnsignedTypes\npublic infix fun UByteArray.contentEquals(other: UByteArray): Boolean
{\n    return this.contentEquals(other)\n}\n\n**\n * Returns `true` if the two specified arrays are *structurally* equal

```

```

to one another,\n * i.e. contain the same number of the same elements in the same order.\n */\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic
infix fun UShortArray.contentEquals(other: UShortArray): Boolean {\n    return
this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one
another,\n * i.e. contain the same number of the same elements in the same order.\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun
UIntArray?.contentEquals(other:
UIIntArray?): Boolean {\n    return this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the two
specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the
same order.\n */\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun
ULongArray?.contentEquals(other: ULongArray?): Boolean {\n    return
this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally*
equal to one another,\n * i.e. contain the same number of the same elements
in the same order.\n */\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun
UByteArray?.contentEquals(other: UByteArray?): Boolean {\n    return
this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally*
equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray?.contentEquals(other:
UShortArray?): Boolean {\n    return this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns a hash code
based on the contents of this array as if it is [List].\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid
deprecation warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n
*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n
*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based
on the contents of this array as if it is [List].\n */\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic
fun UIntArray?.contentHashCode(): Int {\n    return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash
code based on the contents of this array as if it is [List].\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray?.contentHashCode(): Int {\n
return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it
is [List].\n */\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray?.contentHashCode(): Int {\n    return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash
code based on the contents of this array as if it is [List].\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray?.contentHashCode(): Int {\n
return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a string representation of the contents of the specified
array

```

```

as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentToString(): String {\n return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentToString(): String {\n return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentToString(): String {\n return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.contentToString(): String {\n return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray?.contentToString(): String {\n
return this?.joinToString(",
", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray?.contentToString(): String {\n
return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of
the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray?.contentToString(): String {\n
return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of
the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic
fun UShortArray?.contentToString(): String {\n return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n
* Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the
same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n *
@param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to
copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n *
@param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this
array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange
doesn't fit into the [destination] array starting at the specified [destinationOffset],\n
* or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.copyInto(destination: UIntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size):
UIntArray {\n storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n return
destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n *

```

It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy,

size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.copyInto(destination: ULongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size):  
ULongArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return  
destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n *  
It's allowed to pass the same array in the [destination] and even specify the
```

```
subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * \n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the  
beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the  
subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or  
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex  
> endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array  
starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.copyInto(destination: UByteArray, destinationOffset: Int = 0, startIndex:  
Int = 0, endIndex: Int = size): UByteArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex,  
endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and  
returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so  
that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param  
destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the  
beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the  
subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or  
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex  
> endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination]  
array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices  
range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.copyInto(destination: UShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int =  
size): UShortArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return  
destination\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample  
samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.copyOfOf(): UIntArray {\n    return UIntArray(storage.copyOfOf())\n}\n\n/**\n * Returns new array which is  
a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline fun ULongArray.copyOfOf(): ULongArray {\n    return ULongArray(storage.copyOfOf())\n}\n\n/**\n * Returns  
new array which is a copy of the original array.\n * \n * @sample  
samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```

UByteArray.copyOf(): UByteArray {\n  return UByteArray(storage.copyOf())\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOfOf
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
UShortArray.copyOf(): UShortArray {\n  return UShortArray(storage.copyOf())\n}\n\n/**\n * Returns new array
which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at
the end with zero values if necessary.\n * \n * - If [newSize] is
less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than
the size of the original array, the extra elements in the copy array are filled with zero values.\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
UIntArray.copyOf(newSize: Int): UIntArray {\n  return UIntArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either
truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the
original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original
array, the extra elements in the copy array are filled with zero values.\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
ULongArray.copyOf(newSize: Int): ULongArray
{\n  return ULongArray(storage.copyOf(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original
array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if
necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the
[newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are
filled with zero values.\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
UByteArray.copyOf(newSize: Int): UByteArray {\n  return UByteArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either
truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the
original array, the copy array is truncated to the [newSize].\n * - If [newSize]
is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
UShortArray.copyOf(newSize: Int): UShortArray {\n  return UShortArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start
of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to copy.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
UIntArray.copyOfRange(fromIndex: Int, toIndex: Int): UIntArray {\n  return
UIntArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n *
Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the
start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to copy.\n * \n *
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this
array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun
ULongArray.copyOfRange(fromIndex: Int, toIndex: Int): ULongArray {\n  return
ULongArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n *
@param toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n * \n @SinceKotlin("1.3")\n @ExperimentalUnsignedTypes\n @kotlin.internal.InlineOnly\n public inline fun

```

```

ByteArray.copyOfRange(fromIndex: Int, toIndex: Int): ByteArray {
    return
    ByteArray(storage.copyOfRange(fromIndex, toIndex))
}

/**
 * Returns a new array which is a copy of the
 * specified range of the original array.
 * @param fromIndex the start of the range (inclusive) to copy.
 * @param toIndex the end of the range (exclusive) to copy.
 * @throws IndexOutOfBoundsException if
 * [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
 * @throws
 * IllegalArgumentException if [fromIndex] is greater than [toIndex].
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun
UShortArray.copyOfRange(fromIndex: Int, toIndex: Int): UShortArray {
    return
    UShortArray(storage.copyOfRange(fromIndex, toIndex))
}

/**
 * Fills this array or its subrange with the specified [element] value.
 * @param fromIndex the start of the
 * range (inclusive) to fill, 0 by default.
 * @param toIndex the end of the range (exclusive) to fill, size of this array
 * by default.
 * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater
 * than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun
UIntArray.fill(element: UInt, fromIndex:
Int = 0, toIndex: Int = size): Unit {
    storage.fill(element.toInt(), fromIndex, toIndex)
}

/**
 * Fills this array
 * or its subrange with the specified [element] value.
 * @param fromIndex the start of the range (inclusive) to
 * fill, 0 by default.
 * @param toIndex the end of the range (exclusive) to fill, size of this array by default.
 * @throws IndexOutOfBoundsException if [fromIndex] is less than
 * zero or [toIndex] is greater than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is
 * greater than [toIndex].
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun
ULongArray.fill(element: ULong, fromIndex: Int = 0, toIndex: Int = size): Unit {
    storage.fill(element.toLong(),
fromIndex, toIndex)
}

/**
 * Fills this array or its subrange with the specified [element] value.
 * @param fromIndex the start of the range (inclusive) to fill, 0 by default.
 * @param toIndex the end of the range
 * (exclusive) to fill, size of this array by default.
 * @throws IndexOutOfBoundsException if [fromIndex] is less
 * than zero or [toIndex] is greater than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is
 * greater than [toIndex].
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun
ByteArray.fill(element: UByte, fromIndex: Int = 0, toIndex: Int = size): Unit {
    storage.fill(element.toByte(),
fromIndex,
toIndex)
}

/**
 * Fills this array or its subrange with the specified [element] value.
 * @param
 * fromIndex the start of the range (inclusive) to fill, 0 by default.
 * @param toIndex the end of the range (exclusive)
 * to fill, size of this array by default.
 * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
 * or [toIndex] is greater than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is greater
 * than [toIndex].
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun
UShortArray.fill(element:
UShort, fromIndex: Int = 0, toIndex: Int = size): Unit {
    storage.fill(element.toShort(), fromIndex,
toIndex)
}

/**
 * Returns the range of valid indices for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val UIntArray.indices: IntRange
    get()
    = storage.indices

/**
 * Returns the range of valid indices for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public
inline val ULongArray.indices: IntRange
    get()
    = storage.indices

/**
 * Returns the range of valid indices
 * for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val ByteArray.indices:
IntRange
    get()
    = storage.indices

/**
 * Returns the range of valid indices for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val UShortArray.indices: IntRange
    get()
    = storage.indices

/**
 * Returns the last valid index for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val UIntArray.lastIndex: Int
    get()
    = storage.lastIndex

/**
 * Returns the last valid index for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val ULongArray.lastIndex: Int
    get()
    = storage.lastIndex

/**
 * Returns the last valid index for the array.
 */
@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public inline val ByteArray.lastIndex: Int

```

```

    get() = storage.lastIndex\n\n**\n * Returns the last valid index for the array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic inline val UShortArray.lastIndex: Int\n    get() =
storage.lastIndex\n\n**\n * Returns an array containing all elements of the original array and then the given
[element].\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
operator fun UIntArray.plus(element: UInt): UIntArray {\n    return UIntArray(storage +
element.toInt())\n}\n\n**\n * Returns an array containing all elements of the original array and then the given
[element].\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
operator fun ULongArray.plus(element: ULong): ULongArray {\n    return ULongArray(storage +
element.toLong())\n}\n\n**\n * Returns an array containing all elements of the original array and then the given
[element].\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline operator fun UByteArray.plus(element: UByte): UByteArray {\n    return UByteArray(storage +
element.toByte())\n}\n\n**\n * Returns an array containing all elements of the original array and then the given
[element].\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
operator fun UShortArray.plus(element: UShort): UShortArray {\n    return UShortArray(storage +
element.toShort())\n}\n\n**\n * Returns an array containing all elements of the original array and then all elements
of the given [elements] collection.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic operator
fun UIntArray.plus(elements: Collection<UInt>): UIntArray {\n    var index = size\n    val result =
storage.copyOf(size + elements.size)\n    for (element in elements) result[index++] = element.toInt()\n    return
UIntArray(result)\n}\n\n**\n * Returns an array containing all elements of the original array and
then all elements of the given [elements] collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic operator fun ULongArray.plus(elements:
Collection<ULong>): ULongArray {\n    var index = size\n    val result = storage.copyOf(size + elements.size)\n
for (element in elements) result[index++] = element.toLong()\n    return ULongArray(result)\n}\n\n**\n * Returns
an array containing all elements of the original array and then all elements of the given [elements] collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic operator fun UByteArray.plus(elements:
Collection<UByte>): UByteArray {\n    var index = size\n    val result = storage.copyOf(size + elements.size)\n
for (element in elements) result[index++] = element.toByte()\n    return UByteArray(result)\n}\n\n**\n * Returns
an array containing all elements of the original array and then all elements of the given [elements] collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
operator fun UShortArray.plus(elements: Collection<UShort>): UShortArray {\n    var index = size\n    val result =
storage.copyOf(size + elements.size)\n    for (element in elements) result[index++] = element.toShort()\n    return
UShortArray(result)\n}\n\n**\n * Returns an array containing all elements of the original array and then all
elements of the given [elements] array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UIntArray.plus(elements: UIntArray): UIntArray {\n    return UIntArray(storage + elements.storage)\n}\n\n**\n *
Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
ULongArray.plus(elements: ULongArray): ULongArray {\n    return ULongArray(storage +
elements.storage)\n}\n\n**\n * Returns an array containing all elements
of the original array and then all elements of the given [elements] array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UByteArray.plus(elements: UByteArray): UByteArray {\n    return UByteArray(storage +
elements.storage)\n}\n\n**\n * Returns an array containing all elements of the original array and then all elements
of the given [elements] array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun
UShortArray.plus(elements: UShortArray): UShortArray {\n    return UShortArray(storage +
elements.storage)\n}\n\n**\n * Sorts the array in-place.\n * \n * @sample
samples.collections.Arrays.Sorting.sortArray\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic

```

```

fun UIntArray.sort(): Unit {
    if (size > 1) sortArray(this, 0, size)
}

@sample samples.collections.Arrays.Sorting.sortArray

@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun ULongArray.sort(): Unit {
    if (size > 1) sortArray(this, 0, size)
}

@sample samples.collections.Arrays.Sorting.sortArray

@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun UByteArray.sort(): Unit {
    if (size > 1)
        sortArray(this, 0, size)
}

@sample
samples.collections.Arrays.Sorting.sortArray

@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
public fun UShortArray.sort(): Unit {
    if (size > 1) sortArray(this, 0, size)
}

@sample
@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@ExperimentalUnsignedTypes
public fun UIntArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    sortArray(this, fromIndex, toIndex)
}

@sample
@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@ExperimentalUnsignedTypes
public fun ULongArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    sortArray(this, fromIndex, toIndex)
}

@sample
@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@ExperimentalUnsignedTypes
public fun UByteArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    sortArray(this, fromIndex, toIndex)
}

@sample
@param fromIndex the start of the range (inclusive) to sort, 0 by default.
@param toIndex the end of the range (exclusive) to sort, size of this array by default.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@ExperimentalUnsignedTypes
public fun UShortArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    sortArray(this, fromIndex, toIndex)
}

@sample
@param fromIndex the start of the range (inclusive) to sort.
@param toIndex the end of the range (exclusive) to sort.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].

@sample samples.collections.Arrays.Sorting.sortRangeOfArray

@SinceKotlin("1.4")
@ExperimentalUnsignedTypes
public fun UIntArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {
    sort(fromIndex, toIndex)
    reverse(fromIndex, toIndex)
}

@sample
@param fromIndex the start of the range (inclusive) to sort.
@param toIndex the end of the range (exclusive) to sort.
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
@throws

```



IllegalArgumentException if [fromIndex] is greater than [toIndex].\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortDescending(fromIndex:
Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements
of the array in the specified range
in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param fromIndex
the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n * \n *
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this
array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortDescending(fromIndex:
Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements
of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort
order.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range
(exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than
[toIndex].\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Returns an array of type [ByteArray], which is a copy of this array where
each element is a signed reinterpretation\n * of the corresponding element of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.toByteArray(): ByteArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns an array of type
[IntArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding
element of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.toIntArray(): IntArray {\n    return storage.copyOf()\n}\n\n/**\n *
Returns an array of type [LongArray], which is a copy of this array where each element is a signed
reinterpretation\n * of the corresponding element of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.toLongArray(): LongArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns an array of type
[ShortArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding
element of this array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.toShortArray(): ShortArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns a *typed* object array
containing all of the elements of this primitive array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.toTypedArray(): Array<UInt>
{\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object
array containing all of the elements of this primitive array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.toTypedArray():
Array<ULong> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array
containing all of the elements of this primitive array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.toTypedArray():
Array<UByte> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array
containing all of the elements of this primitive array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.toTypedArray():
Array<UShort> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of UByte containing
all of the elements of this generic array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
Array<out UByte>.toUByteArray(): UByteArray {\n    return UByteArray(size) { index -> this[index]
}\n}\n\n/**\n * Returns an array of type [UByteArray], which is a copy of this array where each element is an
unsigned reinterpretation\n * of the corresponding element of this array.\n
```

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.toUByteArray(): UByteArray {\n    return UByteArray(this.copyOf())\n}\n\n/**\n * Returns an array of
UInt containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out UInt>.toUIntArray(): UIntArray
{\n    return UIntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [UIntArray], which is a
copy of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.toUIntArray(): UIntArray {\n    return UIntArray(this.copyOf())\n}\n\n/**\n
 * Returns an array of ULong containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out ULong>.toULongArray():
ULongArray {\n    return ULongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type
[ULongArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.toULongArray(): ULongArray {\n    return ULongArray(this.copyOf())\n}\n\n/**\n * Returns an array
of UShort containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out UShort>.toUShortArray():
UShortArray {\n    return UShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type
[UShortArray], which is a copy of this array where each element is an unsigned reinterpretation\n
 * of the corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.toUShortArray(): UShortArray {\n    return UShortArray(this.copyOf())\n}\n\n/**\n * Returns a [Map]
where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to
each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map
preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UIntArray.associateWith(valueSelector: (UInt) -> V): Map<UInt, V> {\n    val result = LinkedHashMap<UInt,
V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements
from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If
any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry
iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
ULongArray.associateWith(valueSelector: (ULong) -> V): Map<ULong, V> {\n    val result =
LinkedHashMap<ULong, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n
 * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last
one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n
 * \n * @sample
@sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UByteArray.associateWith(valueSelector: (UByte) -> V): Map<UByte, V> {\n    val result =
LinkedHashMap<UByte, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n
 * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last
one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n
 * \n *

```



```

invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.flatMap(transform: (UShort) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original array.\n * \n
* @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.flatMapIndexed(transform: (index: Int, UInt) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n
* @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.flatMapIndexed(transform: (index: Int, ULong) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.flatMapIndexed(transform: (index: Int, UByte) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n
* @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R> UShortArray.flatMapIndexed(transform: (index: Int, UShort) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> UIntArray.flatMapIndexedTo(destination: C, transform: (index: Int, UInt) ->
Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++, element)\n
destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and
its index in the original array, to the given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> ULongArray.flatMapIndexedTo(destination: C, transform: (index: Int, ULong) ->
Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++, element)\n
destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :

```

MutableCollection<in R>> UByteArray.flatMapIndexedTo(destination:

C, transform: (index: Int, UByte) -> Iterable<R>): C {  
 var index = 0  
 for (element in this) {  
 val list = transform(index++, element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Appends all elements yielded from results of [transform] function being invoked on each element and its index in the original array, to the given [destination].

\*  
@SinceKotlin("1.4")  
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)  
@OverloadResolutionByLambdaReturnType  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <R, C : MutableCollection<in R>> UShortArray.flatMapIndexedTo(destination: C, transform: (index: Int, UShort) -> Iterable<R>): C {  
 var index = 0  
 for (element in this) {  
 val list = transform(index++, element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Appends all elements yielded from results of [transform] function being invoked

on each element of original array, to the given [destination].

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <R, C : MutableCollection<in R>> UIntArray.flatMapTo(destination: C, transform: (UInt) -> Iterable<R>): C {  
 for (element in this) {  
 val list = transform(element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <R, C : MutableCollection<in R>> ULongArray.flatMapTo(destination: C, transform: (ULong) -> Iterable<R>): C {  
 for (element in this) {  
 val list = transform(element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <R, C : MutableCollection<in R>> UByteArray.flatMapTo(destination: C, transform: (UByte) -> Iterable<R>): C {  
 for (element in this) {  
 val list = transform(element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <R, C : MutableCollection<in R>> UShortArray.flatMapTo(destination: C, transform: (UShort) -> Iterable<R>): C {  
 for (element in this) {  
 val list = transform(element)  
 destination.addAll(list)  
 }  
 return destination  
}  
\* Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and returns a map where each group key is associated with a list of corresponding elements.  
\* The returned map preserves the entry iteration order of the keys produced from the original array.  
@sample samples.collections.Collections.Transformations.groupBy

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <K> UIntArray.groupBy(keySelector: (UInt) -> K): Map<K, List<UInt>> {  
 return groupByTo(LinkedHashMap<K, MutableList<UInt>>(), keySelector)  
}  
\* Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and returns a map where each group key is associated with a list of corresponding elements.  
\* The returned map preserves the entry iteration order of the keys produced from the original array.  
@sample samples.collections.Collections.Transformations.groupBy

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <K> ULongArray.groupBy(keySelector: (ULong) -> K): Map<K, List<ULong>> {  
 return groupByTo(LinkedHashMap<K, MutableList<ULong>>(), keySelector)  
}  
\* Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and returns a map where each group key is associated with a list of corresponding elements.  
\* The returned map preserves the entry iteration order of the keys produced from the original array.  
@sample samples.collections.Collections.Transformations.groupBy

\*  
@SinceKotlin("1.3")  
@ExperimentalUnsignedTypes  
@kotlin.internal.InlineOnly  
public inline fun <K>

```

ByteArray.groupBy(keySelector: (UByte) -> K): Map<K, List<UByte>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<UByte>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector]
function\n * applied to each element and returns a map where each group key is associated with a list of
corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the
original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>
UShortArray.groupBy(keySelector: (UShort) -> K): Map<K, List<UShort>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<UShort>>(), keySelector)\n}\n\n/**\n * Groups values returned by
the [valueTransform] function applied to each element of the original array\n * by the key returned by the given
[keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of
corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the
original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UIntArray.groupBy(keySelector: (UInt) -> K, valueTransform: (UInt) -> V): Map<K, List<V>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
ULongArray.groupBy(keySelector: (ULong) -> K, valueTransform:
(ULong) -> V): Map<K, List<V>> {\n  return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,
valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of
the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns
a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves
the entry iteration order of the keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UByteArray.groupBy(keySelector: (UByte) -> K, valueTransform: (UByte) -> V): Map<K, List<V>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element
of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and
returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map
preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UShortArray.groupBy(keySelector: (UShort) -> K, valueTransform: (UShort) -> V): Map<K, List<V>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups elements
of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to
the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M
: MutableMap<in K, MutableList<UInt>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K): M {\n
for (element in this) {\n  val key = keySelector(element)\n  val list = destination.getOrPut(key) {
ArrayList<UInt>() }\n  list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the

```

```

[destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M :
MutableMap<in K, MutableList<ULong>>> ULongArray.groupByTo(destination: M, keySelector: (ULong)
-> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list =
destination.getOrPut(key) { ArrayList<ULong>() }\n list.add(element)\n }\n return destination}\n\n/**\n *
Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each
element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n *
@return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M :
MutableMap<in K, MutableList<UByte>>> UByteArray.groupByTo(destination: M, keySelector: (UByte) -> K):
M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) {
ArrayList<UByte>() }\n list.add(element)\n }\n return destination}\n\n/**\n * Groups elements
of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to
the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M :
MutableMap<in K, MutableList<UShort>>> UShortArray.groupByTo(destination: M, keySelector: (UShort) -> K):
M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) {
ArrayList<UShort>() }\n list.add(element)\n }\n return destination}\n\n/**\n * Groups values returned by
the [valueTransform] function applied to each element of the original array\n * by the key returned by the given
[keySelector] function applied to the element\n * and puts to the [destination] map each group key associated
with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K,
valueTransform: (UInt) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list =
destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return
destination}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> ULongArray.groupByTo(destination: M, keySelector: (ULong) -> K,
valueTransform: (ULong) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list
= destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return
destination}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <K, V, M : MutableMap<in K, MutableList<V>>> UByteArray.groupByTo(destination: M, keySelector:
(UByte) -> K, valueTransform: (UByte) -> V): M {\n for (element in this) {\n val key =
keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n
list.add(valueTransform(element))\n }\n return destination}\n\n/**\n * Groups values returned by the
[valueTransform] function applied to each element of the original array\n * by the key returned by the given
[keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a
list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample

```

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samples.collections.Collections.Transformations.groupByKeyAndValues\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V,\n M : MutableMap<in K, MutableList<V>>> UShortArray.groupByTo(destination: M, keySelector:\n (UShort) -> K, valueTransform: (UShort) -> V): M {\n for (element in this) {\n val key =\n keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Returns a list containing the results of\n applying the given [transform] function\n * to each element in the original array.\n * \n * @sample\n samples.collections.Collections.Transformations.map\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\n UIntArray.map(transform: (UInt) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original\n array.\n * \n * @sample\n samples.collections.Collections.Transformations.map\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\n ULongArray.map(transform:\n (ULong) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing\n the results of applying the given [transform] function\n * to each element in the original array.\n * \n * @sample\n samples.collections.Collections.Transformations.map\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\n UByteArray.map(transform: (UByte) -> R): List<R> {\n return mapTo(ArrayList<R>(size),\n transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each\n element in the original array.\n * \n * @sample\n samples.collections.Collections.Transformations.map\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\n UShortArray.map(transform: (UShort) -> R): List<R> {\n return mapTo(ArrayList<R>(size),\n transform)\n}\n\n/**\n * Returns a list containing the results of applying the given\n [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that\n takes the index of an element and the element itself\n * and returns the result of the transform applied to the\n element.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline\n fun <R> UIntArray.mapIndexed(transform: (index: Int, UInt) -> R): List<R> {\n return\n mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the\n given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function\n that takes the index of an element and the element itself\n * and returns the result of the transform applied to the\n element.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline\n fun <R> ULongArray.mapIndexed(transform: (index: Int, ULong) -> R): List<R> {\n return\n mapIndexedTo(ArrayList<R>(size),\n transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each\n element and its index in the original array.\n * @param [transform] function that takes the index of an element and\n the element itself\n * and returns the result of the transform applied to the element.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\n UByteArray.mapIndexed(transform: (index: Int, UByte) -> R): List<R> {\n return\n mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the\n given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function\n that takes the index of an element and the element itself\n * and returns the result of the transform applied to the\n element.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline\n fun <R> UShortArray.mapIndexed(transform:\n (index: Int, UShort) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array\n * and appends the results\n to the given [destination].\n * @param [transform] function that takes the index of an element and the element\n itself\n * and returns the result of the transform applied to the element.\n

```



```

*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> UIntArray.mapIndexedTo(destination: C, transform: (index: Int, UInt) -> R): C {\n  var
index = 0\n  for (item in this)\n    destination.add(transform(index++, item))\n  return destination\n}\n\n/**\n *
Applies the given [transform] function to each element and its index in the original array\n * and appends the results
to the given [destination].\n * @param [transform] function that takes the index of an element and the element
itself\n * and returns the result of the transform applied to the element.\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> ULongArray.mapIndexedTo(destination: C, transform: (index: Int, ULong) -> R): C {\n
var index = 0\n  for (item in this)\n    destination.add(transform(index++, item))\n  return
destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n
* and appends the results to the given [destination].\n * @param [transform] function that takes the index of an
element and the element itself\n * and returns the result of the transform applied to the element.\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> UByteArray.mapIndexedTo(destination: C, transform: (index: Int, UByte) -> R): C {\n
var index = 0\n  for (item in this)\n
    destination.add(transform(index++, item))\n  return destination\n}\n\n/**\n * Applies the given [transform]
function to each element and its index in the original array\n * and appends the results to the given [destination].\n
* @param [transform] function that takes the index of an element and the element itself\n * and returns the result of
the transform applied to the element.\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> UShortArray.mapIndexedTo(destination: C, transform: (index: Int, UShort) -> R): C {\n
var index = 0\n  for (item in this)\n    destination.add(transform(index++, item))\n  return
destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and
appends the results to the given [destination].\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in
R>> UIntArray.mapTo(destination: C, transform: (UInt) -> R): C {\n  for (item in this)\n
    destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function to each
element of the original array\n * and appends the results to the given [destination].\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> ULongArray.mapTo(destination: C, transform: (ULong) -> R): C {\n  for (item in
this)\n    destination.add(transform(item))\n  return destination\n}\n\n/**\n * Applies the given [transform]
function to each element of the original array\n * and appends the results to the given [destination].\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> UByteArray.mapTo(destination: C, transform: (UByte) -> R): C {\n  for (item in this)\n
    destination.add(transform(item))\n
    return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n
* and appends the results to the given [destination].\n
*^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^@kotlin.internal.InlineOnly^public inline fun <R, C :
MutableCollection<in R>> UShortArray.mapTo(destination: C, transform: (UShort) -> R): C {\n  for (item in
this)\n    destination.add(transform(item))\n  return destination\n}\n\n/**\n * Returns a lazy [Iterable] that wraps
each element of the original array\n * into an [IndexedValue] containing the index of that element and the element
itself.\n *^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^public fun UIntArray.withIndex():
Iterable<IndexedValue<UInt>> {\n  return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and the
element itself.\n *^@SinceKotlin("1.3")^@ExperimentalUnsignedTypes^public
fun ULongArray.withIndex(): Iterable<IndexedValue<ULong>> {\n  return IndexingIterable { iterator()
}\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original array\n * into an [IndexedValue]

```

containing the index of that element and the element itself.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.withIndex():
```

```
Iterable<IndexedValue<UByte>> {\n    return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]  
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and the  
element itself.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.withIndex():  
Iterable<IndexedValue<UShort>> {\n    return IndexingIterable { iterator() }\n}\n\n/**\n * Returns `true` if all  
elements match the given [predicate].\n * \n * Note that if the array contains no elements, the function returns  
`true`\n
```

```
 * because there are no elements in it that do not match the predicate.\n * See a more detailed explanation of this  
logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth) article.\n * \n * @sample  
samples.collections.Collections.Aggregates.all\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.all(predicate: (UInt) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return  
false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the  
array contains no elements, the function returns `true`\n * because there are no elements in it that do not match the  
predicate.\n * See a more detailed explanation of this logic concept in ["Vacuous  
truth"](https://en.wikipedia.org/wiki/Vacuous_truth) article.\n * \n * @sample  
samples.collections.Collections.Aggregates.all\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline fun ULongArray.all(predicate: (ULong) -> Boolean): Boolean {\n    for (element in this) if  
(!predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given  
[predicate].\n * \n * Note that if the array contains no elements, the function returns `true`\n * because there are no  
elements in it that do not match the predicate.\n * See a more detailed explanation of this logic concept in  
["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth) article.\n * \n * @sample  
samples.collections.Collections.Aggregates.all\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.all(predicate: (UByte) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return  
false\n    return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * Note that if the  
array contains no elements, the function  
returns `true`\n * because there are no elements in it that do not match the predicate.\n * See a more detailed  
explanation of this logic concept in ["Vacuous truth"](https://en.wikipedia.org/wiki/Vacuous_truth) article.\n * \n * \n * @sample  
samples.collections.Collections.Aggregates.all\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.all(predicate: (UShort) -> Boolean): Boolean {\n    for (element in this) if (!predicate(element)) return  
false\n    return true\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample  
samples.collections.Collections.Aggregates.any\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.any(): Boolean {\n    return storage.any()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample  
samples.collections.Collections.Aggregates.any\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline fun ULongArray.any(): Boolean {\n    return storage.any()\n}\n\n/**\n * Returns `true` if array has at least  
one element.\n * \n * @sample  
samples.collections.Collections.Aggregates.any\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.any(): Boolean {\n    return storage.any()\n}\n\n/**\n * Returns `true` if array has at least one  
element.\n * \n * @sample  
samples.collections.Collections.Aggregates.any\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.any(): Boolean {\n    return storage.any()\n}\n\n/**\n * Returns `true` if at least one element matches  
the given [predicate].\n * \n * @sample  
samples.collections.Collections.Aggregates.anyWithPredicate\n
```

```

*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.any(predicate: (UInt) -> Boolean): Boolean {\n
    for (element in this) if (predicate(element)) return true\n    return false\n}\n\n/**\n * Returns `true` if at least one
element matches the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.any(predicate: (ULong) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.any(predicate: (UByte) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.any(predicate: (UShort) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
true\n    return false\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.count(predicate: (UInt) -> Boolean): Int {\n    var count = 0\n    for (element in this) if
(predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given
[predicate].\n *^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.count(predicate: (ULong) -> Boolean): Int {\n    var count = 0\n    for (element in this) if
(predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements
matching the given [predicate].\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.count(predicate: (UByte) -> Boolean): Int {\n    var count = 0\n    for (element in this) if
(predicate(element)) ++count\n    return count\n}\n\n/**\n * Returns the number of elements matching the given
[predicate].\n *^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.count(predicate: (UShort) -> Boolean): Int {\n    var count = 0\n    for (element in this) if
(predicate(element)) ++count\n    return count\n}\n\n/**\n * Accumulates value starting with [initial] value and
applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes current accumulator
value and an element, and calculates the next accumulator value.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic
inline fun <R> UIntArray.fold(initial: R, operation: (acc: R, UInt) -> R): R {\n    var accumulator = initial\n    for
(element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and
each element.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.fold(initial: R, operation: (acc: R, ULong) -> R): R {\n    var accumulator = initial\n    for (element in
this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value
starting with [initial] value
and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes current accumulator
value and an element, and calculates the next accumulator value.\n
*^@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.fold(initial: R, operation: (acc: R, UByte) -> R): R {\n    var accumulator = initial\n    for (element in
this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value

```

starting with [initial] value and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R> UShortArray.fold(initial: R, operation: (acc: R, UShort) -> R): R {\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): R {\n    var index = 0\n    var accumulator = initial\n    for (element in this) accumulator = operation(index++, accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): R {\n    var index = 0\n    var accumulator = initial\n    for (element in this) accumulator = operation(index++, accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UByte) -> R): R {\n    var index = 0\n    var accumulator = initial\n    for (element in this) accumulator = operation(index++, accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UShort) -> R): R {\n    var index = 0\n    var accumulator = initial\n    for (element in this) accumulator = operation(index++, accumulator, element)\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.foldRight(initial: R, operation: (UInt, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the

```

next accumulator value.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nULongArray.foldRight(initial: R, operation: (ULong, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUByteArray.foldRight(initial: R, operation: (UByte, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUShortArray.foldRight(initial: R, operation: (UShort, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUIntArray.foldRightIndexed(initial: R, operation: (index: Int, UInt, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nULongArray.foldRightIndexed(initial: R, operation: (index: Int, ULong, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation]
```

from right to left\n \* to each element with its index in the original array and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes the index of an element, the element itself\n \* and current accumulator value, and calculates the next accumulator value.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUByteArray.foldRightIndexed(initial: R, operation: (index: Int, UByte, acc: R) -> R): R {\n    var index = lastIndex\n    var accumulator = initial\n    while (index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return accumulator\n}\n\n*\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n
```

\n \* \n \* @param [operation] function that takes the index of an element, the element itself\n \* and current accumulator value, and calculates the next accumulator value.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUShortArray.foldRightIndexed(initial: R, operation: (index: Int, UShort, acc: R) -> R): R {\n    var index =
```



```

element.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxOrThrow-
U")\n@\n@ExperimentalUnsignedTypes\n@\n@Suppress("CONFLICTING_OVERLOADS")\n\npublic
fun UShortArray.max(): UShort {\n    if (isEmpty()) throw NoSuchElementException()\n    var max = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (max < e) max = e\n    }\n    return max\n}\n\n/**\n * Returns
the first element yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the
array is empty.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n
*\n@\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow-
U")\n@\n@ExperimentalUnsignedTypes\n@\n@kotlin.internal.InlineOnly\n@\n@Suppress("CONFLICTING_OVERLOADS
")\n\npublic inline fun <R : Comparable<R>> UIntArray.maxBy(selector: (UInt) -> R): UInt {\n    if (isEmpty())
throw NoSuchElementException()\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex ==
0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem
= e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the
largest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n *
@sample samples.collections.Collections.Aggregates.maxBy\n
*\n@\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow-
U")\n@\n@ExperimentalUnsignedTypes\n@\n@kotlin.internal.InlineOnly\n@\n@Suppress("CONFLICTING_OVERLOADS
")\n\npublic inline fun <R : Comparable<R>> ULongArray.maxBy(selector: (ULong) -> R): ULong {\n    if
(isEmpty()) throw NoSuchElementException()\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element
yielding the largest value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * @sample samples.collections.Collections.Aggregates.maxBy\n
*\n@\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow-
U")\n@\n@ExperimentalUnsignedTypes\n@\n@kotlin.internal.InlineOnly\n@\n@Suppress("CONFLICTING_OVERLOADS
")\n\npublic inline fun <R : Comparable<R>> UByteArray.maxBy(selector: (UByte) -> R): UByte {\n    if
(isEmpty()) throw NoSuchElementException()\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the largest
value of the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.maxBy\n
*\n@\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxByOrThrow-
U")\n@\n@ExperimentalUnsignedTypes\n@\n@kotlin.internal.InlineOnly\n@\n@Suppress("CONFLICTING_OVERLOADS
")\n\npublic inline fun <R : Comparable<R>> UShortArray.maxBy(selector: (UShort) -> R): UShort {\n    if
(isEmpty()) throw NoSuchElementException()\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or
`null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n
*\n@\n@SinceKotlin("1.4")\n@\n@ExperimentalUnsignedTypes\n@\n@kotlin.internal.InlineOnly\n\npublic inline fun <R :
Comparable<R>> UIntArray.maxByOrNull(selector: (UInt) -> R): UInt? {\n    if (isEmpty()) return null\n    var
maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue =
selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v) {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample

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samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.maxByOrNull(selector: (ULong) -> R): ULong? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n
    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n
for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v) {\n        maxElem =
e\n        maxValue = v\n    }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the
largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.maxByOrNull(selector: (UByte) -> R): UByte? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n        maxElem
= e\n        maxValue = v\n    }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first element yielding the
largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.maxByOrNull(selector: (UShort) -> R): UShort? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n        maxElem = e\n        maxValue = v\n    }\n    }\n    return maxElem\n}\n\n/**\n * Returns the largest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.maxOf(selector: (UInt) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.maxOf(selector: (ULong) -> Double): Double {\n  if (isEmpty()) throw
NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.maxOf(selector: (UByte) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n
  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n

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```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOf(selector: (UShort) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector]
function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`,
the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.maxOf(selector: (UInt) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.maxOf(selector: (ULong) -> Float): Float {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.maxOf(selector: (UByte)
-> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for
(i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return
maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOf(selector: (UShort) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.maxOf(selector: (UInt) -> R): R {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic

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inline fun <R : Comparable<R>> ULongArray.maxOf(selector: (ULong) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (maxValue < v) {
            maxValue = v
        }
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array.
* @throws NoSuchElementException if the array is empty.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R : Comparable<R>> UByteArray.maxOf(selector: (UByte) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (maxValue < v) {
            maxValue = v
        }
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array.
* @throws NoSuchElementException if the array is empty.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R : Comparable<R>> UShortArray.maxOf(selector: (UShort) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (maxValue < v) {
            maxValue = v
        }
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun UIntArray.maxOfOrNull(selector: (UInt) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun ULongArray.maxOfOrNull(selector: (ULong) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
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public inline fun UByteArray.maxOfOrNull(selector: (UByte) -> Double): Double? {
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    }
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}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.
*/
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun UShortArray.maxOfOrNull(selector: (UShort) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}
Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of

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values produced by [selector] function is `NaN`, the returned result is `NaN`.
*/@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
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UIntArray.maxOfOrNull(selector: (UInt) -> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]
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inline fun ULongArray.maxOfOrNull(selector: (ULong) -> Float): Float? {\n  if (isEmpty()) return null\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
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*/@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOfOrNull(selector: (UShort) -> Float): Float? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n  }\n  return
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*/@SinceKotlin("1.4")@OptIn(kotlin.experimental.ExperimentalTypeInference::class)@OverloadResolution
ByLambdaReturnType@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic
inline fun <R : Comparable<R>> UIntArray.maxOfOrNull(selector: (UInt) -> R): R? {\n  if (isEmpty()) return
null\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value
among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no
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Comparable<R>> ULongArray.maxOfOrNull(selector: (ULong) -> R): R? {\n  if (isEmpty()) return null\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest
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Comparable<R>> UByteArray.maxOfOrNull(selector: (UByte) -> R): R? {\n  if (isEmpty()) return null\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(maxValue < v) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values

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produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
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ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R : Comparable<R>> UShortArray.maxOfOrNull(selector: (UShort) -> R): R? {\n if (isEmpty())
return null\n var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(maxV < v) {\n maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value
according to the provided [comparator]\n * among all values produced by [selector] function applied to each
element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.maxOfWith(comparator: Comparator<in R>, selector: (UInt) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n
var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxV, v) < 0) {\n maxV = v\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.maxOfWith(comparator: Comparator<in R>, selector: (ULong) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n
var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(maxV, v) < 0) {\n maxV = v\n }\n }\n }\n return maxV\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n * @throws
NoSuchElementException if the array is empty.\n
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UByteArray.maxOfWith(comparator: Comparator<in R>, selector: (UByte) -> R): R {\n if (isEmpty()) throw
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var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(maxV, v) < 0) {\n maxV = v\n }\n }\n }\n return
maxV\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values
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ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.maxOfWith(comparator: Comparator<in R>, selector: (UShort) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n
var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(maxV, v) < 0) {\n maxV = v\n }\n }\n }\n return
maxV\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R> UIntArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (UInt) -> R): R? {\n if
(isEmpty()) return null\n
var maxV = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(maxV, v) < 0) {\n maxV = v\n }\n }\n }\n return
maxV\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>

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ULongArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (ULong) -> R): R? {\n  if (isEmpty())
return null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return
max\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (UByte) -> R): R? {\n  if (isEmpty())
return null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return max\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (UShort) -> R): R? {\n  if (isEmpty())
return null\n  var max = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(max, v) < 0) {\n      max = v\n    }\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.maxOrNull(): UInt? {\n  if
(isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max
= e\n  }\n  return max\n}\n\n/**\n * Returns
the largest element or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.maxOrNull(): ULong? {\n  if
(isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max
= e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.maxOrNull(): UByte? {\n  if
(isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max
= e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.maxOrNull(): UShort? {\n  if
(isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max
= e\n  }\n  return
max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator].\n * \n
*\n * @throws NoSuchElementException if the array is empty.\n
*\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow-
U")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun
UIntArray.maxWith(comparator: Comparator<in UInt>): UInt {\n  if (isEmpty()) throw
NoSuchElementException\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator].\n * \n
*\n * @throws NoSuchElementException if the array is
empty.\n
*\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow-
U")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun
ULongArray.maxWith(comparator: Comparator<in ULong>): ULong {\n  if (isEmpty()) throw
NoSuchElementException()\n
  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (comparator.compare(max, e) < 0) max
= e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided
[comparator].\n * \n
*\n * @throws NoSuchElementException if the array is
empty.\n
*\n*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("maxWithOrThrow-
U")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic fun

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    if (min > e) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element yielding the smallest value of
the given function.\n * \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow-
U")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\n@Suppress("CONFLICTING_OVERLOADS
")\npublic inline fun <R : Comparable<R>> UIntArray.minBy(selector: (UInt) -> R): UInt {\n    if (isEmpty())
throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex ==
0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val
v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n
* \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow-
U")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\n@Suppress("CONFLICTING_OVERLOADS
")\npublic inline fun <R : Comparable<R>> UIntArray.minBy(selector: (UInt) -> R): UInt {\n    if (isEmpty())
throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex ==
0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n
* \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow-
U")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\n@Suppress("CONFLICTING_OVERLOADS
")\npublic inline fun <R : Comparable<R>> ULongArray.minBy(selector: (ULong) -> R): ULong {\n    if
(isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n
* \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow-
U")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\n@Suppress("CONFLICTING_OVERLOADS
")\npublic inline fun <R : Comparable<R>> UByteArray.minBy(selector: (UByte) -> R): UByte {\n    if
(isEmpty()) throw NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function.\n
* \n * @throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Aggregates.minBy\n
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minByOrThrow-
U")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\n@Suppress("CONFLICTING_OVERLOADS
")\npublic inline fun <R : Comparable<R>> UShortArray.minBy(selector: (UShort) -> R): UShort {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0)
return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v =
selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there
are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.minByOrNull(selector: (UInt) -> R): UInt? {\n    if (isEmpty()) return null\n    var
minElem = this[0]\n    val lastIndex = this.lastIndex\n    if
(lastIndex == 0) return minElem\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e =
this[i]\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or
`null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.minByOrNull(selector: (ULong) -> R): ULong? {\n    if (isEmpty()) return null\n

```

```

var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue =
selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v)
{\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or
`null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n * @SinceKotlin("1.4")\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public inline fun <R :
Comparable<R>> UByteArray.minByOrNull(selector: (UByte) -> R): UByte? {\n    if (isEmpty()) return null\n
var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n    var minValue =
selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (minValue > v)
{\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n
*\n * @SinceKotlin("1.4")\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public
inline fun <R : Comparable<R>> UShortArray.minByOrNull(selector: (UShort) -> R): UShort? {\n    if (isEmpty())
return null\n    var minElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return minElem\n
var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if
(minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n *
Returns the smallest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public
inline fun UIntArray.minOf(selector: (UInt) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public inline fun
ULongArray.minOf(selector: (ULong) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val
v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public inline fun
UByteArray.minOf(selector: (UByte) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution
ByLambdaReturnType\n * @ExperimentalUnsignedTypes\n * @kotlin.internal.InlineOnly\n * public inline fun
UShortArray.minOf(selector: (UShort) -> Double): Double {\n    if (isEmpty()) throw
NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        minValue =

```



```

minOf(minValue, v)\n } \n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.minOf(selector: (UInt) -> Float): Float {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.minOf(selector: (ULong) -> Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue =
minOf(minValue, v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.minOf(selector: (UByte) -> Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var
minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue =
minOf(minValue, v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.minOf(selector: (UShort) -> Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue =
minOf(minValue, v)\n }\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R : Comparable<R>> UIntArray.minOf(selector: (UInt) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (minValue > v) {\n minValue = v\n }\n }\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.minOf(selector: (ULong) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (minValue > v) {\n minValue = v\n }\n }\n
return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n * \n * \n *\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

```

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ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.minOf(selector: (UByte) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced by [selector] function\n * applied to each element
in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.minOf(selector: (UShort) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (minValue > v) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.minOfOrNull(selector: (UInt) -> Double): Double? {\n  if (isEmpty()) return null\n  var
minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.minOfOrNull(selector: (ULong) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue
= selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n *
\n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.minOfOrNull(selector: (UByte) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue
= selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.minOfOrNull(selector: (UShort) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue
= selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.minOfOrNull(selector: (UInt) -> Float): Float? {\n  if (isEmpty()) return null\n  var
minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/*
Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*/

```



```

= selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (minValue > v) {\n
minValue = v\n } \n } \n return minValue\n}\n\n/**\n * Returns the smallest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.minOfWith(comparator: Comparator<in R>, selector: (UInt) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return
minValue\n}\n\n/**\n * Returns the
smallest value according to the provided [comparator]\n * among all values produced by [selector] function applied
to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.minOfWith(comparator: Comparator<in R>, selector: (ULong) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if
the array is empty.\n
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ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.minOfWith(comparator: Comparator<in R>, selector: (UByte) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if
the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
<R> UShortArray.minOfWith(comparator: Comparator<in R>, selector: (UShort) -> R): R {\n if (isEmpty())
throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UInt) -> R): R? {\n if (isEmpty()) return
null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n
if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (ULong) -> R): R? {\n if (isEmpty())
return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n
if (comparator.compare(minValue, v) > 0) {\n minValue = v\n } \n } \n return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]

```

function

applied to each element in the array or `null` if there are no elements.

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
```

```
UByteArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UByte) -> R): R? {\n    if (isEmpty())\n        return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/* Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
```

function applied to each element in the array or `null` if there are no elements.

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
```

```
inline fun <R> UShortArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UShort) -> R): R? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =\n            selector(this[i])\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return\n        minValue\n}\n\n/* Returns the smallest element or `null` if there are no elements.
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.minOrNull(): UInt? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min =\n            e\n    }\n    return min\n}\n\n/* Returns the smallest element or `null` if there are no elements.
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.minOrNull(): ULong? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val\n            e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n/* Returns the smallest element or `null` if\nthere are no elements.
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun\nUByteArray.minOrNull(): UByte? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n/* Returns the smallest element or `null`\nif there are no elements.
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun\nUShortArray.minOrNull(): UShort? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex)\n        {\n            val e = this[i]\n            if (min > e) min = e\n        }\n    return min\n}\n\n/* Returns the first element having\nthe smallest value according to the provided [comparator].\n\n* @throws NoSuchElementException if the array
```

is empty.

```
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow-\nU")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic
```

```
fun UIntArray.minWith(comparator: Comparator<in UInt>): UInt {\n    if (isEmpty()) throw\n        NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if\n            (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/* Returns the first element having the\nsmallest value according to the provided [comparator].\n\n* @throws NoSuchElementException if the array is\nempty.
```

```
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow-\nU")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic
```

```
fun ULongArray.minWith(comparator: Comparator<in ULong>): ULong {\n    if (isEmpty()) throw\n        NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if\n            (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/* Returns the first element having the\nsmallest value according
```

to the provided [comparator].\n\n\* @throws NoSuchElementException if the array is empty.

```
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow-\nU")\n@ExperimentalUnsignedTypes\n@Suppress("CONFLICTING_OVERLOADS")\npublic
```

```
fun UByteArray.minWith(comparator: Comparator<in UByte>): UByte {\n    if (isEmpty()) throw\n        NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if\n            (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/* Returns the first element having the\nsmallest value according to the provided [comparator].\n\n* @throws NoSuchElementException if the array is\nempty.
```

```
*\n@SinceKotlin("1.7")\n@kotlin.jvm.JvmName("minWithOrThrow-
```

```

U)\n\n@ExperimentalUnsignedTypes\n\n@Suppress(\"CONFLICTING_OVERLOADS\")\n\npublic fun
UShortArray.minWith(comparator: Comparator<in UShort>): UShort {\n    if (isEmpty()) throw
NoSuchElementException()\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the
first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin(\"1.4\")\n\n@ExperimentalUnsignedTypes\n\npublic fun UIntArray.minWithOrNull(comparator:
Comparator<in UInt>): UInt? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first
element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin(\"1.4\")\n\n@ExperimentalUnsignedTypes\n\npublic fun ULongArray.minWithOrNull(comparator:
Comparator<in ULong>): ULong? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
        val e = this[i]\n        if (comparator.compare(min, e) > 0) min
= e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided
[comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin(\"1.4\")\n\n@ExperimentalUnsignedTypes\n\npublic fun UByteArray.minWithOrNull(comparator:
Comparator<in UByte>): UByte? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the
first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin(\"1.4\")\n\n@ExperimentalUnsignedTypes\n\npublic fun UShortArray.minWithOrNull(comparator:
Comparator<in UShort>): UShort? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns
`true` if the array
has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
UIntArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n *
@sample samples.collections.Collections.Aggregates.none\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
ULongArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n *
@sample samples.collections.Collections.Aggregates.none\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
UByteArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n *
@sample samples.collections.Collections.Aggregates.none\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic
inline fun UShortArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if no elements match
the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
UIntArray.none(predicate: (UInt) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
ULongArray.none(predicate: (ULong) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun
UByteArray.none(predicate: (UByte) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n\n@SinceKotlin(\"1.3\")\n\n@ExperimentalUnsignedTypes\n\n@kotlin.internal.InlineOnly\n\npublic inline fun

```

```

UShortArray.none(predicate: (UShort) -> Boolean): Boolean {
    for (element in this) if (predicate(element))
        return false
    return true
}

* Performs the given [action] on each element and returns the array itself afterwards.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UIntArray.onEach(action: (UInt) -> Unit): UIntArray {
    return apply { for (element in this)
        action(element) }
}

* Performs the given [action] on each element and returns the array itself afterwards.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun ULongArray.onEach(action: (ULong) -> Unit): ULongArray {
    return apply { for (element in this)
        action(element) }
}

* Performs the given [action] on each element and returns the array itself afterwards.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UByteArray.onEach(action: (UByte) -> Unit): UByteArray {
    return apply { for (element in this)
        action(element) }
}

* Performs the given [action] on each element and returns the array itself afterwards.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UShortArray.onEach(action: (UShort) -> Unit): UShortArray {
    return apply { for (element in this)
        action(element) }
}

* Performs the given [action] on each element, providing sequential index with the element,
* and returns the array itself afterwards.
* @param [action] function that takes the index of an element and the element itself
* and performs the action on the element.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UIntArray.onEachIndexed(action: (index: Int, UInt) -> Unit): UIntArray {
    return apply {
        forEachIndexed(action) }
}

* Performs the given [action] on each element, providing sequential index with the element,
* and returns the array itself afterwards.
* @param [action] function that takes the index of an element and the element itself
* and performs the action on the element.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun ULongArray.onEachIndexed(action: (index: Int, ULong) -> Unit): ULongArray {
    return apply {
        forEachIndexed(action) }
}

* Performs the given [action] on each element, providing sequential index with the element,
* and returns the array itself afterwards.
* @param [action] function that takes the index of an element and the element itself
* and performs the action on the element.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UByteArray.onEachIndexed(action: (index: Int, UByte) -> Unit): UByteArray {
    return apply {
        forEachIndexed(action) }
}

* Performs the given [action] on each element, providing sequential index with the element,
* and returns the array itself afterwards.
* @param [action] function that takes the index of an element and the element itself
* and performs the action on the element.

@SinceKotlin("1.4")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UShortArray.onEachIndexed(action: (index: Int, UShort) -> Unit): UShortArray {
    return apply {
        forEachIndexed(action) }
}

* Accumulates value starting with the first element and applying [operation] from left to right
* to current accumulator value and each element.
* Throws an exception if this array is empty. If the array can be empty in an expected way,
* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.
* @param [operation] function that takes current accumulator value and an element,
* and calculates the next accumulator value.
* @sample samples.collections.Collections.Aggregates.reduce

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduce(operation: (acc: UInt, UInt) -> UInt): UInt {
    if (isEmpty())
        throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(accumulator, this[index])
    }
    return accumulator
}

* Accumulates value starting with the first element and applying [operation] from left to right
* to current accumulator value and each element.
* Throws an exception if this array is empty. If the array can be empty in an expected way,
* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.
* @param [operation] function that takes current accumulator value and an

```

element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduce(operation: (acc: ULong, ULong) -> ULong): ULong {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the
array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates
the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduce(operation: (acc: UByte, UByte) -> UByte): UByte {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current
accumulator
value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param
[operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduce(operation: (acc: UShort, UShort) -> UShort): UShort {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current
accumulator value and each
element with its index in the original array.\n * \n * Throws an exception if this array is empty. If the array can be
empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is
empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the
element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceIndexed(operation: (index: Int, acc: UInt, UInt) -> UInt): UInt {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying
[operation] from left to right\n * to current accumulator value and each element with its index in the original
array.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please
use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceIndexed(operation: (index: Int, acc: ULong, ULong) -> ULong): ULong {\n if (isEmpty())\n
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n
```



\* Accumulates value starting with the first element and applying [operation] from left to right  
 \* to current accumulator value and each element with its index in the original array.  
 \* Throws an exception if this array is empty. If the array can be empty in an expected way,  
 \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.  
 \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,  
 \* and calculates the next accumulator value.  
 \* @sample samples.collections.Collections.Aggregates.reduce

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.reduceIndexed(operation: (index: Int, acc: UByte, UByte) -> UByte): UByte {\n    if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = this[0]\n    for  
(index in 1..lastIndex) {\n        accumulator
```

```
= operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting  
with the first element and applying [operation] from left to right  
* to current accumulator value and each element  
with its index in the original array.  
* Throws an exception if this array is empty. If the array can be empty in  
an expected way,  
* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.  
* @param [operation] function that takes the index of an element, current accumulator value and the element itself,  
* and calculates the next accumulator value.  
* @sample samples.collections.Collections.Aggregates.reduce
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.reduceIndexed(operation: (index: Int, acc: UShort, UShort) -> UShort): UShort {\n    if (isEmpty())\n    throw UnsupportedOperationException("Empty array can't be reduced.")\n
```

```
var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index, accumulator,  
this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and  
applying [operation] from left to right  
* to current accumulator value and each element with its index in the  
original array.  
* Returns `null` if the array is empty.  
* @param [operation] function that takes the index  
of an element, current accumulator value and the element itself,  
* and calculates the next accumulator value.  
* @sample samples.collections.Collections.Aggregates.reduceOrNull
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.reduceIndexedOrNull(operation: (index: Int, acc: UInt, UInt) -> UInt): UInt? {\n    if (isEmpty())\n    return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index,  
accumulator,
```

```
this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and  
applying [operation] from left to right  
* to current accumulator value and each element with its index in the  
original array.  
* Returns `null` if the array is empty.  
* @param [operation] function that takes the index  
of an element, current accumulator value and the element itself,  
* and calculates the next accumulator value.  
* @sample samples.collections.Collections.Aggregates.reduceOrNull
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.reduceIndexedOrNull(operation: (index: Int, acc: ULong, ULong) -> ULong): ULong? {\n    if  
(isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =  
operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting  
with the first element
```

```
and applying [operation] from left to right  
* to current accumulator value and each element with its index in the  
original array.  
* Returns `null` if the array is empty.  
* @param [operation] function that takes the index  
of an element, current accumulator value and the element itself,  
* and calculates the next accumulator value.  
* @sample samples.collections.Collections.Aggregates.reduceOrNull
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.reduceIndexedOrNull(operation: (index: Int, acc: UByte, UByte) -> UByte): UByte? {\n    if  
(isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =  
operation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting  
with the first element and applying [operation] from left to right  
* to current accumulator value and each element
```

with its index in

the original array.\n \* \n \* Returns `null` if the array is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceOrNull\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.reduceIndexedOrNull(operation: (index: Int, acc: UShort, UShort) -> UShort): UShort? {\n    if\n(isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =\noperation(index, accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting\nwith the first element and applying [operation] from left to right\n * to current accumulator value and each\nelement.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current\naccumulator value and
```

an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample\nsamples.collections.Collections.Aggregates.reduceOrNull\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceOrNull(operation: (acc: UInt, UInt) -> UInt): UInt?\n{\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value\nstarting with the first element and applying [operation] from left to right\n * to current accumulator value and each\nelement.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current\naccumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample\nsamples.collections.Collections.Aggregates.reduceOrNull\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic\ninline fun ULongArray.reduceOrNull(operation: (acc: ULong, ULong) -> ULong): ULong? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =\noperation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the\nfirst element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current accumulator value and\nan element,\n * and calculates the next accumulator value.\n * \n * @sample\nsamples.collections.Collections.Aggregates.reduceOrNull\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceOrNull(operation: (acc:\nUByte, UByte) -> UByte): UByte? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for\n(index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return\naccumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to\nright\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next\naccumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceOrNull(operation: (acc: UShort, UShort) ->\nUShort): UShort? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex)\n{\n        accumulator\n= operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the\nlast element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use\n[reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that\ntakes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample\nsamples.collections.Collections.Aggregates.reduceRight\n
```

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceRight(operation: (UInt, acc: UInt) -> UInt): UInt {\n  var index = lastIndex\n  if (index < 0)
throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n
while (index >= 0) {\n    accumulator
= operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n**\n * Accumulates value starting with
the last element and applying [operation] from right to left\n * to each element and current accumulator value.\n *
* Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use
[reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that
takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceRight(operation: (ULong, acc: ULong) -> ULong): ULong {\n  var index = lastIndex\n  if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator =
get(index--)\n  while (index >= 0) {\n    accumulator
= operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n**\n * Accumulates value starting with
the last element and applying [operation] from right to left\n * to each element and current accumulator value.\n *
* Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please use
[reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that
takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduceRight(operation: (UByte, acc: UByte) -> UByte): UByte {\n  var index = lastIndex\n  if (index
< 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator = get(index--)\n
while (index >= 0) {\n
    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n**\n * Accumulates value
starting with the last element and applying [operation] from right to left\n * to each element and current accumulator
value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected way,\n * please
use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function
that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceRight(operation: (UShort, acc: UShort) -> UShort): UShort {\n  var index = lastIndex\n  if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n  var accumulator =
get(index--)\n  while (index >= 0)
{\n    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Throws an exception if this array is empty. If
the array can be empty in an expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null`
when its receiver is empty.\n * \n * @param [operation] function that takes the index of an element, the element
itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceRightIndexed(operation: (index: Int, UInt, acc: UInt) -> UInt): UInt {\n  var index = lastIndex\n
if (index < 0) throw UnsupportedOperationException("Empty
array can't be reduced.")\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n**\n * Accumulates
value starting with the last element and applying [operation] from right to left\n * to each element with its index in
the original array and current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can

```

be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value. @sample

samples.collections.Collections.Aggregates.reduceRight

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.reduceRightIndexed(operation: (index: Int,
```

```
    ULong, acc: ULong) -> ULong): ULong {\n    var index = lastIndex\n    if (index < 0) throw
```

```
UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = get(index--)\n    while  
(index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return  
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
```

left to each element with its index in the original array and current accumulator value. Throws an exception if this array is empty. If the array can be empty in an expected way, please use

[reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty. @param [operation]

function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value. @sample

samples.collections.Collections.Aggregates.reduceRight

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline fun UByteArray.reduceRightIndexed(operation: (index: Int, UByte, acc: UByte) -> UByte): UByte {\n    var  
index = lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var  
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),  
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last  
element and applying [operation] from right to left to each element with its index in the original array and  
current accumulator value. Throws an exception if this array is empty. If the array can be empty in an  
expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.  
 * @param [operation] function that takes the index of an element, the element itself and current accumulator  
value, and calculates the next accumulator
```

```
value.\n * @sample samples.collections.Collections.Aggregates.reduceRight\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UShortArray.reduceRightIndexed(operation: (index: Int, UShort, acc: UShort) -> UShort): UShort {\n    var index =
```

```
lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var  
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),  
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
```

element and applying [operation] from right to left to each element with its index in the original array and current accumulator value. Returns `null` if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value. @sample

```
 * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UIntArray.reduceRightIndexedOrNull(operation: (index: Int, UInt, acc: UInt) -> UInt): UInt? {\n    var index =
```

```
lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left to each element with
```

its index in the original array and current accumulator value. Returns `null` if the array is empty. @param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value. @sample

samples.collections.Collections.Aggregates.reduceRightOrNull

```
 * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
```

```
inline fun ULongArray.reduceRightIndexedOrNull(operation: (index: Int, ULong, acc: ULong) -> ULong): ULong?
```

```
{\n    var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0)
```

```

{\n    accumulator = operation(index, get(index), accumulator)\n    --index\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UByteArray.reduceRightIndexedOrNull(operation: (index: Int, UByte, acc: UByte) -> UByte): UByte?
{\n    var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0)
{\n        accumulator = operation(index, get(index), accumulator)\n        --index\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceRightIndexedOrNull(operation: (index:
Int, UShort, acc: UShort) -> UShort): UShort? {\n    var index = lastIndex\n    if (index < 0) return null\n    var
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceRightOrNull(operation: (UInt, acc: UInt) -> UInt):
UInt? {\n    var index = lastIndex\n    if (index < 0) return null\n
    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n
    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation]
from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceRightOrNull(operation: (ULong, acc: ULong) ->
ULong): ULong? {\n    var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n
    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*/\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceRightOrNull(operation: (UByte, acc: UByte) ->
UByte): UByte? {\n    var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n
    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element
and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function
that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n *

```

```

@sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceRightOrNull(operation: (UShort, acc: UShort) ->
UShort): UShort? {\n    var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n
while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n    }\n    return
accumulator\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n
* Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes current accumulator value and an element, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.runningFold(initial: R, operation: (acc: R, UInt) -> R): List<R> {\n    if (isEmpty()) return
listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for
(element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n    }\n
return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n
* Note that
`acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in
resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.runningFold(initial: R, operation: (acc: R, UByte) -> R): List<R> {\n    if (isEmpty()) return
listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for
(element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n    }\n
return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.runningFold(initial: R, operation: (acc: R, UShort) -> R): List<R> {\n    if (isEmpty()) return
listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for
(element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n    }\n
return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n

```

\* to each element, its index in the original array and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUIntArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n
```

\* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nULongArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n
```

\* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUByteArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UByte) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n
```

\* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUShortArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UShort) -> R): List<R>\n{\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n
```

\* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with the first element of this array.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningReduce\n

```

*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.runningReduce(operation: (acc: UInt, UInt) -> UInt): List<UInt> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UInt>(size).apply { add(accumulator) }\n  for
(index in 1 until size) {\n    accumulator = operation(accumulator, this[index])\n    result.add(accumulator)\n
}\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value
and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.runningReduce(operation: (acc: ULong, ULong) -> ULong): List<ULong> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<ULong>(size).apply { add(accumulator) }\n
for (index in 1 until size) {\n    accumulator = operation(accumulator, this[index])\n    result.add(accumulator)\n
}\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value
and an element,
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.runningReduce(operation: (acc: UByte, UByte) -> UByte): List<UByte> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UByte>(size).apply { add(accumulator) }\n
for (index in 1 until size) {\n    accumulator = operation(accumulator, this[index])\n    result.add(accumulator)\n
}\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would
affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.runningReduce(operation: (acc: UShort, UShort) -> UShort): List<UShort> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UShort>(size).apply { add(accumulator) }\n
for (index in 1 until size) {\n    accumulator = operation(accumulator, this[index])\n    result.add(accumulator)\n
}\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element, its index in the original array and current accumulator value that
starts with the first element of this array.\n * \n * Note that `acc` value passed to [operation] function should not be
mutated;\n
* otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.runningReduceIndexed(operation: (index: Int, acc: UInt, UInt) -> UInt): List<UInt> {\n  if (isEmpty())
return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UInt>(size).apply { add(accumulator)
}\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n    result.add(accumulator)\n
}\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and

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current

accumulator value that starts with the first element of this array.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample

samples.collections.Collections.Aggregates.runningReduce\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.runningReduceIndexed(operation: (index: Int, acc: ULong, ULong) -> ULong): List<ULong> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<ULong>(size).apply {\n        add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing
```

successive accumulation values generated by applying [operation] from left to right\n \* to each element, its index in the original array and current accumulator value that starts with the first element of this array.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample

samples.collections.Collections.Aggregates.runningReduce\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.runningReduceIndexed(operation: (index: Int, acc: UByte, UByte) -> UByte): List<UByte> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UByte>(size).apply {\n        add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from
```

left to right\n \* to each element, its index in the original array and current accumulator value that starts with the first element of this array.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningReduce\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.runningReduceIndexed(operation: (index: Int, acc: UShort, UShort) -> UShort): List<UShort> {\n    if (isEmpty())
```

```
return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UShort>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
```

samples.collections.Collections.Aggregates.scan\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R>
```

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UIntArray.scan(initial: R, operation: (acc: R, UInt) -> R): List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
```

```

@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.scan(initial: R, operation: (acc: R, ULong) -> R):
List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.scan(initial: R, operation: (acc: R, UByte) -> R):
List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that
`acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in
resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.scan(initial: R, operation: (acc: R, UShort) -> R):
List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n
*\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the
element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.scanIndexed(initial: R, operation: (index: Int, acc: R,
UInt) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing
successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in
the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value
passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting
list.\n * \n * \n * @param [operation] function that takes the index of an element,
current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.scanIndexed(initial: R, operation: (index: Int, acc:
R, ULong) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element,
its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that
`acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in
resulting list.\n * \n * \n * @param [operation] function that takes the index of an element, current accumulator
value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.scanIndexed(initial: R, operation: (index: Int, acc:
R, UByte) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing
successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in
the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value
passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting
list.\n * \n *

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\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element
itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.scanIndexed(initial: R, operation: (index: Int, acc:
R, UShort) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns the sum of all
values produced by [selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf
instead.", ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.sumBy(selector: (UInt) -> UInt): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince
= "1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.sumBy(selector: (ULong) -> UInt): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.sumBy(selector: (UByte) -> UInt): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince
= "1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.sumBy(selector: (UShort) -> UInt): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.sumByDouble(selector: (UInt) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.sumByDouble(selector: (ULong) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in
this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use sumOf instead.",
ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.sumByDouble(selector: (UByte) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in
this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n *\n@Deprecated("Use
sumOf instead.", ReplaceWith("this.sumOf(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.sumByDouble(selector: (UShort) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in
this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfDouble\
\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumOf(selector:
(UInt) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum
of all values produced by [selector] function applied to each element in the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfDouble\
\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector:
(ULong) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfDouble\
\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector:
(UByte) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfDouble\
\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector:
(UShort) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=
selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfInt\")\n
@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.sumOf(selector: (UInt) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n
sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfInt\")\n
@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.sumOf(selector:
(ULong) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n
}\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in
the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfInt\")\n
@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UByteArray.sumOf(selector: (UByte) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this)
{\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n
*\n*\n@SinceKotlin(\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress(\"INAPPLICABLE_JVM_NAME\")\n@kotlin.jvm.JvmName(\"sumOfInt\")\n
@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.sumOf(selector:
(UShort) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n
}\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function

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applied to each element in the array.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumOf(selector: (UInt)\n-> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector:\n(ULong) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]\n function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector:\n(UByte) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum +=\n selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline\n fun UShortArray.sumOf(selector: (UShort) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in\n this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by\n [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun UIntArray.sumOf(selector: (UInt) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for\n (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values\n produced by [selector] function applied to each element in the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic\n inline fun ULongArray.sumOf(selector: (ULong) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in\n this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by\n [selector] function applied to each element in the array.\n
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*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun UByteArray.sumOf(selector: (UByte) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each\n element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline
```

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Only\npublic inline fun UShortArray.sumOf(selector: (UShort) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic\n\ninline fun UIntArray.sumOf(selector: (UInt) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector: (ULong) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector: (UByte) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector: (UShort) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n */\n\n@sample\nsamples.collections.Iterables.Operations.zipIterable\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UIntArray.zip(other: Array<out R>): List<Pair<UInt, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n */\n\n@sample\nsamples.collections.Iterables.Operations.zipIterable\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other: Array<out R>): List<Pair<ULong, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n */\n\n@sample\nsamples.collections.Iterables.Operations.zipIterable\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other: Array<out R>): List<Pair<UByte, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n */\n\n@sample\nsamples.collections.Iterables.Operations.zipIterable\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UShortArray.zip(other: Array<out R>): List<Pair<UShort, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided

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[transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n *
\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UIntArray.zip(other: Array<out R>, transform: (a: UInt, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n
}\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned
list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R, V> ULongArray.zip(other: Array<out R>, transform: (a: ULong, b: R) -> V): List<V> {\n    val size
= minOf(size, other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n
list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements
of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each
pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample
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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UByteArray.zip(other: Array<out R>, transform: (a: UByte, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i],
other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using
the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UShortArray.zip(other: Array<out R>, transform: (a: UShort, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i],
other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with
the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic inline fun <R, V>
UIntArray.zip(other: Iterable<R>): List<Pair<UInt, R>> {\n    return zip(other) { t1, t2 -> t1 to t2
}\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same
index.\n * The returned list has length of the shortest collection.\n * \n * @sample
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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other:
Iterable<R>): List<Pair<ULong, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other:
Iterable<R>): List<Pair<UByte, R>> {\n    return zip(other) { t1,
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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UShortArray.zip(other:
Iterable<R>): List<Pair<UShort, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of
values built from the elements of `this` array and the [other] collection with the same index\n * using the provided
[transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n *
\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UIntArray.zip(other: Iterable<R>, transform: (a: UInt, b: R) -> V): List<V> {\n  val
  arraySize = size\n  val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n
for (element in other) {\n  if (i >= arraySize) break\n  list.add(transform(this[i++], element))\n  }\n  return
list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the
same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has
length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
ULongArray.zip(other: Iterable<R>, transform: (a: ULong, b: R) -> V): List<V> {\n  val arraySize = size\n  val
list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n  for (element in other)
{\n  if (i >= arraySize) break\n  list.add(transform(this[i++],
element))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the
[other] collection with the same index\n * using the provided [transform] function applied to each pair of
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samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UByteArray.zip(other: Iterable<R>, transform: (a: UByte, b: R) -> V): List<V> {\n  val arraySize = size\n  val list
= ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n  for (element in other) {\n
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[transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n *
\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UShortArray.zip(other: Iterable<R>, transform: (a: UShort, b: R) -> V): List<V> {\n  val arraySize = size\n  val
list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n  for (element in other)
{\n  if (i >= arraySize) break\n  list.add(transform(this[i++], element))\n  }\n  return list\n}\n\n/**\n *
Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The
returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray.zip(other:
UIntArray): List<Pair<UInt, UInt>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun ULongArray.zip(other: ULongArray):
List<Pair<ULong, ULong>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built
from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray.zip(other: UByteArray):
List<Pair<UByte, UByte>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built
from
the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray.zip(other: UShortArray):
List<Pair<UShort, UShort>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built
from the elements of `this` array and the [other] array with the same index\n * using the provided [transform]
function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample

```



```

samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UIntArray.zip(other: UIntArray, transform: (a: UInt, b: UInt) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for
(i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of
values built from the elements of `this` array and the [other] array with the same index\n * using the provided
[transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n *
@sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
ULongArray.zip(other: ULongArray, transform: (a: ULong, b: ULong) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n
}\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
with the same index\n * using the provided [transform] function applied to each pair of elements.\n
* The returned list has length of the shortest array.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UByteArray.zip(other: UByteArray, transform: (a: UByte, b: UByte) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n
}\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
with the same index\n * using the provided [transform] function applied to each pair of elements.\n
* The returned list has length of the shortest array.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UShortArray.zip(other: UShortArray, transform:
(a: UShort, b: UShort) -> V): List<V> {\n    val size = minOf(size, other.size)\n    val list = ArrayList<V>(size)\n
for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns the sum
of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT
ypes::class)\npublic fun Array<out UInt>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfULong")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Array<out ULong>.sum(): ULong {\n    var sum: ULong = 0uL\n    for (element in this)
{\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUByte")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic
fun Array<out UByte>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum += element\n
}\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUShort")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Array<out UShort>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.sum(): UInt {\n    return storage.sum().toUInt()\n}\n\n/**\n * Returns the sum of all elements in the
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.sum(): ULong {\n    return storage.sum().toULong()\n}\n\n/**\n * Returns the sum of all elements in
the array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UByteArray.sum(): UInt {\n    return sumOf { it.toUInt() }\n}\n\n/**\n * Returns the sum of all elements in the
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.sum(): UInt {\n    return sumOf { it.toUInt() }\n}\n\n", "*/\n * Copyright 2010-2022 JetBrains s.r.o. and

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Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("\uCollectionsKt")\n\npackage
kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n\nimport kotlin.random.*\nimport
kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns an array
of UByte containing all of the elements of this collection.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Collection<UByte>.toUByteArray():
UByteArray {\n    val result = UByteArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] =
element\n    return result\n}\n\n/**\n * Returns an array of UInt containing all of the elements of this collection.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Collection<UInt>.toUIntArray(): UIntArray
{\n    val result = UIntArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] = element\n
return result\n}\n\n/**\n * Returns an array of ULong containing all of the elements of this collection.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Collection<ULong>.toULongArray():
ULongArray {\n    val result = ULongArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] =
element\n    return result\n}\n\n/**\n * Returns an array of UShort containing all of the elements of this collection.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Collection<UShort>.toUShortArray():
UShortArray {\n    val result = UShortArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] =
element\n    return result\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*\n\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT
ypes::class)\npublic fun Iterable<UInt>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*\n\n@kotlin.jvm.JvmName("sumOfULong")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Iterable<ULong>.sum(): ULong {\n    var sum: ULong = 0uL\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n/**\n * Returns
the sum of all elements in the collection.\n
*\n\n@kotlin.jvm.JvmName("sumOfUByte")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Iterable<UByte>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*\n\n@kotlin.jvm.JvmName("sumOfUShort")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Iterable<UShort>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n"/**\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("\uComparisonsKt")\n\npackage
kotlin.comparisons\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED
by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n\nimport
kotlin.random.*\n\n/**\n * Returns the greater of two values.\n
*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UInt, b:
UInt): UInt {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n
*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: ULong,
b: ULong): ULong {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n
*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UByte,
b: UByte): UByte {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n
*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UShort,
b: UShort): UShort {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns

```

```

the greater of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UInt, b: UInt, c: UInt): UInt {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns\n the greater of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: ULong, b: ULong, c: ULong): ULong {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns\n the greater of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UByte, b: UByte, c: UByte): UByte {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns\n the greater of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UShort, b: UShort, c: UShort): UShort {\n    return maxOf(a,\n    maxOf(b, c))\n}\n\n/**\n * Returns\n the greater of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UInt, vararg other: UInt): UInt\n{\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns\n the greater of the\n given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: ULong, vararg\nother: ULong): ULong {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns\n the greater of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun\nmaxOf(a: UByte, vararg other: UByte): UByte {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns\n the greater of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UShort, vararg other: UShort):\nUShort {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns\n the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UInt, b:\nUInt): UInt {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns\n the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: ULong,\nb: ULong): ULong {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns\n the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UByte,\nb: UByte): UByte {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns\n the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UShort,\nb: UShort): UShort {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns\n the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline\nfun minOf(a: UInt, b: UInt, c: UInt): UInt {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns\n the smaller of\n three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun minOf(a: ULong, b: ULong, c: ULong): ULong {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns\n the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun minOf(a: UByte, b: UByte, c: UByte): UByte {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns\n the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun minOf(a: UShort, b: UShort, c: UShort): UShort {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns\n the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun\nminOf(a: UInt, vararg\nother: UInt): UInt {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns\n the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun minOf(a:\nULong, vararg other: ULong): ULong {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return

```

```

min\n}\n\n/**\n * Returns the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: UByte, vararg other: UByte):
UByte {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of
the given values.\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: UShort, vararg
other: UShort): UShort {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n"/*\n *
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governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("URangesKt")\n\npackage
kotlin.ranges\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns the
first element.\n * \n * @throws NoSuchElementException if the progression is empty.\n
*\n@SinceKotlin("1.7")\npublic fun UIntProgression.first(): UInt {\n    if (isEmpty())\n        throw
NoSuchElementException("Progression $this is empty.")\n    return this.first\n}\n\n/**\n * Returns the first
element.\n * \n * @throws NoSuchElementException if the progression is empty.\n
*\n@SinceKotlin("1.7")\npublic fun ULongProgression.first(): ULong {\n    if (isEmpty())\n        throw
NoSuchElementException("Progression $this is empty.")\n    return this.first\n}\n\n/**\n * Returns the first
element, or `null` if the progression is
empty.\n *\n@SinceKotlin("1.7")\npublic fun UIntProgression.firstOrNull(): UInt? {\n    return if (isEmpty())
null else this.first\n}\n\n/**\n * Returns the first element, or `null` if the progression is empty.\n
*\n@SinceKotlin("1.7")\npublic fun ULongProgression.firstOrNull(): ULong? {\n    return if (isEmpty()) null else
this.first\n}\n\n/**\n * Returns the last element.\n * \n * @throws NoSuchElementException if the progression is
empty.\n * \n * @sample samples.collections.Collections.Elements.last\n *\n@SinceKotlin("1.7")\npublic fun
UIntProgression.last(): UInt {\n    if (isEmpty())\n        throw NoSuchElementException("Progression $this is
empty.")\n    return this.last\n}\n\n/**\n * Returns the last element.\n * \n * @throws NoSuchElementException if
the progression is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.7")\npublic fun ULongProgression.last(): ULong {\n    if (isEmpty())\n        throw
NoSuchElementException("Progression
$this is empty.")\n    return this.last\n}\n\n/**\n * Returns the last element, or `null` if the progression is empty.\n *
*\n@sample samples.collections.Collections.Elements.last\n *\n@SinceKotlin("1.7")\npublic fun
UIntProgression.lastOrNull(): UInt? {\n    return if (isEmpty()) null else this.last\n}\n\n/**\n * Returns the last
element, or `null` if the progression is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.7")\npublic fun ULongProgression.lastOrNull(): ULong? {\n    return if (isEmpty()) null else
this.last\n}\n\n/**\n * Returns a random element from this range.\n * \n * @throws IllegalArgumentException if this
range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n
public inline fun UIntRange.random(): UInt {\n    return random(Random)\n}\n\n/**\n * Returns a random element
from this range.\n * \n * @throws IllegalArgumentException if this
range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n
public inline fun ULongRange.random(): ULong {\n    return random(Random)\n}\n\n/**\n * Returns a random
element from this range using the specified source of randomness.\n * \n * @throws IllegalArgumentException if
this range is empty.\n *\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun UIntRange.random(random: Random): UInt {\n    try {\n        return random.nextUInt(this)\n    } catch(e:
IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a
random element from this range using the specified source of randomness.\n * \n * @throws
IllegalArgumentExcep\n
tion if this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun

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```

ULongRange.random(random: Random): ULong {
    try {
        return random.nextULong(this)
    } catch(e: IllegalArgumentException) {
        throw NoSuchElementException(e.message)
    }
}

Returns a random element from this range, or `null` if this range is empty.

@SinceKotlin("1.5")@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)@kotlin.internal.InlineOnly
public inline fun UIntRange.randomOrNull():
UInt? {
    return randomOrNull(Random)
}

Returns a random element from this range, or `null` if this
range is empty.

@SinceKotlin("1.5")@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)@kotlin.internal.InlineOnly
public inline fun ULongRange.randomOrNull():
ULong? {
    return randomOrNull(Random)
}

Returns a random element from this range using the
specified source of randomness, or `null` if this range is empty.

@SinceKotlin("1.5")@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)
public fun UIntRange.randomOrNull(random:
Random): UInt? {
    if (isEmpty())
        return null
    return random.nextUInt(this)
}

Returns a
random element from this range using the specified source of randomness, or `null` if this range is empty.

@SinceKotlin("1.5")@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)
public fun ULongRange.randomOrNull(random: Random): ULong? {
    if
(isEmpty())
        return null
    return random.nextULong(this)
}

Returns `true` if this range contains
the specified [element].

* Always returns `false` if the [element] is `null`.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)@kotlin.internal.InlineOnly
public inline operator fun UIntRange.contains(element: UInt?): Boolean {
    return element != null &&
contains(element)
}

Returns `true` if this range contains the specified [element].

* Always returns
`false` if the [element] is `null`.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)@kotlin.internal.InlineOnly
public
inline operator fun ULongRange.contains(element: ULong?): Boolean {
    return element != null &&
contains(element)
}

Checks if the specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
UIntRange.contains(value: UByte): Boolean {
    return contains(value.toInt())
}

Checks if the
specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
ULongRange.contains(value: UByte): Boolean {
    return contains(value.toULong())
}

Checks if the
specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
ULongRange.contains(value: UInt): Boolean {
    return contains(value.toULong())
}

Checks
if the specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
UIntRange.contains(value: ULong): Boolean {
    return (value shr UInt.SIZE_BITS) == 0uL &&
contains(value.toInt())
}

Checks if the specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
UIntRange.contains(value: UShort): Boolean {
    return contains(value.toInt())
}

Checks if the
specified [value] belongs to this range.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public operator fun
ULongRange.contains(value: UShort): Boolean {
    return contains(value.toULong())
}

Returns a
progression from this value down to the specified [to] value with the step -1.

* The [to] value should be less
than or equal to `this` value.

* If the [to] value is greater than `this` value the
returned progression is empty.

@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)
public infix fun
UByte.downTo(to: UByte): UIntProgression {
    return UIntProgression.fromClosedRange(this.toInt(),

```

to.toUInt(), -1)\n}\n\n/\*\*\n \* Returns a progression from this value down to the specified [to] value with the step -1.\n \* \n \* The [to] value should be less than or equal to `this` value.\n \* If the [to] value is greater than `this` value the returned progression is empty.\n

```

*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UInt.downTo(to: UInt): UIntProgression {\n    return UIntProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
infix fun ULong.downTo(to: ULong): ULongProgression {\n    return ULongProgression.fromClosedRange(this,
to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UShort.downTo(to: UShort): UIntProgression {\n    return UIntProgression.fromClosedRange(this.toUInt(),
to.toUInt(), -1)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UIntProgression.reversed(): UIntProgression {\n    return UIntProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULongProgression.reversed(): ULongProgression {\n    return ULongProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UIntProgression.step(step: Int): UIntProgression {\n    checkStepIsPositive(step > 0, step)\n    return
UIntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
ULongProgression.step(step: Long): ULongProgression {\n    checkStepIsPositive(step > 0, step)\n    return
ULongProgression.fromClosedRange(first, last, if (this.step > 0)
step else -step)\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UByte.until(to: UByte): UIntRange {\n    if (to <= UByte.MIN_VALUE) return UIntRange.EMPTY\n    return
this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun UInt.until(to:
UInt): UIntRange {\n    if (to <= UInt.MIN_VALUE) return UIntRange.EMPTY\n    return this .. (to - 1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
ULong.until(to: ULong): ULongRange {\n    if (to <= ULong.MIN_VALUE) return ULongRange.EMPTY\n    return
this .. (to - 1u).toULong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UShort.until(to: UShort): UIntRange {\n    if (to <= UShort.MIN_VALUE) return UIntRange.EMPTY\n    return
this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the

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[minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun UInt.coerceAtLeast(minimumValue: UInt): UInt {\n    return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceAtLeast(minimumValue: ULong): ULong {\n    return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun UByte.coerceAtLeast(minimumValue: UByte): UByte {\n    return if (this < minimumValue) minimumValue
else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this
value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceAtLeast(minimumValue: UShort): UShort {\n    return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceAtMost(maximumValue:
UInt): UInt {\n    return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is
not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the
[maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceAtMost(maximumValue: ULong): ULong {\n    return if (this > maximumValue) maximumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UByte.coerceAtMost(maximumValue: UByte): UByte {\n    return if (this > maximumValue) maximumValue
else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return
this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceAtMost(maximumValue: UShort): UShort {\n    return if (this > maximumValue) maximumValue
else this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n
* @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or
[maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceIn(minimumValue: UInt, maximumValue: UInt): UInt {\n    if (minimumValue
> maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the

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specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or
[minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceIn(minimumValue: ULong, maximumValue: ULong): ULong {\n    if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n
    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the
specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or
[minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UByte.coerceIn(minimumValue: UByte, maximumValue: UByte): UByte {\n    if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the
specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range,
or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceIn(minimumValue: UShort, maximumValue: UShort): UShort {\n    if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the
specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than
`range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun UInt.coerceIn(range: ClosedRange<UInt>): UInt {\n    if (range is ClosedFloatingPointRange) {\n        return
this.coerceIn<UInt>(range)\n    }\n    if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value to
an empty range: $range.")\n    return when {\n        this < range.start -> range.start\n        this > range.endInclusive -
-> range.endInclusive\n        else -> this\n    }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n
* @return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or
`range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceIn(range: ClosedRange<ULong>): ULong {\n    if (range is ClosedFloatingPointRange) {\n        return
this.coerceIn<ULong>(range)\n    }\n    if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value to an empty range: $range.")\n
return when {\n        this < range.start -> range.start\n        this > range.endInclusive -> range.endInclusive\n
else -> this\n    }\n}\n\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("USequencesKt")\n\npackage
kotlin.sequences\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns the
sum of all elements in the sequence.\n * \n * The operation is _terminal_.\n
*\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT

```



```

ypes::class)\npublic
fun Sequence<UInt>.sum(): UInt {\n  var sum: UInt = 0u\n  for (element in this) {\n    sum += element\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n *\n @kotlin.jvm.JvmName("sumOfULong")\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Sequence<ULong>.sum(): ULong {\n  var sum: ULong = 0uL\n  for (element in this) {\n    sum += element\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n *\n @kotlin.jvm.JvmName("sumOfUByte")\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Sequence<UByte>.sum(): UInt {\n  var sum: UInt = 0u\n  for (element in this) {\n    sum += element\n  }\n  return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n *\n @kotlin.jvm.JvmName("sumOfUShort")\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsigned
Types::class)\npublic
fun Sequence<UShort>.sum(): UInt {\n  var sum: UInt = 0u\n  for (element in this) {\n    sum += element\n  }\n  return sum\n}\n\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin\n\npublic expect open class Error : Throwable {\n
constructor()\n constructor(message: String?)\n constructor(message: String?, cause: Throwable?)\n
constructor(cause: Throwable?)\n}\n\npublic expect open class Exception : Throwable {\n  constructor()\n
constructor(message: String?)\n constructor(message: String?, cause: Throwable?)\n constructor(cause:
Throwable?)\n}\n\npublic expect open class RuntimeException : Exception {\n  constructor()\n
constructor(message: String?)\n constructor(message:
String?, cause: Throwable?)\n constructor(cause: Throwable?)\n}\n\npublic expect open class
IllegalArgumentException : RuntimeException {\n  constructor()\n constructor(message: String?)\n
constructor(message: String?, cause: Throwable?)\n constructor(cause: Throwable?)\n}\n\npublic expect open
class IllegalStateException : RuntimeException {\n  constructor()\n constructor(message: String?)\n
constructor(message: String?, cause: Throwable?)\n constructor(cause: Throwable?)\n}\n\npublic expect open
class IndexOutOfBoundsException : RuntimeException {\n  constructor()\n constructor(message:
String?)\n}\n\npublic expect open class ConcurrentModificationException : RuntimeException {\n  constructor()\n
constructor(message: String?)\n constructor(message: String?, cause: Throwable?)\n constructor(cause:
Throwable?)\n}\n\npublic expect open class UnsupportedOperationException : RuntimeException {\n
constructor()\n constructor(message: String?)\n
constructor(message: String?, cause: Throwable?)\n constructor(cause: Throwable?)\n}\n\npublic expect open
class NumberFormatException : IllegalArgumentException {\n  constructor()\n constructor(message:
String?)\n}\n\npublic expect open class NullPointerException : RuntimeException {\n  constructor()\n
constructor(message: String?)\n}\n\npublic expect open class ClassCastException : RuntimeException {\n
constructor()\n constructor(message: String?)\n}\n\npublic expect open class AssertionError : Error {\n
constructor()\n constructor(message: Any?)\n}\n\npublic expect open class NoSuchElementException :
RuntimeException {\n  constructor()\n constructor(message: String?)\n}\n\n @SinceKotlin("1.3")\npublic
expect open class ArithmeticException : RuntimeException {\n  constructor()\n constructor(message:
String?)\n}\n\n @Deprecated("This exception type is not supposed to be thrown or caught in common code and will
be removed from kotlin-stdlib-common
soon.", level = DeprecationLevel.ERROR)\npublic expect open class NoWhenBranchMatchedException :
RuntimeException {\n  constructor()\n constructor(message: String?)\n constructor(message: String?, cause:
Throwable?)\n constructor(cause: Throwable?)\n}\n\n @Deprecated("This exception type is not supposed to be
thrown or caught in common code and will be removed from kotlin-stdlib-common soon.", level =
DeprecationLevel.ERROR)\npublic expect class UninitializedPropertyAccessException : RuntimeException {\n
constructor()\n constructor(message: String?)\n constructor(message: String?, cause: Throwable?)\n}

```

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constructor(cause: Throwable?)\n}\n\n/**\n * Thrown after invocation of a function or property that was expected to
return `Nothing`, but returned something instead.\n * \n@\n@SinceKotlin("1.4")\n@\n@PublishedApi\n\ninternal class
KotlinNothingValueException : RuntimeException {\n    constructor(): super()\n    constructor(message: String?) :
super(message)\n    constructor(message:
String?, cause: Throwable?) : super(message, cause)\n    constructor(cause: Throwable?) :
super(cause)\n}\n\n\n/**\n * Returns the detailed description of this throwable with its stack trace.\n * \n * The
detailed description includes:\n * - the short description (see [Throwable.toString]) of this throwable;\n * - the
complete stack trace;\n * - detailed descriptions of the exceptions that were [suppressed][suppressedExceptions] in
order to deliver this exception;\n * - the detailed description of each throwable in the [Throwable.cause] chain.\n
*\n@\n@SinceKotlin("1.4")\n\npublic expect fun Throwable.stackTraceToString(): String\n\n\n/**\n * Prints the [detailed
description][Throwable.stackTraceToString] of this throwable to the standard output or standard error output.\n
*\n@\n@SinceKotlin("1.4")\n@\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\n\npublic expect fun
Throwable.printStackTrace(): Unit\n\n\n/**\n * When supported by the platform, adds the specified exception to the
list of exceptions that were\n * suppressed in order to deliver this exception.\n
*\n@\n@SinceKotlin("1.4")\n@\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\n\npublic expect fun
Throwable.addSuppressed(exception: Throwable)\n\n\n/**\n * Returns a list of all exceptions that were suppressed in
order to deliver this exception.\n * \n * The list can be empty:\n * - if no exceptions were suppressed;\n * - if the
platform doesn't support suppressed exceptions;\n * - if this [Throwable] instance has disabled the suppression.\n
*\n@\n@SinceKotlin("1.4")\n\npublic expect val Throwable.suppressedExceptions: List<Throwable>\n", "/*\n *
Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n * \n@\n\npackage
kotlin.js\n\nimport kotlin.annotation.AnnotationTarget.*\n\n\n/**\n * Gives a declaration (a function, a property or a
class) specific name in JavaScript.\n * \n@\n@Target(CLASS,
FUNCTION, PROPERTY, CONSTRUCTOR, PROPERTY_GETTER,
PROPERTY_SETTER)\n@\n@OptionalExpectation\n\npublic expect annotation class JsName(val name: String)\n\n\n/**\n *
Marks experimental JS export annotations.\n * \n * Note that behavior of these annotations will likely be changed
in the future.\n * \n * Usages of such annotations will be reported as warnings unless an explicit opt-in with\n * the
[OptIn] annotation, e.g. `@OptIn(ExperimentalJsExport::class)`,\n * or with the `opt-
in=kotlin.js.ExperimentalJsExport` compiler option is given.\n * \n@\n@RequiresOptIn(level =
RequiresOptIn.Level.WARNING)\n@\n@MustBeDocumented\n@\n@Retention(AnnotationRetention.BINARY)\n@\n@Since
Kotlin("1.4")\n\npublic annotation class ExperimentalJsExport\n\n\n/**\n * Exports top-level declaration on JS
platform.\n * \n * Compiled module exposes declarations that are marked with this annotation without name
mangling.\n * \n * This annotation can be applied to either files or top-level declarations.\n * \n * It is currently
prohibited to export the following kinds of declarations:\n * * `expect` declarations\n * * inline functions
with reified type parameters\n * * suspend functions\n * * secondary constructors without `@JsName`\n * *
extension properties\n * * enum classes\n * * annotation classes\n * \n * Signatures of exported declarations must
only contain `exportable` types:\n * * `dynamic`, `Any`, `String`, `Boolean`, `Byte`, `Short`, `Int`, `Float`,
`Double`\n * * `BooleanArray`, `ByteArray`, `ShortArray`, `IntArray`, `FloatArray`, `DoubleArray`\n * *
`Array<exportable-type>`\n * * Function types with exportable parameters and return types\n * * `external` or
`@JsExport` classes and interfaces\n * * Nullable counterparts of types above\n * * Unit return type. Must not be
nullable\n * \n * This annotation is experimental, meaning that restrictions mentioned above are subject to change.\n
*\n@\n@ExperimentalJsExport\n@\n@Retention(AnnotationRetention.BINARY)\n@\n@Target(CLASS,
PROPERTY, FUNCTION, FILE)\n@\n@SinceKotlin("1.4")\n@\n@OptionalExpectation\n\npublic expect annotation class
JsExport() ", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n@\n\npackage kotlin.io\n\n\n/**\n * Prints the line separator to the standard output stream. \n*\n\npublic expect fun
println()\n\n\n/**\n * Prints the given [message] and the line separator to the standard output stream. \n*\n\npublic expect fun
println(message: Any?)\n\n\n/**\n * Prints the given [message] to the standard output stream. \n*\n\npublic expect fun

```

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print(message: Any?)\n\n/**\n * Reads a line of input from the standard input stream and returns it,\n * or throws a [RuntimeException] if EOF has already been reached when [readln] is called.\n * LF or CRLF is treated as the line terminator. Line terminator is not included in the returned string.\n * Currently this function is not supported in Kotlin/JS and throws [UnsupportedOperationException].\n */\n\n@SinceKotlin("1.6")\npublic expect fun readln(): String\n\n/**\n * Reads a line of input from the standard input stream and returns it,\n * or return `null` if EOF has already been reached when [readlnOrNull] is called.\n * LF or CRLF is treated as the line terminator. Line terminator is not included in the returned string.\n * Currently this function is not supported in Kotlin/JS and throws [UnsupportedOperationException].\n */\n\n@SinceKotlin("1.6")\npublic expect fun readlnOrNull(): String?\n\ninternal class ReadAfterEOFException(message: String?) : RuntimeException(message)\n\ninternal expect interface Serializable\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport kotlin.internal.PlatformDependent\n\n/**\n * Classes that inherit from this interface can be represented as a sequence of elements that can\n * be iterated over.\n * @param T the type of element being iterated over. The iterator is covariant in its element type.\n */\n\npublic interface Iterable<out T> {\n    /**\n     * Returns an iterator over the elements of this object.\n     */\n\n    public operator fun iterator(): Iterator<T>\n}\n\n/**\n * Classes that inherit from this interface can be represented as a sequence of elements that can\n * be iterated over and that supports removing elements during iteration.\n * @param T the type of element being iterated over. The mutable iterator is invariant in its element type.\n */\n\npublic interface MutableIterable<out T> : Iterable<T> {\n    /**\n     * Returns an iterator over the elements of this sequence that supports removing elements during iteration.\n     */\n\n    override fun iterator(): MutableIterator<T>\n}\n\n/**\n * A generic collection of elements. Methods in this interface support only read-only access to the collection;\n * read/write access is supported through the [MutableCollection] interface.\n * @param E the type of elements contained in the collection. The collection is covariant in its element type.\n */\n\npublic interface Collection<out E> : Iterable<E> {\n    // Query Operations\n\n    /**\n     * Returns the size of the collection.\n     */\n\n    public val size: Int\n\n    /**\n     * Returns `true` if the collection is empty (contains no elements), `false` otherwise.\n     */\n\n    public fun isEmpty(): Boolean\n\n    /**\n     * Checks if the specified element is contained in this collection.\n     */\n\n    public operator fun contains(element: @UnsafeVariance E): Boolean\n\n    override fun iterator(): Iterator<E>\n\n    // Bulk Operations\n\n    /**\n     * Checks if all elements in the specified collection are contained in this collection.\n     */\n\n    public fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean\n}\n\n/**\n * A generic collection of elements that supports adding and removing elements.\n * @param E the type of elements contained in the collection. The mutable collection is invariant in its element type.\n */\n\npublic interface MutableCollection<E> : Collection<E>, MutableIterable<E> {\n    // Query Operations\n\n    override fun iterator(): MutableIterator<E>\n\n    // Modification Operations\n\n    /**\n     * Adds the specified element to the collection.\n     */\n\n    /**\n     * @return `true` if the element has been added, `false` if the collection does not support duplicates\n     * and the element is already contained in the collection.\n     */\n\n    public fun add(element: E): Boolean\n\n    /**\n     * Removes a single instance of the specified element from this\n     * collection, if it is present.\n     */\n\n    /**\n     * @return `true` if the element has been successfully removed; `false` if it was not present in the collection.\n     */\n\n    public fun remove(element: E): Boolean\n\n    // Bulk Modification Operations\n\n    /**\n     * Adds all of the elements of the specified collection to this collection.\n     */\n\n    /**\n     * @return `true` if any of the specified elements was added to the collection, `false` if the collection was not modified.\n     */\n\n    public fun addAll(elements: Collection<E>): Boolean\n\n    /**\n     * Removes all of this collection's elements that are also contained in the specified collection.\n     */\n\n    /**\n     * @return `true` if any of the specified elements was removed from the collection, `false` if the collection was not modified.\n     */\n\n    public fun removeAll(elements: Collection<E>): Boolean\n\n    /**\n     * Retains only the elements in this collection that are contained in the specified collection.\n     */\n\n    /**\n     * @return `true` if any element was removed from the collection, `false` if the collection was not modified.\n     */\n\n    public fun retainAll(elements:

```

```

Collection<E>): Boolean\n\n /**\n * Removes all elements
from this collection.\n *^\n public fun clear(): Unit\n}\n\n/**\n * A generic ordered collection of elements.
Methods in this interface support only read-only access to the list;\n * read/write access is supported through the
[MutableList] interface.\n * @param E the type of elements contained in the list. The list is covariant in its element
type.\n *^\npublic interface List<out E> : Collection<E> {\n // Query Operations\n\n override val size: Int\n
override fun isEmpty(): Boolean\n override fun contains(element: @UnsafeVariance E): Boolean\n override fun
iterator(): Iterator<E>\n\n // Bulk Operations\n override fun containsAll(elements: Collection<@UnsafeVariance
E>): Boolean\n\n // Positional Access Operations\n /**\n * Returns the element at the specified index in the
list.\n *^\n public operator fun get(index: Int): E\n\n // Search Operations\n /**\n * Returns the index of
the first occurrence of the specified element in the list,
or -1 if the specified\n * element is not contained in the list.\n *^\n public fun indexOf(element:
@UnsafeVariance E): Int\n\n /**\n * Returns the index of the last occurrence of the specified element in the list,
or -1 if the specified\n * element is not contained in the list.\n *^\n public fun lastIndexOf(element:
@UnsafeVariance E): Int\n\n // List Iterators\n /**\n * Returns a list iterator over the elements in this list (in
proper sequence).\n *^\n public fun listIterator(): ListIterator<E>\n\n /**\n * Returns a list iterator over the
elements in this list (in proper sequence), starting at the specified [index].\n *^\n public fun listIterator(index:
Int): ListIterator<E>\n\n // View\n /**\n * Returns a view of the portion of this list between the specified
[fromIndex] (inclusive) and [toIndex] (exclusive).\n * The returned list is backed by this list, so non-structural
changes in the returned list are
reflected in this list, and vice-versa.\n *^\n * Structural changes in the base list make the behavior of the view
undefined.\n *^\n public fun subList(fromIndex: Int, toIndex: Int): List<E>\n}\n\n/**\n * A generic ordered
collection of elements that supports adding and removing elements.\n * @param E the type of elements contained in
the list. The mutable list is invariant in its element type.\n *^\npublic interface MutableList<E> : List<E>,
MutableCollection<E> {\n // Modification Operations\n /**\n * Adds the specified element to the end of this
list.\n *^\n * @return `true` because the list is always modified as the result of this operation.\n *^\n override
fun add(element: E): Boolean\n\n override fun remove(element: E): Boolean\n\n // Bulk Modification
Operations\n /**\n * Adds all of the elements of the specified collection to the end of this list.\n *^\n * The
elements are appended in the order they appear in the [elements]
collection.\n *^\n * @return `true` if the list was changed as the result of the operation.\n *^\n override fun
addAll(elements: Collection<E>): Boolean\n\n /**\n * Inserts all of the elements of the specified collection
[elements] into this list at the specified [index].\n *^\n * @return `true` if the list was changed as the result of the
operation.\n *^\n public fun addAll(index: Int, elements: Collection<E>): Boolean\n\n override fun
removeAll(elements: Collection<E>): Boolean\n override fun retainAll(elements: Collection<E>): Boolean\n
override fun clear(): Unit\n\n // Positional Access Operations\n /**\n * Replaces the element at the specified
position in this list with the specified element.\n *^\n * @return the element previously at the specified
position.\n *^\n public operator fun set(index: Int, element: E): E\n\n /**\n * Inserts an element into the list
at the specified [index].\n *^\n public
fun add(index: Int, element: E): Unit\n\n /**\n * Removes an element at the specified [index] from the list.\n
*\n * @return the element that has been removed.\n *^\n public fun removeAt(index: Int): E\n\n // List
Iterators\n override fun listIterator(): MutableListIterator<E>\n\n override fun listIterator(index: Int):
MutableListIterator<E>\n\n // View\n override fun subList(fromIndex: Int, toIndex: Int):
MutableList<E>\n}\n\n/**\n * A generic unordered collection of elements that does not support duplicate
elements.\n * Methods in this interface support only read-only access to the set;\n * read/write access is supported
through the [MutableSet] interface.\n * @param E the type of elements contained in the set. The set is covariant in
its element type.\n *^\npublic interface Set<out E> : Collection<E> {\n // Query Operations\n\n override val size:
Int\n override fun isEmpty(): Boolean\n override fun contains(element: @UnsafeVariance
E): Boolean\n override fun iterator(): Iterator<E>\n\n // Bulk Operations\n override fun containsAll(elements:
Collection<@UnsafeVariance E>): Boolean\n}\n\n/**\n * A generic unordered collection of elements that does not

```

support duplicate elements, and supports adding and removing elements. @param E the type of elements contained in the set. The mutable set is invariant in its element type.

```

public interface MutableSet<E> : Set<E>,
    MutableCollection<E> {
    // Query Operations
    override fun iterator(): MutableIterator<E>
    // Modification Operations
    /**
     * Adds the specified element to the set.
     * @return `true` if the element has been added, `false` if the element is already contained in the set.
     */
    override fun add(element: E): Boolean
    override fun remove(element: E): Boolean
    // Bulk Modification Operations
    override fun addAll(elements: Collection<E>): Boolean
    override fun removeAll(elements: Collection<E>): Boolean
    override fun retainAll(elements: Collection<E>): Boolean
    override fun clear(): Unit
}

```

A collection that holds pairs of objects (keys and values) and supports efficiently retrieving the value corresponding to each key. Map keys are unique; the map holds only one value for each key. Methods in this interface support only read-only access to the map; read-write access is supported through the [MutableMap] interface.

@param K the type of map keys. The map is invariant in its key type, as it can accept key as a parameter (of [containsKey] for example) and return it in [keys] set.

@param V the type of map values. The map is covariant in its value type.

```

public interface Map<K, out V> {
    // Query Operations
    /**
     * Returns the number of key/value pairs in the map.
     */
    public val size: Int
    /**
     * Returns `true` if the map is empty (contains no elements), `false` otherwise.
     */
    public fun isEmpty(): Boolean
    /**
     * Returns `true` if the map contains the specified [key].
     */
    public fun containsKey(key: K): Boolean
    /**
     * Returns `true` if the map maps one or more keys to the specified [value].
     */
    public fun containsValue(value: @UnsafeVariance V): Boolean
    /**
     * Returns the value corresponding to the given [key], or `null` if such a key is not present in the map.
     */
    public operator fun get(key: K): V?
    /**
     * Returns the value corresponding to the given [key], or [defaultValue] if such a key is not present in the map.
     * @since JDK 1.8
     */
    @SinceKotlin("1.1")
    @PlatformDependent
    public fun getOrDefault(key: K, defaultValue: @UnsafeVariance V): V {
        // See default implementation in JDK sources
        throw NotImplementedError()
    }
    // Views
    /**
     * Returns a read-only [Set] of all keys in this map.
     */
    public val keys: Set<K>
    /**
     * Returns a read-only [Collection] of all values in this map. Note that this collection may contain duplicate values.
     */
    public val values: Collection<V>
    /**
     * Returns a read-only [Set] of all key/value pairs in this map.
     */
    public val entries: Set<Map.Entry<K, V>>
    /**
     * Represents a key/value pair held by a [Map].
     */
    public interface Entry<out K, out V> {
        /**
         * Returns the key of this key/value pair.
         */
        public val key: K
        /**
         * Returns the value of this key/value pair.
         */
        public val value: V
    }
}

```

A modifiable collection that holds pairs of objects (keys and values) and supports efficiently retrieving the value corresponding to each key. Map keys are unique; the map holds only one value for each key.

@param K the type of map keys. The map is invariant in its key type.

@param V the type of map values. The mutable map is invariant in its value type.

```

public interface MutableMap<K, V> : Map<K, V> {
    // Modification Operations
    /**
     * Associates the specified [value] with the specified [key] in the map.
     * @return the previous value associated with the key, or `null` if the key was not present in the map.
     */
    public fun put(key: K, value: V): V?
    /**
     * Removes the specified key and its corresponding value from this map.
     * @return the previous value associated with the key, or `null` if the key was not present in the map.
     */
    public fun remove(key: K): V?
    /**
     * Removes the entry for the specified key only if it is mapped to the specified value.
     * @return true if entry was removed
     */
    @SinceKotlin("1.1")
    @PlatformDependent
    public fun remove(key: K, value: V): Boolean {
        // See default implementation in JDK sources
        return true
    }
    // Bulk Modification Operations
    /**
     * Updates this map with key/value pairs from the specified map [from].
     */
    public fun putAll(from: Map<out K, V>): Unit
    /**
     * Removes all elements from this map.
     */
    public fun clear(): Unit
    // Views
    /**
     * Returns a [MutableSet] of all keys in this map.
     */
    override val keys: MutableSet<K>
    /**
     * Returns a [MutableCollection] of all values in this map. Note that this collection may contain duplicate values.
     */
    override val values:

```

```

MutableCollection<V>\n\n /**\n * Returns a [MutableSet] of all key/value pairs in this map.\n */\n
override val entries: MutableSet<MutableMap.MutableEntry<K, V>>\n\n /**\n * Represents a key/value pair
held by a [MutableMap].\n */\n public interface MutableEntry<K, V> : Map.Entry<K, V> {\n /**\n *
Changes the value associated with the key of this entry.\n */\n
    * @return the previous value corresponding to the key.\n */\n public fun setValue(newValue: V): V\n
}\n\n",/>\n * Copyright 2010-2015 JetBrains s.r.o.\n * Licensed under the Apache License, Version 2.0 (the
"License");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the
License at\n * http://www.apache.org/licenses/LICENSE-2.0\n * Unless required by applicable law or
agreed to in writing, software\n * distributed under the License is distributed on an "AS IS" BASIS,\n *
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for
the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin\n\n/**\n *
The type with only one value: the `Unit` object. This type corresponds to the `void` type in Java.\n */\npublic object
Unit {\n override fun toString() = "kotlin.Unit"\n\n",/>\n * Copyright 2010-2015 JetBrains s.r.o.\n
*\n * Licensed under the Apache License, Version 2.0 (the "License");\n * you may not use this file except in
compliance with the License.\n * You may obtain a copy of the License at\n *
http://www.apache.org/licenses/LICENSE-2.0\n * Unless required by applicable law or agreed to in writing,
software\n * distributed under the License is distributed on an "AS IS" BASIS,\n * WITHOUT WARRANTIES
OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language
governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.annotation\n\nimport
kotlin.annotation.AnnotationTarget.*\n\n/**\n * Contains the list of code elements which are the possible annotation
targets\n */\npublic enum class AnnotationTarget {\n /** Class, interface or object, annotation class is also
included */\n CLASS,\n /** Annotation class only */\n ANNOTATION_CLASS,\n /** Generic type
parameter */\n TYPE_PARAMETER,\n /** Property */\n
PROPERTY,\n /** Field, including property's backing field */\n FIELD,\n /** Local variable */\n
LOCAL_VARIABLE,\n /** Value parameter of a function or a constructor */\n VALUE_PARAMETER,\n
/** Constructor only (primary or secondary) */\n CONSTRUCTOR,\n /** Function (constructors are not
included) */\n FUNCTION,\n /** Property getter only */\n PROPERTY_GETTER,\n /** Property setter
only */\n PROPERTY_SETTER,\n /** Type usage */\n TYPE,\n /** Any expression */\n
EXPRESSION,\n /** File */\n FILE,\n /** Type alias */\n @SinceKotlin("1.1")\n
TYPEALIAS\n }\n\n/**\n * Contains the list of possible annotation's retentions.\n */\n * Determines how an
annotation is stored in binary output.\n */\npublic enum class AnnotationRetention {\n /** Annotation isn't stored
in binary output */\n SOURCE,\n /** Annotation is stored in binary output, but invisible for reflection */\n
BINARY,\n /** Annotation is stored
in binary output and visible for reflection (default retention) */\n RUNTIME\n }\n\n/**\n * This meta-annotation
indicates the kinds of code elements which are possible targets of an annotation.\n */\n * If the target meta-annotation
is not present on an annotation declaration, the annotation is applicable to the following elements:\n * [CLASS],
[PROPERTY], [FIELD], [LOCAL_VARIABLE], [VALUE_PARAMETER], [CONSTRUCTOR], [FUNCTION],
[PROPERTY_GETTER], [PROPERTY_SETTER].\n */\n * @property allowedTargets list of allowed annotation
targets\n */\n@Target(AnnotationTarget.ANNOTATION_CLASS)\n@MustBeDocumented\npublic annotation
class Target(vararg val allowedTargets: AnnotationTarget)\n\n/**\n * This meta-annotation determines whether an
annotation is stored in binary output and visible for reflection. By default, both are true.\n */\n * @property value
necessary annotation retention (RUNTIME, BINARY or SOURCE)\n
*/\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class Retention(val
value: AnnotationRetention = AnnotationRetention.RUNTIME)\n\n/**\n * This meta-annotation determines that an
annotation is applicable twice or more on a single code element\n
*/\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class Repeatable\n\n/**\n * This
meta-annotation determines that an annotation is a part of public API and therefore should be included in the
generated\n * documentation for the element to which the annotation is applied.\n
*/\n

```



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    } else {\n        instance.asDynamic().stack = js("new Error()").stack;\n    }\n}\n\n@JsName("newThrowable")\ninternal fun newThrowable(message: String?, cause: Throwable?):\nThrowable {\n    val throwable = js("new Error()")\n    throwable.message = if (jsTypeOf(message) ==\n        "undefined") {\n        if (cause != null) cause.toString() else null\n    } else {\n        message\n    }\n    throwable.cause = cause\n    throwable.name = "Throwable"\n    return\n    throwable\n}\n\n@JsName("BoxedChar")\ninternal class BoxedChar(val c: Int) : Comparable<Int> {\n    override\n    fun equals(other: Any?): Boolean {\n        return other is BoxedChar && c == other.c\n    }\n\n    override fun\n    hashCode(): Int {\n        return c\n    }\n\n    override fun toString(): String {\n        return\n        js("this.c").unsafeCast<Char>().toString()\n    }\n\n    override fun compareTo(other: Int): Int {\n        return\n        js("this.c - other").unsafeCast<Int>()\n    }\n}\n\n@JsName("valueOf")\npublic\nfun valueOf(): Int {\n    return c\n}\n}\n\n@kotlin.internal.InlineOnly\ninternal inline fun <T> concat(args:\nArray<T>): T {\n    val typed = js("Array")(args.size)\n    for (i in args.indices) {\n        val arr = args[i]\n        if\n        (arr !is Array<*>) {\n            typed[i] = js("[]").slice.call(arr)\n        } else {\n            typed[i] = arr\n        }\n    }\n    return js("[]").concat.apply(js("[]"), typed);\n}\n\n/** Concat regular Array's and TypedArray's into an Array.\n *\n */\n\n@PublishedApi\n@JsName("arrayConcat")\n@Suppress("UNUSED_PARAMETER")\ninternal fun <T>\narrayConcat(a: T, b: T): T {\n    return concat(js("arguments"))\n}\n\n/** Concat primitive arrays. Main use:\n * prepare vararg arguments.\n * For compatibility with 1.1.0 the arguments may be a mixture of Array's and\n * TypedArray's.\n * If the first argument is TypedArray (Byte-, Short-, Char-, Int-, Float-, and DoubleArray)\n * returns a TypedArray, otherwise an Array.\n * If the first argument\n * has the $type$ property (Boolean-, Char-, and LongArray) copy its value to result.$type$.\n * If the first argument\n * is a regular Array without the $type$ property default to arrayConcat.\n *\n */\n\n@PublishedApi\n@JsName("primitiveArrayConcat")\n@Suppress("UNUSED_PARAMETER")\ninternal\nfun <T> primitiveArrayConcat(a: T, b: T): T {\n    val args: Array<T> = js("arguments")\n    if (a is Array<*> &&\n        a.asDynamic().`$type$` === undefined) {\n        return concat(args)\n    } else {\n        var size = 0\n        for (i in\n            args.indices) {\n                size += args[i].asDynamic().length as Int\n            }\n        val result = js("new\n            a.constructor(size)")\n        kotlin.copyArrayType(a, result)\n        size = 0\n        for (i in args.indices) {\n            val\n            arr = args[i].asDynamic()\n            for (j in 0 until arr.length) {\n                result[size++] = arr[j]\n            }\n        }\n        return result\n    }\n}\n\n@JsName("booleanArrayOf")\ninternal fun booleanArrayOf()\n= withType("BooleanArray", js("[]").slice.call(arguments))\n\n@JsName("charArrayOf")\ninternal fun\ncharArrayOf() = withType("CharArray", js("new\n    Uint16Array(arguments)")\n)\n\n@JsName("longArrayOf")\ninternal fun longArrayOf() =\nwithType("LongArray",\n    js("[]").slice.call(arguments))\n)\n\n@JsName("withType")\n@kotlin.internal.InlineOnly\ninternal inline fun\nwithType(type: String, array: dynamic): dynamic {\n    array.`$type$` = type\n    return array\n}\n\n/* Copyright\n2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed\n * by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Function corresponding to JavaScript's `typeof` operator\n *\n */\n\n@kotlin.internal.InlineOnly\n@Suppress("UNUSED_PARAMETER")\npublic inline fun jsTypeOf(a: Any?):\nString = js("typeof a")\n\n/* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language\n * contributors.\n *\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n */\n\n@file:Suppress("UNUSED_PARAMETER", "NOTHING_TO_INLINE")\npackage kotlin\n\n/**\n * Returns an empty array of the specified type [T].\n *\n */\n\npublic inline fun <T> emptyArray(): Array<T> =\n    js("[]")\n\n@library\npublic fun <T> arrayOf(vararg elements: T): Array<T> =\n    definedExternally\n\n@library\npublic fun doubleArrayOf(vararg elements: Double): DoubleArray =\n    definedExternally\n\n@library\npublic fun floatArrayOf(vararg elements: Float): FloatArray =\n    definedExternally\n\n@library\npublic fun longArrayOf(vararg elements: Long): LongArray =\n    definedExternally\n\n@library\npublic fun intArrayOf(vararg elements: Int): IntArray =\n    definedExternally

```



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definedExternally\n\n@library\npublic fun charArrayOf(vararg elements: Char): CharArray =
definedExternally\n\n@library\npublic fun shortArrayOf(vararg elements: Short): ShortArray =
definedExternally\n\n@library\npublic fun byteArrayOf(vararg
elements: Byte): ByteArray = definedExternally\n\n@library\npublic fun booleanArrayOf(vararg elements:
Boolean): BooleanArray = definedExternally\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified
initialization function [initializer].\n *^\npublic actual fun <T> lazy(initializer: () -> T): Lazy<T> =
UnsafeLazyImpl(initializer)\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization
function [initializer].\n *^\n * The [mode] parameter is ignored. *\npublic actual fun <T> lazy(mode:
LazyThreadSafetyMode, initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n\n/**\n * Creates a new
instance of the [Lazy] that uses the specified initialization function [initializer].\n *^\n * The [lock] parameter is
ignored.\n *^\npublic actual fun <T> lazy(lock: Any?, initializer: () -> T): Lazy<T> =
UnsafeLazyImpl(initializer)\n\n\ninternal fun fillFrom(src: dynamic, dst: dynamic): dynamic {\n    val srcLen: Int =
src.length\n    val
dstLen: Int = dst.length\n    var index: Int = 0\n    while (index < srcLen && index < dstLen) dst[index] =
src[index++]\n    return dst\n}\n\n\ninternal fun arrayCopyResize(source: dynamic, newSize: Int, defaultValue:
Any?): dynamic {\n    val result = source.slice(0, newSize)\n    copyArrayType(source, result)\n    var index: Int =
source.length\n    if (newSize > index) {\n        result.length = newSize\n        while (index < newSize)
result[index++] = defaultValue\n    }\n    return result\n}\n\n\ninternal fun <T> arrayPlusCollection(array: dynamic,
collection: Collection<T>): dynamic {\n    val result = array.slice()\n    result.length += collection.size\n    copyArrayType(array, result)\n    var index: Int = array.length\n    for (element in collection) result[index++] =
element\n    return result\n}\n\n\ninternal fun <T> fillFromCollection(dst: dynamic, startIndex: Int, collection:
Collection<T>): dynamic {\n    var index = startIndex\n    for (element in collection) dst[index++]
= element\n    return dst\n}\n\n\ninternal inline fun copyArrayType(from: dynamic, to: dynamic) {\n    if
(from.`$type$` !== undefined) {\n        to.`$type$` = from.`$type$`\n    }\n}\n\n\ninternal inline fun jsIsType(obj:
dynamic, jsClass: dynamic) = js("Kotlin").isType(obj, jsClass)", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Creates a Char with the specified
[code].\n *^\n * @sample samples.text.Chars.charFromCode\n
*\n\n@SinceKotlin("1.5")\n\n@WasExperimental(ExperimentalStdlibApi::class)\n\n@kotlin.internal.InlineOnly\n\npublic
actual inline fun Char(code: UShort): Char {\n    return code.toInt().toChar()\n}\n\n", "/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt
file.\n */\n\npackage kotlin.coroutines\n\nimport
kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED\n\n@SinceKotlin("1.3")\n\n@JsName("CoroutineImpl")\n\n\ninternal abstract class CoroutineImpl(private val resultContinuation: Continuation<Any?>) : Continuation<Any?>
{\n    protected var state = 0\n    protected var exceptionState = 0\n    protected var result: Any? = null\n    protected
var exception: Throwable? = null\n    protected var finallyPath: Array<Int>? = null\n\n    public override val context:
CoroutineContext = resultContinuation.context\n\n    private var intercepted_: Continuation<Any?>? = null\n\n    public fun intercepted(): Continuation<Any?> =\n        intercepted_\n        ?:\n    (context[ContinuationInterceptor]?.interceptContinuation(this) ?: this)\n        .also { intercepted_ = it }\n\n    override fun resumeWith(result: Result<Any?>) {\n        var current = this\n        var currentResult: Any? =
result.getOrNull()\n        var currentException:
Throwable? = result.exceptionOrNull()\n        // This loop unrolls recursion in current.resumeWith(param) to
make saner and shorter stack traces on resume\n        while (true) {\n            with(current) {\n                val
completion = resultContinuation\n                // Set result and exception fields in the current continuation\n                if (currentException == null) {\n                    this.result = currentResult\n                } else {\n                    state =
exceptionState\n                    exception = currentException\n                }\n                try {\n                    val
outcome = doResume()\n                    if (outcome === COROUTINE_SUSPENDED) return\n                }

```

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currentResult = outcome\n                currentException = null\n                } catch (exception: dynamic) { // Catch
all exceptions\n                currentResult = null\n                currentException =
exception.unsafeCast<Throwable>()\n
                }\n                releaseIntercepted() // this state machine instance is terminating\n                if (completion
is CoroutineImpl) {\n                // unrolling recursion via loop\n                current = completion\n                }
else {\n                // top-level completion reached -- invoke and return\n                currentException?.let {\n
                completion.resumeWithException(it)\n                } ?: completion.resume(currentResult)\n
return\n                }\n                }\n                }\n                }\n                private fun releaseIntercepted() {\n                val intercepted =
intercepted_\n                if (intercepted != null && intercepted !== this) {\n
context[ContinuationInterceptor]!!.releaseInterceptedContinuation(intercepted)\n                }\n                this.intercepted_ =
CompletedContinuation // just in case\n                }\n                protected abstract fun doResume(): Any?\n                }\n                internal object
CompletedContinuation
: Continuation<Any?> {\n                override val context: CoroutineContext\n                get() = error("This continuation is
already complete")\n                override fun resumeWith(result: Result<Any?>) {\n                error("This continuation is
already complete")\n                }\n                override fun toString(): String = "This continuation is already
complete"\n                }\n                * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n                Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n                @file:Suppress("UNCHECKED_CAST", "RedundantVisibilityModifier")\n                package kotlin\n                import
kotlin.contracts.*\n                import kotlin.internal.InlineOnly\n                import kotlin.jvm.JvmField\n                import
kotlin.jvm.JvmInline\n                import kotlin.jvm.JvmName\n                /**\n                * A discriminated union that encapsulates a successful
outcome with a value of type [T]\n                * or a failure with an arbitrary [Throwable] exception.\n
*\n                * @SinceKotlin("1.3")\n                * @JvmInline\n                public
value class Result<out T> @PublishedApi internal constructor(\n                @PublishedApi\n                internal val value: Any?\n
): Serializable {\n                // discovery\n                /**\n                * Returns `true` if this instance represents a successful outcome.\n                *
In this case [isFailure] returns `false`.\n                *\n                * @public val isSuccess: Boolean get() = value !is Failure\n                /**\n
* Returns `true` if this instance represents a failed outcome.\n                * In this case [isSuccess] returns `false`.\n                *\n
* @public val isFailure: Boolean get() = value is Failure\n                // value & exception retrieval\n                /**\n                * Returns the
encapsulated value if this instance represents [success][Result.isSuccess] or `null`\n                * if it is
[failure][Result.isFailure].\n                *\n                * This function is a shorthand for `getOrElse { null }` (see [getOrElse]) or\n
* `fold(onSuccess = { it }, onFailure = { null })` (see [fold]).\n                *\n                * @InlineOnly\n                public inline fun
getOrNull(): T? =\n                when
{\n                isFailure -> null\n                else -> value as T\n                }\n                /**\n                * Returns the encapsulated
[Throwable] exception if this instance represents [failure][isFailure] or `null`\n                * if it is [success][isSuccess].\n
*\n                * This function is a shorthand for `fold(onSuccess = { null }, onFailure = { it })` (see [fold]).\n                *\n                * @public
fun exceptionOrNull(): Throwable? =\n                when (value) {\n                is Failure -> value.exception\n                else ->
null\n                }\n                /**\n                * Returns a string `Success(v)` if this instance represents [success][Result.isSuccess]\n
* where `v` is a string representation of the value or a string `Failure(x)` if\n                * it is [failure][isFailure] where `x` is
a string representation of the exception.\n                *\n                * @public override fun toString(): String =\n                when (value) {\n
is Failure -> value.toString() // "Failure($exception)"
else -> "Success($value)"
}\n                }\n                // companion with constructors\n                /**\n                * Companion object for [Result] class that contains its constructor
functions\n                * [success] and [failure].\n                *\n                * @public companion object {\n                /**\n                * Returns an instance
that encapsulates the given [value] as successful value.\n                *\n
*\n                * @Suppress("INAPPLICABLE_JVM_NAME")\n                * @InlineOnly\n                * @JvmName("success")\n                * @public
inline fun <T> success(value: T): Result<T> =\n                Result(value)\n                /**\n                * Returns an instance that
encapsulates the given [Throwable] [exception] as failure.\n                *\n
*\n                * @Suppress("INAPPLICABLE_JVM_NAME")\n                * @InlineOnly\n                * @JvmName("failure")\n                * @public
inline fun <T> failure(exception: Throwable): Result<T> =\n                Result(createFailure(exception))\n                }\n                }\n
internal class Failure(\n                @JvmField\n                val exception: Throwable\n                ): Serializable {\n                override fun

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equals(other:

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Any?): Boolean = other is Failure && exception == other.exception\n    override fun hashCode(): Int =  
exception.hashCode()\n    override fun toString(): String = \"Failure($exception)\"\n}\n\n/* Creates an  
instance of internal marker [Result.Failure] class to\n* make sure that this class is not exposed in ABI.\n*\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun createFailure(exception: Throwable): Any =\nResult.Failure(exception)\n\n/* Throws exception if the result is failure. This internal function minimizes\n* inlined bytecode for [getOrThrow] and makes sure that in the future we can\n* add some exception-augmenting  
logic here (if needed).\n*\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun Result<*>.throwOnFailure() {\nif (value is Result.Failure) throw value.exception\n}\n\n/* Calls the specified function [block] and returns its  
encapsulated result if invocation was successful,\n* catching any [Throwable] exception that was thrown  
from the [block] function execution and encapsulating it as a failure.\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R> runCatching(block: () -> R): Result<R> {\nreturn try {\n    Result.success(block())\n} catch (e: Throwable) {\n    Result.failure(e)\n}\n}\n\n/* Calls the specified function [block] with `this` value as its receiver and returns its encapsulated result if invocation  
was successful,\n* catching any [Throwable] exception that was thrown from the [block] function execution and  
encapsulating it as a failure.\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T, R>  
T.runCatching(block: T.() -> R): Result<R> {\nreturn try {\n    Result.success(block())\n} catch (e:  
Throwable) {\n    Result.failure(e)\n}\n}\n\n// -- extensions --\n\n/* Returns the encapsulated value if this  
instance represents [success][Result.isSuccess] or throws the encapsulated [Throwable] exception\n* if it is  
[failure][Result.isFailure].\n*\n* This function is a shorthand for `getOrElse { throw it }` (see [getOrElse]).\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T> Result<T>.getOrThrow(): T {\nthrowOnFailure()\nreturn value as T\n}\n\n/* Returns the encapsulated value if this instance represents  
[success][Result.isSuccess] or the\n* result of [onFailure] function for the encapsulated [Throwable] exception if it  
is [failure][Result.isFailure].\n*\n* Note, that this function rethrows any [Throwable] exception thrown by  
[onFailure] function.\n*\n* This function is a shorthand for `fold(onSuccess = { it }, onFailure = onFailure)` (see  
[fold]).\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R> Result<T>.getOrElse(onFailure:  
(exception: Throwable) -> R): R {\ncontract {\n    callsInPlace(onFailure,  
InvocationKind.AT_MOST_ONCE)\n}\nreturn when (val exception = exceptionOrNull()) {\n    null ->  
value as T\n    else -> onFailure(exception)\n}\n}\n\n/* Returns the encapsulated value if this instance represents [success][Result.isSuccess] or the\n* [defaultValue] if it is [failure][Result.isFailure].\n*\n* This function is a shorthand for `getOrElse { defaultValue  
}` (see [getOrElse]).\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R>  
Result<T>.getOrDefault(defaultValue: R): R {\nif (isFailure) return defaultValue\nreturn value as  
T\n}\n\n/* Returns the result of [onSuccess] for the encapsulated value if this instance represents  
[success][Result.isSuccess]\n* or the result of [onFailure] function for the encapsulated [Throwable] exception if it  
is [failure][Result.isFailure].\n*\n* Note, that this function rethrows any [Throwable] exception thrown by  
[onSuccess] or by [onFailure] function.\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T>  
Result<T>.fold(\n    onSuccess: (value: T) -> R,\n    onFailure: (exception: Throwable) -> R\n): R {\ncontract {\n    callsInPlace(onSuccess, InvocationKind.AT_MOST_ONCE)\n    callsInPlace(onFailure,  
InvocationKind.AT_MOST_ONCE)\n}\nreturn when (val exception = exceptionOrNull()) {\n    null ->  
onSuccess(value as T)\n    else -> onFailure(exception)\n}\n}\n\n// transformation\n\n/* Returns the  
encapsulated result of the given [transform] function applied to the encapsulated value\n* if this instance represents  
[success][Result.isSuccess] or the\n* original encapsulated [Throwable] exception if it is  
[failure][Result.isFailure].\n*\n* Note, that this function rethrows any [Throwable] exception thrown by  
[transform] function.\n*\n* See [mapCatching] for an alternative that encapsulates exceptions.\n*\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T> Result<T>.map(transform: (value: T) -> R):  
Result<R> {\ncontract {\n    callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n}\nreturn when
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{\n    isSuccess -> Result.success(transform(value
as T))\n    else -> Result(value)\n } \n\n/**\n * Returns the encapsulated result of the given [transform]
function applied to the encapsulated value\n * if this instance represents [success][Result.isSuccess] or the\n *
original encapsulated [Throwable] exception if it is [failure][Result.isFailure].\n *\n * This function catches any
[Throwable] exception thrown by [transform] function and encapsulates it as a failure.\n * See [map] for an
alternative that rethrows exceptions from `transform` function.\n *\n@InlineOnly\n@SinceKotlin("1.3")\npublic
inline fun <R, T> Result<T>.mapCatching(transform: (value: T) -> R): Result<R> {\n    return when {\n
isSuccess -> runCatching { transform(value as T) }\n    else -> Result(value)\n } \n\n\n/**\n * Returns the
encapsulated result of the given [transform] function applied to the encapsulated [Throwable] exception\n * if this
instance represents [failure][Result.isFailure] or the\n * original encapsulated value
if it is [success][Result.isSuccess].\n *\n * Note, that this function rethrows any [Throwable] exception thrown by
[transform] function.\n * See [recoverCatching] for an alternative that encapsulates exceptions.\n
*\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R> Result<T>.recover(transform: (exception:
Throwable) -> R): Result<R> {\n    contract {\n        callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n
}\n    return when (val exception = exceptionOrNull()) {\n        null -> this\n        else ->
Result.success(transform(exception))\n    } \n\n\n/**\n * Returns the encapsulated result of the given [transform]
function applied to the encapsulated [Throwable] exception\n * if this instance represents [failure][Result.isFailure]
or the\n * original encapsulated value if it is [success][Result.isSuccess].\n *\n * This function catches any
[Throwable] exception thrown by [transform] function and encapsulates it as a failure.\n * See [recover] for an
alternative
that rethrows exceptions.\n *\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R>
Result<T>.recoverCatching(transform: (exception: Throwable) -> R): Result<R> {\n    return when (val exception =
exceptionOrNull()) {\n        null -> this\n        else -> runCatching { transform(exception) } \n    } \n\n\n/"peek"
onto value/exception and pipe\n\n/**\n * Performs the given [action] on the encapsulated [Throwable] exception if
this instance represents [failure][Result.isFailure].\n * Returns the original `Result` unchanged.\n
*\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <T> Result<T>.onFailure(action: (exception:
Throwable) -> Unit): Result<T> {\n    contract {\n        callsInPlace(action, InvocationKind.AT_MOST_ONCE)\n
}\n    exceptionOrNull()?.let { action(it) } \n    return this\n} \n\n\n/**\n * Performs the given [action] on the
encapsulated value if this instance represents [success][Result.isSuccess].\n * Returns the original `Result`
unchanged.\n
*\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <T> Result<T>.onSuccess(action: (value: T) -> Unit):
Result<T> {\n    contract {\n        callsInPlace(action, InvocationKind.AT_MOST_ONCE)\n    } \n    if (isSuccess)
action(value as T)\n    return this\n} \n\n\n-----\n"/\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n\npackage kotlin.coroutines\n\nimport kotlin.contracts.*\nimport
kotlin.coroutines.intrinsics.*\nimport kotlin.internal.InlineOnly\n\n/**\n * Interface representing a continuation after
a suspension point that returns a value of type `T`.\n *\n@SinceKotlin("1.3")\npublic interface Continuation<in
T> {\n    /**\n     * The context of the coroutine that corresponds to this continuation.\n     *\n     public val context:
CoroutineContext\n\n    /**\n     * Resumes the execution of the
corresponding coroutine passing a successful or failed [result] as the\n     * return value of the last suspension
point.\n     *\n     public fun resumeWith(result: Result<T>)\n} \n\n\n/**\n * Classes and interfaces marked with this
annotation are restricted when used as receivers for extension\n * `suspend` functions. These `suspend` extensions
can only invoke other member or extension `suspend` functions on this particular\n * receiver and are restricted
from calling arbitrary suspension functions.\n
*\n@SinceKotlin("1.3")\n@Target(AnnotationTarget.CLASS)\n@Retention(AnnotationRetention.BINARY)\npu
blic annotation class RestrictsSuspension\n\n\n/**\n * Resumes the execution of the corresponding coroutine passing
[value] as the return value of the last suspension point.\n *\n@SinceKotlin("1.3")\n@InlineOnly\npublic inline
fun <T> Continuation<T>.resume(value: T): Unit =\n    resumeWith(Result.success(value))\n\n\n/**\n * Resumes the

```

execution of the corresponding coroutine so that the

[exception] is re-thrown right after the\n \* last suspension point.\n

```
*\n@SinceKotlin("1.3")\n@InlineOnly\npublic inline fun <T>
```

```
Continuation<T>.resumeWithException(exception: Throwable): Unit =\n
```

resumeWith(Result.failure(exception))\n\n\n\*\*\n \* Creates a [Continuation] instance with the given [context] and implementation of [resumeWith] method.\n \* \n@SinceKotlin("1.3")\n@InlineOnly\npublic inline fun <T>

```
Continuation(\n context: CoroutineContext,\n crossinline resumeWith: (Result<T>) -> Unit)\n): Continuation<T>
```

```
=\n object : Continuation<T> {\n override val context: CoroutineContext\n get() = context\n\n
```

```
override fun resumeWith(result: Result<T>) =\n resumeWith(result)\n }\n\n**\n * Creates a coroutine
```

without a receiver and with result type [T].\n \* This function creates a new, fresh instance of suspendable computation every time it is invoked.\n \* \n \* To start executing the created coroutine, invoke `resume(Unit)` on the returned

[Continuation] instance.\n \* The [completion] continuation is invoked when the coroutine completes with a result or an exception.\n \* Subsequent invocation of any resume function on the resulting continuation will produce an

```
[IllegalStateException].\n *\n@SinceKotlin("1.3")\n@Suppress("UNCHECKED_CAST")\npublic fun <T>
```

```
(suspend () -> T).createCoroutine(\n completion: Continuation<T>\n): Continuation<Unit> =\n
```

```
SafeContinuation(createCoroutineUnintercepted(completion).intercepted(), COROUTINE_SUSPENDED)\n\n\n**\n
```

\* Creates a coroutine with receiver type [R] and result type [T].\n \* This function creates a new, fresh instance of suspendable computation every time it is invoked.\n \* \n \* To start executing the created coroutine, invoke

`resume(Unit)` on the returned [Continuation] instance.\n \* The [completion] continuation is invoked when the coroutine completes with a result or an exception.\n \* Subsequent invocation of any resume function on the resulting continuation will

```
produce an [IllegalStateException].\n *\n@SinceKotlin("1.3")\n@Suppress("UNCHECKED_CAST")\npublic fun <R, T> (suspend R.() -> T).createCoroutine(\n receiver: R,\n completion: Continuation<T>\n):
```

```
Continuation<Unit> =\n SafeContinuation(createCoroutineUnintercepted(receiver, completion).intercepted(), COROUTINE_SUSPENDED)\n\n\n**\n
```

\* Starts a coroutine without a receiver and with result type [T].\n \* This function creates and starts a new, fresh instance of suspendable computation every time it is invoked.\n \* The [completion] continuation is invoked when the coroutine completes with a result or an exception.\n

```
*\n@SinceKotlin("1.3")\n@Suppress("UNCHECKED_CAST")\npublic fun <T> (suspend () ->
```

```
T).startCoroutine(\n completion: Continuation<T>\n) {\n
```

```
createCoroutineUnintercepted(completion).intercepted().resume(Unit)\n}\n\n**\n * Starts a coroutine with receiver
```

type [R] and result type [T].\n \* This function creates and starts a new, fresh instance of suspendable computation every time it is invoked.\n \* The [completion] continuation is invoked when the coroutine completes with a result or an exception.\n \* \n@SinceKotlin("1.3")\n@Suppress("UNCHECKED\_CAST")\npublic fun <R,

```
T> (suspend R.() -> T).startCoroutine(\n receiver: R,\n completion: Continuation<T>\n) {\n
```

```
createCoroutineUnintercepted(receiver, completion).intercepted().resume(Unit)\n}\n\n**\n
```

\* Obtains the current continuation instance inside suspend functions and suspends\n \* the currently running coroutine.\n \* \n \* In this function both [Continuation.resume] and [Continuation.resumeWithException] can be used either synchronously

in\n \* the same stack-frame where the suspension function is run or asynchronously later in the same thread or\n \* from a different thread of execution. Subsequent invocation of any resume function will produce an

```
[IllegalStateException].\n *\n@SinceKotlin("1.3")\n@InlineOnly\npublic suspend inline fun <T>
```

```
suspendCoroutine(crossinline block: (Continuation<T>
```

```
-> Unit): T {\n contract { callsInPlace(block, InvocationKind.EXACTLY_ONCE) }\n return
```

```
suspendCoroutineUninterceptedOrReturn { c: Continuation<T> ->\n val safe =
```

```
SafeContinuation(c.intercepted())\n block(safe)\n safe.getOrThrow()\n }\n\n**\n
```

\* Returns the context of the current coroutine.\n

```
*\n@SinceKotlin("1.3")\n@Suppress("WRONG_MODIFIER_TARGET")\n@InlineOnly\npublic suspend inline
```

```
val coroutineContext: CoroutineContext\n get() {\n throw NotImplementedError("Implemented as
```

```

intrinsic")\n } \n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines.intrinsics\n\nimport kotlin.coroutines.*\nimport kotlin.internal.InlineOnly\n\n/**\n * Starts an unintercepted coroutine without a receiver and with result type [T] and executes it until its\n * first suspension.\n * Returns the result of the coroutine or throws its exception if it does not suspend or\n * [COROUTINE_SUSPENDED] if it suspends.\n * In the latter case, the [completion] continuation is invoked when\n * the coroutine completes with a result or an exception.\n * The coroutine is started directly in the invoker's thread\n * without going through the [ContinuationInterceptor] that might\n * be present in the completion's\n * [CoroutineContext]. It is the invoker's responsibility to ensure that a proper invocation\n * context is established.\n * This function is designed to be used from inside of [suspendCoroutineUninterceptedOrReturn] to resume the\n * execution of the suspended\n * coroutine using a reference to the suspending function.\n */\n\n@SinceKotlin("1.3")\n@InlineOnly\npublic actual inline fun <T> (suspend () ->\n T).startCoroutineUninterceptedOrReturn(\n completion: Continuation<T>)\n): Any? =\n this.asDynamic()(completion, false)\n\n/**\n * Starts an unintercepted coroutine\n * with receiver type [R] and result type [T] and executes it until its first suspension.\n * Returns the result of the\n * coroutine or throws its exception if it does not suspend or [COROUTINE_SUSPENDED] if it suspends.\n * In the\n * latter case, the [completion] continuation is invoked when the coroutine completes with a result or an exception.\n * The coroutine is started directly in the invoker's thread without going through the [ContinuationInterceptor]\n * that might\n * be present in the completion's [CoroutineContext]. It is the invoker's responsibility to ensure that a\n * proper invocation\n * context is established.\n * This function is designed to be used from inside of\n * [suspendCoroutineUninterceptedOrReturn] to resume the execution of the suspended\n * coroutine using a reference\n * to the suspending function.\n */\n\n@SinceKotlin("1.3")\n@InlineOnly\npublic actual inline fun <R, T> (suspend\n R.() -> T).startCoroutineUninterceptedOrReturn(\n receiver: R,\n completion: Continuation<T>)\n):\n Any? = this.asDynamic()(receiver, completion, false)\n\n@InlineOnly\ninternal actual inline fun <R, P, T>\n (suspend R.(P) -> T).startCoroutineUninterceptedOrReturn(\n receiver: R,\n param: P,\n completion:\n Continuation<T>)\n): Any? = this.asDynamic()(receiver, param, completion, false)\n\n/**\n * Creates unintercepted\n * coroutine without receiver and with result type [T].\n * This function creates a new, fresh instance of suspendable\n * computation every time it is invoked.\n * To start executing the created coroutine, invoke `resume(Unit)` on the\n * returned [Continuation] instance.\n * The [completion] continuation is invoked when coroutine completes with\n * result or exception.\n * This function returns unintercepted continuation.\n * Invocation of `resume(Unit)` starts\n * coroutine immediately in the invoker's call stack without going through the\n * [ContinuationInterceptor] that might\n * be present in the completion's [CoroutineContext].\n * It is the invoker's responsibility\n * to ensure that a proper invocation context is established.\n * Note that [completion] of this function may get\n * invoked in an arbitrary context.\n * [Continuation.intercepted] can be used to acquire the intercepted\n * continuation.\n * Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of\n * both the\n * coroutine and [completion] happens in the invocation context established by\n * [ContinuationInterceptor].\n * Repeated invocation of any resume function on the resulting continuation corrupts the\n * state machine of the\n * coroutine and may result in arbitrary behaviour or exception.\n */\n\n@SinceKotlin("1.3")\npublic actual fun <T>\n (suspend () -> T).createCoroutineUnintercepted(\n completion: Continuation<T>)\n): Continuation<Unit> =\n //\n // Kotlin/JS suspend lambdas have an extra parameter `suspended`\n // if (this.asDynamic().length == 2) {\n //\n // When `suspended` is true the continuation is created, but not executed\n //\n // this.asDynamic()(completion,\n // true)\n // } else {\n //\n // createCoroutineFromSuspendFunction(completion) {\n //\n // this.asDynamic()(completion)\n //\n // }\n // }\n\n/**\n * Creates unintercepted coroutine with receiver type [R] and\n * result type [T].\n * This function creates a new, fresh instance of suspendable computation every time it is\n * invoked.\n * To start executing the created coroutine, invoke `resume(Unit)` on the returned [Continuation]\n * instance.\n * The [completion] continuation is invoked when coroutine completes with result or exception.\n * This function returns unintercepted continuation.\n * Invocation of `resume(Unit)` starts\n * coroutine immediately in the invoker's call stack without going through the\n * [ContinuationInterceptor] that might be present in the

```

completion's [CoroutineContext].\n \* It is the invoker's responsibility to ensure that a proper invocation context is established.\n \* Note that [completion] of this function may get invoked in an arbitrary context.\n

\*\n \* [Continuation.intercepted] can be used to acquire the intercepted continuation.\n \* Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of\n \* both the coroutine and [completion] happens in the invocation context established by\n \* [ContinuationInterceptor].\n \*\n \* Repeated invocation of any resume function on the resulting continuation corrupts the\n \* state machine of the coroutine and may result in arbitrary behaviour or exception.\n \*\n @SinceKotlin("1.3")\n public actual fun <R, T> (suspend R.() -> T).createCoroutineUnintercepted(\n receiver: R,\n completion: Continuation<T>)\n : Continuation<Unit> =\n // Kotlin/JS suspend lambdas have an extra parameter `suspended`\n if (this.asDynamic().length == 3) {\n // When `suspended` is true the continuation is created, but not executed\n this.asDynamic()(receiver, completion, true)\n } else {\n createCoroutineFromSuspendFunction(completion) {\n this.asDynamic()(receiver, completion)\n }\n }\n }\n\n\*\*\n \* Intercepts this continuation with [ContinuationInterceptor].\n \*\n \* This function shall be used on the immediate result of [createCoroutineUnintercepted] or [suspendCoroutineUninterceptedOrReturn],\n \* in which case it checks for [ContinuationInterceptor] in the continuation's [context][Continuation.context],\n \* invokes [ContinuationInterceptor.interceptContinuation], caches and returns the result.\n \*\n \* If this function is invoked on other [Continuation] instances it returns `this` continuation unchanged.\n \*\n @SinceKotlin("1.3")\n public actual fun <T> Continuation<T>.intercepted(): Continuation<T> =\n (this as? CoroutineImpl)?.intercepted() ?: this\n\n\nprivate inline fun <T> createCoroutineFromSuspendFunction(\n completion: Continuation<T>,\n crossinline block: () -> Any?)\n : Continuation<Unit> {\n @Suppress("UNCHECKED\_CAST")\n return object : CoroutineImpl(completion as Continuation<Any?>) {\n override fun doResume(): Any? {\n exception?.let { throw it }\n return block()\n }\n }\n }\n\n", /\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*\n\npackage kotlin.js\n\n// Mirrors signature from JS IR BE\n// Used for js.translator/testData/box/number/mulInt32.kt\n@library\n@JsName("imulEmulated")\n@Suppress("UNUSED\_PARAMETER")\ninternal fun imul(x: Int, y: Int): Int =\n definedExternally\n\n@Suppress("NOTHING\_TO\_INLINE")\ninternal inline fun isArrayish(o: dynamic) =\n js("Kotlin").isArrayish(o)\n", /\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*\n\npackage kotlin\n\n// NOTE: Do not author your exceptions as they are written in this file, instead use this template:\n\npublic open class MyException : Exception {\n constructor() : super()\n constructor(message: String?) : super(message)\n constructor(message: String?, cause: Throwable?) : super(message, cause)\n constructor(cause: Throwable?) : super(cause)\n }\n\n\n// TODO: remove primary constructors, make all secondary\n\n@Suppress("USELESS\_ELVIS\_RIGHT\_IS\_NULL")\npublic actual open class Error actual constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefiend, cause)\n }\n\n\n@Suppress("USELESS\_ELVIS\_RIGHT\_IS\_NULL")\npublic actual open class Exception actual constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefiend, cause)\n }\n\n\npublic actual open class RuntimeException actual constructor(message: String?, cause: Throwable?) : Exception(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefiend, cause)\n }\n\n\npublic actual open class IllegalArgumentException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefiend, cause)\n }\n\n\npublic actual open class IllegalStateException actual

```

constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n  actual constructor() :
this(null, null)\n  actual constructor(message: String?) : this(message, null)\n  actual constructor(cause:
Throwable?) : this(undefined, cause)\n}\n\npublic actual open class IndexOutOfBoundsException actual
constructor(message: String?) : RuntimeException(message) {\n  actual constructor() : this(null)\n}\n\npublic
actual open class ConcurrentModificationException actual constructor(message: String?, cause: Throwable?) :
RuntimeException(message, cause) {\n  actual constructor() : this(null, null)\n  actual constructor(message:
String?) : this(message, null)\n  actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual
open class UnsupportedOperationException actual constructor(message: String?, cause: Throwable?) :
RuntimeException(message, cause) {\n  actual constructor() : this(null, null)\n  actual constructor(message:
String?) : this(message, null)\n  actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic
actual open class NumberFormatException actual constructor(message: String?) :
IllegalArgumentException(message)
{\n  actual constructor() : this(null)\n}\n\npublic actual open class NullPointerException actual
constructor(message: String?) : RuntimeException(message) {\n  actual constructor() : this(null)\n}\n\npublic
actual open class ClassCastException actual constructor(message: String?) : RuntimeException(message) {\n
actual constructor() : this(null)\n}\n\npublic actual open class
AssertionError\n@SinceKotlin("1.4")\nconstructor(message: String?, cause: Throwable?) : Error(message, cause)
{\n  actual constructor() : this(null)\n  constructor(message: String?) : this(message, null)\n  actual
constructor(message: Any?) : this(message.toString(), message as? Throwable)\n}\n\npublic actual open class
NoSuchElementException actual constructor(message: String?) : RuntimeException(message) {\n  actual
constructor() : this(null)\n}\n\n@SinceKotlin("1.3")\npublic actual open class ArithmeticException actual
constructor(message: String?) : RuntimeException(message) {\n  actual
constructor() : this(null)\n}\n\npublic actual open class NoWhenBranchMatchedException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n  actual constructor() :
this(null, null)\n  actual constructor(message: String?) : this(message, null)\n  actual constructor(cause:
Throwable?) : this(undefined, cause)\n}\n\npublic actual open class UninitializedPropertyAccessException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n  actual constructor() :
this(null, null)\n  actual constructor(message: String?) : this(message, null)\n  actual constructor(cause:
Throwable?) : this(undefined, cause)\n}\n\n", /*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is
governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n
*\n\n@file:Suppress("UNUSED_PARAMETER")\n\npackage kotlin.js\n\n@kotlin.internal.InlineOnly\n\ninternal
inline fun jsDeleteProperty(obj:
Any, property: Any) {\n  js("delete obj[property]")\n}\n\n@kotlin.internal.InlineOnly\n\ninternal inline fun
jsBitwiseOr(lhs: Any?, rhs: Any?): Int =\n  js("lhs | rhs").unsafeCast<Int>()", /*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.math\n\n/**\n * Returns
this value with the sign bit same as of the [sign] value.\n * If [sign] is `NaN` the sign of the result is undefined.\n
*\n@SinceKotlin("1.2")\npublic actual fun Double.withSign(sign: Double): Double {\n  val thisSignBit =
js("Kotlin").doubleSignBit(this).unsafeCast<Int>()\n  val newSignBit =
js("Kotlin").doubleSignBit(sign).unsafeCast<Int>()\n  return if (thisSignBit == newSignBit) this else -
this\n}\n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin\n\n/**\n *
Returns a bit representation of the specified floating-point value as [Long]\n * according to the IEEE 754 floating-
point "double format" bit layout.\n */\n@SinceKotlin("1.2")\n@library("doubleToBits")\npublic actual fun
Double.toBits(): Long = definedExternally\n\n/**\n * Returns a bit representation of the specified floating-point
value as [Long]\n * according to the IEEE 754 floating-point "double format" bit layout,\n * preserving `NaN`
values exact layout.\n */\n@SinceKotlin("1.2")\n@library("doubleToRawBits")\npublic actual fun

```



```

Double.toRawBits(): Long = definedExternally\n\n/**\n * Returns the [Double] value corresponding to a given bit
representation.\n *\n @SinceKotlin("1.2")\n @kotlin.internal.InlineOnly\n public actual inline fun
Double.Companion.fromBits(bits: Long): Double =
js("Kotlin").doubleFromBits(bits).unsafeCast<Double>()\n\n/**\n * Returns
a bit representation of the specified floating-point value as [Int]\n * according to the IEEE 754 floating-point
'single format' bit layout.\n *\n * Note that in Kotlin/JS [Float] range is wider than 'single format' bit layout can
represent,\n * so some [Float] values may overflow, underflow or loose their accuracy after conversion to bits and
back.\n *\n @SinceKotlin("1.2")\n @library("floatToBits")\n public actual fun Float.toBits(): Int =
definedExternally\n\n/**\n * Returns a bit representation of the specified floating-point value as [Int]\n * according
to the IEEE 754 floating-point 'single format' bit layout,\n * preserving `NaN` values exact layout.\n *\n * Note
that in Kotlin/JS [Float] range is wider than 'single format' bit layout can represent,\n * so some [Float] values
may overflow, underflow or loose their accuracy after conversion to bits and back.\n
*\n @SinceKotlin("1.2")\n @library("floatToRawBits")\n public actual fun Float.toRawBits(): Int =
definedExternally\n\n/**\n
* Returns the [Float] value corresponding to a given bit representation.\n
*\n @SinceKotlin("1.2")\n @kotlin.internal.InlineOnly\n public actual inline fun Float.Companion.fromBits(bits:
Int): Float =
js("Kotlin").floatFromBits(bits).unsafeCast<Float>()\n\n\n @Suppress("NOTHING_TO_INLINE")\n internal
inline fun Long(low: Int, high: Int) = js("Kotlin").Long.fromBits(low, high).unsafeCast<Long>()\n\n internal inline
val Long.low: Int get() = this.asDynamic().getLowBits().unsafeCast<Int>()\n\n internal inline val Long.high: Int get()
= this.asDynamic().getHighBits().unsafeCast<Int>()\n\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n @nimport kotlin.reflect.KClass\n @PublishedApi\n internal fun <T :
Annotation> KClass<*>.findAssociatedObject(@Suppress("UNUSED_PARAMETER") annotationClass:
KClass<T>): Any?
{\n // This API is not supported in js-v1. Return `null` to be source-compatible with js-ir.\n return
null\n}\n", /*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n @npackage kotlin.text\n /**\n * Returns a string representation of this [Long] value in the specified [radix].\n
*\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n
*\n @SinceKotlin("1.2")\n public actual fun Long.toString(radix: Int): String =
asDynamic().toString(checkRadix(radix)), /*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n @npackage
kotlin.js\n @PublishedApi\n @Suppress("NOTHING_TO_INLINE")\n @JsPolyfill("\n\n"nif (typeof
Array.prototype.fill
=== "undefined") {\n // Polyfill from https://developer.mozilla.org/en-
US/docs/Web/JavaScript/Reference/Global_Objects/Array/fill#Polyfill\n Object.defineProperty(Array.prototype,
'fill', {\n value: function (value) {\n // Steps 1-2.\n if (this == null) {\n throw new
TypeError('this is null or not defined');\n }\n\n var O = Object(this);\n\n // Steps 3-5.\n
var len = O.length >>> 0;\n\n // Steps 6-7.\n var start = arguments[1];\n var relativeStart = start
>> 0;\n\n // Step 8.\n var k = relativeStart < 0 ?\n Math.max(len + relativeStart, 0) :\n
Math.min(relativeStart, len);\n\n // Steps 9-10.\n var end = arguments[2];\n var
relativeEnd = end === undefined ?\n len : end >> 0;\n\n // Step 11.\n var finalValue
= relativeEnd < 0 ?\n Math.max(len + relativeEnd, 0) :\n Math.min(relativeEnd,
len);\n\n // Step 12.\n while (k < finalValue) {\n O[k] = value;\n k++;\n }\n\n // Step 13.\n return O;\n }\n });\n\n}\n\n[Int8Array, Int16Array, Uint16Array, Int32Array,
Float32Array, Float64Array].forEach(function (TypedArray) {\n if (typeof TypedArray.prototype.fill ===

```







BgzgyI8g9gL8g9kI0wgwJoxgkoC0wgioFkw/wI0w53iF4gioYowjmgBHGq1qkgwBF1q1q8qBHWghuIwghyKk0go  
QkwgoQk3goQHGFHkyg0pBgxj6IoinkxDswno7Ikwhz9Bo0gioB8z48Rwli0xN0mpjoX8w78pDwltoqKHFGGwwg  
sIHFH3q1q16BFHWFZ1q10q1B2qlwq1B1q10q1B2q1yq1B6q1gq1Biq1qhxBir1qp1Bqt1q1qB1g1q1+B//3q16B//q  
1qBH/qlq9Bholq9B1i00a1q10qD1op1HkwmigEigiY6Cptogq1Bixo1kDq7/j00B2qgoBWGFm1lz50B6s5q1+BG  
WhggzhwBFFhgk4//Bo2jigE8wguI8wguI8wguUog1qoB4qjmIwwi2KgkYHHH4IBgiFWkgIWoghssMmz5smrBZ  
3q1y50B5sm7gzBtz1smzB5smz50BqzqtmzB5sgzqzBF2/9//5BowgoIwmnkzPkwgk4C8ys65BkgoqI0wgy6FghquZo  
2giY0ghiIsgH24B4ghsQ8QF/v1q1OFs0O8iCHHF1qggz/B8wg6Iznv+//B08QgohsjK0QGFk7hsQ4gB\

decodedRangeCategory = decodeVarLenBase64(rangeCategory, fromBase64, 222)\n }\n}\n\n/\*\*\n \* Returns  
`true` if this character is a letter.\n \*/\ninternal fun Char.isLetterImpl(): Boolean {\n return getLetterType() !=  
0\n}\n}\n\n/\*\*\n \* Returns `true` if this character is a lower case letter, or it has contributory property  
`Other\_Lowercase`.\n \*/\ninternal fun Char.isLowercaseImpl(): Boolean {\n return getLetterType() == 1 ||  
code.isOtherLowercase()\n}\n}\n\n/\*\*\n \* Returns `true` if this character is an upper case letter, or it has contributory  
property `Other\_Uppercase`.\n \*/\ninternal fun Char.isUppercaseImpl(): Boolean {\n return getLetterType() == 2  
|| code.isOtherUppercase()\n}\n}\n\n/\*\*\n \* Returns\n \* - `1` if the character is a lower case letter,\n \* - `2` if the  
character is an

upper case letter,\n \* - `3` if the character is a letter but not a lower or upper case letter,\n \* - `0` otherwise.\n \*/\nprivate fun Char.getLetterType(): Int {\n val ch = this.code\n val index =  
binarySearchRange(Letter.decodedRangeStart, ch)\n val rangeStart = Letter.decodedRangeStart[index]\n val  
rangeEnd = rangeStart + Letter.decodedRangeLength[index] - 1\n val code =  
Letter.decodedRangeCategory[index]\n if (ch > rangeEnd) {\n return 0\n }\n val lastTwoBits = code  
and 0x3\n if (lastTwoBits == 0) { // gap pattern\n var shift = 2\n var threshold = rangeStart\n for (i  
in 0..1) {\n threshold += (code shr shift) and 0x7f\n if (threshold > ch) {\n return 3\n  
}\n shift += 7\n threshold += (code shr shift) and 0x7f\n if (threshold > ch) {\n return  
0\n }\n shift += 7\n }\n return 3\n }\n}\n if (code <= 0x7) {\n return lastTwoBits\n }\n val distance = (ch - rangeStart)\n val shift = if (code <=  
0x1F) distance % 2 else distance\n return (code shr (2 \* shift)) and 0x3\n}\n}\n\n"/\*\n \* Copyright 2010-2021  
JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the  
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*/\npackage kotlin.text\n\n/\n\nNOTE:  
THIS FILE IS AUTO-GENERATED by the GenerateUnicodeData.kt\n See:

<https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib>\n\nprivate object OtherLowercase {\n internal  
val otherLowerStart = intArrayOf(\n 0x00aa, 0x00ba, 0x02b0, 0x02c0, 0x02e0, 0x0345, 0x037a, 0x1d2c,  
0x1d78, 0x1d9b, 0x2071, 0x207f, 0x2090, 0x2170, 0x24d0, 0x2c7c, 0xa69c, 0xa770, 0xa7f8, 0xab5c, \n )\n internal val otherLowerLength = intArrayOf(\n 1, 1, 9, 2, 5, 1, 1, 63, 1, 37, 1, 1, 13, 16, 26, 2, 2, 1, 2, 4, \n )\n}\n}\n\ninternal

fun Int.isOtherLowercase(): Boolean {\n val index = binarySearchRange(OtherLowercase.otherLowerStart,  
this)\n return index >= 0 && this < OtherLowercase.otherLowerStart[index] +  
OtherLowercase.otherLowerLength[index]\n}\n}\n\n"/\*\n \* Copyright 2010-2021 JetBrains s.r.o. and Kotlin  
Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be  
found in the license/LICENSE.txt file.\n \*/\npackage kotlin.text\n\n/\n\nNOTE: THIS FILE IS AUTO-  
GENERATED by the GenerateUnicodeData.kt\n See:

<https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib>\n\ninternal fun Int.isOtherUppercase(): Boolean  
{\n return this in 0x2160..0x216f\n || this in 0x24b6..0x24cf\n}\n}\n\n"/\*\n \* Copyright 2010-2022 JetBrains  
s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0  
license that can be found in the license/LICENSE.txt file.\n \*/\npackage kotlin.text\n\n/\n\nNOTE:  
THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n See:

<https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib>\n\nimport kotlin.js.\*\n\n/\*\*\n \* Returns a  
character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char  
sequence.\n \*/\n@sample samples.collections.Collections.Elements.elementAt\n\npublic actual fun

```

CharSequence.elementAt(index: Int): Char {\n    return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, length: $length}") }\n}\n\n"/*\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/\n// NOTE: THIS FILE IS
AUTO-GENERATED by the GenerateUnicodeData.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n/\n// 4 ranges totally\n\ninternal fun
Char.titlecaseCharImpl():
    Char {\n    val code = this.code\n    // Letters repeating <Lu, Lt, Ll> sequence and code of the Lt is a multiple of 3,
e.g. <\u01c4, \u01c5, \u01c6>\n    if (code in 0x01c4..0x01cc || code in 0x01f1..0x01f3) {\n        return (3 * ((code +
1) / 3)).toChar()\n    }\n    // Lower case letters whose title case mapping equivalent is equal to the original letter\n
if (code in 0x10d0..0x10fa || code in 0x10fd..0x10ff) {\n        return this\n    }\n    return uppercaseChar()\n}"/*\n *
Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n/\n\nimport kotlin.js.*\nimport
kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns an element
at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n
*\n * @sample samples.collections.Collections.Elements.elementAt\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.elementAt(index: Int):
UInt {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n * \n *\n * @sample samples.collections.Collections.Elements.elementAt\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.elementAt(index: Int):
ULong {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n * \n *\n * @sample samples.collections.Collections.Elements.elementAt\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UByteArray.elementAt(index: Int):
UByte {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n * \n *\n * @sample samples.collections.Collections.Elements.elementAt\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UShortArray.elementAt(index: Int):
UShort {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n
}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.asList(): List<UInt> {\n
return object : AbstractList<UInt>(), RandomAccess {\n    override val size: Int get() = this@asList.size\n
override fun
isEmpty(): Boolean = this@asList.isEmpty()\n    override fun contains(element: UInt): Boolean =
this@asList.contains(element)\n    override fun get(index: Int): UInt {\n
AbstractList.checkElementIndex(index, size)\n        return this@asList[index]\n    }\n    override fun
indexOf(element: UInt): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UInt)
return -1\n        return this@asList.indexOf(element)\n    }\n    override fun lastIndexOf(element: UInt): Int
{\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UInt) return -1\n        return
this@asList.lastIndexOf(element)\n    }\n}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.asList(): List<ULong>
{\n    return object : AbstractList<ULong>(), RandomAccess {\n        override val size: Int get() = this@asList.size\n
override fun isEmpty(): Boolean = this@asList.isEmpty()\n        override fun contains(element: ULong):
Boolean = this@asList.contains(element)\n        override fun get(index: Int): ULong {\n
AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n    }\n    override fun

```



produces mangled names for functions with parameters, which is unnatural for usual JavaScript developer.

You can put `@JsName(...)` on functions you want to be available from JavaScript. For some reason you want to rename declaration, e.g. there's common term in JavaScript for a concept provided by the declaration, which is uncommon in Kotlin. Example:

```
kotlin
class Person(val name: String) {
    fun hello() {
        println("Hello $name!")
    }
}
@JsName("helloWithGreeting")
fun hello(greeting: String) {
    println("$greeting $name!")
}
```

`@property name` the name which compiler uses both for declaration itself and for all references to the declaration. It's required to denote a valid JavaScript identifier.

```
@Retention(AnnotationRetention.BINARY)
@Target(CLASS, FUNCTION, PROPERTY, CONSTRUCTOR,
PROPERTY_GETTER, PROPERTY_SETTER)
public actual annotation class JsName(actual val name:
```

```
String)
Denotes an 'external' declaration that must be imported from native JavaScript library.
```

The compiler produces the code relevant for the target module system, for example, in case of CommonJS, it will import the declaration via the `require(...)` function. The annotation can be used on top-level external declarations (classes, properties, functions) and files. In case of file (which can't be 'external') the following rule applies: all the declarations in the file must be 'external'. By applying `@JsModule(...)` on a file you tell the compiler to import a

```
JavaScript object that contain all the declarations from the file.
Example:
kotlin
@JsModule("jquery")
external abstract class JQuery() {
    // some declarations here
}
@JsModule("jquery")
external fun JQuery(element: Element): JQuery
@property import name
of a module to import declaration from.
It is not interpreted by the Kotlin compiler, it's passed as is
directly to the target module system. @see JsNonModule
```

```
@Retention(AnnotationRetention.BINARY)
@Target(CLASS, PROPERTY, FUNCTION, FILE)
public
annotation class JsModule(val import: String)
Denotes an 'external' declaration that can be used without
module system. By default, an 'external' declaration is available regardless your target module system.
However, by applying [JsModule] annotation you can make a declaration unavailable to 'plain' module system.
Some JavaScript libraries are distributed both as
```

a standalone downloadable piece of JavaScript and as a module available as an npm package. To tell the Kotlin compiler to accept both cases, you can augment [JsModule] with the `@JsNonModule` annotation. For example:

```
kotlin
@JsModule("jquery")
@JsNonModule
@JsName("$")
external
abstract class JQuery() {
    // some declarations here
}
@JsModule("jquery")
@JsNonModule
@JsName("$")
external fun JQuery(element: Element): JQuery
@see JsModule
@Retention(AnnotationRetention.BINARY)
@Target(CLASS, PROPERTY, FUNCTION, FILE)
public
annotation class JsNonModule
Adds prefix to 'external' declarations in a source file.
JavaScript
does not have concept of packages (namespaces). They are usually emulated by nested objects.
The compiler
turns references to 'external' declarations either to plain unprefix names (in case of 'plain' modules) or to
plain imports.
However,
```

if a JavaScript library provides its declarations in packages, you won't be satisfied with this. You can tell the compiler to generate additional prefix before references to 'external' declarations using the `@JsQualifier(...)` annotation.

Note that a file marked with the `@JsQualifier(...)` annotation can't contain non-'external' declarations. Example:

```
@file:JsQualifier("my.jsPackageName")
package
some.kotlinPackage
external fun foo(x: Int)
external fun bar(): String
@property value
the qualifier to add to the declarations in the generated code.
It must be a sequence of valid JavaScript
identifiers separated by the `.` character.
Examples of valid qualifiers are: `foo`, `bar.Baz`, `_.$.f`
```

```
@see JsModule
@Retention(AnnotationRetention.BINARY)
@Target(AnnotationTarget.FILE)
public
annotation class JsQualifier(val value: String)
Exports top-level declaration
```

on JS platform. Compiled module exposes declarations that are marked with this annotation without name mangling. This annotation can be applied to either files or top-level declarations. It is currently prohibited to export the following kinds of declarations: `*`expect` declarations`, `* inline functions with`



```

reified type parameters\n * * suspend functions\n * * secondary constructors without `@JsName`\n * *
extension properties\n * * enum classes\n * * annotation classes\n * * Signatures of exported declarations must
only contain \"exportable\" types:\n * * `dynamic`, `Any`, `String`, `Boolean`, `Byte`, `Short`, `Int`, `Float`,
`Double`\n * * `BooleanArray`, `ByteArray`, `ShortArray`, `IntArray`, `FloatArray`, `DoubleArray`\n * *
`Array<exportable-type>`\n * * Function types with exportable parameters and return types\n * * `external` or
`@JsExport` classes and interfaces\n * * Nullable counterparts of types above\n
* * Unit return type. Must not be nullable\n * * This annotation is experimental, meaning that restrictions
mentioned above are subject to change.\n
*/\n\n@ExperimentalJsExport\n@Retention(AnnotationRetention.BINARY)\n@Target(CLASS, PROPERTY,
FUNCTION, FILE)\n@SinceKotlin(\"1.3\")\npublic actual annotation class JsExport\n\n/**\n * Forces a top-level
property to be initialized eagerly, opposed to lazily on the first access to file and/or property.\n
*/\n\n@ExperimentalStdlibApi\n@Retention(AnnotationRetention.BINARY)\n@Target(AnnotationTarget.PROPER
TY)\n@SinceKotlin(\"1.6\")\n@Deprecated(\"This annotation is a temporal migration assistance and may be
removed in the future releases, please consider filing an issue about the case where it is needed\")\npublic annotation
class EagerInitialization", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt
file.\n */\n\npackage kotlin.jvm\n\n// these are used in common generated code in stdlib\n\n// TODO: find how to
deprecate these ones\n\n@Target(AnnotationTarget.FIELD)\n@Retention(AnnotationRetention.SOURCE)\npublic
actual annotation class Volatile\n\n@Target(AnnotationTarget.FUNCTION,
AnnotationTarget.PROPERTY_GETTER,
AnnotationTarget.PROPERTY_SETTER)\n@Retention(AnnotationRetention.SOURCE)\npublic actual annotation
class Synchronized\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the
[MutableCollection] interface.\n * * @param E the type of elements contained in the collection. The collection is
invariant in its element type.\n */\n\npublic actual abstract class AbstractMutableCollection<E> protected actual
constructor() : AbstractCollection<E>(),
MutableCollection<E> {\n\n    actual abstract override fun add(element: E): Boolean\n\n    actual override fun
remove(element: E): Boolean {\n        checkIsMutable()\n        val iterator = iterator()\n        while
(iterator.hasNext()) {\n            if (iterator.next() == element) {\n                iterator.remove()\n                return true\n
            }\n        }\n        return false\n    }\n\n    actual override fun addAll(elements: Collection<E>): Boolean {\n
checkIsMutable()\n        var modified = false\n        for (element in elements) {\n            if (add(element)) modified =
true\n        }\n        return modified\n    }\n\n    actual override fun removeAll(elements: Collection<E>): Boolean {\n
checkIsMutable()\n        return (this as MutableIterable<E>).removeAll { it in elements }\n    }\n\n    actual
override fun retainAll(elements: Collection<E>): Boolean {\n        checkIsMutable()\n        return (this as
MutableIterable<E>).removeAll
{ it !in elements }\n    }\n\n    actual override fun clear(): Unit {\n        checkIsMutable()\n        val iterator =
this.iterator()\n        while (iterator.hasNext()) {\n            iterator.next()\n            iterator.remove()\n        }\n    }\n\n
@Deprecated(\"Provided so that subclasses inherit this function\", level = DeprecationLevel.HIDDEN)\n
@JsName(\"toJSON\")\n    protected fun toJSON(): Any = this.toArray()\n\n    /**\n     * This method is called
every time when a mutating method is called on this mutable collection.\n     * Mutable collections that are built
(frozen) must throw `UnsupportedOperationException`.\n     */\n\n    internal open fun checkIsMutable(): Unit {\n
}\n}\n\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\n\n/**\n * Based on GWT AbstractList\n * Copyright 2007 Google
Inc.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the [MutableList]
interface.\n * * @param E the type of elements contained in the list. The list is invariant in its element type.\n

```

```

*^/npublic actual abstract class AbstractMutableList<E> protected actual constructor() :
AbstractMutableCollection<E>(), MutableList<E> {/n  protected var modCount: Int = 0/n/n  abstract override fun
add(index: Int, element: E): Unit/n/n  abstract override fun removeAt(index: Int): E/n/n  abstract override fun
set(index: Int, element: E): E/n/n  /**/n  * Adds the specified element to the end of this list./n  */n  * @return
`true` because the list is always modified as the result of this operation./n  */n  actual override fun add(element:
E): Boolean {/n  checkIsMutable()/n  add(size, element)/n  return true/n  }/n/n  actual override fun
addAll(index: Int, elements: Collection<E>): Boolean {/n  AbstractList.checkPositionIndex(index,
size)/n/n  checkIsMutable()/n  var _index = index/n  var changed = false/n  for (e in elements) {/n
  add(_index++, e)/n  changed = true/n  }/n  return changed/n  }/n/n  actual override fun clear() {/n
  checkIsMutable()/n  removeRange(0, size)/n  }/n/n  actual override fun removeAll(elements:
Collection<E>): Boolean {/n  checkIsMutable()/n  return removeAll { it in elements }/n  }/n/n  actual
override fun retainAll(elements: Collection<E>): Boolean {/n  checkIsMutable()/n  return removeAll { it !in
elements }/n  }/n/n  actual override fun iterator(): MutableIterator<E> = IteratorImpl()/n/n  actual override fun
contains(element: E): Boolean = indexOf(element) >= 0/n/n  actual override fun indexOf(element: E): Int {/n
  for (index in 0..lastIndex) {/n  if (get(index) == element) {/n  return index/n  }/n  }/n
  return -1/n  }/n/n  actual override fun lastIndexOf(element: E): Int {/n  for (index in lastIndex downTo 0) {/n
  if (get(index) == element) {/n  return index/n  }/n  }/n  return -1/n  }/n/n  actual
override fun listIterator(): MutableListIterator<E> = listIterator(0)/n  actual override fun listIterator(index: Int):
MutableListIterator<E> = ListIteratorImpl(index)/n/n/n  actual override fun subList(fromIndex: Int, toIndex: Int):
MutableList<E> = SubList(this, fromIndex, toIndex)/n/n  /**/n  * Removes the range of elements from this list
starting from [fromIndex] and ending with but not including [toIndex]./n  */n  protected open fun
removeRange(fromIndex: Int, toIndex: Int) {/n  val iterator = listIterator(fromIndex)/n  repeat(toIndex -
fromIndex) {/n  iterator.next()/n  iterator.remove()/n  }/n  }/n/n  /**/n  * Compares this list with
another list instance with the ordered
structural equality./n  */n  * @return true, if [other] instance is a [List] of the same size, which contains the
same elements in the same order./n  */n  override fun equals(other: Any?): Boolean {/n  if (other === this)
return true/n  if (other !is List<*>) return false/n/n  return AbstractList.orderedEquals(this, other)/n  }/n/n
/**/n  * Returns the hash code value for this list./n  */n  override fun hashCode(): Int =
AbstractList.orderedHashCode(this)/n/n/n  private open inner class IteratorImpl : MutableIterator<E> {/n  /**
the index of the item that will be returned on the next call to [next]() */n  protected var index = 0/n  /** the
index of the item that was returned on the previous call to [next]() */n  * or [ListIterator.previous]() (for
`ListIterator`),/n  * -1 if no such item exists/n  */n  protected var last = -1/n/n  override fun
hasNext(): Boolean = index < size/n/n
  override fun next(): E {/n  if (!hasNext()) throw NoSuchElementException()/n  last = index++/n
  return get(last)/n  }/n/n  override fun remove() {/n  check(last != -1) { "Call next() or previous()
before removing element from the iterator." }/n/n  removeAt(last)/n  index = last/n  last = -1/n
  }/n  }/n/n  /**/n  * Implementation of `MutableListIterator` for abstract lists./n  */n  private inner class
ListIteratorImpl(index: Int) : IteratorImpl(), MutableListIterator<E> {/n/n  init {/n
  AbstractList.checkPositionIndex(index, this@AbstractMutableList.size)/n  this.index = index/n  }/n/n
  override fun hasPrevious(): Boolean = index > 0/n/n  override fun nextIndex(): Int = index/n/n  override fun
previous(): E {/n  if (!hasPrevious()) throw NoSuchElementException()/n/n  last = --index/n
  return get(last)/n
  }/n/n  override fun previousIndex(): Int = index - 1/n/n  override fun add(element: E) {/n
  add(index, element)/n  index++/n  last = -1/n  }/n/n  override fun set(element: E) {/n
  check(last != -1) { "Call next() or previous() before updating element value with the iterator." }/n  set(last,
element)/n  }/n  }/n/n  private class SubList<E>(private val list: AbstractMutableList<E>, private val
fromIndex: Int, toIndex: Int) : AbstractMutableList<E>(), RandomAccess {/n  private var _size: Int = 0/n/n
  init {/n  AbstractList.checkRangeIndexes(fromIndex, toIndex, list.size)/n  this._size = toIndex -

```

```

fromIndex\n    }\n\n    override fun add(index: Int, element: E) {\n
AbstractList.checkPositionIndex(index, _size)\n        list.add(fromIndex + index, element)\n        _size++\n
    }\n\n    override fun get(index: Int): E {\n
        AbstractList.checkElementIndex(index, _size)\n        return list[fromIndex + index]\n    }\n\n
override fun removeAt(index: Int): E {\n        AbstractList.checkElementIndex(index, _size)\n        val result
= list.removeAt(fromIndex + index)\n        _size--\n        return result\n    }\n\n    override fun set(index:
Int, element: E): E {\n        AbstractList.checkElementIndex(index, _size)\n        return list.set(fromIndex +
index, element)\n    }\n\n    override val size: Int get() = _size\n\n    internal override fun checkIsMutable():
Unit = list.checkIsMutable()\n    }\n\n}\n\n"/**\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n/**\n * Based on GWT AbstractMap\n * Copyright 2007 Google Inc.\n */\n\npackage kotlin.collections\n\n/**\n * Provides
a skeletal implementation of the [MutableMap] interface.\n */\n\n * The implementor is required to implement
[entries] property, which should return mutable set of map entries, and [put] function.\n */\n\n * @param K the type of
map keys. The map is invariant in its key type.\n */\n\n * @param V the type of map values. The map is invariant in its
value type.\n */\n\npublic actual abstract class AbstractMutableMap<K, V> protected actual constructor() :
AbstractMap<K, V>(), MutableMap<K, V> {\n\n    /**\n     * A mutable [Map.Entry] shared by several [Map]
implementations.\n     */\n\n    internal open class SimpleEntry<K, V>(override val key: K, value: V) :
MutableMap.MutableEntry<K, V> {\n        constructor(entry: Map.Entry<K, V>) : this(entry.key, entry.value)\n\n        private var _value = value\n\n        override val value: V get() = _value\n\n        override fun setValue(newValue:
V): V {\n            // Should check if the map containing this entry is mutable.\n            // However, to not
increase entry memory footprint it might be worthwhile not to check it here and\n            // force subclasses that
implement `build()` (freezing) operation to implement their own `MutableEntry`.\n            //\n            this@AbstractMutableMap.checkIsMutable()\n            val oldValue = this._value\n            this._value = newValue\n\n            return oldValue\n        }\n\n        override fun hashCode(): Int = entryHashCode(this)\n        override fun
toString(): String = entryToString(this)\n        override fun equals(other: Any?): Boolean = entryEquals(this,
other)\n    }\n\n    // intermediate abstract class to workaround KT-43321\n    internal abstract class
AbstractEntrySet<E : Map.Entry<K, V>, K, V> : AbstractMutableSet<E>() {\n        final override fun
contains(element: E): Boolean = containsEntry(element)\n        abstract fun containsEntry(element: Map.Entry<K,
V>): Boolean\n        final override fun remove(element: E): Boolean = removeEntry(element)\n        abstract fun
removeEntry(element: Map.Entry<K, V>): Boolean\n    }\n\n    actual override fun clear() {\n        entries.clear()\n    }\n\n    private var _keys: MutableSet<K>? = null\n    actual override val keys: MutableSet<K>\n        get() {\n            if (_keys == null) {\n                _keys = object : AbstractMutableSet<K>() {\n                    override fun
add(element: K): Boolean = throw UnsupportedOperationException("Add is not supported on keys")\n\n                    override fun clear() {\n                        this@AbstractMutableMap.clear()\n                    }\n\n                    override
operator fun contains(element: K): Boolean = containsKey(element)\n\n                    override operator fun iterator():
MutableIterator<K> {\n                        val entryIterator = entries.iterator()\n                        return object :
MutableIterator<K> {\n                            override fun hasNext(): Boolean = entryIterator.hasNext()\n\n                            override fun next(): K = entryIterator.next().key\n\n                            override fun remove() =
entryIterator.remove()\n                        }\n                    }\n\n                    override fun remove(element: K): Boolean
{\n                        checkIsMutable()\n                        if (containsKey(element)) {\n                            this@AbstractMutableMap.remove(element)\n                            return true\n                        }\n                        return
false\n                    }\n\n                    override val size: Int get() = this@AbstractMutableMap.size\n\n                    override fun checkIsMutable(): Unit = this@AbstractMutableMap.checkIsMutable()\n                }\n            }\n\n            return _keys!!\n        }\n\n    actual abstract override fun put(key: K, value: V): V?\n\n    actual override fun
putAll(from: Map<out K, V>) {\n        checkIsMutable()\n        for ((key, value) in from) {\n            put(key,
value)\n        }\n    }\n}

```



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    modCount++\n    return true\n    }\n\n    actual override fun add(index: Int, element: E): Unit {\n
checkIsMutable()\n    array.asDynamic().splice(insertionRangeCheck(index), 0, element)\n    modCount++\n
}\n\n    actual override fun addAll(elements: Collection<E>): Boolean {\n    checkIsMutable()\n    if
(elements.isEmpty()) return false\n    array += elements.toArray<Any?>()\n    modCount++\n
return true\n    }\n\n    actual override fun addAll(index: Int, elements: Collection<E>): Boolean {\n
checkIsMutable()\n    insertionRangeCheck(index)\n\n    if (index == size) return addAll(elements)\n
    if (elements.isEmpty()) return false\n    when (index) {\n        size -> return addAll(elements)\n        0 ->
array = elements.toArray<Any?>() + array\n        else -> array = array.copyOfRange(0,
index).asDynamic().concat(elements.toArray<Any?>(), array.copyOfRange(index, size))\n    }\n\n
modCount++\n    return true\n    }\n\n    actual override fun removeAt(index: Int): E {\n    checkIsMutable()\n
rangeCheck(index)\n    modCount++\n    return if (index == lastIndex)\n        array.asDynamic().pop()\n
    else\n        array.asDynamic().splice(index, 1)[0]\n    }\n\n    actual override fun remove(element: E): Boolean {\n
checkIsMutable()\n    for (index in array.indices) {\n        if (array[index] == element) {\n
array.asDynamic().splice(index, 1)\n        modCount++\n        return true\n        }\n    }\n    return
false\n    }\n\n    override
fun removeRange(fromIndex: Int, toIndex: Int) {\n    checkIsMutable()\n    modCount++\n
array.asDynamic().splice(fromIndex, toIndex - fromIndex)\n    }\n\n    actual override fun clear() {\n
checkIsMutable()\n    array = emptyArray()\n    modCount++\n    }\n\n\n    actual override fun
indexOf(element: E): Int = array.indexOf(element)\n\n    actual override fun lastIndexOf(element: E): Int =
array.lastIndexOf(element)\n\n    override fun toString() = arrayToString(array)\n\n
@Suppress("UNCHECKED_CAST")\n    override fun <T> toArray(array: Array<T>): Array<T> {\n    if
(array.size < size) {\n        return toArray() as Array<T>\n    }\n\n    (this.array as
Array<T>).copyInto(array)\n\n    if (array.size > size) {\n        array[size] = null as T // null-terminate\n
}\n\n    return array\n    }\n\n    override fun toArray(): Array<Any?> {\n    return js("[ ]").slice.call(array)\n
}\n\n\n    internal override
fun checkIsMutable() {\n    if (isReadOnly) throw UnsupportedOperationException()\n    }\n\n    private fun
rangeCheck(index: Int) = index.apply {\n    AbstractList.checkElementIndex(index, size)\n    }\n\n    private fun
insertionRangeCheck(index: Int) = index.apply {\n    AbstractList.checkPositionIndex(index, size)\n    }\n"},"/*\n
* Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.collections\n\ninternal fun <T> sortArrayWith(array: Array<out T>, comparison: (T, T) -> Int) {\n    if
(getStableSortingIsSupported()) {\n        array.asDynamic().sort(comparison)\n    } else {\n
mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, Comparator(comparison))\n    }\n}\n\ninternal fun
<T> sortArrayWith(array: Array<out T>, comparator: Comparator<in T>) {\n    if (getStableSortingIsSupported())
{\n        val comparison = { a: T, b: T -> comparator.compare(a, b) }\n        array.asDynamic().sort(comparison)\n
    } else {\n        mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, comparator)\n    }\n}\n\ninternal fun
<T> sortArrayWith(array: Array<out T>, fromIndex: Int, toIndex: Int, comparator: Comparator<in T>) {\n    if
(fromIndex < toIndex - 1) {\n        mergeSort(array.unsafeCast<Array<T>>(), fromIndex, toIndex - 1, comparator)\n
}\n}\n\ninternal fun <T : Comparable<T>> sortArray(array: Array<out T>) {\n    if
(getStableSortingIsSupported()) {\n        val comparison = { a: T, b: T -> a.compareTo(b) }\n
array.asDynamic().sort(comparison)\n    } else {\n        mergeSort(array.unsafeCast<Array<T>>(), 0,
array.lastIndex, naturalOrder())\n    }\n}\n\nprivate var _stableSortingIsSupported: Boolean? = null\nprivate fun
getStableSortingIsSupported(): Boolean {\n    _stableSortingIsSupported?.let { return it }\n
_stableSortingIsSupported = false\n\n
val array = js("[ ]").unsafeCast<Array<Int>>()\n    // known implementations may use stable sort for arrays of up to
512 elements\n    // so we create slightly more elements to test stability\n    for (index in 0 until 600)
array.asDynamic().push(index)\n    val comparison = { a: Int, b: Int -> (a and 3) - (b and 3) }\n
array.asDynamic().sort(comparison)\n    for (index in 1 until array.size) {\n        val a = array[index - 1]\n        val b

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= array[index]\n    if ((a and 3) == (b and 3) && a >= b) return false\n    }\n    _stableSortingIsSupported = true\n    return true\n}\n\nprivate fun <T> mergeSort(array: Array<T>, start: Int, endInclusive: Int, comparator: Comparator<in T>) {\n    val buffer = arrayOfNulls<Any?>(array.size).unsafeCast<Array<T>>()\n    val result = mergeSort(array, buffer, start, endInclusive, comparator)\n    if (result !== array) {\n        for (i in start..endInclusive) array[i] = result[i]\n    }\n}\n\n// Both start and end are inclusive indices.\nprivate fun <T> mergeSort(array: Array<T>, buffer: Array<T>, start: Int, end: Int, comparator: Comparator<in T>): Array<T> {\n    if (start == end) {\n        return array\n    }\n    val median = (start + end) / 2\n    val left = mergeSort(array, buffer, start, median, comparator)\n    val right = mergeSort(array, buffer, median + 1, end, comparator)\n    val target = if (left === buffer) array else buffer\n    // Merge.\n    var leftIndex = start\n    var rightIndex = median + 1\n    for (i in start..end) {\n        when {\n            leftIndex <= median && rightIndex <= end -> {\n                val leftValue = left[leftIndex]\n                val rightValue = right[rightIndex]\n                if (comparator.compare(leftValue, rightValue) <= 0) {\n                    target[i] = leftValue\n                    leftIndex++\n                } else {\n                    target[i] = rightValue\n                    rightIndex++\n                }\n            }\n            leftIndex <= median -> {\n                target[i] = left[leftIndex]\n                leftIndex++\n            }\n            else /* rightIndex <= end */ -> {\n                target[i] = right[rightIndex]\n                rightIndex++\n            }\n        }\n    }\n    return target\n}, /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n@OptIn(ExperimentalUnsignedTypes::class)\n@SinceKotlin("1.3")\n@kotlin.js.JsName("contentDeepHashCodeImpl")\ninternal fun <T> Array<out T>?.contentDeepHashCodeImpl(): Int {\n    if (this == null) return 0\n    var result = 1\n    for (element in this) {\n        val elementHash = when {\n            element == null -> 0\n            element is UByteArray -> element.contentHashCode()\n            element is UShortArray -> element.contentHashCode()\n            element is UIntArray -> element.contentHashCode()\n            element is ULongArray -> element.contentHashCode()\n            else -> element.hashCode()\n        }\n        result = 31 * result + elementHash\n    }\n    return result\n}, /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\ninternal interface EqualityComparator {\n    /**\n     * Subclasses must override to return a value indicating whether or not two keys or values are equal.\n     */\n    abstract fun equals(value1: Any?, value2: Any?): Boolean\n\n    /**\n     * Subclasses must override to return the hash code of a given key.\n     */\n    abstract fun getHashCode(value: Any?): Int\n\n    object HashCode : EqualityComparator {\n        override fun equals(value1: Any?, value2: Any?): Boolean = value1 == value2\n        override fun getHashCode(value: Any?): Int = value?.hashCode() ?: 0\n    }\n}, /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n/*\n * Based on GWT AbstractHashMap\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n * Hash table based implementation of the [MutableMap] interface.\n * This implementation makes no guarantees regarding the order of enumeration of [keys], [values] and [entries] collections.\n * Classes that extend HashMap and implement `build()` (freezing) operation have to make sure mutating methods check `checkIsMutable`.\n */\npublic actual\n\nopen class HashMap<K, V> : AbstractMutableMap<K, V>, MutableMap<K, V> {\n    private inner class EntrySet : AbstractEntrySet<MutableEntry<K, V>, K, V>() {\n        override fun add(element: MutableEntry<K, V>): Boolean = throw UnsupportedOperationException("Add is not supported on entries")\n        override fun clear() {\n            this@HashMap.clear()\n        }\n        override fun containsEntry(element: Map.Entry<K, V>): Boolean = this@HashMap.containsEntry(element)\n        override operator fun iterator(): MutableIterator<MutableEntry<K, V>> = internalMap.iterator()\n        override fun removeEntry(element:

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Map.Entry<K, V>: Boolean {
    if (contains(element)) {
        this@HashMap.remove(element.key)
    }
    return true
}
return false
}
override val size: Int get() =
this@HashMap.size
}
/**
 * Internal implementation of the map: either string-based or hashcode-based.
 *
 * private val internalMap: InternalMap<K, V>
 * private val equality: EqualityComparator
 * internal constructor(internalMap: InternalMap<K, V>) : super() {
    this.internalMap = internalMap
    this.equality = internalMap.equality
}
/**
 * Constructs an empty [HashMap] instance.
 *
 * actual constructor() : this(InternalHashCodeMap(EqualityComparator.HashCode))
 *
 * Constructs an empty [HashMap] instance.
 *
 * @param initialCapacity the initial capacity (ignored)
 * @param loadFactor the load factor (ignored)
 * @throws IllegalArgumentException if the initial capacity or load factor are negative
 *
 * actual constructor(initialCapacity: Int, loadFactor: Float) : this() {
    // This implementation of HashMap has no need of load factors or capacities.
    require(initialCapacity >= 0) { "Negative initial capacity: $initialCapacity" }
    require(loadFactor >= 0) { "Non-positive load factor: $loadFactor" }
}
actual constructor(initialCapacity: Int) : this(initialCapacity, 0.0f)
/**
 * Constructs an instance of [HashMap] filled with the contents of the specified [original] map.
 *
 * actual constructor(original: Map<out K, V>) : this() {
    this.putAll(original)
}
actual override fun clear() {
    internalMap.clear()
}
structureChanged(this)
}
actual override fun containsKey(key: K): Boolean =
internalMap.containsKey(key)
actual override fun containsValue(value: V): Boolean =
internalMap.any { equality.equals(it.value, value) }
private var _entries: MutableSet<MutableMap.MutableEntry<K, V>>? = null
actual override val entries: MutableSet<MutableMap.MutableEntry<K, V>>
get() {
    if (_entries == null) {
        _entries = createEntrySet()
    }
    return _entries!!
}
internal open fun createEntrySet():
MutableSet<MutableMap.MutableEntry<K, V>> = EntrySet()
actual override operator fun get(key: K): V? =
internalMap.get(key)
actual override fun put(key: K, value: V): V? =
internalMap.put(key, value)
actual override fun remove(key: K): V? =
internalMap.remove(key)
actual override val size: Int get() =
internalMap.size
}
/**
 * Constructs the specialized implementation of [HashMap] with [String] keys, which stores the keys as properties of JS object without hashing them.
 *
 * public fun <V> stringMapOf(vararg pairs: Pair<String, V>): HashMap<String, V> {
    return HashMap<String, V>(InternalStringMap(EqualityComparator.HashCode)).apply {
        putAll(pairs)
    }
}
*/
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 *
 * Based on GWT HashSet
 *
 * Copyright 2008 Google Inc.
 *
 * package kotlin.collections
 *
 * The implementation of the [MutableSet] interface, backed by a [HashMap] instance.
 *
 * // Classes that extend HashSet and implement `build()` (freezing) operation
 * // have to make sure mutating methods check `checkIsMutable`.
 *
 * public actual open class HashSet<E> : AbstractMutableSet<E>, MutableSet<E> {
    internal val map: HashMap<E, Any>
    /**
     * Constructs a new empty [HashSet].
     *
     * actual constructor() {
        map = HashMap<E, Any>()
    }
    /**
     * Constructs a new [HashSet] filled with the elements of the specified collection.
     *
     * actual constructor(elements: Collection<E>) {
        map = HashMap<E, Any>(elements.size)
        addAll(elements)
    }
    /**
     * Constructs a new empty [HashSet].
     *
     * @param initialCapacity the initial capacity (ignored)
     * @param loadFactor the load factor (ignored)
     * @throws IllegalArgumentException if the initial capacity or load factor are negative
     *
     * actual constructor(initialCapacity: Int, loadFactor: Float) {
        map = HashMap<E, Any>(initialCapacity, loadFactor)
    }
    actual constructor(initialCapacity: Int) :
this(initialCapacity, 0.0f)
    /**
     * Protected constructor to specify the underlying map. This is used by
     *
     * LinkedHashSet.
     *
     * @param map underlying map to use.
     *
     * internal constructor(map: HashMap<E, Any>) {
        this.map = map
    }
    actual override fun add(element: E): Boolean {
        val old = map.put(element, this)
        return old == null
    }
    actual override fun clear() {
        map.clear()
    }
}

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    public override fun clone(): Any {\n//      return HashSet<E>(this)\n//    }\n\n    actual override operator fun
contains(element: E): Boolean = map.containsKey(element)\n\n    actual override fun isEmpty(): Boolean =
map.isEmpty()\n\n    actual override fun iterator(): MutableIterator<E>
= map.keys.iterator()\n\n    actual override fun remove(element: E): Boolean = map.remove(element) != null\n\n
actual override val size: Int get() = map.size\n\n\n}\n\n/**\n * Creates a new instance of the specialized
implementation of [HashSet] with the specified [String] elements,\n * which elements the keys as properties of JS
object without hashing them.\n */\npublic fun stringSetOf(vararg elements: String): HashSet<String> {\n    return
HashSet(stringMapOf<Any>()).apply { addAll(elements) }\n}\n\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n * Based on GWT InternalHashCodeMap\n * Copyright
2008 Google Inc.\n */\n\npackage kotlin.collections\n\nimport
kotlin.collections.MutableMap.MutableEntry\nimport kotlin.collections.AbstractMutableMap.SimpleEntry\n\n/**\n
* A simple wrapper around JavaScriptObject to provide
[java.util.Map]-like semantics for any\n * key type.\n * \n * \n * Implementation notes:\n * \n * \n * A key's hashCode
is the index in backingMap which should contain that key. Since several keys may\n * have the same hash, each
value in hashCodeMap is actually an array containing all entries whose\n * keys share the same hash.\n */\n\ninternal
class InternalHashCodeMap<K, V>(override val equality: EqualityComparator) : InternalMap<K, V> {\n\n    private var backingMap: dynamic = createJsMap()\n    override var size: Int = 0\n    private set\n\n    override fun
put(key: K, value: V): V? {\n        val hashCode = equality.getHashCode(key)\n        val chainOrEntry =
getChainOrEntryOrNull(hashCode)\n        if (chainOrEntry == null) {\n            // This is a new chain, put it to the
map.\n            backingMap[hashCode] = SimpleEntry(key, value)\n        } else {\n            if (chainOrEntry !is
Array<*>) {\n                // It is an entry\n                val entry: SimpleEntry<K,
V> = chainOrEntry\n                if (equality.equals(entry.key, key)) {\n                    return entry.setValue(value)\n
                } else {\n                    backingMap[hashCode] = arrayOf(entry, SimpleEntry(key, value))\n
                size++\n                return null\n            }\n        } else {\n            // Chain already exists, perhaps key also
exists.\n            val chain: Array<MutableEntry<K, V>> = chainOrEntry\n            val entry =
chain.findEntryInChain(key)\n            if (entry != null) {\n                return entry.setValue(value)\n            }\n            chain.asDynamic().push(SimpleEntry(key, value))\n            }\n            size++\n\n            structureChanged(host)\n            return null\n        }\n\n        override fun remove(key: K): V? {\n            val hashCode =
equality.getHashCode(key)\n            val chainOrEntry = getChainOrEntryOrNull(hashCode) ?: return null\n            if
(chainOrEntry
!is Array<*>) {\n                val entry: MutableEntry<K, V> = chainOrEntry\n                if (equality.equals(entry.key,
key)) {\n                    jsDeleteProperty(backingMap, hashCode)\n                    size--\n                    return entry.value\n
                } else {\n                    return null\n                }\n            } else {\n                val chain: Array<MutableEntry<K, V>> =
chainOrEntry\n                for (index in chain.indices) {\n                    val entry = chain[index]\n                    if
(equality.equals(key, entry.key)) {\n                        if (chain.size == 1) {\n                            chain.asDynamic().length =
0\n                            // remove the whole array\n                            jsDeleteProperty(backingMap, hashCode)\n
                        } else {\n                            // splice out the entry we're removing\n                            chain.asDynamic().splice(index, 1)\n
                        }\n                        size--\n\n                        structureChanged(host)\n
                        return entry.value\n                    }\n                }\n                return null\n            }\n\n            override fun clear() {\n                backingMap = createJsMap()\n                size = 0\n            }\n\n            override fun contains(key: K): Boolean = getEntry(key) !=
null\n\n            override fun get(key: K): V? = getEntry(key)?.value\n\n            private fun getEntry(key: K): MutableEntry<K,
V>? {\n                val chainOrEntry = getChainOrEntryOrNull(equality.getHashCode(key)) ?: return null\n                if
(chainOrEntry !is Array<*>) {\n                    val entry: MutableEntry<K, V> = chainOrEntry\n                    if
(equality.equals(entry.key, key)) {\n                        return entry\n                    } else {\n                        return null\n                    }\n                }
else {\n                    val chain: Array<MutableEntry<K, V>> = chainOrEntry\n                    return
chain.findEntryInChain(key)\n                }\n            }\n\n            private fun Array<MutableEntry<K, V>>.findEntryInChain(key:
K): MutableEntry<K, V>? =\n                firstOrNull { entry ->

```



```

equality.equals(entry.key, key) }
override fun iterator(): MutableIterator<MutableEntry<K, V>> {
return object : MutableIterator<MutableEntry<K, V>> {
    var state = -1 // -1 not ready, 0 - ready, 1 -
done
    val keys: Array<String> = js("Object").keys(backingMap)
    var keyIndex = -1
var chainOrEntry: dynamic = null
    var isChain = false
    var itemIndex = -1
    var lastEntry:
MutableEntry<K, V>? = null
    private fun computeNext(): Int {
        if (chainOrEntry != null &&
isChain) {
            val chainSize: Int = chainOrEntry.unsafeCast<Array<MutableEntry<K, V>>>().size
            if (++itemIndex < chainSize)
                return 0
        } else {
            if (++keyIndex < keys.size)
                chainOrEntry = backingMap[keys[keyIndex]]
            isChain = chainOrEntry is Array<*>
            itemIndex = 0
            return 0
        }
    }
    override fun hasNext(): Boolean {
        if (state == -1)
            state = computeNext()
        return state == 0
    }
    override fun next(): MutableEntry<K, V> {
        if (!hasNext())
            throw NoSuchElementException()
        val lastEntry = if (isChain)
            chainOrEntry.unsafeCast<Array<MutableEntry<K, V>>>()[itemIndex]
        else
            chainOrEntry.unsafeCast<MutableEntry<K, V>>()
        this.lastEntry = lastEntry
        state = -1
        return lastEntry
    }
    override fun remove() {
        checkNotNull(lastEntry)
        this@InternalHashCodeMap.remove(lastEntry!!.key)
        lastEntry = null // the chain being iterated just got modified by InternalHashCodeMap.remove
        itemIndex--
    }
    private fun getChainOrEntryOrNull(hashCode: Int): dynamic {
        val chainOrEntry = backingMap[hashCode]
        return if (chainOrEntry === undefined)
            null
        else
            chainOrEntry
    }
}
}

/*
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 */
package kotlin.collections
/**
 * The common interface of [InternalStringMap] and [InternalHashCodeMap].
 */
internal interface InternalMap<K, V> :
MutableIterable<MutableMap.MutableEntry<K, V>> {
    val equality: EqualityComparator
    val size: Int
    operator fun contains(key: K): Boolean
    operator fun get(key: K): V?
    fun put(key: K, value: V): V?
    fun remove(key: K): V?

    fun clear(): Unit
    fun createJsMap(): dynamic {
        val result = js("Object.create(null)") // force to
switch object representation to dictionary mode
        result["foo"] = 1
        jsDeleteProperty(result, "foo")
        return result
    }
}

/*
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license/LICENSE.txt file.
 */
Based on GWT InternalStringMap
 * Copyright 2008 Google Inc.
 */
package kotlin.collections
import kotlin.collections.MutableMap.MutableEntry
/**
 * A simple wrapper
around JavaScript Map for key type is string.
 * Though this map is instantiated only with K=String, the K type
is not fixed to String statically,
 * because we want to have it erased to Any? in order not to generate type-safe
override bridges for [get], [contains], [remove] etc, if they ever are generated.
 */
internal class InternalStringMap<K, V>(override val equality: EqualityComparator) : InternalMap<K, V> {
    private var backingMap: dynamic = createJsMap()
    override var size: Int = 0
    private set // /**
 * A mod count to track 'value' replacements in map to ensure that the 'value' that we have in the
 * iterator entry
is guaranteed to be still correct.
 * This is to optimize for the common scenario where the values are not
modified during
 * iterations where the entries are never stale.
 */
    private var valueMod: Int = 0
    override operator fun contains(key: K): Boolean {
        if (key !is String)
            return
            backingMap[key] !== undefined
    }
    override operator fun get(key: K): V? {
        if (key !is String)
            return
            null
        val value = backingMap[key]
        return if (value !== undefined)
            value.unsafeCast<V>()
        else
            null
    }
    override fun put(key: K, value: V): V? {
        if (key !is String)
            return
            null
        val oldValue = backingMap[key]
        backingMap[key] = value
        if (oldValue === undefined)
            size++
        structureChanged(host)
        return null
    }
    override fun remove(key: K): V? {
        if (key !is String)
            return
            null
        val value = backingMap[key]
        backingMap[key] = null
        valueMod++
        return value.unsafeCast<V>()
    }
}
}

```

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{\n    if (key !is String) return null\n    val value = backingMap[key]\n    if (value !== undefined) {\n
jsDeleteProperty(backingMap, key)\n    size--\n//    structureChanged(host)\n    return
value.unsafeCast<V>()\n    } else {\n//    valueMod++\n    return null\n    }\n }\n\n\n override fun
clear() {\n    backingMap = createJsMap()\n    size = 0\n }\n\n\n override fun iterator():
MutableIterator<MutableEntry<K, V>> {\n    return object : MutableIterator<MutableEntry<K, V>> {\n
private val keys: Array<String>
= js("Object").keys(backingMap)\n    private val iterator = keys.iterator()\n    private var lastKey:
String? = null\n\n    override fun hasNext(): Boolean = iterator.hasNext()\n\n    override fun next():
MutableEntry<K, V> {\n        val key = iterator.next()\n        lastKey = key\n
@Suppress("UNCHECKED_CAST")\n        return newMapEntry(key as K)\n    }\n\n    override
fun remove() {\n        @Suppress("UNCHECKED_CAST")\n
this@InternalStringMap.remove(checkNotNull(lastKey) as K)\n    }\n    }\n }\n\n\n private fun
newMapEntry(key: K): MutableEntry<K, V> = object : MutableEntry<K, V> {\n    override val key: K get() =
key\n    override val value: V get() = this@InternalStringMap[key].unsafeCast<V>()\n\n    override fun
setValue(newValue: V): V = this@InternalStringMap.put(key, newValue).unsafeCast<V>()\n\n    override fun
hashCode(): Int
= AbstractMap.entryHashCode(this)\n    override fun toString(): String = AbstractMap.entryToString(this)\n
override fun equals(other: Any?): Boolean = AbstractMap.entryEquals(this, other)\n    }\n }\n\n\n /*\n * Copyright
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by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n\n /*\n * Based on GWT
LinkedHashMap\n * Copyright 2008 Google Inc.\n */\n\n\n package kotlin.collections\n\n\n import
kotlin.collections.MutableMap.MutableEntry\n\n\n /**\n * Hash table based implementation of the [MutableMap]
interface, which additionally preserves the insertion order\n * of entries during the iteration.\n * The insertion
order is preserved by maintaining a doubly-linked list of all of its entries.\n */\n\n\n public actual open class
LinkedHashMap<K, V> : HashMap<K, V>, MutableMap<K, V> {\n\n    /**\n     * The entry we use includes
next/prev pointers for a doubly-linked
circular\n     * list with a head node. This reduces the special cases we have to deal with\n     * in the list
operations.\n\n     * Note that we duplicate the key from the underlying hash map so we can find\n     * the eldest
entry. The alternative would have been to modify HashMap so more\n     * of the code was directly usable here, but
this would have added some\n     * overhead to HashMap, or to reimplement most of the HashMap code here with\n
     * small modifications. Paying a small storage cost only if you use\n     * LinkedHashMap and minimizing code size
seemed like a better tradeoff\n     */\n\n     private inner class ChainEntry<K, V>(key: K, value: V) :
AbstractMutableMap.SimpleEntry<K, V>(key, value) {\n        internal var next: ChainEntry<K, V>? = null\n
internal var prev: ChainEntry<K, V>? = null\n\n        override fun setValue(newValue: V): V {\n
this@LinkedHashMap.checkIsMutable()\n            return super.setValue(newValue)\n        }\n
    }\n\n     private inner class EntrySet : AbstractEntrySet<MutableEntry<K, V>, K, V> {\n        private inner
class EntryIterator : MutableIterator<MutableEntry<K, V>> {\n            // The last entry that was returned from this
iterator.\n            private var last: ChainEntry<K, V>? = null\n            // The next entry to return from this
iterator.\n            private var next: ChainEntry<K, V>? = null\n            init {\n                next = head\n            }
recordLastKnownStructure(map, this)\n        }\n\n        override fun hasNext(): Boolean {\n            return
next !== null\n        }\n\n        override fun next(): MutableEntry<K, V> {\n            //
checkStructuralChange(map, this)\n            if (!hasNext()) throw NoSuchElementException()\n            val
current = next!!\n            last = current\n            next = current.next.takeIf { it !== head }\n            return
current\n        }\n\n        override fun remove() {\n            check(last != null)\n            this@EntrySet.checkIsMutable()\n
checkStructuralChange(map, this)\n            last!!.remove()\n            map.remove(last!!.key)\n            recordLastKnownStructure(map, this)\n            last = null\n        }\n    }\n\n    override fun add(element:
MutableEntry<K, V>): Boolean = throw UnsupportedOperationException("Add is not supported on entries")\n
}

```

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override fun clear() {\n        this@LinkedHashMap.clear()\n    }\n\n    override fun containsEntry(element:
Map.Entry<K, V>): Boolean = this@LinkedHashMap.containsEntry(element)\n\n    override operator fun
iterator(): MutableIterator<MutableEntry<K, V>> = EntryIterator()\n\n    override fun removeEntry(element:
Map.Entry<K, V>): Boolean {\n        checkIsMutable()\n        if (contains(element)) {\n
this@LinkedHashMap.remove(element.key)\n
            return true\n        }\n        return false\n    }\n\n    override val size: Int get() =
this@LinkedHashMap.size\n\n    override fun checkIsMutable(): Unit =
this@LinkedHashMap.checkIsMutable()\n    }\n\n\n    /*\n     * The head of the insert order chain, which is a doubly-
linked circular\n     * list.\n     * The most recently inserted node is at the end of the chain, ie.\n     * chain.prev.\n     */\n    private var head: ChainEntry<K, V>? = null\n\n    /*\n     * Add this node to the end of the chain.\n     */\n    private fun ChainEntry<K, V>.addToEnd() {\n        // This entry is not in the list.\n        check(next == null && prev
== null)\n        val _head = head\n        if (_head == null) {\n            head = this\n            next = this\n            prev =
this\n        } else {\n            // Chain is valid.\n            val _tail = checkNotNull(_head.prev)\n            // Update me.\n            prev = _tail\n            next = _head\n
            // Update my new siblings: current head and old tail\n            _head.prev = this\n            _tail.next = this\n
        }\n    }\n\n    /*\n     * Remove this node from the chain it is a part of.\n     */\n    private fun ChainEntry<K,
V>.remove() {\n        if (this.next === this) {\n            // if this is single element, remove head\n            head = null\n
        } else {\n            if (head === this) {\n                // if this is first element, move head to next\n                head =
next\n            }\n            next!!.prev = prev\n            prev!!.next = next\n        }\n        next = null\n        prev = null\n
    }\n\n    /*\n     * The hashmap that keeps track of our entries and the chain. Note that we\n     * duplicate the key here
to eliminate changes to HashMap and minimize the\n     * code here, at the expense of additional space.\n     */\n    private val map:
HashMap<K, ChainEntry<K, V>>\n\n    private var isReadOnly: Boolean = false\n\n    /*\n     * Constructs an empty [LinkedHashMap] instance.\n     */\n    actual constructor(): super() {\n        map =
HashMap<K, ChainEntry<K, V>>()\n    }\n\n    internal constructor(backingMap: HashMap<K, Any>): super() {\n
        @Suppress("UNCHECKED_CAST") // expected to work due to erasure\n        map = backingMap as
HashMap<K, ChainEntry<K, V>>\n    }\n\n    /*\n     * Constructs an empty [LinkedHashMap] instance.\n     */\n    * @param initialCapacity the initial capacity (ignored)\n     * @param loadFactor the load factor (ignored)\n
*\n     * @throws IllegalArgumentException if the initial capacity or load factor are negative\n     */\n    actual
constructor(initialCapacity: Int, loadFactor: Float): super(initialCapacity, loadFactor) {\n        map = HashMap<K,
ChainEntry<K, V>>()\n    }\n\n    actual constructor(initialCapacity: Int): this(initialCapacity, 0.0f)\n\n    /*\n     *
Constructs an instance of [LinkedHashMap] filled with the contents of the specified [original]
map.\n     */\n    actual constructor(original: Map<out K, V>) {\n        map = HashMap<K, ChainEntry<K, V>>()\n
        this.putAll(original)\n    }\n\n    @PublishedApi\n    internal fun build(): Map<K, V> {\n        checkIsMutable()\n
        isReadOnly = true\n        return this\n    }\n\n    actual override fun clear() {\n        checkIsMutable()\n
map.clear()\n        head = null\n    }\n\n\n    // override fun clone(): Any {\n    //     return LinkedHashMap(this)\n    // }\n\n\n    actual override fun containsKey(key: K): Boolean = map.containsKey(key)\n\n    actual override fun
containsValue(value: V): Boolean {\n        var node: ChainEntry<K, V> = head ?: return false\n        do {\n            if
(node.value == value) {\n                return true\n            }\n            node = node.next!!\n        } while (node !=
head)\n        return false\n    }\n\n\n    internal override fun createEntrySet():
MutableSet<MutableMap.MutableEntry<K, V>> = EntrySet()\n\n    actual override operator fun get(key: K): V? = map.get(key)?.value\n\n    actual override fun put(key: K, value:
V): V? {\n        checkIsMutable()\n        val old = map.get(key)\n        if (old == null) {\n            val newEntry =
ChainEntry(key, value)\n            map.put(key, newEntry)\n            newEntry.addToEnd()\n            return null\n
        } else {\n            return old.setValue(value)\n        }\n    }\n\n    actual override fun remove(key: K): V? {\n
        checkIsMutable()\n        val entry = map.remove(key)\n        if (entry != null) {\n            entry.remove()\n
            return entry.value\n        }\n        return null\n    }\n\n    actual override val size: Int get() = map.size\n\n    internal
override fun checkIsMutable() {\n        if (isReadOnly) throw UnsupportedOperationException()\n    }\n\n\n    /*\n     * Constructs the specialized implementation of [LinkedHashMap] with [String] keys, which stores the keys as

```

properties of JS object without

```
hashing them.\n *^public fun <V> linkedStringMapOf(vararg pairs: Pair<String, V>): LinkedHashMap<String, V> {\n    return LinkedHashMap<String, V>(stringMapOf<Any>()).apply { putAll(pairs) }\n}\n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *^/n/*\n * Based on GWT\n *^LinkedHashSet\n * Copyright 2008 Google Inc.\n *^/npackage kotlin.collections\n *^/n/**\n * The implementation of the [MutableSet] interface, backed by a [LinkedHashMap] instance.\n *^This implementation preserves the insertion order of elements during the iteration.\n *^public actual open class LinkedHashSet<E> : HashSet<E>, MutableSet<E> {\n    internal constructor(map: LinkedHashMap<E, Any>) : super(map)\n\n    /**\n     * Constructs a new empty [LinkedHashSet].\n     *^actual constructor() : super(LinkedHashMap<E, Any>())\n\n    /**\n     *
```

```
Constructs a new [LinkedHashSet] filled with the elements of the specified collection.\n *^actual constructor(elements: Collection<E>) : super(LinkedHashMap<E, Any>()) {\n    addAll(elements)\n}\n\n/**\n * Constructs a new empty [LinkedHashSet].\n *^@param initialCapacity the initial capacity (ignored)\n *^@param loadFactor the load factor (ignored)\n *^@throws IllegalArgumentException if the initial capacity or load factor are negative\n *^actual constructor(initialCapacity: Int, loadFactor: Float) : super(LinkedHashMap<E, Any>(initialCapacity, loadFactor))\n\nactual constructor(initialCapacity: Int) : this(initialCapacity, 0.0f)\n\n@PublishedApi\ninternal fun build(): Set<E> {\n    (map as LinkedHashMap<E, Any>).build()\n    return this\n}\n\ninternal override fun checkIsMutable(): Unit = map.checkIsMutable()\n\n// public override fun clone(): Any {\n//    return LinkedHashSet(this)\n//\n//}\n\n}\n\n}\n\n/**\n * Creates a new instance of the specialized implementation of [LinkedHashSet] with the specified [String] elements,\n *^which elements the keys as properties of JS object without hashing them.\n *^public fun linkedStringSetOf(vararg elements: String): LinkedHashSet<String> {\n    return LinkedHashSet(linkedStringMapOf<Any>()).apply { addAll(elements) }\n}\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *^/npackage kotlin\n *^nimport kotlin.contracts.*\n *^n\n *^@DeprecatedSinceKotlin(warningSince = \"1.6\")\n *^@Deprecated(\"Synchronization on any object is not supported in Kotlin/JS\", ReplaceWith(\"run(block)\"))\n *^n\n *^internal.InlineOnly\n *^n\n *^@Suppress(\"UNUSED_PARAMETER\")\n *^n\n *^public inline fun <R> synchronized(lock: Any, block: () -> R): R {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n\n        }\n    return block()\n}\n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *^/npackage kotlin.io\n *^n\n *^internal abstract class BaseOutput {\n    open fun println()\n\n    {\n        print(\"\\n\")\n    }\n\n    open fun println(message: Any?) {\n        print(message)\n        println()\n    }\n\n    abstract fun print(message: Any?)\n\n    open fun flush() {\n    }\n}\n\n/**\n * JsName used to make the declaration available outside of module to test it\n *^@JsName(\"NodeJsOutput\")\n *^n\n *^internal class NodeJsOutput(val outputStream: dynamic) : BaseOutput() {\n    override fun print(message: Any?) {\n        // TODO: Using local variable because of bug in block decomposition lowering in IR backend\n        val messageString = String(message)\n        outputStream.write(messageString)\n    }\n}\n\n/**\n * JsName used to make the declaration available outside of module to test it\n *^@JsName(\"OutputToConsoleLog\")\n *^n\n *^internal class OutputToConsoleLog : BaseOutput() {\n    override fun print(message: Any?) {\n        console.log(message)\n    }\n\n    override fun println(message: Any?) {\n        console.log(message)\n    }\n\n    override fun println() {\n        console.log(\"\\n\")\n    }\n}\n\n/**\n * JsName used to make the declaration available outside of module to test it and use at try.kotl.in\n *^@JsName(\"BufferedOutput\")\n *^n\n *^internal open class BufferedOutput : BaseOutput() {\n    var buffer = \"\"\n\n    override fun print(message: Any?) {\n        buffer += String(message)\n    }\n\n    override fun flush() {\n        buffer = \"\"\n    }\n}\n\n/**\n * JsName used to make the declaration available outside of module to test it\n *^@JsName(\"BufferedOutputToConsoleLog\")\n *^n\n *^internal class BufferedOutputToConsoleLog : BufferedOutput()
```

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{\n  override fun print(message: Any?) {\n      var s = String(message)\n      val
i = s.nativeLastIndexOf("\\n", 0)\n      if (i >= 0) {\n          buffer += s.substring(0, i)\n          flush()\n          s =
s.substring(i + 1)\n      }\n      buffer += s\n  }\n\n  override fun flush() {\n      console.log(buffer)\n      buffer
= ""\n  }\n}\n\n/** JsName used to make the declaration available outside of module to test it and use at
try.kotl.in */\n@JsName("output")\ninternal var output = run {\n    val isNode: Boolean = js("typeof process !==
'undefined' && process.versions && !process.versions.node")\n    if (isNode) NodeJsOutput(js("process.stdout"))
else BufferedOutputToConsoleLog()\n}\n\n@kotlin.internal.InlineOnly\nprivate inline fun String(value: Any?):
String = js("String")(value)\n\n/** Prints the line separator to the standard output stream. */\npublic actual fun
println() {\n    output.println()\n}\n\n/** Prints the given [message] and the line separator to the standard output
stream. */\npublic actual fun println(message:
Any?) {\n    output.println(message)\n}\n\n/** Prints the given [message] to the standard output stream. */\npublic
actual fun print(message: Any?) {\n    output.print(message)\n}\n\n@SinceKotlin("1.6")\npublic actual fun
readln(): String = throw UnsupportedOperationException("readln is not supported in
Kotlin/JS")\n\n@SinceKotlin("1.6")\npublic actual fun readlnOrNull(): String? = throw
UnsupportedOperationException("readlnOrNull is not supported in Kotlin/JS"), /*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport
kotlin.coroutines.intrinsics.CoroutineSingletons.\n\nimport
kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal
actual class SafeContinuation<in T>\n\ninternal actual constructor(\n    private val delegate: Continuation<T>,\n
    initialResult: Any?\n) : Continuation<T> {\n    @PublishedApi\n    internal actual constructor(delegate:
Continuation<T>) : this(delegate, UNDECIDED)\n\n    public actual override val context: CoroutineContext\n
get() = delegate.context\n\n    private var result: Any? = initialResult\n\n    public actual override fun
resumeWith(result: Result<T>) {\n        val cur = this.result\n        when {\n            cur === UNDECIDED -> {\n
                this.result = result.value\n            }\n            cur === COROUTINE_SUSPENDED -> {\n                this.result =
RESUMED\n                delegate.resumeWith(result)\n            }\n            else -> throw
IllegalStateException("Already resumed")\n        }\n    }\n\n    @PublishedApi\n    internal actual fun
getOrThrow(): Any? {\n        if (result === UNDECIDED) {\n            result = COROUTINE_SUSPENDED\n
return COROUTINE_SUSPENDED\n        }\n        val result = this.result\n        return when {\n
            result === RESUMED -> COROUTINE_SUSPENDED // already called continuation, indicate
COROUTINE_SUSPENDED upstream\n            result is Result.Failure -> throw result.exception\n            else ->
result // either COROUTINE_SUSPENDED or data\n        }\n    }\n}\n\n"/*\n * Copyright 2010-2020 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.coroutines.cancellation\n\n@SinceKotlin("1.4")\npublic actual open class CancellationException :
IllegalStateException {\n    actual constructor() : super()\n    actual constructor(message: String?) : super(message)\n
    constructor(message: String?, cause: Throwable?) : super(message, cause)\n    constructor(cause: Throwable?) :
super(cause)\n}\n\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines.js.internal\n\nimport
kotlin.coroutines.Continuation\n\nimport
kotlin.coroutines.EmptyCoroutineContext\n\n@PublishedApi\n@SinceKotlin("1.3")\ninternal val
EmptyContinuation = Continuation<Any?>(EmptyCoroutineContext) { result ->\n    result.getOrThrow()\n}\n\n"/*\n *
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is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.js\n\n/**\n * Exposes the [Date API](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Date) to Kotlin.\n
*/\n\n@Suppress("NOT_DOCUMENTED")\npublic external class Date() {\n    public constructor(milliseconds:

```



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\kotlinx.dom.appendElement()\n\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\npublic
inline fun Element.appendElement(name: String, noinline init: Element.() -> Unit): Element =
this.newAppendElement(name,
init)\n\n\",/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.dom\n\nimport org.w3c.dom.Element\nimport
kotlin.internal.LowPriorityInOverloadResolution\nimport kotlin.dom.addClass as newAddClass\nimport
kotlin.dom.hasClass as newHasClass\nimport kotlin.dom.removeClass as newRemoveClass\n\n/** Returns true if
the element has the given CSS class style in its 'class' attribute
*/\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to another package,
use 'kotlinx.dom.hasClass' instead.\",\n replaceWith = ReplaceWith(\"this.hasClass(cssClass)\",
\"kotlinx.dom.hasClass\")\n)\n\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\ninline fun
Element.hasClass(cssClass: String): Boolean = this.newHasClass(cssClass)\n\n/**\n * Adds CSS class to element.
Has no effect
if all specified classes are already in class attribute of the element\n * \n * @return true if at least one class has been
added\n */\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to another
package, use 'kotlinx.dom.addClass' instead.\",\n replaceWith = ReplaceWith(\"this.addClass(cssClasses)\",
\"kotlinx.dom.addClass\")\n)\n\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\ninline fun
Element.addClass(vararg cssClasses: String): Boolean = this.newAddClass(*cssClasses)\n\n/**\n * Removes all
[cssClasses] from element. Has no effect if all specified classes are missing in class attribute of the element\n * \n *
@return true if at least one class has been removed\n */\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n
message = \"This API is moved to another package, use 'kotlinx.dom.removeClass' instead.\",\n replaceWith =
ReplaceWith(\"this.removeClass(cssClasses)\",
\"kotlinx.dom.removeClass\")\n)\n\n@DeprecatedSinceKotlin(warningSince
= \"1.4\", errorSince = \"1.6\")\ninline fun Element.removeClass(vararg cssClasses: String): Boolean =
this.newRemoveClass(*cssClasses)\n\n\",/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.dom\n\nimport org.w3c.dom.Element\nimport
org.w3c.dom.Node\nimport kotlin.internal.LowPriorityInOverloadResolution\nimport kotlin.dom.isElement as
newIsElement\nimport kotlin.dom.isText as newIsText\n\n/**\n * Gets a value indicating whether this node is a
TEXT_NODE or a CDATA_SECTION_NODE.\n */\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n
message = \"This API is moved to another package, use 'kotlinx.dom.isText' instead.\",\n replaceWith =
ReplaceWith(\"this.isText\", \"kotlinx.dom.isText\")\n)\n\n@DeprecatedSinceKotlin(warningSince = \"1.4\",
errorSince = \"1.6\")\npublic val Node.isText: Boolean\n
inline get() = this.newIsText\n\n/**\n * Gets a value indicating whether this node is an [Element].\n */\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to another package,
use 'kotlinx.dom.isElement' instead.\",\n replaceWith = ReplaceWith(\"this.isElement\",
\"kotlinx.dom.isElement\")\n)\n\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\npublic val
Node.isElement: Boolean\n inline get() = this.newIsElement\n\n\",/*\n * Copyright 2010-2018 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\npackage org.w3c.dom.events\n\npublic fun
EventListener(handler: (Event) -> Unit): EventListener = EventListenerHandler(handler)\n\nprivate class
EventListenerHandler(private val handler: (Event) -> Unit) : EventListener {\n public override fun
handleEvent(event: Event) {\n handler(event)\n
}\n\n public override fun toString(): String = \"EventListenerHandler($handler)\"\n}\n\n\",/*\n * Copyright 2010-
2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage org.w3c.dom\n\npublic
external interface ItemArrayLike<out T> {\n val length: Int\n fun item(index: Int): T?\n}\n\n/**\n * Returns the

```

```

view of this `ItemArrayLike<T>` collection as `List<T>`
n */npublic fun <T> ItemArrayLike<T>.asList(): List<T>
= object : AbstractList<T>() {
n override val size: Int get() = this@asList.length
n override fun get(index: Int):
T = when (index) {
n in 0..lastIndex -> this@asList.item(index).unsafeCast<T>()
n else -> throw
IndexOutOfBoundsException("index $index is not in range [0..$lastIndex]")
n }
n }
n */n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.
n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
n */npackage
kotlin.dom
nimport org.w3c.dom.Element
nimport org.w3c.dom.Node
nimport
kotlin.internal.LowPriorityInOverloadResolution
nimport kotlin.dom.appendText as newAppendText
nimport
kotlin.dom.clear as newClear
n/** Removes all the children from this node.
*/n@LowPriorityInOverloadResolution
n@Deprecated(
n message = "This API is moved to another package,
use 'kotlinx.dom.clear' instead.",
n replaceWith = ReplaceWith("this.clear()"),
"\"kotlinx.dom.clear\"")
n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
npublic inline fun
Node.clear() = this.newClear()
n/**
n * Creates text node and append it to the element.
n * @return this
element
n */n@LowPriorityInOverloadResolution
n@Deprecated(
n message = "This API is moved to another
package, use 'kotlinx.dom.appendText' instead.",
n replaceWith = ReplaceWith("this.appendText(text)",
"\"kotlinx.dom.appendText\"")
n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
ninline fun
Element.appendText(text: String): Element = this.newAppendText(text)
n */n * Copyright 2010-2018 JetBrains
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n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.
n */npackage kotlin.js
n/**
n * Reinterprets this value
as a value of the [dynamic type](/docs/reference/dynamic-type.html).
n */n@kotlin.internal.InlineOnly
npublic
inline fun Any?.asDynamic(): dynamic = this
n/**
n * Reinterprets this value as a value of the specified type [T]
without any actual type checking.
n */n@kotlin.internal.InlineOnly
npublic inline fun <T> Any?.unsafeCast():
@kotlin.internal.NoInfer T = this.asDynamic()
n/**
n * Reinterprets this `dynamic` value as a value of the
specified type [T] without any actual type checking.
n */n@kotlin.internal.DynamicExtension
n@JsName("unsafeCastDynamic")
n@kotlin.internal.InlineOnly
npublic
inline fun <T> dynamic.unsafeCast(): @kotlin.internal.NoInfer T = this
n/**
n * Allows to iterate this `dynamic`
object in the following cases:
n * - when it has an `iterator` function,
n * - when it is an array
n * - when it is an
instance of [kotlin.collections.Iterable]
n */n@kotlin.internal.DynamicExtension
npublic operator fun
dynamic.iterator(): Iterator<dynamic> {
n val r: Any? = this
n return when {
n this["iterator"] != null -
->
n this["iterator"]()
n isArrayish(r) ->
n r.unsafeCast<Array<*>>().iterator()
n else ->
n (r as Iterable<*>).iterator()
n }
n }
n */n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming
Language contributors.
n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.
n */npackage kotlin.enums
n// Unused stub
ninternal actual class
EnumEntriesSerializationProxy<E>
: Enum<E>> actual constructor(entries: Array<E>)\n",
n */n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.
n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.
n */n// a package is omitted to get declarations directly under the
module
n@JsName("throwNPE")
ninternal fun throwNPE(message: String) {
n throw
NullPointerException(message)
n }
n@JsName("throwCCE")
ninternal fun throwCCE() {
n throw
ClassCastException("Illegal cast")
n }
n@JsName("throwISE")
ninternal fun throwISE(message: String) {
n throw
IllegalStateException(message)
n }
n@JsName("throwUPAE")
ninternal fun throwUPAE(propertyName:
String) {
n throw
UninitializedPropertyAccessException("lateinit property ${propertyName} has not been
initialized")
n }
n */n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.
n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
n */npackage
kotlin.collections
n/**
n * Groups elements from the [Grouping] source by key and counts elements in each
group.
n * @return a [Map] associating the key of each group with the count of elements in the group.
n * @sample samples.collections.Grouping.groupingByEachCount
n */n@SinceKotlin("1.1")
npublic actual fun <T,

```



```

K> Grouping<T, K>.eachCount(): Map<K, Int> =\n    fold(0) { acc, _ -> acc + 1 }\n\n/**\n * Groups elements
from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements in each
group.\n * @return a [Map] associating the key of each group with the count of element in the group.\n
*\n@SinceKotlin("1.1")\npublic inline fun <T, K> Grouping<T, K>.eachSumOf(valueSelector: (T) -> Int):
Map<K, Int> =\n    fold(0) { acc, e -> acc + valueSelector(e) }\n*/\n * Copyright 2010-2018 JetBrains s.r.o.
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Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n@file:kotlin.jvm.JvmName("GroupingKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
kotlin.collections\n\n/**\n * Represents a source of elements with a [keyOf] function, which can be applied to each
element to get its key.\n * A [Grouping] structure serves as an intermediate step in group-and-fold operations:\n
* they group elements by their keys and then fold each group with some aggregating operation.\n * It is created
by attaching `keySelector: (T) -> K` function to a source of elements.\n * To get an instance of [Grouping] use one
of `groupingBy` extension functions:\n * - [Iterable.groupingBy]\n * - [Sequence.groupingBy]\n * -
[Array.groupingBy]\n * - [CharSequence.groupingBy]\n * For the list of group-and-fold operations available,
see the [extension functions](#extension-functions) for `Grouping`.\n *\n@SinceKotlin("1.1")\npublic
interface Grouping<T, out K> {\n    /** Returns an [Iterator] over the elements of the source of this grouping. *\n
fun sourceIterator(): Iterator<T>\n    /** Extracts the key of an [element]. *\n    fun keyOf(element: T):
K\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each
group sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores
the results in a new map.\n * The key for each element is provided by the [Grouping.keyOf] function.\n * @param
operation function is invoked on each element with the following parameters:\n * - `key`: the key of the
group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group, can be `null`
if it's the first `element` encountered in the group;\n * - `element`: the element from the source being aggregated;\n
* - `first`: indicates whether it's the first `element` encountered
in the group.\n * @return a [Map] associating the key of each group with the result of aggregation of the group
elements.\n * @sample samples.collections.Grouping.aggregateByRadix\n *\n@SinceKotlin("1.1")\npublic inline
fun <T, K, R> Grouping<T, K>.aggregate(\n    operation: (key: K, accumulator: R?, element: T, first: Boolean) ->
R\n): Map<K, R> {\n    return aggregateTo(mutableMapOf<K, R>(), operation)\n}\n\n/**\n * Groups elements
from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing
the previously accumulated value and the current element as arguments,\n * and stores the results in the given
[destination] map.\n * The key for each element is provided by the [Grouping.keyOf] function.\n * @param
operation a function that is invoked on each element with the following parameters:\n * - `key`: the key of the group
this element belongs to;\n * - `accumulator`: the current value of the accumulator of the
group, can be `null` if it's the first `element` encountered in the group;\n * - `element`: the element from the source
being aggregated;\n * - `first`: indicates whether it's the first `element` encountered in the group.\n * If the
[destination] map already has a value corresponding to some key,\n * then the elements being aggregated for that
key are never considered as `first`.\n * @return the [destination] map associating the key of each group with the
result of aggregation of the group elements.\n * @sample samples.collections.Grouping.aggregateByRadixTo\n
*\n@SinceKotlin("1.1")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T,
K>.aggregateTo(\n    destination: M,\n    operation: (key: K, accumulator: R?, element: T, first: Boolean) -> R\n): M
{\n    for (e in this.sourceIterator()) {\n        val key = keyOf(e)\n        val accumulator = destination[key]\n
destination[key] = operation(key, accumulator, e, accumulator == null && !destination.containsKey(key))\n
    }\n    return destination\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation]
to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as
arguments, and stores the results in a new map.\n * An initial value of accumulator is provided by
[initialValueSelector] function.\n * @param initialValueSelector a function that provides an initial value of
accumulator for each group.\n * It's invoked with parameters:\n * - `key`: the key of the group;\n * - `element`: the

```

first element being encountered in that group.

`* @param operation` a function that is invoked on each element with the following parameters:

- `* - `key``: the key of the group this element belongs to;
- `* - `accumulator``: the current value of the accumulator of the group;
- `* - `element``: the element from the source being accumulated.

`* @return` a [Map] associating the key of each group with the result of accumulating the group elements.

`* @sample`

```
samples.collections.Grouping.foldByEvenLengthWithComputedInitialValue
```

`* ^\n@SinceKotlin("1.1")\npublic inline fun <T, K, R> Grouping<T, K>.fold(\n initialValueSelector: (key: K, element: T) -> R,\n operation: (key: K, accumulator: R, element: T) -> R\n): Map<K, R> =\n @Suppress("UNCHECKED_CAST")\n aggregate { key, acc, e, first -> operation(key, if (first) initialValueSelector(key, e) else acc as R, e) }\n\n**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of accumulator is provided by [initialValueSelector] function.\n *\n * @param initialValueSelector a function that provides an initial value of accumulator for each group.\n * It's invoked with parameters:\n * - `key` : the key of the group;\n * - `element` : the first element being encountered in that group.\n *\n * If the [destination] map already has a value corresponding to some key, that value is used as an initial value of\n * the accumulator for that group and the [initialValueSelector] function is not called for that group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `key` : the key of the group this element belongs to;\n * - `accumulator` : the current value of the accumulator of the group;\n * - `element` : the element from the source being accumulated.\n *\n * @return the [destination] map associating the key of each group with the result of accumulating the group elements.\n *\n * @sample

```
samples.collections.Grouping.foldByEvenLengthWithComputedInitialValueTo
```

* ^\n@SinceKotlin("1.1")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(\n destination: M,\n initialValueSelector: (key: K, element: T) -> R,\n operation: (key: K, accumulator: R, element: T) -> R\n): M =\n @Suppress("UNCHECKED_CAST")\n aggregateTo(destination) { key, acc, e, first -> operation(key, if (first) initialValueSelector(key, e) else acc as R, e) }\n\n\n**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores the results in a new map.\n * An initial value of accumulator is the same [initialValue] for each group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `accumulator` : the current value of the accumulator of the group;\n * - `element` : the element from the source being accumulated.\n *\n * @return a [Map] associating the key of each group with the result of accumulating the group elements.\n *\n * @sample

```
samples.collections.Grouping.foldByEvenLengthWithConstantInitialValue
```

* ^\n@SinceKotlin("1.1")\npublic inline fun <T, K, R> Grouping<T, K>.fold(\n initialValue: R,\n operation: (accumulator: R, element: T) -> R\n): Map<K, R> =\n @Suppress("UNCHECKED_CAST")\n aggregate { _, acc, e, first -> operation(if (first) initialValue else acc as R, e) }\n\n**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of accumulator is the same [initialValue] for each group.\n *\n * If the [destination] map already has a value corresponding to the key of some group,\n * that value is used as an initial value of the accumulator for that group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `accumulator` : the current value of the accumulator of the group;\n * - `element` : the element from the source being accumulated.\n *\n * @return the [destination] map associating the key of each group with the result of accumulating the group elements.\n *\n * @sample

```
samples.collections.Grouping.foldByEvenLengthWithConstantInitialValueTo
```

* ^\n@SinceKotlin("1.1")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(\n destination: M,\n initialValue: R,\n operation: (accumulator: R, element: T) -> R\n): M =\n @Suppress("UNCHECKED_CAST")\n`

aggregateTo(destination) { \_, acc, e, first -> operation(if (first) initialValue else acc as R, e) }  
Groups elements from the [Grouping] source by key and applies the reducing [operation] to the elements of each group sequentially starting from the second element of the group, passing the previously accumulated value and the current element as arguments, and stores the results in a new map. An initial value of accumulator is the first element of the group.  
@param operation a

function that is invoked on each subsequent element of the group with the following parameters:  
- `key`: the key of the group this element belongs to;  
- `accumulator`: the current value of the accumulator of the group;  
- `element`: the element from the source being accumulated.  
@return a [Map] associating the key of each group with the result of accumulating the group elements.  
@sample

```
samples.collections.Grouping.reduceByMaxVowels  
^  
^@SinceKotlin("1.1")  
public inline fun <S, T : S, K>  
Grouping<T, K>.reduce(\n operation: (key: K, accumulator: S, element: T) -> S\n): Map<K, S> =\n aggregate {  
key, acc, e, first ->\n @Suppress("UNCHECKED_CAST")\n if (first) e else operation(key, acc as S, e)\n }  
Groups elements from the [Grouping] source by key and applies the reducing [operation] to the elements of each group sequentially starting from the second element of the group, passing the previously accumulated value and
```

the current element as arguments, and stores the results in the given [destination] map. An initial value of accumulator is the first element of the group. If the [destination] map already has a value corresponding to the key of some group, that value is used as an initial value of the accumulator for that group and the first element of that group is also subjected to the [operation].  
@param operation a function that is invoked on each subsequent element of the group with the following parameters:  
- `accumulator`: the current value of the accumulator of the group;  
- `element`: the element from the source being folded;  
@return the [destination] map associating the key of each group with the result of accumulating the group elements.  
@sample

```
samples.collections.Grouping.reduceByMaxVowelsTo  
^  
^@SinceKotlin("1.1")  
public inline fun <S, T : S, K, M : MutableMap<in K, S>> Grouping<T, K>.reduceTo(\n destination: M,\n operation:  
(key: K, accumulator: S, element: T) -> S\n): M =\n aggregateTo(destination) { key, acc, e, first ->\n @Suppress("UNCHECKED_CAST")\n if (first) e else operation(key, acc as S, e)\n }  
Groups elements from the [Grouping] source by key and counts elements in each group to the given [destination] map. If the [destination] map already has a value corresponding to the key of some group, that value is used as an initial value of the counter for that group. @return the [destination] map associating the key of each group with the count of elements in the group.  
@sample
```

```
samples.collections.Grouping.groupingByEachCount  
^  
^@SinceKotlin("1.1")  
public fun <T, K, M : MutableMap<in K, Int>> Grouping<T, K>.eachCountTo(destination: M): M =\n foldTo(destination, 0) { acc, _ -> acc + 1 }  
Groups elements from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements in each group  
* to the given [destination] map. If the [destination] map already has a value corresponding to the key of some group, that value is used as an initial value of the sum for that group. @return the [destination] map associating the key of each group with the sum of elements in the group.  
@sample
```

```
samples.collections.Grouping.groupingByEachSum  
^  
^@SinceKotlin("1.1")  
public inline fun <T, K, M : MutableMap<in K, Int>> Grouping<T, K>.eachSumOfTo(destination: M, valueSelector: (T) -> Int): M =\n foldTo(destination, 0) { acc, e -> acc + valueSelector(e) }  
// TODO: sum by long and by double overloads  
public inline fun <T, K, M : MutableMap<in K, Long>> Grouping<T, K>.sumEachByLongTo(destination: M, valueSelector: (T) -> Long): M =\n foldTo(destination, 0L) { acc, e -> acc + valueSelector(e) }  
public inline fun <T, K> Grouping<T, K>.sumEachByLong(valueSelector: (T) -> Long): Map<K, Long> =\n fold(0L) { acc, e -> acc + valueSelector(e) }  
public inline fun <T, K, M : MutableMap<in K, Double>> Grouping<T, K>.sumEachByDoubleTo(destination: M, valueSelector: (T) -> Double): M =\n foldTo(destination, 0.0) { acc, e -> acc + valueSelector(e) }  
public inline fun <T, K> Grouping<T, K>.sumEachByDouble(valueSelector: (T) -> Double): Map<K, Double> =\n fold(0.0) { acc, e -> acc + valueSelector(e) }  
"/**  
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```

contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*/\n\npackage

```
kotlin.js\n\n@Retention(AnnotationRetention.BINARY)\n@Target(AnnotationTarget.FUNCTION,
AnnotationTarget.PROPERTY)\ninternal annotation class JsPolyfill(val implementation: String)\n", "/*\n *
Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.js\n\n/**\n * An interface
for indexing access to a collection of key-value pairs, where type of key is [String] and type of value is
[Any?][Any].\n */\n\npublic external interface Json {\n    /**\n     * Calls to the function will be translated to indexing
operation (square brackets) on the receiver with [propertyName] as the argument.\n     *\n     * E.g. for next code:\n     *
```\nkotlin\n     * fun test(j: Json, p: String) = j["prop"] + j.get(p)\n     * ```\n     *\n     * will be generated:\n     *
```\njs\n     * function test(j, p) {\n     *     return j["prop"] + j[p];\n     * }\n     * ```\n     *\n     */\n    operator fun
get(propertyName: String): Any?\n\n    /**\n     * Calls of the function will be translated to an assignment of [value]
to the receiver indexed (with square brackets/index operation) with [propertyName].\n     *\n     * E.g. for the
following code:\n     *
```\nkotlin\n     * fun test(j: Json, p: String, newValue: Any) {\n     *     j["prop"] = 1\n     *
j.set(p, newValue)\n     * }\n     *
```\n     *\n     * will be generated:\n     *
```\njs\n     * function test(j, p, newValue) {\n     *     j["prop"] = 1;\n     *
j[p] = newValue;\n     * }\n     * }\n     * }\n     * }\n     * }\n     *\n     */\n    operator fun set(propertyName: String, value: Any?):
Unit\n\n}\n\n/**\n * Returns a simple JavaScript object (as [Json]) using provided key-value pairs as names and
values of its properties.\n */\n\npublic fun json(vararg pairs: Pair<String, Any?>): Json {\n    val res: dynamic =
js("{}")\n    for ((name, value) in pairs) {\n        res[name] = value\n    }\n    return res\n}\n\n/**\n * Adds key-
value pairs from [other] to [this].\n */\n\npublic fun Json.add(other: Json): Json {\n    val keys: Array<String> =
js("Object").keys(other)\n    for (key in keys) {\n        if
(other.asDynamic().hasOwnProperty(key)) {\n            this[key] = other[key];\n        }\n    }\n    return
this\n}\n\n/**\n * Exposes the JavaScript [JSON object](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/JSON)
to Kotlin.\n */\n\n@Suppress("NOT_DOCUMENTED")\npublic external object JSON {\n    public fun stringify(o:
Any?): String\n    public fun stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?): String)\n    public fun
stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?)? = definedExternally, space: Int): String\n    public fun
stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?)? = definedExternally, space: String): String\n    public fun
stringify(o: Any?, replacer: Array<String>): String\n    public fun stringify(o: Any?, replacer:
Array<String>, space: Int): String\n    public fun stringify(o: Any?, replacer:
Array<String>, space: String):
String\n\n    public fun <T> parse(text: String): T\n    public fun <T> parse(text: String, reviver: ((key: String, value:
Any?) -> Any?): T)\n}\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.math\n\nimport kotlin.internal.InlineOnly\nimport kotlin.js.JsMath as nativeMath\n\n//
region ===== Double Math =====\n\n/**\n * Computes the sine of the angle [x] given in radians.\n *
Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sin(x: Double): Double =
nativeMath.sin(x)\n\n/**\n * Computes the cosine of the angle [x] given in radians.\n *
Special cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun cos(x: Double):
Double = nativeMath.cos(x)\n\n/**\n * Computes the tangent of the angle [x] given in radians.\n *
Special cases:\n * - `tan(NaN|+Inf|-Inf)` is `NaN`\n */\n\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun tan(x:
Double): Double = nativeMath.tan(x)\n\n/**\n * Computes the arc sine of the value [x];\n * the returned value is an angle in the range from `PI/2` to `PI/2`
radians.\n *
Special cases:\n * - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun asin(x: Double): Double =
```

`nativeMath.asin(x)` Computes the arc cosine of the value  $[x]$ ; the returned value is an angle in the range from  $0.0$  to  $\text{PI}$  radians. Special cases: `acos(x)` is `NaN`, when `abs(x) > 1` or `x` is `NaN`.
   
`nativeMath.acos(x)` Computes the arc tangent of the value  $[x]$ ; the returned value is an angle in the range from  $-\text{PI}/2$  to  $\text{PI}/2$  radians. Special cases: `atan(NaN)` is `NaN`.
   
`nativeMath.atan(x)` Returns the angle  $\theta$  of the polar coordinates  $(r, \theta)$  that correspond to the rectangular coordinates  $(x, y)$  by computing the arc tangent of the value  $[y] / [x]$ ; the returned value is an angle in the range from  $-\text{PI}$  to  $\text{PI}$  radians. Special cases: `atan2(0.0, 0.0)` is `0.0`; `atan2(0.0, x)` is `0.0` for  $x > 0$  and  $\text{PI}$  for  $x < 0$ ; `atan2(-0.0, x)` is `-0.0` for  $x > 0$  and  $-\text{PI}$  for  $x < 0$ ; `atan2(y, +Inf)` is `0.0` for  $0 < y < +\text{Inf}$  and `-0.0` for  $-\text{Inf} < y < 0$ ; `atan2(y, -Inf)` is  $\text{PI}$  for  $0 < y < +\text{Inf}$  and  $-\text{PI}$  for  $-\text{Inf} < y < 0$ ; `atan2(y, 0.0)` is  $\text{PI}/2$  for  $y > 0$  and  $-\text{PI}/2$  for  $y < 0$ ; `atan2(+Inf, x)` is  $\text{PI}/2$  for finite  $x$ ; `atan2(-Inf, x)` is  $-\text{PI}/2$  for finite  $x$ ; `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`.
   
`nativeMath.atanh(x)` Computes the inverse hyperbolic sine of the value  $[x]$ . Special cases: `asinh(NaN)` is `NaN`; `asinh(+Inf)` is `+Inf`; `asinh(-Inf)` is `-Inf`.
   
`nativeMath.cosh(x)` Computes the hyperbolic cosine of the value  $[x]$ . Special cases: `cosh(NaN)` is `NaN`; `cosh(+Inf)` is `+Inf`; `cosh(-Inf)` is `+Inf`.
   
`nativeMath.cosh(x)` Computes the hyperbolic tangent of the value  $[x]$ . Special cases: `tanh(NaN)` is `NaN`; `tanh(+Inf)` is `1.0`; `tanh(-Inf)` is `-1.0`.
   
`nativeMath.tanh(x)` Computes the inverse hyperbolic sine of the value  $[x]$ . The returned value is  $y$  such that  $\sinh(y) = x$ . Special cases: `asinh(NaN)` is `NaN`; `asinh(+Inf)` is `+Inf`; `asinh(-Inf)` is `-Inf`.
   
`nativeMath.acosh(x)` Computes the inverse hyperbolic cosine of the value  $[x]$ . The returned value is positive  $y$  such that  $\cosh(y) = x$ . Special cases: `acosh(NaN)` is `NaN`; `acosh(x)` is `NaN` when  $x < 1$ ; `acosh(+Inf)` is `+Inf`.
   
`nativeMath.atanh(x)` Computes the inverse hyperbolic tangent of the value  $[x]$ . The returned value is  $y$  such that  $\tanh(y) = x$ . Special cases: `atanh(NaN)` is `NaN`; `atanh(x)` is `NaN` when  $x > 1$  or  $x < -1$ ; `atanh(1.0)` is `+Inf`; `atanh(-1.0)` is `-Inf`.
   
`nativeMath.hypot(x, y)` Computes  $\sqrt{x^2 + y^2}$  without intermediate overflow or underflow. Special cases: returns `+Inf` if any of arguments is infinite; returns `NaN` if any of arguments is `NaN` and the other is not infinite.
   
`nativeMath.sqrt(x)` Computes the positive square root of the value  $[x]$ . Special cases: `sqrt(x)` is `NaN` when  $x < 0$  or  $x$  is `NaN`.
   
`nativeMath.exp(x)` Computes Euler's number  $e$  raised to the power of the value  $[x]$ . Special cases: `exp(NaN)` is `NaN`; `exp(+Inf)` is `+Inf`; `exp(-Inf)` is `0.0`.
   
`nativeMath.expm1(x)` Computes  $\exp(x) - 1$ . This function can be implemented to produce more precise result for  $[x]$  near zero. Special cases: `expm1(NaN)` is `NaN`; `expm1(+Inf)` is `+Inf`; `expm1(-Inf)` is `-1.0`.
   
`nativeMath.log(x)` Computes the logarithm of the value  $[x]$  to the

given [base].  
Special cases:  
 $\log(x, b)$  is NaN if either  $x$  or  $b$  are NaN  
 $\log(x, b)$  is NaN when  $x < 0$  or  $b \leq 0$  or  $b == 1.0$   
 $\log(+Inf, +Inf)$  is NaN  
 $\log(+Inf, b)$  is  $+Inf$  for  $b > 1$  and  $-Inf$  for  $b < 1$   
 $\log(0.0, b)$  is  $-Inf$  for  $b > 1$  and  $+Inf$  for  $b < 1$   
See also logarithm functions for common fixed bases: [ln], [log10] and [log2].  
@SinceKotlin("1.2")  
public actual fun log(x: Double, base: Double): Double {  
if (base <= 0.0 || base == 1.0) return Double.NaN  
return nativeMath.log(x) / nativeMath.log(base)  
}  
Computes the natural logarithm (base 'E') of the value [x].  
Special cases:  
 $\ln(NaN)$  is NaN  
 $\ln(x)$  is NaN when  $x < 0.0$   
 $\ln(+Inf)$  is  $+Inf$   
 $\ln(0.0)$  is  $-Inf$   
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun ln(x: Double): Double = nativeMath.log(x)  
Computes the common logarithm (base 10) of the value [x].  
@see [ln] function for special cases.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun log10(x: Double): Double = nativeLog10(x)  
Computes the binary logarithm (base 2) of the value [x].  
@see [ln] function for special cases.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun log2(x: Double): Double = nativeLog2(x)  
Computes  $\ln(x + 1)$ .  
This function can be implemented to produce more precise result for [x] near zero.  
Special cases:  
 $\ln1p(NaN)$  is NaN  
 $\ln1p(x)$  is NaN where  $x < -1.0$   
 $\ln1p(-1.0)$  is  $-Inf$   
 $\ln1p(+Inf)$  is  $+Inf$   
@see [ln] function  
@see [expm1] function  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun ln1p(x: Double): Double = nativeLog1p(x)  
Rounds the given value [x] to an integer towards positive infinity.  
@return the smallest double value that is greater than or equal to the given value [x] and is a mathematical integer.  
Special cases:  
 $\text{ceil}(x)$  is  $x$  where  $x$  is NaN or  $+Inf$  or  $-Inf$  or already a mathematical integer.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun ceil(x: Double): Double = nativeMath.ceil(x)  
Rounds the given value [x] to an integer towards negative infinity.  
@return the largest double value that is smaller than or equal to the given value [x] and is a mathematical integer.  
Special cases:  
 $\text{floor}(x)$  is  $x$  where  $x$  is NaN or  $+Inf$  or  $-Inf$  or already a mathematical integer.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun floor(x: Double): Double = nativeMath.floor(x)  
Rounds the given value [x] to an integer towards zero.  
@return the value [x] having its fractional part truncated.  
Special cases:  
 $\text{truncate}(x)$  is  $x$  where  $x$  is NaN or  $+Inf$  or  $-Inf$  or already a mathematical integer.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun truncate(x: Double): Double = nativeTrunc(x)  
Rounds the given value [x] towards the closest integer with ties rounded towards even integer.  
Special cases:  
 $\text{round}(x)$  is  $x$  where  $x$  is NaN or  $+Inf$  or  $-Inf$  or already a mathematical integer.  
@SinceKotlin("1.2")  
public actual fun round(x: Double): Double {  
if (x % 0.5 != 0.0) {  
return nativeMath.round(x)  
} else {  
val floor = floor(x)  
return if (floor % 2 == 0.0) floor else ceil(x)  
}  
}  
Returns the absolute value of the given value [x].  
Special cases:  
 $\text{abs}(NaN)$  is NaN  
@see absoluteValue extension property for [Double]  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun abs(x: Double): Double = nativeMath.abs(x)  
Returns the sign of the given value [x]:  
 $-1.0$  if the value is negative,  
zero if the value is zero,  
 $1.0$  if the value is positive  
Special case:  
 $\text{sign}(NaN)$  is NaN  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun sign(x: Double): Double = nativeSign(x)  
Returns the smaller of two values.  
If either value is NaN, then the result is NaN.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun min(a: Double, b: Double): Double = nativeMath.min(a, b)  
Returns the greater of two values.  
If either value is NaN, then the result is NaN.  
@SinceKotlin("1.2")  
@InlineOnly  
public actual inline fun max(a: Double, b: Double): Double = nativeMath.max(a, b)  
Returns the cube root of [x]. For any  $x$ ,  $\text{cbrt}(-x) == -\text{cbrt}(x)$ ; that is, the cube root of a negative value is the negative of the cube root of that value's magnitude.  
Special cases:  
If the argument is NaN, then the result is NaN.  
If the argument is infinite, then the result is an infinity with the same sign as the argument.  
If the argument is zero, then the result is a zero with the same sign as the argument.  
@SinceKotlin("1.8")  
@WasExperimental(ExperimentalStdlibApi::class)  
@InlineOnly  
public actual inline

```

fun cbrt(x: Double): Double = nativeMath.cbrt(x)\n\n// extensions\n\n**\n * Raises this value to the power [x].\n
*\n * Special cases:\n * - `b.pow(0.0)` is `1.0`\n * - `b.pow(1.0) == b`\n * - `b.pow(NaN)` is `NaN`\n * -
`NaN.pow(x)` is `NaN` for `x != 0.0`\n * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`\n * - `b.pow(x)` is `NaN` for
`b < 0` and `x` is finite and not an integer\n *^\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun
Double.pow(x: Double): Double = nativeMath.pow(this, x)\n\n**\n * Raises this value to the integer power [n].\n
*\n * See the other overload of [pow] for details.\n *^\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline
fun Double.pow(n: Int): Double = nativeMath.pow(this, n.toDouble())\n\n**\n * Returns the absolute value of this
value.\n *^\n * Special cases:\n * - `NaN.absoluteValue` is `NaN`\n *^\n * @see abs function\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Double.absoluteValue: Double get() =
nativeMath.abs(this)\n\n**\n * Returns the sign of this value:\n * - `-1.0` if the value is negative,\n * - zero if the
value is zero,\n * - `1.0` if the value is positive\n *^\n * Special case:\n * - `NaN.sign` is `NaN`\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Double.sign: Double get() =
nativeSign(this)\n\n**\n * Returns this value with the sign bit same as of the [sign] value.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Double.withSign(sign: Int): Double =
this.withSign(sign.toDouble())\n\n**\n * Returns
the ulp (unit in the last place) of this value.\n *^\n * An ulp is a positive distance between this value and the next
nearest [Double] value larger in magnitude.\n *^\n * Special Cases:\n * - `NaN.ulp` is `NaN`\n * - `x.ulp` is `+Inf`
when `x` is `+Inf` or `-Inf`\n * - `0.0.ulp` is `Double.MIN_VALUE`\n *^\n@SinceKotlin("1.2")\npublic actual val
Double.ulp: Double get() = when {\n this < 0 -> (-this).ulp\n this.isNaN() || this ==
Double.POSITIVE_INFINITY -> this\n this == Double.MAX_VALUE -> this - this.nextDown()\n else ->
this.nextUp() - this}\n\n**\n * Returns the [Double] value nearest to this value in direction of positive infinity.\n
*\n@SinceKotlin("1.2")\npublic actual fun Double.nextUp(): Double = when {\n this.isNaN() || this ==
Double.POSITIVE_INFINITY -> this\n this == 0.0 -> Double.MIN_VALUE\n else ->
Double.fromBits(this.toRawBits() + if (this > 0) 1 else -1)\n}\n\n**\n * Returns the [Double] value nearest to this
value in direction of negative
infinity.\n *^\n@SinceKotlin("1.2")\npublic actual fun Double.nextDown(): Double = when {\n this.isNaN() ||
this == Double.NEGATIVE_INFINITY -> this\n this == 0.0 -> -Double.MIN_VALUE\n else ->
Double.fromBits(this.toRawBits() + if (this > 0) -1 else 1)\n}\n\n**\n * Returns the [Double] value nearest to this
value in direction from this value towards the value [to].\n *^\n * Special cases:\n * - `x.nextTowards(y)` is `NaN` if
either `x` or `y` are `NaN`\n * - `x.nextTowards(x) == x`\n *^\n@SinceKotlin("1.2")\npublic actual fun
Double.nextTowards(to: Double): Double = when {\n this.isNaN() || to.isNaN() -> Double.NaN\n to == this ->
to\n to > this -> this.nextUp()\n else /* to < this */ -> this.nextDown()\n}\n\n**\n * Rounds this [Double]
value to the nearest integer and converts the result to [Int].\n *^\n * Ties are rounded towards positive infinity.\n *^\n *
Special cases:\n * - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n *
- `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n *^\n * @throws IllegalArgumentException
when this value is `NaN`\n *^\n@SinceKotlin("1.2")\npublic actual fun Double.roundToInt(): Int = when {\n
isNaN() -> throw IllegalArgumentException("Cannot round NaN value.")\n this > Int.MAX_VALUE ->
Int.MAX_VALUE\n this < Int.MIN_VALUE -> Int.MIN_VALUE\n else ->
nativeMath.round(this).toInt()\n}\n\n**\n * Rounds this [Double] value to the nearest integer and converts the
result to [Long].\n *^\n * Ties are rounded towards positive infinity.\n *^\n * Special cases:\n * - `x.roundToLong() ==
Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n * - `x.roundToLong() == Long.MIN_VALUE` when `x
< Long.MIN_VALUE`\n *^\n * @throws IllegalArgumentException when this value is `NaN`\n
*\n@SinceKotlin("1.2")\npublic actual fun Double.roundToLong(): Long = when {\n isNaN() -> throw
IllegalArgumentException("Cannot round NaN value.")\n this > Long.MAX_VALUE -> Long.MAX_VALUE\n
this
< Long.MIN_VALUE -> Long.MIN_VALUE\n else -> nativeMath.round(this).toLong()\n}\n\n//
endregion\n\n\n// region ===== Float Math
=====
\n\n**\n * Computes the sine of the angle [x] given in

```

radians.  
`Special cases:  $\sin(\pm\infty)$  is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sin(x: Float): Float = nativeMath.sin(x.toDouble()).toFloat()`  
`Computes the cosine of the angle [x] given in radians.`  
`Special cases:  $\cos(\pm\infty)$  is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun cos(x: Float): Float = nativeMath.cos(x.toDouble()).toFloat()`  
`Computes the tangent of the angle [x] given in radians.`  
`Special cases:  $\tan(\pm\infty)$  is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun tan(x: Float): Float = nativeMath.tan(x.toDouble()).toFloat()`  
`Computes the arc sine of the value [x];`  
`the returned value is an angle in the range from  $-\pi/2$  to  $\pi/2$  radians.`  
`Special cases:  $\arcsin(x)$  is NaN, when  $abs(x) > 1$  or x is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun asin(x: Float): Float = nativeMath.asin(x.toDouble()).toFloat()`  
`Computes the arc cosine of the value [x];`  
`the returned value is an angle in the range from  $0.0$  to  $\pi$  radians.`  
`Special cases:  $\arccos(x)$  is NaN, when  $abs(x) > 1$  or x is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun acos(x: Float): Float = nativeMath.acos(x.toDouble()).toFloat()`  
`Computes the arc tangent of the value [x];`  
`the returned value is an angle in the range from  $-\pi/2$  to  $\pi/2$  radians.`  
`Special cases:  $\operatorname{atan}(\pm\infty)$  is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atan(x: Float): Float = nativeMath.atan(x.toDouble()).toFloat()`  
`Returns the angle  $\theta$  of the polar coordinates (r, theta) that correspond to the rectangular coordinates (x, y) by computing the arc tangent of the value  $y / x$ ;`  
`the returned value is an angle in the range from  $-\pi$  to  $\pi$  radians.`  
`Special cases:  $\operatorname{atan2}(0.0, 0.0)$  is  $0.0$ ;  $\operatorname{atan2}(0.0, x)$  is  $0.0$  for  $x > 0$  and  $\pi$  for  $x < 0$ ;  $\operatorname{atan2}(-0.0, x)$  is  $-0.0$  for  $x > 0$  and  $-\pi$  for  $x < 0$ ;  $\operatorname{atan2}(y, +\infty)$  is  $0.0$  for  $0 < y < +\infty$  and  $-0.0$  for  $-\infty < y < 0$ ;  $\operatorname{atan2}(y, -\infty)$  is  $\pi$  for  $0 < y < +\infty$  and  $-\pi$  for  $-\infty < y < 0$ ;  $\operatorname{atan2}(y, 0.0)$  is  $\pi/2$  for  $y > 0$  and  $-\pi/2$  for  $y < 0$ ;  $\operatorname{atan2}(+\infty, x)$  is  $\pi/2$  for finite  $x > 0$  and  $-\pi/2$  for finite  $x < 0$ ;  $\operatorname{atan2}(\pm\infty, \pm\infty)$  and  $\operatorname{atan2}(y, \pm\infty)$  is NaN`  
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atan2(y: Float, x: Float): Float = nativeMath.atan2(y.toDouble(), x.toDouble()).toFloat()`  
`Computes the hyperbolic sine of the value [x].`  
`Special cases:  $\sinh(\pm\infty)$  is  $\pm\infty$ ;  $\sinh(+\infty)$  is  $+\infty$ ;  $\sinh(-\infty)$  is  $-\infty$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sinh(x: Float): Float = nativeSinh(x.toDouble()).toFloat()`  
`Computes the hyperbolic cosine of the value [x].`  
`Special cases:  $\cosh(\pm\infty)$  is  $+\infty$ ;  $\cosh(+\infty)$  is  $+\infty$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun cosh(x: Float): Float = nativeCosh(x.toDouble()).toFloat()`  
`Computes the hyperbolic tangent of the value [x].`  
`Special cases:  $\tanh(\pm\infty)$  is  $\pm 1.0$ ;  $\tanh(+\infty)$  is  $1.0$ ;  $\tanh(-\infty)$  is  $-1.0$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun tanh(x: Float): Float = nativeTanh(x.toDouble()).toFloat()`  
`Computes the inverse hyperbolic sine of the value [x].`  
`The returned value is y such that  $\sinh(y) = x$ .`  
`Special cases:  $\operatorname{asinh}(\pm\infty)$  is  $\pm\infty$ ;  $\operatorname{asinh}(+\infty)$  is  $+\infty$ ;  $\operatorname{asinh}(-\infty)$  is  $-\infty$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun asinh(x: Float): Float = nativeAsinh(x.toDouble()).toFloat()`  
`Computes the inverse hyperbolic cosine of the value [x].`  
`The returned value is positive y such that  $\cosh(y) = x$ .`  
`Special cases:  $\operatorname{acosh}(\pm\infty)$  is  $+\infty$ ;  $\operatorname{acosh}(x)$  is NaN when  $x < 1$ ;  $\operatorname{acosh}(+\infty)$  is  $+\infty$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun acosh(x: Float): Float = nativeAcosh(x.toDouble()).toFloat()`  
`Computes the inverse hyperbolic tangent of the value [x].`  
`The returned value is y such that  $\tanh(y) = x$ .`  
`Special cases:  $\operatorname{atanh}(\pm\infty)$  is NaN;  $\operatorname{atanh}(x)$  is NaN when  $x > 1$  or  $x < -1$ ;  $\operatorname{atanh}(1.0)$  is  $+\infty$ ;  $\operatorname{atanh}(-1.0)$  is  $-\infty$`   
`@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atanh(x: Float): Float = nativeAtanh(x.toDouble()).toFloat()`  
`Computes  $\sqrt{x^2 + y^2}$  without intermediate overflow or underflow.`  
`Special cases: returns  $+\infty$  if any of arguments is infinite; returns NaN if any of arguments is NaN and the other is not infinite`



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*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun hypot(x: Float, y: Float): Float =
nativeHypot(x.toDouble(), y.toDouble()).toFloat()\n\n/**\n * Computes the positive square root of the value [x].\n *\n * Special cases:\n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sqrt(x: Float): Float =
nativeMath.sqrt(x.toDouble()).toFloat()\n\n/**\n * Computes Euler's number `e` raised to the power of the value
[x].\n *\n * Special cases:\n * - `exp(NaN)` is `NaN`\n * - `exp(+Inf)` is `+Inf`\n * - `exp(-Inf)` is `0.0`\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun exp(x: Float): Float =
nativeMath.exp(x.toDouble()).toFloat()\n\n/**\n * Computes `exp(x) - 1`.\n *\n * This function can be implemented to produce more precise result for [x] near
zero.\n *\n * Special cases:\n * - `expm1(NaN)` is `NaN`\n * - `expm1(+Inf)` is `+Inf`\n * - `expm1(-Inf)` is `
1.0`\n *\n * @see [exp] function.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun expm1(x:
Float): Float = nativeExpM1(x.toDouble()).toFloat()\n\n/**\n * Computes the logarithm of the value [x] to the given
[base].\n *\n * Special cases:\n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n * - `log(x, b)` is `NaN`
when `x < 0` or `b <= 0` or `b == 1.0`\n * - `log(+Inf, +Inf)` is `NaN`\n * - `log(+Inf, b)` is `+Inf` for `b > 1` and
`-Inf` for `b < 1`\n * - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b > 1`\n *\n * See also logarithm functions
for common fixed bases: [ln], [log10] and [log2].\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline
fun log(x: Float, base: Float): Float = log(x.toDouble(), base.toDouble()).toFloat()\n\n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n *\n * Special cases:\n * - `ln(NaN)` is `NaN`\n * -
`ln(x)` is `NaN` when `x < 0.0`\n * - `ln(+Inf)` is `+Inf`\n * - `ln(0.0)` is `-Inf`\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun ln(x: Float): Float =
nativeMath.log(x.toDouble()).toFloat()\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n *\n * @see [ln] function for special cases.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun log10(x:
Float): Float = nativeLog10(x.toDouble()).toFloat()\n\n/**\n * Computes the binary logarithm (base 2) of the value
[x].\n *\n * @see [ln] function for special cases.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline
fun log2(x: Float): Float = nativeLog2(x.toDouble()).toFloat()\n\n/**\n * Computes `ln(x + 1)`.\n *\n * This
function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n
* - `ln1p(NaN)` is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)`
is `+Inf`\n *\n * @see [ln] function\n * @see [expm1] function\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic
actual inline fun ln1p(x: Float): Float = nativeLog1p(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x]
to an integer towards positive infinity.\n *\n * @return the smallest Float value that is greater than or equal to the
given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or
`+Inf` or `-Inf` or already a mathematical integer.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline
fun ceil(x: Float): Float = nativeMath.ceil(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an
integer towards negative infinity.\n *\n * @return the largest Float value that is smaller than or equal to the given
value [x] and is a mathematical integer.\n *\n * Special cases:\n * -
`floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun floor(x: Float): Float =
nativeMath.floor(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *\n *
@return the value [x] having its fractional part truncated.\n *\n * Special cases:\n * - `truncate(x)` is `x` where `x`
is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic
actual inline fun truncate(x: Float): Float = truncate(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x]
towards the closest integer with ties rounded towards even integer.\n *\n * Special cases:\n * - `round(x)` is `x`
where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun round(x: Float): Float =
round(x.toDouble()).toFloat()\n\n/**\n * Returns the absolute value
of the given value [x].\n *\n * Special cases:\n * - `abs(NaN)` is `NaN`\n *\n * @see absoluteValue extension
property for [Float]\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun abs(x: Float): Float =
nativeMath.abs(x.toDouble()).toFloat()\n\n/**\n * Returns the sign of the given value [x]:\n * - `1.0` if the value is

```



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max(a: Int, b: Int): Int = nativeMath.max(a, b)\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `Int.MIN_VALUE.absoluteValue` is `Int.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Int.absoluteValue: Int get() =\n    abs(this)\n\n/**\n * Returns the sign of this value:\n * - `-1` if the value is negative,\n * - `0` if the value is zero,\n * - `1` if the value is positive\n */\n@SinceKotlin("1.2")\npublic actual val Int.sign: Int get() = when {\n    this < 0 -> -1\n    this > 0 -> 1\n    else -> 0\n}\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n * - `abs(Long.MIN_VALUE)` is `Long.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension property for [Long]\n */\n@SinceKotlin("1.2")\npublic actual fun abs(n: Long): Long = if (n < 0) -n else n\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin("1.2")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun min(a: Long, b: Long): Long = if (a <= b) a else b\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin("1.2")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun max(a: Long, b: Long): Long = if (a >= b) a else b\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `Long.MIN_VALUE.absoluteValue` is `Long.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Long.absoluteValue: Long get() =\n    abs(this)\n\n/**\n * Returns the sign of this value:\n * - `-1` if the value is negative,\n * - `0` if the value is zero,\n * - `1` if the value is positive\n */\n@SinceKotlin("1.2")\npublic actual val Long.sign: Int get() = when {\n    this < 0 -> -1\n    this > 0 -> 1\n    else -> 0\n}\n\n// endregion\n"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin\n\n/**\n * Returns `true` if the specified number is a Not-a-Number (NaN) value, `false` otherwise.\n */\npublic actual fun Double.isNaN(): Boolean = this != this\n\n/**\n * Returns `true` if the specified number is a Not-a-Number (NaN) value, `false` otherwise.\n */\npublic actual fun Float.isNaN(): Boolean = this != this\n\n/**\n * Returns `true` if this value is infinitely large in magnitude.\n */\npublic actual fun Double.isInfinite(): Boolean = this == Double.POSITIVE_INFINITY || this == Double.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if this value is infinitely large in magnitude.\n */\npublic actual fun Float.isInfinite(): Boolean = this == Float.POSITIVE_INFINITY || this == Float.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns `false` otherwise (for `NaN` and infinity arguments).\n */\npublic actual fun Double.isFinite(): Boolean = !isInfinite() && !isNaN()\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns `false` otherwise (for `NaN` and infinity arguments).\n */\npublic actual fun Float.isFinite(): Boolean = !isInfinite() && !isNaN()\n\n/**\n * Counts the number of set bits in the binary representation of this [Int] number.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun Int.countOneBits(): Int {\n    // Hacker's Delight 5-1 algorithm\n    var v = this\n    v = (v and 0x55555555) + (v.ushr(1) and 0x55555555)\n    v = (v and 0x33333333) + (v.ushr(2) and 0x33333333)\n    v = (v and 0x0F0F0F0F) + (v.ushr(4) and 0x0F0F0F0F)\n    v = (v and 0x00FF00FF) + (v.ushr(8) and 0x00FF00FF)\n    v = (v and 0x0000FFFF) + (v.ushr(16))\n    return v\n}\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the binary representation of this [Int] number.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic actual inline fun Int.countLeadingZeroBits(): Int = nativeClz32(this)\n\n/**\n * Counts the number of consecutive least significant bits that are zero in the binary representation of this [Int] number.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun Int.countTrailingZeroBits(): Int =\n    // Hacker's Delight 5-4 algorithm for expressing countTrailingZeroBits with countLeadingZeroBits\n    Int.SIZE_BITS - (this or -this).inv().countLeadingZeroBits()\n\n/**\n * Returns a number having a single bit set in the position of the most significant set bit of this [Int] number, or zero, if this number is zero.\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun

```

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Int.takeHighestOneBit(): Int =\n  if (this == 0) 0 else 1.shl(Int.SIZE_BITS - 1 - countLeadingZeroBits())\n\n/**\n * Returns a number having a single bit set in the position of the least significant set bit of this [Int] number,\n * or zero, if this number is zero.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.takeLowestOneBit(): Int =\n  // Hacker's Delight 2-1 algorithm for isolating rightmost 1-bit\n  this and -
this\n\n/**\n * Rotates the binary representation of this [Int] number left by the specified [bitCount] number of
bits.\n * The most significant bits pushed out from the left side reenter the number as the least significant bits on the
right side.\n * Rotating the number left by a negative bit count is the same as rotating it
right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple
of [Int.SIZE_BITS] (32) returns the same number, or more generally\n * `number.rotateLeft(n) ==
number.rotateLeft(n % 32)`\n *\n */\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.rotateLeft(bitCount: Int): Int =\n  shl(bitCount) or ushr(Int.SIZE_BITS - bitCount)\n\n/**\n * Rotates the
binary representation of this [Int] number right by the specified [bitCount] number of bits.\n * The least significant
bits pushed out from the right side reenter the number as the most significant bits on the left side.\n * Rotating
the number right by a negative bit count is the same as rotating it left by the negated bit count:\n *
`number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of [Int.SIZE_BITS] (32) returns
the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 32)`\n *\n */\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
actual fun Int.rotateRight(bitCount: Int): Int =\n  shl(Int.SIZE_BITS - bitCount) or ushr(bitCount)\n\n/**\n * Counts the number of set bits in the binary representation of this [Long] number.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.countOneBits(): Int =\n  high.countOneBits() + low.countOneBits()\n\n/**\n * Counts the number of
consecutive most significant bits that are zero in the binary representation of this [Long] number.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.countLeadingZeroBits(): Int =\n  when (val high = this.high) {\n    0 -> Int.SIZE_BITS +
low.countLeadingZeroBits()\n    else -> high.countLeadingZeroBits()\n  }\n\n/**\n * Counts the number of
consecutive least significant bits that are zero in the binary representation of this [Long] number.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
actual fun Long.countTrailingZeroBits(): Int =\n  when (val low = this.low) {\n    0 -> Int.SIZE_BITS +
high.countTrailingZeroBits()\n    else -> low.countTrailingZeroBits()\n  }\n\n/**\n * Returns a number having a
single bit set in the position of the most significant set bit of this [Long] number,\n * or zero, if this number is
zero.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.takeHighestOneBit(): Long =\n  when (val high = this.high) {\n    0 -> Long(low.takeHighestOneBit(),
0)\n    else -> Long(0, high.takeHighestOneBit())\n  }\n\n/**\n * Returns a number having a single bit set in the
position of the least significant set bit of this [Long] number,\n * or zero, if this number is zero.\n *\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.takeLowestOneBit(): Long =\n  when (val low = this.low) {\n    0 -> Long(0, high.takeLowestOneBit())\n    else -> Long(low.takeLowestOneBit(), 0)\n  }\n\n/**\n * Rotates the binary representation of this [Long] number left by the specified [bitCount] number of bits.\n * The most
significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n *
`number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple of [Long.SIZE_BITS] (64) returns
the same number, or more generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 64)`\n *\n */\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.rotateLeft(bitCount: Int): Long {\n  if ((bitCount and 31) != 0) {\n    val low = this.low\n    val high =
this.high\n    val newLow = low.shl(bitCount) or high.ushr(-bitCount)\n    val newHigh = high.shl(bitCount)

```



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object `S`.\n *\n * Otherwise returns `null`.\n *\n @ExperimentalAssociatedObjects\n public inline fun <reified
T : Annotation> KClass<*>.findAssociatedObject(): Any? =\n this.findAssociatedObject(T::class)", /*\n *
Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n \n package
kotlin.js\n \n import getKClass\n \n import kotlin.reflect.KClass\n \n import kotlin.reflect.js.internal.KClassImpl\n \n /**\n *
Represents the constructor of a class. Instances of `JsClass` can be passed to JavaScript APIs that expect a
constructor reference.\n *\n \n external interface JsClass<T : Any> {\n // **\n * Returns the unqualified name of the
class represented by this instance.\n * \n val name: String\n }\n \n /**\n * Obtains a constructor reference for the
given `KClass`.\n *\n \n val <T : Any> KClass<T>.js: JsClass<T>\n get() = (this as KClassImpl<T>).jClass\n \n /**\n *
Obtains a `KClass` instance for the given constructor reference.\n *\n \n val <T : Any> JsClass<T>.kotlin:
KClass<T>\n get() = getKClass(this)\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n \n package kotlin.reflect.js.internal\n \n import kotlin.reflect.*\n \n internal abstract
class KClassImpl<T : Any>(\n internal open val jClass: JsClass<T>\n ) : KClass<T> {\n \n override val
qualifiedName: String?\n get() = TODO()\n \n override fun equals(other: Any?): Boolean {\n return other
is KClassImpl<*> && jClass == other.jClass\n }\n \n // TODO: use FQN\n override fun hashCode(): Int =
simpleName?.hashCode() ?: 0\n \n override fun toString(): String {\n // TODO: use FQN\n return "\"class
$simpleName\"\n }\n }\n \n internal class SimpleKClassImpl<T : Any>(jClass: JsClass<T>) :
KClassImpl<T>(jClass) {\n override val simpleName: String? =
jClass.asDynamic().`$metadata$`.simpleName.unsafeCast<String?>()\n \n
override fun isInstance(value: Any?): Boolean {\n return jsIsType(value, jClass)\n }\n }\n \n internal class
PrimitiveKClassImpl<T : Any>(\n jClass: JsClass<T>,\n private val givenSimpleName: String,\n private val
isInstanceFunction: (Any?) -> Boolean\n ) : KClassImpl<T>(jClass) {\n override fun equals(other: Any?): Boolean
{\n if (other !is PrimitiveKClassImpl<*>) return false\n return super.equals(other) && givenSimpleName
== other.givenSimpleName\n }\n \n override val simpleName: String? get() = givenSimpleName\n \n override
fun isInstance(value: Any?): Boolean {\n return isInstanceFunction(value)\n }\n }\n \n internal object
NothingKClassImpl : KClassImpl<Nothing>(js("Object")) {\n override val simpleName: String =
"Nothing"\n \n override fun isInstance(value: Any?): Boolean = false\n \n override val jClass:
JsClass<Nothing>\n get() = throw UnsupportedOperationException("There's no native
JS class for Nothing type")\n \n override fun equals(other: Any?): Boolean = other === this\n \n override fun
hashCode(): Int = 0\n }\n \n internal class ErrorKClass : KClass<Nothing> {\n override val simpleName: String?
get() = error("Unknown simpleName for ErrorKClass")\n \n override val qualifiedName: String? get() =
error("Unknown qualifiedName for ErrorKClass")\n \n override fun isInstance(value: Any?): Boolean =
error("Can's check isInstance on ErrorKClass")\n \n override fun equals(other: Any?): Boolean = other ===
this\n \n override fun hashCode(): Int = 0\n }", /*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n \n package kotlin.reflect\n \n internal actual inline val
KClass<*>.qualifiedOrSimpleName: String?\n get() = simpleName", /*\n * Copyright 2010-2018 JetBrains s.r.o.
and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n \n // a package is omitted to get declarations directly under the module\n \n // TODO:
Remove once JsReflectionAPICallChecker supports more reflection
types\n \n @file:Suppress("Unsupported")\n \n import kotlin.reflect.*\n \n import
kotlin.reflect.js.internal.*\n \n @JsName("createKType")\n \n internal fun createKType(\n classifier: KClassifier,\n
arguments: Array<KTypeProjection>,\n isMarkedNullable: Boolean\n ) =\n KTypeImpl(classifier,
arguments.asList(), isMarkedNullable)\n \n @JsName("createDynamicKType")\n \n internal fun
createDynamicKType(): KType = DynamicKType\n \n @JsName("markKTypeNullable")\n \n internal fun
markKTypeNullable(kType: KType) = KTypeImpl(kType.classifier!!, kType.arguments,

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true)\n\n@JsName("createKTypeParameter")\ninternal fun createKTypeParameter(\n    name: String,\n    upperBounds: Array<KType>,\n    variance: String): KTypeParameter\n    {\n        val kVariance = when (variance) {\n            "in" -> KVariance.IN\n            "out" -> KVariance.OUT\n            else -> KVariance.INVARIANT\n        }\n        return KTypeParameterImpl(name, upperBounds.asList(), kVariance,\n            false)\n    }\n\n@JsName("getStarKTypeProjection")\ninternal fun getStarKTypeProjection(): KTypeProjection =\n    KTypeProjection.STAR\n\n@JsName("createCovariantKTypeProjection")\ninternal fun\n    createCovariantKTypeProjection(type: KType): KTypeProjection =\n    KTypeProjection.covariant(type)\n\n@JsName("createInvariantKTypeProjection")\ninternal fun\n    createInvariantKTypeProjection(type: KType): KTypeProjection =\n    KTypeProjection.invariant(type)\n\n@JsName("createContravariantKTypeProjection")\ninternal fun\n    createContravariantKTypeProjection(type: KType): KTypeProjection =\n    KTypeProjection.contravariant(type)\n\n"/*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming\n    Language contributors.\n * Use of this source code is governed by\n    the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage\n    kotlin.reflect.js.internal\nimport kotlin.reflect.*\ninternal class KTypeImpl(\n    override val classifier:\n        KClassifier,\n    override val arguments: List<KTypeProjection>,\n    override val isMarkedNullable: Boolean) :\n        KType {\n    override fun equals(other: Any?): Boolean =\n        other is KTypeImpl &&\n            classifier ==\n            other.classifier && arguments == other.arguments &&\n                isMarkedNullable == other.isMarkedNullable\n    override\n        fun hashCode(): Int =\n            (classifier.hashCode() * 31 + arguments.hashCode()) * 31 +\n                isMarkedNullable.hashCode()\n    override fun toString(): String {\n        val kClass = (classifier as? KClass<*>)\n        val classifierName = when {\n            kClass == null -> classifier.toString()\n            kClass.simpleName != null\n            -> kClass.simpleName\n            else -> "(non-denotable type)"\n        }\n        val args =\n            if\n                (arguments.isEmpty()) ""\n            else arguments.joinToString(", ", "<", ">")\n        val nullable = if\n            (isMarkedNullable) "?"\n        else ""\n        return classifierName + args + nullable\n    }\n}\n\ninternal object\n    DynamicKType : KType {\n    override val classifier: KClassifier? = null\n    override val arguments:\n        List<KTypeProjection> = emptyList()\n    override val isMarkedNullable: Boolean = false\n    override fun\n        toString(): String = "dynamic"\n}\n\n"/*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming\n    Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n    license/LICENSE.txt file.\n */\npackage kotlin.reflect.js.internal\nimport kotlin.reflect.*\ninternal data class\n    KTypeParameterImpl(\n    override val name: String,\n    override val upperBounds: List<KType>,\n    override val\n        variance: KVariance,\n    override val isReified: Boolean) : KTypeParameter {\n    override fun toString():\n        String = name\n}\n\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n    license/LICENSE.txt file.\n */\npackage kotlin.reflect.js.internal\nimport kotlin.js.JsClass\n@JsName("PrimitiveClasses")\ninternal\n    object PrimitiveClasses {\n    @JsName("anyClass")\n        val anyClass =\n            PrimitiveKClassImpl(js("Object").unsafeCast<JsClass<Any>>(), "Any", { it is Any })\n\n    @JsName("numberClass")\n        val numberClass =\n            PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Number>>(), "Number", { it is Number })\n\n    @JsName("nothingClass")\n        val nothingClass = NothingKClassImpl\n\n    @JsName("booleanClass")\n        val\n            booleanClass = PrimitiveKClassImpl(js("Boolean").unsafeCast<JsClass<Boolean>>(), "Boolean", { it is Boolean\n            })\n\n    @JsName("byteClass")\n        val byteClass =\n            PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Byte>>(),\n                "Byte", { it is Byte })\n\n    @JsName("shortClass")\n        val shortClass =\n            PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Short>>(), "Short", { it is Short })\n\n    @JsName("intClass")\n        val intClass = PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Int>>(), "Int",\n            { it is Int })\n\n    @JsName("floatClass")\n        val floatClass =\n            PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Float>>(), "Float", { it is Float })\n\n    @JsName("doubleClass")\n        val doubleClass =

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PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Double>>(), "Double", { it is Double })\n\n
@JsName("arrayClass")\n val arrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<Array<*>>>(), "Array", { it is Array<*> })\n\n
@JsName("stringClass")\n val stringClass = PrimitiveKClassImpl(js("String").unsafeCast<JsClass<String>>(),
"String", { it is String })\n\n @JsName("throwableClass")\n val throwableClass =
PrimitiveKClassImpl(js("Error").unsafeCast<JsClass<Throwable>>(),
"Throwable", { it is Throwable })\n\n @JsName("booleanArrayClass")\n val booleanArrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<BooleanArray>>(), "BooleanArray", { it is BooleanArray
})\n\n @JsName("charArrayClass")\n val charArrayClass =
PrimitiveKClassImpl(js("Uint16Array").unsafeCast<JsClass<CharArray>>(), "CharArray", { it is CharArray
})\n\n @JsName("byteArrayClass")\n val byteArrayClass =
PrimitiveKClassImpl(js("Int8Array").unsafeCast<JsClass<ByteArray>>(), "ByteArray", { it is ByteArray })\n\n
@JsName("shortArrayClass")\n val shortArrayClass =
PrimitiveKClassImpl(js("Int16Array").unsafeCast<JsClass<ShortArray>>(), "ShortArray", { it is ShortArray
})\n\n @JsName("intArrayClass")\n val intArrayClass =
PrimitiveKClassImpl(js("Int32Array").unsafeCast<JsClass<IntArray>>(), "IntArray", { it is IntArray })\n\n
@JsName("longArrayClass")\n val longArrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<LongArray>>(),
"LongArray", { it is LongArray })\n\n @JsName("floatArrayClass")\n val floatArrayClass =
PrimitiveKClassImpl(js("Float32Array").unsafeCast<JsClass<FloatArray>>(), "FloatArray", { it is FloatArray
})\n\n @JsName("doubleArrayClass")\n val doubleArrayClass =
PrimitiveKClassImpl(js("Float64Array").unsafeCast<JsClass<DoubleArray>>(), "DoubleArray", { it is
DoubleArray })\n\n @JsName("functionClass")\n fun functionClass(arity: Int): KClassImpl<Any> {\n
return functionClasses.get(arity) ?: run {\n val result =
PrimitiveKClassImpl(js("Function").unsafeCast<JsClass<Any>>(), "Function$arity",\n
{ jsTypeOf(it) === "function" && it.asDynamic().length === arity })\n functionClasses.asDynamic()[arity]
= result\n result\n })\n }\n\nprivate val functionClasses =
arrayOfNulls<KClassImpl<Any>>(0), "/*\n *

```

Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*/\n\n// a package is omitted to get declarations directly under the module\n\nimport kotlin.reflect.\*\nimport

```

kotlin.reflect.js.internal.*\n\n@JsName("getKClass")\n\ninternal fun <T : Any> getKClass(jClass: Any /*
JsClass<T> | Array<JsClass<T>> */): KClass<T> {\n return if (js("Array").isArray(jClass)) {\n
getKClassM(jClass.unsafeCast<Array<JsClass<T>>>())\n } else {\n
getKClass1(jClass.unsafeCast<JsClass<T>>())\n }\n}\n\n@JsName("getKClassM")\n\ninternal fun <T : Any>
getKClassM(jClasses: Array<JsClass<T>>): KClass<T> = when (jClasses.size) {\n 1 ->
getKClass1(jClasses[0])\n 0 -> NothingKClassImpl.unsafeCast<KClass<T>>()\n else ->
ErrorKClass().unsafeCast<KClass<T>>()\n}\n\n@JsName("getKClassFromExpression")\n\ninternal fun <T : Any>
getKClassFromExpression(e:
T): KClass<T> =\n when (jsTypeOf(e)) {\n "string" -> PrimitiveClasses.stringClass\n "number" -> if
(jsBitwiseOr(e, 0).asDynamic() === e) PrimitiveClasses.intClass else PrimitiveClasses.doubleClass\n
"boolean" -> PrimitiveClasses.booleanClass\n "function" ->
PrimitiveClasses.functionClass(e.asDynamic().length)\n else -> {\n when {\n e is BooleanArray
-> PrimitiveClasses.booleanArrayClass\n e is CharArray -> PrimitiveClasses.charArrayClass\n e
is ByteArray -> PrimitiveClasses.byteArrayClass\n e is ShortArray -> PrimitiveClasses.shortArrayClass\n
e is IntArray -> PrimitiveClasses.intArrayClass\n e is LongArray ->
PrimitiveClasses.longArrayClass\n e is FloatArray -> PrimitiveClasses.floatArrayClass\n e is
DoubleArray -> PrimitiveClasses.doubleArrayClass\n e is KClass<*> -> KClass::class\n

```



```

        e is Array<*> -> PrimitiveClasses.arrayClass\n            else -> {\n                val constructor =
js("Object").getPrototypeOf(e).constructor\n                when {\n                    constructor === js("Object") ->
PrimitiveClasses.anyClass\n                    constructor === js("Error") -> PrimitiveClasses.throwableClass\n
                else -> {\n                    val jsClass: JsClass<T> = constructor\n                        getKClass1(jsClass)\n
                }\n            }\n        }\n    }\n    }\n    }\n    }\n
}.unsafeCast<KClass<T>>()\n\n@JsName("getKClass1")\ninternal fun <T : Any> getKClass1(jClass:
JsClass<T>): KClass<T> {\n    if (jClass === js("String")) return
PrimitiveClasses.stringClass.unsafeCast<KClass<T>>()\n    val metadata = jClass.asDynamic().`$metadata$\n\n
return if (metadata != null) {\n        if (metadata.`$kClass$` == null) {\n            val kClass =
SimpleKClassImpl(jClass)\n            metadata.`$kClass$` = kClass\n            kClass\n        } else {\n
metadata.`$kClass$`\n        }\n    } else {\n        SimpleKClassImpl(jClass)\n    }\n}", "/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Exposes
the JavaScript [RegExp
object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/RegExp) to Kotlin.\n
*/\n\n@Suppress("NOT_DOCUMENTED")\npublic external class RegExp(pattern: String, flags: String? =
definedExternally) {\n\n    public fun test(str: String): Boolean\n\n    public fun exec(str: String): RegExpMatch?\n\n
    public override fun toString(): String\n\n    /**\n     * The lastIndex is a read/write integer property of regular
expressions that specifies the index at which to start the next match.\n
\n     */\n\n    public var lastIndex: Int\n\n    public val global: Boolean\n    public val ignoreCase: Boolean\n    public val
multiline: Boolean\n}\n\n/**\n * Resets the regular expression so that subsequent [RegExp.test] and [RegExp.exec]
calls will match starting with the beginning of the input string.\n */\n\npublic fun RegExp.reset() {\n    lastIndex =
0\n}\n\n// TODO: Inherit from array or introduce asArray() extension\n\n/**\n * Represents the return value of
[RegExp.exec].\n */\n\n@Suppress("NOT_DOCUMENTED")\npublic external interface RegExpMatch {\n    public
val index: Int\n    public val input: String\n    public val length: Int\n}\n\n/**\n * Returns the entire text matched by
[RegExp.exec] if the [index] parameter is 0, or the text matched by the capturing parenthesis\n * at the given
index.\n */\n\npublic inline operator fun RegExpMatch.get(index: Int): String? = asDynamic()[index]\n\n/**\n *
Converts the result of [RegExp.exec] to an array where the first element contains the entire
matched text and each subsequent\n * element is the text matched by each capturing parenthesis.\n */\n\npublic inline
fun RegExpMatch.asArray(): Array<out String?> = unsafeCast<Array<out String?>>()\n", "/*\n * Copyright 2010-
2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.sequences\n\ninternal
actual class ConstrainedOnceSequence<T> actual constructor(sequence: Sequence<T>) : Sequence<T> {\n    private
var sequenceRef: Sequence<T>? = sequence\n\n    actual override fun iterator(): Iterator<T> {\n        val sequence =
sequenceRef ?: throw IllegalStateException("This sequence can be consumed only once.")\n        sequenceRef =
null\n        return sequence.iterator()\n    }\n}\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.text\n\n@SinceKotlin("1.5")\npublic actual enum class CharCategory(internal val value: Int, public actual
val code: String) {\n    /**\n     * General category \"Cn\" in the Unicode specification.\n     */\n    UNASSIGNED(0,
"Cn"),\n\n    /**\n     * General category \"Lu\" in the Unicode specification.\n     */\n    UPPERCASE_LETTER(1,
"Lu"),\n\n    /**\n     * General category \"Ll\" in the Unicode specification.\n     */\n    LOWERCASE_LETTER(2,
"Ll"),\n\n    /**\n     * General category \"Lt\" in the Unicode specification.\n     */\n    TITLECASE_LETTER(3,
"Lt"),\n\n    /**\n     * General category \"Lm\" in the Unicode specification.\n     */\n    MODIFIER_LETTER(4,
"Lm"),\n\n    /**\n     * General category \"Lo\" in the Unicode specification.\n     */\n    OTHER_LETTER(5,
"Lo"),\n\n    /**\n     * General category \"Mn\" in the Unicode specification.\n     */\n    NON_SPACING_MARK(6,

```



```

get() = string.asDynamic().length\n\n actual override fun
get(index: Int): Char =\n    string.getOrElse(index) { throw IndexOutOfBoundsException("index: $index, length:
$length}") }\n\n actual override fun subSequence(startIndex: Int, endIndex: Int): CharSequence =
string.substring(startIndex, endIndex)\n\n actual override fun append(value: Char): StringBuilder {\n    string +=
value\n    return this\n }\n\n actual override fun append(value: CharSequence?): StringBuilder {\n    string
+= value.toString()\n    return this\n }\n\n actual override fun append(value: CharSequence?, startIndex: Int,
endIndex: Int): StringBuilder =\n    this.appendRange(value ?: "null", startIndex, endIndex)\n\n /**\n *
Reverses the contents of this string builder and returns this instance.\n * Surrogate pairs included in this
string builder are treated as single characters.\n * Therefore, the order of the high-low surrogates is never
reversed.\n * Note that the reverse operation may
produce new surrogate pairs that were unpaired low-surrogates and high-surrogates before the operation.\n * For
example, reversing "\uDC00\uD800" produces "\uD800\uDC00" which is a valid surrogate pair.\n */\n\n actual fun reverse(): StringBuilder {\n    var reversed = ""\n    var index = string.length - 1\n    while (index
>= 0) {\n        val low = string[index--]\n        if (low.isLowSurrogate() && index >= 0) {\n            val high =
string[index--]\n            if (high.isHighSurrogate()) {\n                reversed = reversed + high + low\n            }
else {\n                reversed = reversed + low + high\n            }\n        } else {\n            reversed += low\n        }\n    }\n    string = reversed\n    return this\n }\n\n /**\n * Appends the string representation of the
specified object [value] to this string builder and returns this instance.\n * The overall
effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n * and then that
string was appended to this string builder.\n */\n\n actual fun append(value: Any?): StringBuilder {\n    string
+= value.toString()\n    return this\n }\n\n /**\n * Appends the string representation of the specified boolean
[value] to this string builder and returns this instance.\n * The overall effect is exactly as if the [value] were
converted to a string by the `value.toString()` method,\n * and then that string was appended to this string
builder.\n */\n\n @SinceKotlin("1.3")\n actual fun append(value: Boolean): StringBuilder {\n    string +=
value\n    return this\n }\n\n /**\n * Appends characters in the specified character array [value] to this string
builder and returns this instance.\n * Characters are appended in order, starting at the index 0.\n */\n\n
@SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n actual fun append(value: CharArray): StringBuilder {\n
string += value.concatToString()\n    return this\n }\n\n /**\n * Appends the specified string [value] to this
string builder and returns this instance.\n * If [value] is `null`, then the four characters `null` are
appended.\n */\n\n @SinceKotlin("1.3")\n actual fun append(value: String?): StringBuilder {\n    this.string
+= value ?: "null"\n    return this\n }\n\n /**\n * Returns the current capacity of this string builder.\n * The
capacity is the maximum length this string builder can have before an allocation occurs.\n * In
Kotlin/JS implementation of StringBuilder the value returned from this method may not indicate the actual size of
the backing storage.\n */\n\n @SinceKotlin("1.3")\n// @ExperimentalStdlibApi\n @Deprecated("Obtaining
StringBuilder capacity is
not supported in JS and common code.", level = DeprecationLevel.ERROR)\n actual fun capacity(): Int =
length\n\n /**\n * Ensures that the capacity of this string builder is at least equal to the specified
[minimumCapacity].\n * If the current capacity is less than the [minimumCapacity], a new backing storage
is allocated with greater capacity.\n * Otherwise, this method takes no action and simply returns.\n * In
Kotlin/JS implementation of StringBuilder the size of the backing storage is not extended to comply the given
[minimumCapacity],\n * thus calling this method has no effect on the further performance of operations.\n */\n\n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun
ensureCapacity(minimumCapacity: Int) {\n    }\n\n /**\n * Returns the index within this string builder of the
first occurrence of the specified [string].\n * Returns -1 if the specified [string] does not
occur in this string builder.\n */\n\n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n actual fun indexOf(string: String): Int =
this.string.asDynamic().indexOf(string)\n\n /**\n * Returns the index within this string builder of the first

```

occurrence of the specified [string],\n \* starting at the specified [startIndex].\n \* Returns -1 if the specified [string] does not occur in this string builder starting at the specified [startIndex].\n \*/\n

```
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun indexOf(string: String,\n startIndex: Int): Int = this.string.asDynamic().indexOf(string, startIndex)\n\n /**\n * Returns the index within\n this string builder of the last occurrence of the specified [string].\n * The last occurrence of empty string ```` is\n considered to be at the index equal to `this.length`.\n * Returns -1 if the specified [string] does not occur\n in\n this string builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun lastIndexOf(string: String): Int = this.string.asDynamic().lastIndexOf(string)\n\n /**\n * Returns the\n index within this string builder of the last occurrence of the specified [string],\n * starting from the specified\n [startIndex] toward the beginning.\n * Returns -1 if the specified [string] does not occur in this string\n builder starting at the specified [startIndex].\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun lastIndexOf(string: String, startIndex: Int): Int {\n if (string.isEmpty() && startIndex < 0) return -1\n return this.string.asDynamic().lastIndexOf(string,\n startIndex)\n }\n\n /**\n * Inserts the string representation of the specified boolean [value] into this string\n builder at the specified [index] and returns this instance.\n * The\n overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n * and then\n that string was inserted into this string builder at the specified [index].\n * @throws\n IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun insert(index: Int, value:\n Boolean): StringBuilder {\n AbstractList.checkPositionIndex(index, length)\n\n string = string.substring(0,\n index) + value + string.substring(index)\n\n return this\n }\n\n /**\n * Inserts the specified character [value]\n into this string builder at the specified [index] and returns this instance.\n * @throws\n IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun insert(index: Int, value: Char): StringBuilder {\n AbstractList.checkPositionIndex(index,\n length)\n\n string = string.substring(0, index) + value + string.substring(index)\n\n return this\n }\n\n /**\n * Inserts characters in the specified character array [value] into this string builder at the specified [index]\n and returns this instance.\n * The inserted characters go in same order as in the [value] character array,\n starting at [index].\n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the\n length of this string builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun insert(index: Int, value: CharArray): StringBuilder {\n AbstractList.checkPositionIndex(index, length)\n\n string = string.substring(0, index) +\n value.concatToString() + string.substring(index)\n\n return this\n }\n\n /**\n * Inserts\n characters in the specified character sequence [value] into this string builder at the specified [index] and returns this\n instance.\n * The inserted characters go in the same order as in the [value] character sequence, starting at\n [index].\n * @param index the position in this string builder to insert at.\n * @param value the character\n sequence from which characters are inserted. If [value] is `null`, then the four characters `\\null` are inserted.\n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string\n builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun\n insert(index: Int, value: CharSequence?): StringBuilder {\n AbstractList.checkPositionIndex(index, length)\n\n string = string.substring(0, index) + value.toString() + string.substring(index)\n\n return this\n }\n\n /**\n * Inserts the string representation\n of the specified object [value] into this string builder at the specified [index] and returns this instance.\n * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n * and\n then that string was inserted into this string builder at the specified [index].\n * @throws\n IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun insert(index: Int, value:
```

```

Any?): StringBuilder {
    AbstractList.checkPositionIndex(index, length)
    string = string.substring(0, index) + value.toString() + string.substring(index)
    return this
}

/**
 * Inserts the string [value] into this string builder at the specified [index] and returns this instance.
 * If [value] is `null`, then the four characters `null` are inserted.
 * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun insert(index: Int, value: String?): StringBuilder {
    AbstractList.checkPositionIndex(index, length)
    val toInsert = value ?: "null"
    this.string = this.string.substring(0, index) + toInsert + this.string.substring(index)
    return this
}

/**
 * Sets the length of this string builder to the specified [newLength].
 * If the [newLength] is less than the current length, it is changed to the specified [newLength].
 * Otherwise, null characters `    ` are appended to this string builder until its length is less than the [newLength].
 * Note that in Kotlin/JS [set] operator function has non-constant execution time complexity.
 * Therefore, increasing length of this string builder and then updating each character by index may slow down your program.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [newLength] is less than zero.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun setLength(newLength: Int) {
    if (newLength < 0) {
        throw IllegalArgumentException("Negative new length: $newLength.")
    }
    if (newLength <= length) {
        string = string.substring(0, newLength)
    } else {
        for (i in length until newLength) {
            string += "    "
        }
    }
}

/**
 * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [length] (exclusive).
 * @throws IndexOutOfBoundsException if [startIndex] is less than zero or greater than the length of this string builder.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun substring(startIndex: Int): String {
    AbstractList.checkPositionIndex(startIndex, length)
    return string.substring(startIndex)
}

/**
 * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [endIndex] (exclusive).
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun substring(startIndex: Int, endIndex: Int): String {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, length)
    return string.substring(startIndex, endIndex)
}

/**
 * Attempts to reduce storage used for this string builder.
 * If the backing storage of this string builder is larger than necessary to hold its current contents,
 * then it may be resized to become more space efficient.
 * Calling this method may, but is not required to, affect the value of the [capacity] property.
 * In Kotlin/JS implementation of StringBuilder the size of the backing storage is always equal to the length of the string builder.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun trimToSize() {}

override fun toString(): String = string

/**
 * Clears the content of this string builder making it empty and returns this instance.
 * @sample samples.text.Strings.clearStringBuilder
 */
@SinceKotlin("1.3")
public fun clear(): StringBuilder {
    string = ""
    return this
}

/**
 * Sets the character at the specified [index] to the specified [value].
 * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public operator fun set(index: Int, value: Char) {
    AbstractList.checkElementIndex(index, length)
    string = string.substring(0, index) + value + string.substring(index + 1)
}

/**
 * Replaces characters in the specified range of this string builder with characters in the specified string [value] and returns this instance.
 * @param startIndex the beginning (inclusive) of the range to replace.
 * @param endIndex the end (exclusive) of the range to replace.
 * @param value the string to replace with.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [startIndex] is less than zero, greater than the length of this string builder, or `startIndex > endIndex`.
 */
@SinceKotlin("1.4")

```

```

@WasExperimental(ExperimentalStdlibApi::class)\n public fun setRange(startIndex: Int,
endIndex: Int, value: String): StringBuilder {\n    checkReplaceRange(startIndex, endIndex, length)\n\n    this.string = this.string.substring(0, startIndex) + value + this.string.substring(endIndex)\n    return this\n }\n\nprivate fun checkReplaceRange(startIndex: Int, endIndex: Int, length: Int) {\n    if (startIndex < 0 || startIndex >
length) {\n        throw IndexOutOfBoundsException("\startIndex: $startIndex, length: $length")\n    }\n    if
(startIndex > endIndex) {\n        throw IllegalArgumentException("\startIndex($startIndex) >
endIndex($endIndex)")\n    }\n }\n\n /**\n * Removes the character at the specified [index] from this string
builder and returns this instance.\n *\n * If the `Char` at the specified [index] is part of a supplementary code
point, this method does not remove the entire supplementary character.\n *\n * @param index the index of
`Char` to remove.\n *\n * @throws IndexOutOfBoundsException
if [index] is out of bounds of this string builder.\n *\n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n public fun deleteAt(index: Int): StringBuilder {\n
AbstractList.checkElementIndex(index, length)\n\n    string = string.substring(0, index) + string.substring(index +
1)\n    return this\n }\n\n /**\n * Removes characters in the specified range from this string builder and
returns this instance.\n *\n * @param startIndex the beginning (inclusive) of the range to remove.\n *
@param endIndex the end (exclusive) of the range to remove.\n *\n * @throws IndexOutOfBoundsException
or [IllegalArgumentException] when [startIndex] is out of range of this string builder indices or when `startIndex >
endIndex`.\n *\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun
deleteRange(startIndex: Int, endIndex: Int): StringBuilder {\n    checkReplaceRange(startIndex,
endIndex, length)\n\n    string = string.substring(0, startIndex) + string.substring(endIndex)\n    return this\n
}\n\n /**\n * Copies characters from this string builder into the [destination] character array.\n *\n *
@param destination the array to copy to.\n * @param destinationOffset the position in the array to copy to, 0 by
default.\n * @param startIndex the beginning (inclusive) of the range to copy, 0 by default.\n * @param
endIndex the end (exclusive) of the range to copy, length of this string builder by default.\n *\n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this
string builder indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the
subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index
is out of the [destination] array indices range.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun
toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = this.length) {\n
AbstractList.checkBoundsIndexes(startIndex, endIndex, length)\n\n
AbstractList.checkBoundsIndexes(destinationOffset, destinationOffset + endIndex - startIndex, destination.size)\n\n
var dstIndex = destinationOffset\n    for (index in startIndex until endIndex) {\n        destination[dstIndex++]
= string[index]\n    }\n }\n\n /**\n * Appends characters in a subarray of the specified character array
[value] to this string builder and returns this instance.\n *\n * Characters are appended in order, starting at
specified [startIndex].\n *\n * @param value the array from which characters are appended.\n * @param
startIndex the beginning (inclusive) of the subarray to append.\n * @param endIndex the end (exclusive)
of the subarray to append.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException]
when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex > endIndex`.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun
appendRange(value: CharArray, startIndex: Int, endIndex: Int): StringBuilder {\n    string +=
value.concatToString(startIndex, endIndex)\n    return this\n }\n\n /**\n * Appends a subsequence of the
specified character sequence [value] to this string builder and returns this instance.\n *\n * @param value the
character sequence from which a subsequence is appended.\n * @param startIndex the beginning (inclusive) of
the subsequence to append.\n * @param endIndex the end (exclusive) of the subsequence to append.\n *\n *
@throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of
range of the [value] character sequence indices or when `startIndex > endIndex`.\n *\n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun appendRange(value:

```

```

CharSequence, startIndex: Int, endIndex: Int): StringBuilder {\n    val stringCsq = value.toString()\n
AbstractList.checkBoundsIndexes(startIndex, endIndex, stringCsq.length)\n\n    string +=
stringCsq.substring(startIndex, endIndex)\n    return this\n }\n\n /**\n  * Inserts characters in a subarray of
the specified character array [value] into this string builder at the specified [index] and returns this instance.\n  *\n  * The inserted characters go in same order as in the [value] array, starting at [index].\n  *\n  * @param index
the position in this string builder to insert at.\n  * @param value the array from which characters are inserted.\n
* @param startIndex the beginning (inclusive) of the subarray to insert.\n  * @param endIndex
the end (exclusive) of the subarray to insert.\n  *\n  * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when
`startIndex > endIndex`.\n  * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the
length of this string builder.\n  */\n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n public fun insertRange(index: Int, value: CharArray,
startIndex: Int, endIndex: Int): StringBuilder {\n    AbstractList.checkPositionIndex(index, this.length)\n\n
string = string.substring(0, index) + value.concatToString(startIndex, endIndex) + string.substring(index)\n
return this\n }\n\n /**\n  * Inserts characters in a subsequence of the specified character sequence [value] into
this string builder at the specified [index] and returns this instance.\n  *\n  * The inserted characters go in the
same order
as in the [value] character sequence, starting at [index].\n  *\n  * @param index the position in this string
builder to insert at.\n  * @param value the character sequence from which a subsequence is inserted.\n  *
@param startIndex the beginning (inclusive) of the subsequence to insert.\n  * @param endIndex the end
(exclusive) of the subsequence to insert.\n  *\n  * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence
indices or when `startIndex > endIndex`.\n  * @throws IndexOutOfBoundsException if [index] is less than zero or
greater than the length of this string builder.\n  */\n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n public fun insertRange(index: Int, value: CharSequence,
startIndex: Int, endIndex: Int): StringBuilder {\n    AbstractList.checkPositionIndex(index, length)\n\n    val
stringCsq = value.toString()\n
AbstractList.checkBoundsIndexes(startIndex, endIndex, stringCsq.length)\n\n    string = string.substring(0,
index) + stringCsq.substring(startIndex, endIndex) + string.substring(index)\n    return this\n }\n\n /**\n  *
Clears the content of this string builder making it empty and returns this instance.\n  */\n @sample
samples.text.Strings.clearStringBuilder\n
*/\n @SinceKotlin("1.3")\n @Suppress("EXTENSION_SHADOWED_BY_MEMBER",
"NOTHING_TO_INLINE")\n public actual inline fun StringBuilder.clear(): StringBuilder = this.clear()\n\n /**\n  *
Sets the character at the specified [index] to the specified [value].\n  *\n  * @throws IndexOutOfBoundsException if
[index] is out of bounds of this string builder.\n  */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\n public actual inline operator fun
StringBuilder.set(index: Int, value: Char) = this.set(index, value)\n\n /**\n  * Replaces
characters in the specified range of this string builder with characters in the specified string [value] and returns this
instance.\n  *\n  * @param startIndex the beginning (inclusive) of the range to replace.\n  * @param endIndex the end
(exclusive) of the range to replace.\n  * @param value the string to replace with.\n  *\n  * @throws
IndexOutOfBoundsException or [IllegalArgumentException] if [startIndex] is less than zero, greater than the length
of this string builder, or `startIndex > endIndex`.\n  */\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\n public actual inline fun
StringBuilder.setRange(startIndex: Int, endIndex: Int, value: String): StringBuilder =\n    this.setRange(startIndex,
endIndex, value)\n\n /**\n  * Removes the character at the specified [index] from this string builder and returns this
instance.\n  *\n  * If the `Char` at the specified [index] is part of a supplementary code point,

```

this method does not remove the entire supplementary character.

`@param index` the index of `Char` to remove.

`@throws IndexOutOfBoundsException` if `[index]` is out of bounds of this string builder.

```

*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")npublic actual inline fun StringBuilder.deleteAt(index:
Int): StringBuilder = this.deleteAt(index)n/n/**n * Removes characters in the specified range from this string
builder and returns this instance.n *n * @param startIndex the beginning (inclusive) of the range to remove.n *
@param endIndex the end (exclusive) of the range to remove.n *n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] is out of range of this string builder indices or when `startIndex >
endIndex`.n
*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")npublic
actual inline fun StringBuilder.deleteRange(startIndex: Int, endIndex: Int): StringBuilder =
this.deleteRange(startIndex, endIndex)n/n/**n * Copies characters from this string builder into the [destination]
character array.n *n * @param destination the array to copy to.n * @param destinationOffset the position in the
array to copy to, 0 by default.n * @param startIndex the beginning (inclusive) of the range to copy, 0 by default.n
* @param endIndex the end (exclusive) of the range to copy, length of this string builder by default.n *n *
@throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of
range of this string builder indices or when `startIndex > endIndex`.n * @throws IndexOutOfBoundsException
when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],n * or when
that index is out of the [destination] array indices range.n
*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER",
"NOTHING_TO_INLINE", "ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")npublic actual
inline fun StringBuilder.toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0,
endIndex: Int = this.length) =n this.toCharArray(destination, destinationOffset, startIndex, endIndex)n/n/**n *
Appends characters in a subarray of the specified character array [value] to this string builder and returns this
instance.n *n * Characters are appended in order, starting at specified [startIndex].n *n * @param value the array
from which characters are appended.n * @param startIndex the beginning (inclusive) of the subarray to append.n *n
@param endIndex the end (exclusive) of the subarray to append.n *n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when
`startIndex > endIndex`.n
*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER",
"NOTHING_TO_INLINE")npublic actual inline fun StringBuilder.appendRange(value: CharArray, startIndex:
Int, endIndex: Int): StringBuilder =n this.appendRange(value, startIndex, endIndex)n/n/**n * Appends a
subsequence of the specified character sequence [value] to this string builder and returns this instance.n *n *
@param value the character sequence from which a subsequence is appended.n * @param startIndex the beginning
(inclusive) of the subsequence to append.n * @param endIndex the end (exclusive) of the subsequence to append.n
*n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out
of range of the [value] character sequence indices or when `startIndex > endIndex`.n
*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")npublic
actual inline fun StringBuilder.appendRange(value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder
=
n this.appendRange(value, startIndex, endIndex)n/n/**n * Inserts characters in a subarray of the specified
character array [value] into this string builder at the specified [index] and returns this instance.n *n * The inserted
characters go in same order as in the [value] array, starting at [index].n *n * @param index the position in this
string builder to insert at.n * @param value the array from which characters are inserted.n * @param startIndex the
beginning (inclusive) of the subarray to insert.n * @param endIndex the end (exclusive) of the subarray to insert.n

```



```

*\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out
of range of the [value] array indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException if
[index] is less than zero or greater than the length of this string builder.\n
*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\n public actual inline fun
StringBuilder.insertRange(index: Int, value: CharArray, startIndex: Int, endIndex: Int): StringBuilder =\n
this.insertRange(index, value, startIndex, endIndex)\n\n /** \n * Inserts characters in a subsequence of the specified
character sequence [value] into this string builder at the specified [index] and returns this instance. \n * \n * The
inserted characters go in the same order as in the [value] character sequence, starting at [index]. \n * \n * @param
index the position in this string builder to insert at. \n * @param value the character sequence from which a
subsequence is inserted. \n * @param startIndex the beginning (inclusive) of the subsequence to insert. \n * @param
endIndex the end (exclusive) of the subsequence to insert. \n * \n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex]
or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`. \n *
@throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n
*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\n public actual inline fun
StringBuilder.insertRange(index: Int, value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder =\n
this.insertRange(index, value, startIndex, endIndex)\n\n "/* \n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file. \n */\n\n package kotlin.text\n\n /** \n * Returns `true` if the content of this
string is equal to the word `true`, ignoring case, and `false` otherwise. \n * \n * @Deprecated("Use Kotlin compiler
1.4 to avoid deprecation warning.")\n * @DeprecatedSinceKotlin(hiddenSince
= "1.4")\n * @kotlin.internal.InlineOnly\n * public actual inline fun String.toBoolean(): Boolean =
this.toBoolean()\n\n /** \n * Returns `true` if this string is not `null` and its content is equal to the word `true`,
ignoring case, and `false` otherwise. \n * \n * There are also strict versions of the function available on non-nullable
String, [toBooleanStrict] and [toBooleanStrictOrNull]. \n * \n * @SinceKotlin("1.4")\n * public actual fun
String?.toBoolean(): Boolean = this != null && this.lowercase() == "true"\n\n /** \n * Parses the string as a signed
[Byte] number and returns the result. \n * @throws NumberFormatException if the string is not a valid
representation of a number. \n * \n * public actual fun String.toByte(): Byte = toByteOrNull() ?:
numberFormatError(this)\n\n /** \n * Parses the string as a signed [Byte] number and returns the result. \n * @throws
NumberFormatException if the string is not a valid representation of a number. \n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion. \n * \n * public actual fun
String.toByte(radix: Int): Byte = toByteOrNull(radix) ?: numberFormatError(this)\n\n /** \n * Parses the string as a
[Short] number and returns the result. \n * @throws NumberFormatException if the string is not a valid
representation of a number. \n * \n * public actual fun String.toShort(): Short = toShortOrNull() ?:
numberFormatError(this)\n\n /** \n * Parses the string as a [Short] number and returns the result. \n * @throws
NumberFormatException if the string is not a valid representation of a number. \n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion. \n * \n * public actual fun
String.toShort(radix: Int): Short = toShortOrNull(radix) ?: numberFormatError(this)\n\n /** \n * Parses the string as
an [Int] number and returns the result. \n * @throws NumberFormatException if the string is not a valid
representation of a number. \n * \n * public
actual fun String.toInt(): Int = toIntOrNull() ?: numberFormatError(this)\n\n /** \n * Parses the string as an [Int]
number and returns the result. \n * @throws NumberFormatException if the string is not a valid representation of a
number. \n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion. \n
*/\n\n public actual fun String.toInt(radix: Int): Int = toIntOrNull(radix) ?: numberFormatError(this)\n\n /** \n * Parses
the string as a [Long] number and returns the result. \n * @throws NumberFormatException if the string is not a
valid representation of a number. \n * \n * public actual fun String.toLong(): Long = toLongOrNull() ?

```

```

numberFormatException(this)\n\n/**\n * Parses the string as a [Long] number and returns the result.\n * @throws
NumberFormatException if the string is not a valid representation of a number.\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\npublic actual fun
String.toLong(radix:
Int): Long = toLongOrNull(radix) ?: numberFormatException(this)\n\n/**\n * Parses the string as a [Double] number
and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a
number.\n */\npublic actual fun String.toDouble(): Double = +(this.asDynamic()).unsafeCast<Double>().also {\n
if (it.isNaN() && !this.isNaN() || it == 0.0 && this.isBlank())\n    numberFormatException(this)\n}\n\n/**\n * Parses
the string as a [Float] number and returns the result.\n * @throws NumberFormatException if the string is not a
valid representation of a number.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toFloat(): Float
= toDouble().unsafeCast<Float>()\n\n/**\n * Parses the string as a [Double] number and returns the result\n * or
`null` if the string is not a valid representation of a number.\n */\npublic actual fun String.toDoubleOrNull():
Double? = +(this.asDynamic()).unsafeCast<Double>().takeIf {\n    !(it.isNaN()
&& !this.isNaN() || it == 0.0 && this.isBlank())\n}\n\n/**\n * Parses the string as a [Float] number and returns the
result\n * or `null` if the string is not a valid representation of a number.\n */\n@kotlin.internal.InlineOnly\npublic
actual inline fun String.toFloatOrNull(): Float? = toDoubleOrNull().unsafeCast<Float?>()\n\n/**\n * Returns a
string representation of this [Byte] value in the specified [radix].\n */\n * @throws IllegalArgumentException when
[radix] is not a valid radix for number to string conversion.\n
*/\n@SinceKotlin("1.2")\n@kotlin.internal.InlineOnly\npublic actual inline fun Byte.toString(radix: Int): String =
this.toInt().toString(radix)\n\n/**\n * Returns a string representation of this [Short] value in the specified [radix].\n
*/\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n
*/\n@SinceKotlin("1.2")\n@kotlin.internal.InlineOnly\npublic actual inline fun Short.toString(radix: Int): String =
this.toInt().toString(radix)\n\n/**\n * Returns a string representation of this [Int] value in the specified [radix].\n
*/\n * @throws
IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n
*/\n@SinceKotlin("1.2")\npublic actual fun Int.toString(radix: Int): String =
asDynamic().toString(checkRadix(radix))\n\nprivate fun String.isNaN(): Boolean = when (this.lowercase()) {\n
"nan", "+nan", "-nan" -> true\n    else -> false\n}\n\n/**\n * Checks whether the given [radix] is valid radix for
string to number and number to string conversion.\n */\n@PublishedApi\ninternal actual fun checkRadix(radix: Int):
Int {\n    if (radix !in 2..36) {\n        throw IllegalArgumentException("\radix $radix was not in valid range 2..36")\n
}\n    return radix\n}\n\ninternal actual fun digitOf(char: Char, radix: Int): Int = when {\n    char >= '0' && char <=
'9' -> char - '0'\n    char >= 'A' && char <= 'Z' -> char - 'A' + 10\n    char >= 'a' && char <= 'z' -> char
- 'a' + 10\n    char < "\u0080" -> -1\n    char >= "\uFF21" && char <= "\uFF3A" -> char - "\uFF21" + 10 // full-width
latin capital letter\n    char >= "\uFF41" && char <= "\uFF5A" -> char - "\uFF41" + 10 // full-width latin small
letter\n    else -> char.digitToIntImpl()\n}.let { if (it >= radix) -1 else it }\n", "/*\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\nimport
kotlin.js.RegExp\n\n/**\n * Provides enumeration values to use to set regular expression options.\n */\npublic actual
enum class RegexOption(val value: String) {\n    /** Enables case-insensitive matching. */\n    IGNORE_CASE("i"),\n    /** Enables multiline mode.\n     * In multiline mode the expressions `^` and `$`
match just after or just before,\n     * respectively, a line terminator or the end of the input sequence.
*/\n    MULTILINE("m")\n}\n\nprivate fun Iterable<RegexOption>.toFlags(prepend: String): String =
joinToString("\n", prefix = prepend) { it.value }\n\n/**\n * Represents the results from a single capturing group
within a [MatchResult] of [Regex].\n */\n * @param value The value of captured group.\n */\npublic actual data
class MatchGroup(actual val value: String)\n\n/**\n * Returns a named group with the specified [name].\n */\n * @return An instance of [MatchGroup] if the group with the specified [name] was matched or `null` otherwise.\n
*/\n * @throws IllegalArgumentException if there is no group with the specified [name] defined in the regex pattern.\n
*/\n * @throws UnsupportedOperationException if this match group collection doesn't support getting match groups by

```



```

[startIndex].\n * \n * @throws IndexOutOfBoundsException if [startIndex] is less than zero or greater than the
length of the [input] char sequence.\n * \n * @sample samples.text.Regexp.findAll\n * /\n
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n public actual fun findAll(input:
CharSequence, startIndex: Int = 0): Sequence<MatchResult> {\n if (startIndex < 0 || startIndex > input.length)
{\n throw IndexOutOfBoundsException("Start index out of bounds: $startIndex, input length:
${input.length}")\n }\n return generateSequence({ find(input, startIndex) }, { match -> match.next() })\n
}\n\n /**\n * Attempts to match the entire [input] CharSequence against the pattern.\n * \n * @return An
instance of [MatchResult] if the entire input matches or `null` otherwise.\n * /\n public actual fun
matchEntire(input: CharSequence): MatchResult? =\n initMatchesEntirePattern().findNext(input.toString(), 0,
nativePattern)\n\n @SinceKotlin("1.7")\n @WasExperimental(ExperimentalStdlibApi::class)\n public actual
fun matchAt(input: CharSequence, index: Int): MatchResult? {\n if (index < 0 || index > input.length)
{\n throw IndexOutOfBoundsException("index out of bounds: $index, input length: ${input.length}")\n
}\n return initStickyPattern().findNext(input.toString(), index, nativePattern)\n }\n\n\n /**\n * Replaces
all occurrences of this regular expression in the specified [input] string with specified [replacement] expression.\n
*\n * The replacement string may contain references to the captured groups during a match. Occurrences of
`${name}` or `$index`\n * in the replacement string will be substituted with the subsequences corresponding to
the captured groups with the specified name or index.\n * In case of `$index`, the first digit after '$' is always
treated as a part of group reference. Subsequent digits are incorporated\n * into `index` only if they would form a
valid group reference. Only the digits '0'..'9' are considered as potential components\n * of the group reference.
Note that indexes of captured groups start from
1, and the group with index 0 is the whole match.\n * In case of `${name}`, the `name` can consist of latin letters
'a'..'z' and 'A'..'Z', or digits '0'..'9'. The first character must be\n * a letter.\n * \n * Backslash character '\\' can
be used to include the succeeding character as a literal in the replacement string, e.g. '\\$' or '\\\\\\'.\n *
[Regex.escapeReplacement] can be used if [replacement] have to be treated as a literal string.\n * \n * @param
input the char sequence to find matches of this regular expression in\n * @param replacement the expression to
replace found matches with\n * @return the result of replacing each occurrence of this regular expression in
[input] with the result of evaluating the [replacement] expression\n * @throws RuntimeException if
[replacement] expression is malformed, or capturing group with specified `name` or `index` does not exist\n * /\n
public actual fun replace(input: CharSequence, replacement: String):
String {\n if (!replacement.contains("\\\\") && !replacement.contains('$')) {\n return
input.toString().nativeReplace(nativePattern, replacement)\n }\n return replace(input) {\n
substituteGroupRefs(it, replacement) }\n }\n\n\n /**\n * Replaces all occurrences of this regular expression in
the specified [input] string with the result of\n * the given function [transform] that takes [MatchResult] and
returns a string to be used as a\n * replacement for that match.\n * /\n public actual fun replace(input:
CharSequence, transform: (MatchResult) -> CharSequence): String {\n var match = find(input)\n if (match
== null) return input.toString()\n\n var lastStart = 0\n val length = input.length\n val sb =
StringBuilder(length)\n do {\n val foundMatch = match!!\n sb.append(input, lastStart,
foundMatch.range.start)\n sb.append(transform(foundMatch))\n lastStart
= foundMatch.range.endInclusive + 1\n match = foundMatch.next()\n } while (lastStart < length &&
match != null)\n\n if (lastStart < length) {\n sb.append(input, lastStart, length)\n }\n\n return
sb.toString()\n }\n\n\n /**\n * Replaces the first occurrence of this regular expression in the specified [input]
string with specified [replacement] expression.\n * \n * The replacement string may contain references to the
captured groups during a match. Occurrences of `${name}` or `$index`\n * in the replacement string will be
substituted with the subsequences corresponding to the captured groups with the specified name or index.\n * In
case of `$index`, the first digit after '$' is always treated as a part of group reference. Subsequent digits are
incorporated\n * into `index` only if they would form a valid group reference. Only the digits '0'..'9' are considered
as potential components\n * of the group

```

reference. Note that indexes of captured groups start from 1, and the group with index 0 is the whole match.  
 In case of `{name}`, the `name` can consist of latin letters 'a'..'z' and 'A'..'Z', or digits '0'..'9'. The first character must be a letter.  
 Backslash character `\` can be used to include the succeeding character as a literal in the replacement string, e.g. `\\$` or `\\|`.  
`[Regex.escapeReplacement]` can be used if [replacement] have to be treated as a literal string.  
 @param input the char sequence to find a match of this regular expression in  
 @param replacement the expression to replace the found match with  
 @return the result of replacing the first occurrence of this regular expression in [input] with the result of evaluating the [replacement] expression  
 @throws RuntimeException if [replacement] expression is malformed, or capturing group with specified `name` or `index` does not exist

```
public actual fun replaceFirst(input: CharSequence, replacement: String): String {
    if (!replacement.contains("\\|") && !replacement.contains('$')) {
        val nonGlobalOptions = options.toFlags("\\u")
        return input.toString().nativeReplace(Regex(pattern, nonGlobalOptions), replacement)
    }
    val match = find(input) ?: return input.toString()
    return buildString {
        append(input.substring(0, match.range.first))
        append(substituteGroupRefs(match, replacement))
        append(input.substring(match.range.last + 1, input.length))
    }
}

/**
 * Splits the [input] CharSequence to a list of strings around matches of this regular expression.
 * @param limit Non-negative value specifying the maximum number of substrings the string can be split to.
 * Zero by default means no limit is set.
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun split(input: CharSequence, limit: Int = 0): List<String> {
    requireNonNegativeLimit(limit)
    val matches = findAll(input).let { if (limit == 0) it else it.take(limit - 1) }
    val result = mutableListOf<String>()
    var lastStart = 0
    for (match in matches) {
        result.add(input.subSequence(lastStart, match.range.start).toString())
        lastStart = match.range.endInclusive + 1
    }
    result.add(input.subSequence(lastStart, input.length).toString())
    return result
}

/**
 * Splits the [input] CharSequence to a sequence of strings around matches of this regular expression.
 * @param limit Non-negative value specifying the maximum number of substrings the string can be split to.
 * Zero by default means no limit is set.
 */
@sample samples.text.Regexps.splitToSequence
@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
```

```
public actual fun splitToSequence(input: CharSequence, limit: Int = 0): Sequence<String> {
    requireNonNegativeLimit(limit)
    return sequence {
        var match = find(input)
        if (match == null || limit == 1) {
            yield(input.toString())
            return@sequence
        }
        var nextStart = 0
        var splitCount = 0
        do {
            val foundMatch = match!!
            yield(input.substring(nextStart, foundMatch.range.first))
            nextStart = foundMatch.range.endInclusive + 1
            match = foundMatch.next()
        } while (++splitCount != limit - 1 && match != null)
        yield(input.substring(nextStart, input.length))
    }
}

/**
 * Returns the string representation of this regular expression, namely the [pattern] of this regular expression.
 * Note that another regular expression constructed from the same pattern string may have different [options] and may match strings differently.
 */
public override fun toString(): String = nativePattern.toString()

actual companion object {
    /**
     * Returns a regular expression that matches the specified [literal] string literally.
     * No characters of that string will have special meaning when searching for an occurrence of the regular expression.
     */
    public actual fun fromLiteral(literal: String): Regex = Regex(escape(literal))

    /**
     * Returns a regular expression pattern string that matches the specified [literal] string literally.
     * No characters of that string will have special meaning when searching for an occurrence of the regular expression.
     */
    public actual fun escape(literal: String): String = literal.nativeReplace(patternEscape, "\\|\\$&\\|")

    /**
     * Returns
```

```
a literal replacement expression for the specified [literal] string.
 * No characters of that string will have special meaning when it is used as a replacement string in [Regex.replace] function.
 */
public actual fun escapeReplacement(literal: String): String = literal.nativeReplace(replacementEscape, "\\|\\$&\\|")
private
```



```

replacement.substring(index, endIndex).toInt()\n                if (groupIndex >= groups.size)\n                    throw
IndexOutOfBoundsException("Group with index $groupIndex does not exist")\n\n
result.append(groups[groupIndex]?.value ?: "\\")\n                index = endIndex\n            }\n        } else {\n
result.append(char)\n        }\n    }\n    return
result.toString()\n}\n\n// The name must be a legal JavaScript identifier. See https://262.ecma-
international.org/5.1/#sec-7.6\n// Don't try to validate the referenced group name as it may be time-consuming.\n// If
the name is invalid, it won't be found in `match.groups` anyway and will throw.\n// Group names in the target Regex
are validated at creation time.\nprivate fun String.readGroupName(startIndex: Int): Int {\n    var index = startIndex\n    while (index < length) {\n        if (this[index] == '}') {\n            break\n        } else {\n            index++\n        }\n    }\n    return index\n}\n\nprivate fun String.readGroupIndex(startIndex: Int, groupCount: Int): Int {\n    // at least one
digit after '$' is always captured\n    var index = startIndex + 1\n    var groupIndex = this[startIndex] - '0'\n    //
capture the largest valid group index\n    while (index < length && this[index] in '0'..'9') {\n        val newGroupIndex
= (groupIndex * 10) + (this[index] - '0')\n        if (newGroupIndex in 0 until groupCount) {\n            groupIndex = newGroupIndex\n            index++\n        }\n        else {\n            break\n        }\n    }\n    return index\n}", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n@file:Suppress("EXTENSI
ON_SHADOWED_BY_MEMBER")\n\npackage kotlin.text\nimport kotlin.contracts.*\n\n/**\n * A mutable
sequence of characters.\n * String builder can be used to efficiently perform multiple string manipulation
operations.\n */\nexpect class StringBuilder : Appendable, CharSequence {\n    /** Constructs an empty string
builder. *\n    constructor()\n    /** Constructs an empty string builder with the specified initial [capacity]. *\n
    constructor(capacity: Int)\n    /** Constructs
a string builder that contains the same characters as the specified [content] char sequence. *\n
    constructor(content: CharSequence)\n    /** Constructs a string builder that contains the same characters as the
specified [content] string. *\n    @SinceKotlin("1.3")\n    @ExperimentalStdlibApi\n    constructor(content:
String)\n    override val length: Int\n    override operator fun get(index: Int): Char\n    override fun
subSequence(startIndex: Int, endIndex: Int): CharSequence\n    override fun append(value: Char): StringBuilder\n
    override fun append(value: CharSequence?): StringBuilder\n    override fun append(value: CharSequence?,
startIndex: Int, endIndex: Int): StringBuilder\n    /**\n     * Reverses the contents of this string builder and returns
this instance.\n     *\n     * Surrogate pairs included in this string builder are treated as single characters.\n     *
Therefore, the order of the high-low surrogates is never reversed.\n     *\n     * Note that
the reverse operation may produce new surrogate pairs that were unpaired low-surrogates and high-surrogates
before the operation.\n     * For example, reversing `"\uDC00\uD800"` produces `"\uD800\uDC00"` which is a
valid surrogate pair.\n     *\n     fun reverse(): StringBuilder\n     /**\n     * Appends the string representation of the
specified object [value] to this string builder and returns this instance.\n     *\n     * The overall effect is exactly as if
the [value] were converted to a string by the `value.toString()` method,\n     * and then that string was appended to
this string builder.\n     *\n     fun append(value: Any?): StringBuilder\n     /**\n     * Appends the string
representation of the specified boolean [value] to this string builder and returns this instance.\n     *\n     * The
overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n     * and then
that string was appended to this string builder.\n
     *\n     @SinceKotlin("1.3")\n     fun append(value: Boolean): StringBuilder\n     /**\n     * Appends characters in
the specified character array [value] to this string builder and returns this instance.\n     *\n     * Characters are
appended in order, starting at the index 0.\n     *\n     @SinceKotlin("1.4")\n
     @WasExperimental(ExperimentalStdlibApi::class)\n     fun append(value: CharArray): StringBuilder\n     /**\n     *
Appends the specified string [value] to this string builder and returns this instance.\n     *\n     * If [value] is `null`,
then the four characters `null` are appended.\n     *\n     @SinceKotlin("1.3")\n     fun append(value: String?):
StringBuilder\n     /**\n     * Returns the current capacity of this string builder.\n     *\n     * The capacity is the

```

```

maximum length this string builder can have before an allocation occurs.\n    *\n    @SinceKotlin("1.3")\n//
@ExperimentalStdlibApi\n    @Deprecated("Obtaining StringBuilder capacity is not
supported in JS and common code.", level = DeprecationLevel.ERROR)\n    fun capacity(): Int\n\n    /**\n     * Ensures that the capacity of this string builder is at least equal to the specified [minimumCapacity].\n     *\n     * If the current capacity is less than the [minimumCapacity], a new backing storage is allocated with greater capacity.\n     * Otherwise, this method takes no action and simply returns.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun ensureCapacity(minimumCapacity: Int)\n\n    /**\n     * Returns the index within this string builder of the first occurrence of the specified [string].\n     *\n     * Returns -1 if the specified [string] does not occur in this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun indexOf(string: String): Int\n\n    /**\n     * Returns the index within this string builder of the first occurrence of the specified [string],\n     * starting at the specified [startIndex].\n     *\n     * Returns -1 if the specified [string] does not occur in this string builder starting at the specified [startIndex].\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun indexOf(string: String, startIndex: Int): Int\n\n    /**\n     * Returns the index within this string builder of the last occurrence of the specified [string].\n     * The last occurrence of empty string ```` is considered to be at the index equal to `this.length`.\n     *\n     * Returns -1 if the specified [string] does not occur in this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun lastIndexOf(string: String): Int\n\n    /**\n     * Returns the index within this string builder of the last occurrence of the specified [string],\n     * starting from the specified [startIndex] toward the beginning.\n     *\n     * Returns -1 if the specified [string] does not occur in this string builder starting at the specified [startIndex].\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun lastIndexOf(string: String, startIndex: Int): Int\n\n    /**\n     * Inserts the string representation of the specified boolean [value] into this string builder at the specified [index] and returns this instance.\n     *\n     * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n     * and then that string was inserted into this string builder at the specified [index].\n     *\n     * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun insert(index: Int, value: Boolean): StringBuilder\n\n    /**\n     * Inserts the specified character [value] into this string builder at the specified [index] and returns this instance.\n     *\n     * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun insert(index: Int, value: Char): StringBuilder\n\n    /**\n     * Inserts characters in the specified character array [value] into this string builder at the specified [index] and returns this instance.\n     *\n     * The inserted characters go in same order as in the [value] character array, starting at [index].\n     *\n     * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun insert(index: Int, value: CharArray): StringBuilder\n\n    /**\n     * Inserts characters in the specified character sequence [value] into this string builder at the specified [index] and returns this instance.\n     *\n     * The inserted characters go in the same order as in the [value] character sequence, starting at [index].\n     *\n     * @param index the position in this string builder to insert at.\n     * @param value the character sequence from which characters are inserted. If [value] is `null`, then the four characters ``null`` are inserted.\n     *\n     * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n     *\n     * @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    fun insert(index: Int, value: CharSequence?): StringBuilder\n\n    /**\n     * Inserts the string representation of the specified object [value] into this string builder at the specified [index] and returns this instance.\n     *\n     * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n     * and then that string was inserted into this string builder

```



at the specified [index].\n \* \n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n \* \n @SinceKotlin("1.4")\n

```
@WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value: Any?): StringBuilder\n\n /**\n * Inserts the string [value] into this string builder at the specified [index] and returns this instance.\n * \n * If [value] is `null`, then the four characters `\\null` are inserted.\n * \n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value: String?): StringBuilder\n\n /**\n * Sets the length of this string builder to the specified [newLength].\n * \n * If the [newLength] is less than the current length, it is changed to the specified [newLength].\n * \n * Otherwise, null characters `\\u0000` are appended to this string builder until its length is less than the [newLength].\n * \n * Note that in Kotlin/JS [set] operator function has non-constant execution time complexity.\n * \n * Therefore, increasing length of this string builder and then updating each character by index may slow down your program.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [newLength] is less than zero.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun setLength(newLength: Int)\n\n /**\n * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [length] (exclusive).\n * \n * @throws IndexOutOfBoundsException if [startIndex] is less than zero or greater than the length of this string builder.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun substring(startIndex: Int): String\n\n /**\n * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [endIndex] (exclusive).\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun substring(startIndex: Int, endIndex: Int): String\n\n /**\n * Attempts to reduce storage used for this string builder.\n * \n * If the backing storage of this string builder is larger than necessary to hold its current contents,\n * \n * then it may be resized to become more space efficient.\n * \n * Calling this method may, but is not required to, affect the value of the [capacity] property.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun trimToSize()\n\n /**\n * Clears the content of this string builder making it empty and returns this instance.\n * \n * @sample samples.text.Strings.clearStringBuilder\n * \n @SinceKotlin("1.3")\n public expect fun StringBuilder.clear(): String\n\n /**\n * Sets the character at the specified [index] to the specified [value].\n * \n * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect operator fun StringBuilder.set(index: Int, value: Char)\n\n /**\n * Replaces characters in the specified range of this string builder with characters in the specified string [value] and returns this instance.\n * \n * @param startIndex the beginning (inclusive) of the range to replace.\n * \n * @param endIndex the end (exclusive) of the range to replace.\n * \n * @param value the string to replace with.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [startIndex] is less than zero, greater than the length of this string builder, or `startIndex > endIndex`.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun StringBuilder.setRange(startIndex: Int, endIndex: Int, value: String): String\n\n /**\n * Removes the character at the specified [index] from this string builder and returns this instance.\n * \n * \n * If the `Char` at the specified [index] is part of a supplementary code point, this method does not remove the entire supplementary character.\n * \n * @param index the index of `Char` to remove.\n * \n * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun StringBuilder.deleteAt(index: Int): String\n\n /**\n * Removes characters in the specified range from this string builder and returns this instance.\n * \n * @param startIndex the beginning (inclusive) of the range to remove.\n * \n * @param endIndex the
```

end (exclusive) of the range to remove.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n \*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun  
StringBuilder.deleteRange(startIndex: Int, endIndex: Int): StringBuilder\n\n/\*\*\n \* Copies characters from this string builder into the [destination] character array.\n \*\n \* @param destination the array to copy to.\n \*\n \* @param destinationOffset the position in the array to copy to, 0 by default.\n \*\n \* @param startIndex the beginning (inclusive) of the range to copy, 0 by default.\n \*\n \* @param endIndex the end (exclusive) of the range to copy, length of this string builder by default.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n \*\n \* @throws IndexOutOfBoundsException

when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \*\n \* or when that index is out of the [destination] array indices range.\n\n

\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun  
StringBuilder.toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = this.length)\n\n/\*\*\n \* Appends characters in a subarray of the specified character array [value] to this string builder and returns this instance.\n \*\n \* Characters are appended in order, starting at specified [startIndex].\n \*\n \* @param value the array from which characters are appended.\n \*\n \* @param startIndex the beginning (inclusive) of the subarray to append.\n \*\n \* @param endIndex the end (exclusive) of the subarray to append.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex

> endIndex`.\n \*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun  
StringBuilder.appendRange(value: CharArray, startIndex: Int, endIndex: Int): StringBuilder\n\n/\*\*\n \* Appends a subsequence of the specified character sequence [value] to this string builder and returns this instance.\n \*\n \* @param value the character sequence from which a subsequence is appended.\n \*\n \* @param startIndex the beginning (inclusive) of the subsequence to append.\n \*\n \* @param endIndex the end (exclusive) of the subsequence to append.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.\n\n

\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun  
StringBuilder.appendRange(value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder\n\n/\*\*\n \* Inserts characters in a subarray of the specified character array [value] into this string builder at the specified [index] and returns this instance.\n \*\n \* The inserted characters go in same order as in the [value] array, starting at [index].\n \*\n \* @param index the position in this string builder to insert at.\n \*\n \* @param value the array from which characters are inserted.\n \*\n \* @param startIndex the beginning (inclusive) of the subarray to insert.\n \*\n \* @param endIndex the end (exclusive) of the subarray to insert.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex > endIndex`.\n \*\n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n\n

\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public expect fun  
StringBuilder.insertRange(index: Int, value: CharArray, startIndex: Int, endIndex: Int): StringBuilder\n\n/\*\*\n \* Inserts characters

in a subsequence of the specified character sequence [value] into this string builder at the specified [index] and returns this instance.\n \*\n \* The inserted characters go in the same order as in the [value] character sequence, starting at [index].\n \*\n \* @param index the position in this string builder to insert at.\n \*\n \* @param value the character sequence from which a subsequence is inserted.\n \*\n \* @param startIndex the beginning (inclusive) of the subsequence to insert.\n \*\n \* @param endIndex the end (exclusive) of the subsequence to insert.\n \*\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.\n \*\n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n\n



```

String.startsWith(prefix: String, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase) return
    nativeStartsWith(prefix, 0)
    else return regionMatches(0, prefix, 0, prefix.length, ignoreCase)
}
Returns `true` if a substring of this string starting at the specified offset [startIndex] starts with the specified prefix.

@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
String.startsWith(prefix: String, startIndex: Int, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase)
    return nativeStartsWith(prefix, startIndex)
    else
    return regionMatches(startIndex, prefix, 0, prefix.length, ignoreCase)
}
Returns `true` if
this string ends with the specified suffix.

@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
String.endsWith(suffix: String, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase)
    return
    nativeEndsWith(suffix)
    else
    return regionMatches(length - suffix.length, suffix, 0, suffix.length,
    ignoreCase)
}
@Deprecated("Use Regex.matches() instead",
ReplaceWith("regex.toRegex().matches(this)"))
@DeprecatedSinceKotlin(warningSince = "1.6")
public fun
String.matches(regex: String): Boolean {
    @Suppress("DEPRECATION")
    val result = this.match(regex)
    return result != null && result.size != 0
}
Returns `true` if this string is empty or consists solely of
whitespace characters.

@sample samples.text.Strings.stringIsBlank
public actual fun
CharSequence.isBlank():
    Boolean = length == 0 || indices.all { this[it].isWhitespace() }
Returns `true` if this string is equal to
[other], optionally ignoring character case.

@sample samples.text.Strings.equals
public actual fun
String.equals(other: String?, ignoreCase: Boolean = false): Boolean {
    if (this == null) return other == null
    if (other == null) return false
    if (!ignoreCase) return this == other
    if (this.length != other.length) return
    false
    for (index in 0 until this.length) {
        val thisChar = this[index]
        val otherChar = other[index]
        if (!thisChar.equals(otherChar, ignoreCase)) {
            return false
        }
    }
    return
    true
}
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
CharSequence.regionMatches(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int, ignoreCase:
Boolean = false): Boolean =
    regionMatchesImpl(thisOffset, other, otherOffset, length, ignoreCase)
Returns a copy of this string having its first letter titlecased using the rules of the default locale,
or the original
string if it's empty or already starts with a title case letter.

@sample samples.text.Strings.capitalize
@Deprecated("Use
replaceFirstChar instead.",
ReplaceWith("replaceFirstChar { if (it.isLowerCase()) it.titlecase() else it.toString()
}"))
@DeprecatedSinceKotlin(warningSince =
"1.5")
public actual fun String.capitalize(): String {
    return if (isEmpty()) substring(0, 1).uppercase() +
    substring(1) else this
}
Returns a copy of this string having its first letter lowercased using the rules of
the default locale,
or the original string if it's empty or already starts with a lower case letter.

@sample
samples.text.Strings.decapiatalize
@Deprecated("Use replaceFirstChar instead.",
ReplaceWith("replaceFirstChar { it.lowercase() }"))
@DeprecatedSinceKotlin(warningSince = "1.5")
public actual fun String.decapiatalize(): String {
    return if (isEmpty()) substring(0, 1).lowercase() + substring(1) else
    this
}
Returns a string containing this char sequence repeated [n] times.

@throws
[IllegalArgumentException] when n < 0.

@sample samples.text.Strings.repeat
public actual fun
CharSequence.repeat(n: Int): String {
    require(n >= 0) { "Count 'n' must be non-negative, but was $n." }
    return

```

```

when (n) {
    0 -> ""
    1 -> this.toString()
    else -> {
        var result = ""
        if (!isEmpty())
            var s = this.toString()
            var count = n
            while (true) {
                if ((count and 1) == 1)
                    result += s
                count = count ushr 1
                if (count == 0)
                    break
                s += s
            }
            return result
        }
    }
}

/** Returns a new string obtained by replacing all occurrences of the [oldValue] substring in this string with the specified [newValue] string.
 * @sample samples.text.Strings.replace
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.replace(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =
    nativeReplace(Regex(Regex.escape(oldValue)),
        if (ignoreCase) "gui" else "gu"),
        Regex.nativeEscapeReplacement(newValue))

/** Returns a new string with all occurrences of [oldChar] replaced with [newChar].
 * @sample samples.text.Strings.replace
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean = false): String =
    nativeReplace(Regex(Regex.escape(oldChar.toString()), if (ignoreCase) "gui" else "gu"),
        newChar.toString())

@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.replaceFirst(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =
    nativeReplace(Regex(Regex.escape(oldValue)), if (ignoreCase) "ui" else "u"),
        Regex.nativeEscapeReplacement(newValue))

@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.replaceFirst(oldChar: Char, newChar: Char, ignoreCase: Boolean = false): String =
    nativeReplace(Regex(Regex.escape(oldChar.toString()), if (ignoreCase) "ui" else "u"),
        newChar.toString())

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 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.text

/** Returns the negative [size] if [throwOnMalformed] is false, throws [CharacterCodingException] otherwise.
 */
private fun malformed(size: Int, index: Int, throwOnMalformed: Boolean): Int {
    if (throwOnMalformed) throw
        CharacterCodingException("Malformed sequence starting at ${index - 1}")
    return -size
}

/** Returns code point corresponding to UTF-16 surrogate pair, where the first of the pair is the [high] and the second is in the [string] at the [index].
 * Returns zero if the pair is malformed and [throwOnMalformed] is false.
 */
@throws CharacterCodingException if the pair is malformed and [throwOnMalformed] is true.
private fun codePointFromSurrogate(string: String, high: Int, index: Int, endIndex: Int, throwOnMalformed: Boolean): Int {
    if (high !in 0xD800..0xDBFF || index >= endIndex) {
        return malformed(0, index, throwOnMalformed)
    }
    val low = string[index].code
    if (low !in 0xDC00..0xDFFF) {
        return malformed(0, index, throwOnMalformed)
    }
    return 0x10000 + ((high and 0x3FF) shl 10) or (low and 0x3FF)
}

/** Returns code point corresponding to UTF-8 sequence of two bytes, where the first byte of the sequence is the [byte1] and the second byte is in the [bytes] array at the [index].
 * Returns zero if the sequence is malformed and [throwOnMalformed] is false.
 */
@throws CharacterCodingException if the sequence of two bytes is malformed and [throwOnMalformed] is true.
private fun codePointFrom2(bytes: ByteArray, byte1: Int, index: Int, endIndex: Int, throwOnMalformed: Boolean): Int {
    if (byte1 and 0x1E == 0 || index >= endIndex) {
        return malformed(0, index, throwOnMalformed)
    }
    val byte2 = bytes[index].toInt()
    if (byte2 and 0xC0 != 0x80) {
        return malformed(0, index, throwOnMalformed)
    }
    return (byte1 shl 6) xor byte2 xor 0xF8
}

/** Returns code point corresponding to UTF-8 sequence of three bytes, where the first byte of the sequence is the [byte1] and the others are in the [bytes] array starting from the [index].
 * Returns a non-positive value indicating number of bytes from [bytes] included in malformed sequence if the sequence is malformed and [throwOnMalformed] is false.
 */
@throws CharacterCodingException if the sequence of three bytes is malformed and [throwOnMalformed] is true.
private fun codePointFrom3(bytes: ByteArray, byte1: Int, index: Int, endIndex: Int, throwOnMalformed: Boolean): Int {
    if (index >= endIndex) {
        return malformed(0, index, throwOnMalformed)
    }
    val byte2 = bytes[index].toInt()
    if (byte1

```

```

and 0xF == 0) {\n    if (byte2 and 0xE0 != 0xA0) {\n        // Non-shortest form\n        return malformed(0,
index, throwOnMalformed)\n    } else if (byte1 and 0xF == 0xD) {\n    if (byte2 and 0xE0 != 0x80) {\n
    // Surrogate code point\n        return malformed(0, index, throwOnMalformed)\n    } else if (byte2 and
0xC0 != 0x80) {\n    return malformed(0, index, throwOnMalformed)\n } \n\n if (index + 1 == endIndex) {\n
return malformed(1, index, throwOnMalformed)\n } \n val byte3 = bytes[index + 1].toInt()\n if (byte3 and
0xC0 != 0x80) {\n    return malformed(1, index, throwOnMalformed)\n } \n\n return (byte1 shl 12) xor (byte2
shl 6) xor byte3 xor -0x1E080}\n\n/**\n * Returns code point corresponding to UTF-8 sequence of four bytes,\n * where the first byte of the sequence is the [byte1] and the others are in the [bytes] array starting from the [index].\n *
Returns a non-positive value indicating
number of bytes from [bytes] included in malformed sequence\n * if the sequence is malformed and
[throwOnMalformed] is false.\n * \n * @throws CharacterCodingException if the sequence of four bytes is
malformed and [throwOnMalformed] is true.\n */\nprivate fun codePointFrom4(bytes: ByteArray, byte1: Int, index:
Int, endIndex: Int, throwOnMalformed: Boolean): Int {\n    if (index >= endIndex) {\n        malformed(0, index,
throwOnMalformed)\n    } \n\n val byte2 = bytes[index].toInt()\n if (byte1 and 0xF == 0x0) {\n    if (byte2 and
0xF0 <= 0x80) {\n        // Non-shortest form\n        return malformed(0, index, throwOnMalformed)\n    } \n\n
} else if (byte1 and 0xF == 0x4) {\n    if (byte2 and 0xF0 != 0x80) {\n        // Out of Unicode code points
domain (larger than U+10FFFF)\n        return malformed(0, index, throwOnMalformed)\n    } \n\n } else if
(byte1 and 0xF > 0x4) {\n    return malformed(0, index, throwOnMalformed)\n } else if (byte2
and 0xC0 != 0x80) {\n    return malformed(0, index, throwOnMalformed)\n } \n\n if (index + 1 == endIndex)
{\n    return malformed(1, index, throwOnMalformed)\n } \n\n val byte3 = bytes[index + 1].toInt()\n if (byte3
and 0xC0 != 0x80) {\n    return malformed(1, index, throwOnMalformed)\n } \n\n if (index + 2 == endIndex)
{\n    return malformed(2, index, throwOnMalformed)\n } \n\n val byte4 = bytes[index + 2].toInt()\n if (byte4
and 0xC0 != 0x80) {\n    return malformed(2, index, throwOnMalformed)\n } \n\n return (byte1 shl 18) xor
(byte2 shl 12) xor (byte3 shl 6) xor byte4 xor 0x381F80}\n\n/**\n * Maximum number of bytes needed to encode
a single char.\n * \n * Code points in `0..0x7F` are encoded in a single byte.\n * Code points in `0x80..0x7FF` are
encoded in two bytes.\n * Code points in `0x800..0xD7FF` or in `0xE000..0xFFFF` are encoded in three bytes.\n *
Surrogate code points in `0xD800..0xDFFF` are not Unicode scalar values, therefore
aren't encoded.\n * Code points in `0x10000..0x10FFFF` are represented by a pair of surrogate `Char`'s and are
encoded in four bytes.\n */\nprivate const val MAX_BYTES_PER_CHAR = 3\n\n/**\n * The byte sequence a
malformed UTF-16 char sequence is replaced by.\n */\nprivate val REPLACEMENT_BYTE_SEQUENCE:
ByteArray = byteArrayOf(0xEF.toByte(), 0xBF.toByte(), 0xBD.toByte())\n\n/**\n * Encodes the [string] using
UTF-8 and returns the resulting [ByteArray].\n * \n * @param string the string to encode.\n * @param startIndex the
start offset (inclusive) of the substring to encode.\n * @param endIndex the end offset (exclusive) of the substring to
encode.\n * @param throwOnMalformed whether to throw on malformed char sequence or replace by the
[REPLACEMENT_BYTE_SEQUENCE].\n * \n * @throws CharacterCodingException if the char sequence is
malformed and [throwOnMalformed] is true.\n */\ninternal fun encodeUtf8(string: String, startIndex: Int, endIndex:
Int, throwOnMalformed: Boolean): ByteArray
{\n    require(startIndex >= 0 && endIndex <= string.length && startIndex <= endIndex)\n\n    val bytes =
ByteArray((endIndex - startIndex) * MAX_BYTES_PER_CHAR)\n    var byteIndex = 0\n    var charIndex =
startIndex\n\n    while (charIndex < endIndex) {\n        val code = string[charIndex++].code\n        when {\n
code < 0x80 ->\n            bytes[byteIndex++] = code.toByte()\n            code < 0x800 -> {\n
bytes[byteIndex++] = ((code shr 6) or 0xC0).toByte()\n            bytes[byteIndex++] = ((code and 0x3F) or
0x80).toByte()\n            } \n            code < 0xD800 || code >= 0xE000 -> {\n            bytes[byteIndex++] = ((code
shr 12) or 0xE0).toByte()\n            bytes[byteIndex++] = (((code shr 6) and 0x3F) or 0x80).toByte()\n
bytes[byteIndex++] = ((code and 0x3F) or 0x80).toByte()\n            } \n            else -> { // Surrogate char value\n
val codePoint = codePointFromSurrogate(string, code, charIndex,
endIndex, throwOnMalformed)\n            if (codePoint <= 0) {\n                bytes[byteIndex++] =
REPLACEMENT_BYTE_SEQUENCE[0]\n                bytes[byteIndex++] =

```



```

actual val Throwable.suppressedExceptions: List<Throwable>\n  get() {\n    return
this.asDynamic()._suppressed?.unsafeCast<List<Throwable>>() ?: emptyList()\n  }\n\nprivate class
ExceptionTraceBuilder {\n  private val target = StringBuilder()\n  private val visited = arrayOf<Throwable>()\n
private var topStack: String = ""\n  private var topStackStart: Int = 0\n  fun buildFor(exception: Throwable):
String {\n    exception.dumpFullTrace("", "")\n    return target.toString()\n  }\n  private fun
hasSeen(exception: Throwable): Boolean = visited.any { it === exception }\n  private fun
Throwable.dumpFullTrace(indent: String, qualifier: String) {\n    this.dumpSelfTrace(indent, qualifier)
|| return\n\n    var cause = this.cause\n    while (cause != null) {\n      cause.dumpSelfTrace(indent, "Caused
by: ") || return\n      cause = cause.cause\n    }\n  }\n  private fun Throwable.dumpSelfTrace(indent:
String, qualifier: String): Boolean {\n    target.append(indent).append(qualifier)\n    val shortInfo =
this.toString()\n    if (hasSeen(this)) {\n      target.append("[CIRCULAR REFERENCE, SEE ABOVE:
]").append(shortInfo).append("\\n")\n      return false\n    }\n    visited.asDynamic().push(this)\n\n    var
stack = this.asDynamic().stack as String?\n    if (stack != null) {\n      val stackStart =
stack.indexOf(shortInfo).let { if (it < 0) 0 else it + shortInfo.length }\n      if (stackStart == 0)
target.append(shortInfo).append("\\n")\n      if (topStack.isEmpty()) {\n        topStack = stack\n
topStackStart = stackStart\n      } else {\n
        stack = dropCommonFrames(stack, stackStart)\n      }\n      if (indent.isNotEmpty()) {\n        //
indent stack, but avoid indenting exception message lines\n        val messageLines = if (stackStart == 0) 0 else
1 + shortInfo.count { c -> c == "\\n" }\n        stack.lineSequence().forEachIndexed { index: Int, line: String ->}\n
        if (index >= messageLines) target.append(indent)\n        target.append(line).append("\\n")\n
        }\n      } else {\n        target.append(stack).append("\\n")\n      } else {\n
target.append(shortInfo).append("\\n")\n      }\n      val suppressed = suppressedExceptions\n      if
(suppressed.isNotEmpty()) {\n        val suppressedIndent = indent + "  "\n        for (s in suppressed) {\n
s.dumpFullTrace(suppressedIndent, "Suppressed: ")\n        }\n      }\n      return true\n    }\n\n    private fun dropCommonFrames(stack: String, stackStart: Int): String {\n      var commonFrames: Int = 0\n
var lastBreak: Int = 0\n      var preLastBreak: Int = 0\n      for (pos in 0 until minOf(topStack.length -
topStackStart, stack.length - stackStart)) {\n        val c = stack[stack.lastIndex - pos]\n        if (c !=
topStack[topStack.lastIndex - pos]) break\n        if (c == "\\n") {\n          commonFrames += 1\n
preLastBreak = lastBreak\n          lastBreak = pos\n        }\n      }\n      if (commonFrames <= 1) return
stack\n      while (preLastBreak > 0 && stack[stack.lastIndex - (preLastBreak - 1)] == ' ')\n        preLastBreak -=
1\n      // leave 1 common frame to ease matching with the top exception stack\n      return
stack.dropLast(preLastBreak) + "... and ${commonFrames - 1} more common stack frames skipped"\n
}\n  }, "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.time\n\nimport kotlin.js.json\nimport kotlin.math.*\n\ninternal
actual inline val durationAssertionsEnabled: Boolean get() = true\n\ninternal actual fun
formatToExactDecimals(value: Double, decimals: Int): String {\n  val rounded = if (decimals == 0) {\n    value\n
  } else {\n    val pow = 10.0.pow(decimals)\n    JsMath.round(abs(value) * pow) / pow * sign(value)\n  }\n
return if (abs(rounded) < 1e21) {\n    // toFixed switches to scientific format after 1e21\n
rounded.asDynamic().toFixed(decimals).unsafeCast<String>()\n  } else {\n    // toPrecision outputs the specified
number of digits, but only for positive numbers\n    val positive = abs(rounded)\n    val positiveString =
positive.asDynamic().toPrecision(ceil(log10(positive)) + decimals).unsafeCast<String>()\n    if (rounded < 0)
\"-$positiveString\" else positiveString\n  }\n}\n\ninternal actual fun formatUpToDecimals(value: Double,
decimals: Int): String {\n  return value.asDynamic().toLocaleString("en-us", json("maximumFractionDigits" to
decimals)).unsafeCast<String>()\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage
kotlin.time\n\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic actual enum class

```





```

@Suppress("UNCHECKED_CAST")\n    process.hrtime(timeMark.reading as Array<Double>)\n    .let {
(seconds, nanos) -> seconds.toDuration(DurationUnit.SECONDS) +
nanos.toDuration(DurationUnit.NANOSECONDS) }\n\n @Suppress("UNCHECKED_CAST")\n override fun
differenceBetween(one: ValueTimeMark, another: ValueTimeMark): Duration {\n    val (s1, n1) = one.reading as
Array<Double>\n    val (s2, n2) = another.reading as Array<Double>\n    return (if (s1 == s2 && n1 == n2)
Duration.ZERO else (s1 - s2).toDuration(DurationUnit.SECONDS))
+ (n1 - n2).toDuration(DurationUnit.NANOSECONDS)\n }\n\n override fun adjustReading(timeMark:
ValueTimeMark, duration: Duration): ValueTimeMark =\n @Suppress("UNCHECKED_CAST")\n
(timeMark.reading as Array<Double>).let { (seconds, nanos) ->\n    duration.toComponents { _, addNanos ->\n
val resultSeconds = sumCheckNaN(seconds + truncate(duration.toDouble(DurationUnit.SECONDS)))\n
arrayOf<Double>(resultSeconds, if (resultSeconds.isFinite()) nanos + addNanos else 0.0)\n    }\n
}.let(TimeSource.Monotonic::ValueTimeMark)\n\n\n override fun toString(): String =
\n"TimeSource(process.hrtime())"\n}\n\n@SinceKotlin("1.3")\n@ExperimentalTime\ninternal class
PerformanceTimeSource(val performance: Performance) : DefaultTimeSource { //
AbstractDoubleTimeSource(unit = DurationUnit.MILLISECONDS) {\n    private fun read(): Double =
performance.now()\n\n    override fun markNow(): ValueTimeMark
= ValueTimeMark(read())\n    override fun elapsedFrom(timeMark: ValueTimeMark): Duration = (read() -
timeMark.reading as Double).milliseconds\n\n    override fun differenceBetween(one: ValueTimeMark, another:
ValueTimeMark): Duration {\n        val ms1 = one.reading as Double\n        val ms2 = another.reading as Double\n
return if (ms1 == ms2) Duration.ZERO else (ms1 - ms2).milliseconds\n    }\n\n    override fun
adjustReading(timeMark: ValueTimeMark, duration: Duration): ValueTimeMark =\nValueTimeMark(sumCheckNaN(timeMark.reading as Double +
duration.toDouble(DurationUnit.MILLISECONDS)))\n\n    override fun toString(): String =
\n"TimeSource(self.performance.now())"\n}\n\n@SinceKotlin("1.3")\n@ExperimentalTime\ninternal object
DateNowTimeSource : DefaultTimeSource {\n    private fun read(): Double = kotlin.js.Date.now()\n\n    override
fun markNow(): ValueTimeMark = ValueTimeMark(read())\n    override fun elapsedFrom(timeMark:
ValueTimeMark): Duration = (read()
- timeMark.reading as Double).milliseconds\n\n    override fun differenceBetween(one: ValueTimeMark, another:
ValueTimeMark): Duration {\n        val ms1 = one.reading as Double\n        val ms2 = another.reading as Double\n
return if (ms1 == ms2) Duration.ZERO else (ms1 - ms2).milliseconds\n    }\n\n    override fun
adjustReading(timeMark: ValueTimeMark, duration: Duration): ValueTimeMark =\nValueTimeMark(sumCheckNaN(timeMark.reading as Double +
duration.toDouble(DurationUnit.MILLISECONDS)))\n\n    override fun toString(): String =
\n"TimeSource(Date.now())"\n}\n\nprivate fun sumCheckNaN(value: Double): Double = value.also { if (it.isNaN())
throw IllegalArgumentException("Summing infinities of different signs") }"/\n\n * Copyright 2010-2020
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.dom\n\nimport
org.w3c.dom.*\nimport
kotlin.contracts.*\n\n/**\n * Creates a new element with the specified [name].\n */\n * The element is initialized
with the specified [init] function.\n */\n\n@SinceKotlin("1.4")\npublic fun Document.createElement(name: String,
init: Element.() -> Unit): Element {\n    contract { callsInPlace(init, InvocationKind.EXACTLY_ONCE) }\n
return createElement(name).apply(init)\n}\n\n/**\n * Appends a newly created element with the specified [name] to
this element.\n */\n * The element is initialized with the specified [init] function.\n */\n\n@SinceKotlin("1.4")\npublic fun Element.appendChild(name: String, init: Element.() -> Unit): Element {\n
contract { callsInPlace(init, InvocationKind.EXACTLY_ONCE) }\n    return
ownerDocument!!.createElement(name, init).also { appendChild(it) }\n}\n\n"/\n\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt

```

```

file.\n *\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/** Returns true if the element has the given CSS
class style in its 'class' attribute *\n@SinceKotlin("1.4")\nfun Element.hasClass(cssClass: String): Boolean =
className.matches("\\s*(^|\\s+)$cssClass(\\s+|$)".toRegex())\n\n/** Adds CSS class to element. Has no
effect if all specified classes are already in class attribute of the element *\n * @return true if at least one class has
been added *\n@SinceKotlin("1.4")\nfun Element.addClass(vararg cssClasses: String): Boolean {\n    val
missingClasses = cssClasses.filterNot { hasClass(it) }\n    if (missingClasses.isNotEmpty()) {\n        val
presentClasses = className.trim()\n        className = buildString {\n            append(presentClasses)\n            if
(!presentClasses.isEmpty()) {\n                append(" ")\n            }\n            missingClasses.joinTo(this, " ")
}\n        return true\n    }\n    return false\n}\n\n/**
 * Removes all [cssClasses] from element. Has no effect if all specified classes are missing in class attribute of the
element *\n * @return true if at least one class has been removed *\n@SinceKotlin("1.4")\nfun
Element.removeClass(vararg cssClasses: String): Boolean {\n    if (cssClasses.any { hasClass(it) }) {\n        val
toBeRemoved = cssClasses.toSet()\n        className = className.trim().split("\\s+".toRegex()).filter { it !in
toBeRemoved }.joinToString(" ")\n        return true\n    }\n    return false\n}\n\n"/**\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
kotlin.text\n\n/**\n * Converts the string into a regular expression [Regex] with the default options.\n
*\n@kotlin.internal.InlineOnly\npublic inline
fun String.toRegex(): Regex = Regex(this)\n\n/**\n * Converts the string into a regular expression [Regex] with the
specified single [option].\n *\n@kotlin.internal.InlineOnly\npublic inline fun String.toRegex(option: RegexOptions):
Regex = Regex(this, option)\n\n/**\n * Converts the string into a regular expression [Regex] with the specified set
of [options].\n *\n@kotlin.internal.InlineOnly\npublic inline fun String.toRegex(options: Set<RegexOption>):
Regex = Regex(this, options)\n\n"/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/**\n * Gets a value indicating
whether this node is a TEXT_NODE or a CDATA_SECTION_NODE.\n *\n@SinceKotlin("1.4")\npublic val
Node.isText: Boolean\n    get() = nodeType == Node.TEXT_NODE || nodeType ==
Node.CDATA_SECTION_NODE\n\n/**\n *
 * Gets a value indicating whether this node is an [Element].\n *\n@SinceKotlin("1.4")\npublic val Node.isElement:
Boolean\n    get() = nodeType == Node.ELEMENT_NODE\n\n"/**\n * Copyright 2010-2018 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n *\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/**
 * Removes all the children from this node. *\n@SinceKotlin("1.4")\npublic fun Node.clear() {\n    while
(hasChildNodes()) {\n        removeChild(firstChild!)\n    }\n}\n\n/**\n * Creates text node and append it to the
element.\n *\n * @return this element *\n@SinceKotlin("1.4")\nfun Element.appendText(text: String): Element
{\n    appendChild(ownerDocument!!.createTextNode(text))\n    return this\n}\n\n"/**\n * Copyright 2010-2019
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n *\n\npackage org.w3c.dom\n\n@Deprecated("Use
UnionMessagePortOrWindowProxy instead.", ReplaceWith("UnionMessagePortOrWindowProxy"))\ntypealias
UnionMessagePortOrWindow = UnionMessagePortOrWindowProxy\n\n@Deprecated("Use `as` instead.",
ReplaceWith("`as`"))\nvar HTMLLinkElement.as_ get() = `as`\n    set(value) {\n        `as` = value\n    }\n\n@Deprecated("Use `is` instead.", ReplaceWith("`is`"))\nvar ElementCreationOptions.is_ get() = `is`\n    set(value) {\n        `is` = value\n    }\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See
github.com/kotlin/dukat for details\n\npackage org.khronos.webgl\n\nimport kotlin.js.*\nimport

```

```

org.w3c.dom.*\nimport org.w3c.dom.events.*\n\npublic external
interface WebGLContextAttributes {\n    var alpha: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var depth: Boolean? /* = true */\n        get() = definedExternally\n        set(value)
= definedExternally\n    var stencil: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var antialias: Boolean? /* = true */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var premultipliedAlpha: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var preserveDrawingBuffer: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n    var preferLowPowerToHighPerformance: Boolean? /* =
false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var failIfMajorPerformanceCaveat:
Boolean? /* = false */\n        get() = definedExternally\n
        set(value) = definedExternally\n}\n\n@Suppress(\n"INVISIBLE_REFERENCE",
\n"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun WebGLContextAttributes(alpha:
Boolean? = true, depth: Boolean? = true, stencil: Boolean? = false, antialias: Boolean? = true, premultipliedAlpha:
Boolean? = true, preserveDrawingBuffer: Boolean? = false, preferLowPowerToHighPerformance: Boolean? = false,
failIfMajorPerformanceCaveat: Boolean? = false): WebGLContextAttributes {\n    val o = js(\n"({})")\n
o["alpha"] = alpha\n    o["depth"] = depth\n    o["stencil"] = stencil\n    o["antialias"] = antialias\n
o["premultipliedAlpha"] = premultipliedAlpha\n    o["preserveDrawingBuffer"] = preserveDrawingBuffer\n
o["preferLowPowerToHighPerformance"] = preferLowPowerToHighPerformance\n
o["failIfMajorPerformanceCaveat"] = failIfMajorPerformanceCaveat\n    return o\n}\n\npublic external abstract
class WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLBuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLBuffer)
to Kotlin\n */\n\npublic external abstract class WebGLBuffer : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLFramebuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLFramebuffer) to Kotlin\n */\n\npublic
external abstract class WebGLFramebuffer : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLProgram](https://developer.mozilla.org/en/docs/Web/API/WebGLProgram) to Kotlin\n */\n\npublic external
abstract class WebGLProgram : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLRenderbuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderbuffer) to Kotlin\n */\n\npublic
external abstract class WebGLRenderbuffer : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLShader](https://developer.mozilla.org/en/docs/Web/API/WebGLShader) to Kotlin\n */\n\npublic external
abstract class WebGLShader : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLTexture](https://developer.mozilla.org/en/docs/Web/API/WebGLTexture) to Kotlin\n */\n\npublic
external abstract class WebGLTexture : WebGLObject\n\n/**\n * Exposes the JavaScript
[WebGLUniformLocation](https://developer.mozilla.org/en/docs/Web/API/WebGLUniformLocation) to Kotlin\n */\n\n
public external abstract class WebGLUniformLocation\n\n/**\n * Exposes the JavaScript
[WebGLActiveInfo](https://developer.mozilla.org/en/docs/Web/API/WebGLActiveInfo) to Kotlin\n */\n\npublic
external abstract class WebGLActiveInfo {\n    open val size: Int\n    open val type: Int\n    open val name:
String\n}\n\n/**\n * Exposes the JavaScript
[WebGLShaderPrecisionFormat](https://developer.mozilla.org/en/docs/Web/API/WebGLShaderPrecisionFormat) to
Kotlin\n */\n\npublic external abstract class WebGLShaderPrecisionFormat {\n    open val rangeMin: Int\n    open val
rangeMax: Int\n    open val precision:
Int\n}\n\n\n@Suppress(\n"NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external interface
WebGLRenderingContextBase {\n    val canvas: HTMLCanvasElement\n    val drawingBufferWidth: Int\n    val
drawingBufferHeight:
Int\n    fun getContextAttributes(): WebGLContextAttributes?\n    fun isContextLost(): Boolean\n    fun
getSupportedExtensions(): Array<String>?\n    fun getExtension(name: String): dynamic\n    fun
activeTexture(texture: Int)\n    fun attachShader(program: WebGLProgram?, shader: WebGLShader?)\n    fun
bindAttribLocation(program: WebGLProgram?, index: Int, name: String)\n    fun bindBuffer(target: Int, buffer:
WebGLBuffer?)\n    fun bindFramebuffer(target: Int, framebuffer: WebGLFramebuffer?)\n    fun

```

```

bindRenderbuffer(target: Int, renderbuffer: WebGLRenderbuffer?)\n fun bindTexture(target: Int, texture:
WebGLTexture?)\n fun blendColor(red: Float, green: Float, blue: Float, alpha: Float)\n fun
blendEquation(mode: Int)\n fun blendEquationSeparate(modeRGB: Int, modeAlpha: Int)\n fun
blendFunc(sfactor: Int, dfactor: Int)\n fun blendFuncSeparate(srcRGB: Int, dstRGB: Int, srcAlpha: Int, dstAlpha:
Int)\n fun bufferData(target: Int, size: Int, usage: Int)\n
fun bufferData(target: Int, data: BufferDataSource?, usage: Int)\n fun bufferSubData(target: Int, offset: Int, data:
BufferDataSource?)\n fun checkFramebufferStatus(target: Int): Int\n fun clear(mask: Int)\n fun clearColor(red:
Float, green: Float, blue: Float, alpha: Float)\n fun clearDepth(depth: Float)\n fun clearStencil(s: Int)\n fun
colorMask(red: Boolean, green: Boolean, blue: Boolean, alpha: Boolean)\n fun compileShader(shader:
WebGLShader?)\n fun compressedTexImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int,
border: Int, data: ArrayBufferView)\n fun compressedTexSubImage2D(target: Int, level: Int, xoffset: Int, yoffset:
Int, width: Int, height: Int, format: Int, data: ArrayBufferView)\n fun copyTexImage2D(target: Int, level: Int,
internalformat: Int, x: Int, y: Int, width: Int, height: Int, border: Int)\n fun copyTexSubImage2D(target: Int, level:
Int, xoffset: Int, yoffset: Int, x: Int, y: Int, width: Int, height:
Int)\n fun createBuffer(): WebGLBuffer?\n fun createFramebuffer(): WebGLFramebuffer?\n fun
createProgram(): WebGLProgram?\n fun createRenderbuffer(): WebGLRenderbuffer?\n fun createShader(type:
Int): WebGLShader?\n fun createTexture(): WebGLTexture?\n fun cullFace(mode: Int)\n fun
deleteBuffer(buffer: WebGLBuffer?)\n fun deleteFramebuffer(framebuffer: WebGLFramebuffer?)\n fun
deleteProgram(program: WebGLProgram?)\n fun deleteRenderbuffer(renderbuffer: WebGLRenderbuffer?)\n
fun deleteShader(shader: WebGLShader?)\n fun deleteTexture(texture: WebGLTexture?)\n fun depthFunc(func:
Int)\n fun depthMask(flag: Boolean)\n fun depthRange(zNear: Float, zFar: Float)\n fun detachShader(program:
WebGLProgram?, shader: WebGLShader?)\n fun disable(cap: Int)\n fun disableVertexAttribArray(index: Int)\n
fun drawArrays(mode: Int, first: Int, count: Int)\n fun drawElements(mode: Int, count: Int, type: Int, offset: Int)\n
fun enable(cap:
Int)\n fun enableVertexAttribArray(index: Int)\n fun finish()\n fun flush()\n fun
framebufferRenderbuffer(target: Int, attachment: Int, renderbuffertarget: Int, renderbuffer: WebGLRenderbuffer?)\n
fun framebufferTexture2D(target: Int, attachment: Int, textarget: Int, texture: WebGLTexture?, level: Int)\n fun
frontFace(mode: Int)\n fun generateMipmap(target: Int)\n fun getActiveAttrib(program: WebGLProgram?,
index: Int): WebGLActiveInfo?\n fun getActiveUniform(program: WebGLProgram?, index: Int):
WebGLActiveInfo?\n fun getAttachedShaders(program: WebGLProgram?): Array<WebGLShader>?\n fun
getAttribLocation(program: WebGLProgram?, name: String): Int\n fun getBufferParameter(target: Int, pname:
Int): Any?\n fun getParameter(pname: Int): Any?\n fun getError(): Int\n fun
getFramebufferAttachmentParameter(target: Int, attachment: Int, pname: Int): Any?\n fun
getProgramParameter(program: WebGLProgram?, pname: Int): Any?\n fun getProgramInfoLog(program:
WebGLProgram?): String?\n fun getRenderbufferParameter(target: Int, pname: Int): Any?\n fun
getShaderParameter(shader: WebGLShader?, pname: Int): Any?\n fun getShaderPrecisionFormat(shader: Int,
precisiontype: Int): WebGLShaderPrecisionFormat?\n fun getShaderInfoLog(shader: WebGLShader?): String?\n
fun getShaderSource(shader: WebGLShader?): String?\n fun getTexParameter(target: Int, pname: Int): Any?\n
fun getUniform(program: WebGLProgram?, location: WebGLUniformLocation?): Any?\n fun
getUniformLocation(program: WebGLProgram?, name: String): WebGLUniformLocation?\n fun
getVertexAttrib(index: Int, pname: Int): Any?\n fun getVertexAttribOffset(index: Int, pname: Int): Int\n fun
hint(target: Int, mode: Int)\n fun isBuffer(buffer: WebGLBuffer?): Boolean\n fun isEnabled(cap: Int): Boolean\n
fun isFramebuffer(framebuffer: WebGLFramebuffer?): Boolean\n fun isProgram(program: WebGLProgram?):
Boolean\n fun isRenderbuffer(renderbuffer:
WebGLRenderbuffer?): Boolean\n fun isShader(shader: WebGLShader?): Boolean\n fun isTexture(texture:
WebGLTexture?): Boolean\n fun lineWidth(width: Float)\n fun linkProgram(program: WebGLProgram?)\n
fun pixelStorei(pname: Int, param: Int)\n fun polygonOffset(factor: Float, units: Float)\n fun readPixels(x: Int, y:
Int, width: Int, height: Int, format: Int, type: Int, pixels: ArrayBufferView?)\n fun renderbufferStorage(target: Int,

```

```

internalformat: Int, width: Int, height: Int)\n fun sampleCoverage(value: Float, invert: Boolean)\n fun scissor(x:
Int, y: Int, width: Int, height: Int)\n fun shaderSource(shader: WebGLShader?, source: String)\n fun
stencilFunc(func: Int, ref: Int, mask: Int)\n fun stencilFuncSeparate(face: Int, func: Int, ref: Int, mask: Int)\n fun
stencilMask(mask: Int)\n fun stencilMaskSeparate(face: Int, mask: Int)\n fun stencilOp(fail: Int, zfail: Int, zpass:
Int)\n fun stencilOpSeparate(face: Int, fail: Int, zfail: Int,
zpass: Int)\n fun texImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int, border: Int, format:
Int, type: Int, pixels: ArrayBufferView?)\n fun texImage2D(target: Int, level: Int, internalformat: Int, format: Int,
type: Int, source: TexImageSource?)\n fun texParameterf(target: Int, pname: Int, param: Float)\n fun
texParameteri(target: Int, pname: Int, param: Int)\n fun texSubImage2D(target: Int, level: Int, xoffset: Int, yoffset:
Int, width: Int, height: Int, format: Int, type: Int, pixels: ArrayBufferView?)\n fun texSubImage2D(target: Int,
level: Int, xoffset: Int, yoffset: Int, format: Int, type: Int, source: TexImageSource?)\n fun uniform1f(location:
WebGLUniformLocation?, x: Float)\n fun uniform1fv(location: WebGLUniformLocation?, v: Float32Array)\n
fun uniform1fv(location: WebGLUniformLocation?, v: Array<Float>)\n fun uniform1i(location:
WebGLUniformLocation?, x: Int)\n fun uniform1iv(location: WebGLUniformLocation?, v:
Int32Array)\n fun uniform1iv(location: WebGLUniformLocation?, v: Array<Int>)\n fun uniform2f(location:
WebGLUniformLocation?, x: Float, y: Float)\n fun uniform2fv(location: WebGLUniformLocation?, v:
Float32Array)\n fun uniform2fv(location: WebGLUniformLocation?, v: Array<Float>)\n fun
uniform2i(location: WebGLUniformLocation?, x: Int, y: Int)\n fun uniform2iv(location:
WebGLUniformLocation?, v: Int32Array)\n fun uniform2iv(location: WebGLUniformLocation?, v: Array<Int>)\n
fun uniform3f(location: WebGLUniformLocation?, x: Float, y: Float, z: Float)\n fun uniform3fv(location:
WebGLUniformLocation?, v: Float32Array)\n fun uniform3fv(location: WebGLUniformLocation?, v:
Array<Float>)\n fun uniform3i(location: WebGLUniformLocation?, x: Int, y: Int, z: Int)\n fun
uniform3iv(location: WebGLUniformLocation?, v: Int32Array)\n fun uniform3iv(location:
WebGLUniformLocation?, v: Array<Int>)\n fun uniform4f(location: WebGLUniformLocation?, x: Float, y: Float,
z: Float, w: Float)\n fun uniform4fv(location: WebGLUniformLocation?, v: Float32Array)\n fun
uniform4fv(location: WebGLUniformLocation?, v: Array<Float>)\n fun uniform4i(location:
WebGLUniformLocation?, x: Int, y: Int, z: Int, w: Int)\n fun uniform4iv(location: WebGLUniformLocation?, v:
Int32Array)\n fun uniform4iv(location: WebGLUniformLocation?, v: Array<Int>)\n fun
uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
uniformMatrix3fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix3fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
useProgram(program:
WebGLProgram?)\n fun validateProgram(program: WebGLProgram?)\n fun vertexAttrib1f(index: Int, x:
Float)\n fun vertexAttrib1fv(index: Int, values: dynamic)\n fun vertexAttrib2f(index: Int, x: Float, y: Float)\n
fun vertexAttrib2fv(index: Int, values: dynamic)\n fun vertexAttrib3f(index: Int, x: Float, y: Float, z: Float)\n fun
vertexAttrib3fv(index: Int, values: dynamic)\n fun vertexAttrib4f(index: Int, x: Float, y: Float, z: Float, w: Float)\n
fun vertexAttrib4fv(index: Int, values: dynamic)\n fun vertexAttribPointer(index: Int, size: Int, type: Int,
normalized: Boolean, stride: Int, offset: Int)\n fun viewport(x: Int, y: Int, width: Int, height: Int)\n\n companion
object {\n val DEPTH_BUFFER_BIT: Int\n val STENCIL_BUFFER_BIT: Int\n val
COLOR_BUFFER_BIT: Int\n val POINTS: Int\n val LINES: Int\n val LINE_LOOP: Int\n val
LINE_STRIP: Int\n val TRIANGLES: Int\n val TRIANGLE_STRIP:
Int\n val TRIANGLE_FAN: Int\n val ZERO: Int\n val ONE: Int\n val SRC_COLOR: Int\n
val ONE_MINUS_SRC_COLOR: Int\n val SRC_ALPHA: Int\n val ONE_MINUS_SRC_ALPHA: Int\n
val DST_ALPHA: Int\n val ONE_MINUS_DST_ALPHA: Int\n val DST_COLOR: Int\n val
ONE_MINUS_DST_COLOR: Int\n val SRC_ALPHA_SATURATE: Int\n val FUNC_ADD: Int\n val

```

BLEND\_EQUATION: Int\n     val BLEND\_EQUATION\_RGB: Int\n     val BLEND\_EQUATION\_ALPHA:  
 Int\n     val FUNC\_SUBTRACT: Int\n     val FUNC\_REVERSE\_SUBTRACT: Int\n     val  
 BLEND\_DST\_RGB: Int\n     val BLEND\_SRC\_RGB: Int\n     val BLEND\_DST\_ALPHA: Int\n     val  
 BLEND\_SRC\_ALPHA: Int\n     val CONSTANT\_COLOR: Int\n     val ONE\_MINUS\_CONSTANT\_COLOR:  
 Int\n     val CONSTANT\_ALPHA: Int\n     val ONE\_MINUS\_CONSTANT\_ALPHA: Int\n     val  
 BLEND\_COLOR: Int\n     val ARRAY\_BUFFER: Int\n     val ELEMENT\_ARRAY\_BUFFER: Int\n     val  
 ARRAY\_BUFFER\_BINDING:  
 Int\n     val ELEMENT\_ARRAY\_BUFFER\_BINDING: Int\n     val STREAM\_DRAW: Int\n     val  
 STATIC\_DRAW: Int\n     val DYNAMIC\_DRAW: Int\n     val BUFFER\_SIZE: Int\n     val  
 BUFFER\_USAGE: Int\n     val CURRENT\_VERTEX\_ATTRIB: Int\n     val FRONT: Int\n     val BACK:  
 Int\n     val FRONT\_AND\_BACK: Int\n     val CULL\_FACE: Int\n     val BLEND: Int\n     val DITHER:  
 Int\n     val STENCIL\_TEST: Int\n     val DEPTH\_TEST: Int\n     val SCISSOR\_TEST: Int\n     val  
 POLYGON\_OFFSET\_FILL: Int\n     val SAMPLE\_ALPHA\_TO\_COVERAGE: Int\n     val  
 SAMPLE\_COVERAGE: Int\n     val NO\_ERROR: Int\n     val INVALID\_ENUM: Int\n     val  
 INVALID\_VALUE: Int\n     val INVALID\_OPERATION: Int\n     val OUT\_OF\_MEMORY: Int\n     val CW:  
 Int\n     val CCW: Int\n     val LINE\_WIDTH: Int\n     val ALIASED\_POINT\_SIZE\_RANGE: Int\n     val  
 ALIASED\_LINE\_WIDTH\_RANGE: Int\n     val CULL\_FACE\_MODE: Int\n     val FRONT\_FACE: Int\n  
    val DEPTH\_RANGE: Int\n     val DEPTH\_WRITEMASK: Int\n     val DEPTH\_CLEAR\_VALUE: Int\n  
 val DEPTH\_FUNC: Int\n     val STENCIL\_CLEAR\_VALUE: Int\n     val STENCIL\_FUNC: Int\n     val  
 STENCIL\_FAIL: Int\n     val STENCIL\_PASS\_DEPTH\_FAIL: Int\n     val STENCIL\_PASS\_DEPTH\_PASS:  
 Int\n     val STENCIL\_REF: Int\n     val STENCIL\_VALUE\_MASK: Int\n     val STENCIL\_WRITEMASK:  
 Int\n     val STENCIL\_BACK\_FUNC: Int\n     val STENCIL\_BACK\_FAIL: Int\n     val  
 STENCIL\_BACK\_PASS\_DEPTH\_FAIL: Int\n     val STENCIL\_BACK\_PASS\_DEPTH\_PASS: Int\n     val  
 STENCIL\_BACK\_REF: Int\n     val STENCIL\_BACK\_VALUE\_MASK: Int\n     val  
 STENCIL\_BACK\_WRITEMASK: Int\n     val VIEWPORT: Int\n     val SCISSOR\_BOX: Int\n     val  
 COLOR\_CLEAR\_VALUE: Int\n     val COLOR\_WRITEMASK: Int\n     val UNPACK\_ALIGNMENT: Int\n  
    val PACK\_ALIGNMENT: Int\n     val MAX\_TEXTURE\_SIZE: Int\n     val MAX\_VIEWPORT\_DIMS: Int\n  
    val SUBPIXEL\_BITS: Int\n  
    val RED\_BITS: Int\n     val GREEN\_BITS: Int\n     val BLUE\_BITS: Int\n     val ALPHA\_BITS: Int\n  
    val DEPTH\_BITS: Int\n     val STENCIL\_BITS: Int\n     val POLYGON\_OFFSET\_UNITS: Int\n     val  
 POLYGON\_OFFSET\_FACTOR: Int\n     val TEXTURE\_BINDING\_2D: Int\n     val SAMPLE\_BUFFERS:  
 Int\n     val SAMPLES: Int\n     val SAMPLE\_COVERAGE\_VALUE: Int\n     val  
 SAMPLE\_COVERAGE\_INVERT: Int\n     val COMPRESSED\_TEXTURE\_FORMATS: Int\n     val  
 DONT\_CARE: Int\n     val FASTEST: Int\n     val NICEST: Int\n     val GENERATE\_MIPMAP\_HINT: Int\n  
    val BYTE: Int\n     val UNSIGNED\_BYTE: Int\n     val SHORT: Int\n     val UNSIGNED\_SHORT: Int\n  
    val INT: Int\n     val UNSIGNED\_INT: Int\n     val FLOAT: Int\n     val DEPTH\_COMPONENT: Int\n  
    val ALPHA: Int\n     val RGB: Int\n     val RGBA: Int\n     val LUMINANCE: Int\n     val  
 LUMINANCE\_ALPHA: Int\n     val UNSIGNED\_SHORT\_4\_4\_4\_4: Int\n     val  
 UNSIGNED\_SHORT\_5\_5\_5\_1:  
 Int\n     val UNSIGNED\_SHORT\_5\_6\_5: Int\n     val FRAGMENT\_SHADER: Int\n     val  
 VERTEX\_SHADER: Int\n     val MAX\_VERTEX\_ATTRIBS: Int\n     val  
 MAX\_VERTEX\_UNIFORM\_VECTORS: Int\n     val MAX\_VARYING\_VECTORS: Int\n     val  
 MAX\_COMBINED\_TEXTURE\_IMAGE\_UNITS: Int\n     val MAX\_VERTEX\_TEXTURE\_IMAGE\_UNITS:  
 Int\n     val MAX\_TEXTURE\_IMAGE\_UNITS: Int\n     val MAX\_FRAGMENT\_UNIFORM\_VECTORS: Int\n  
    val SHADER\_TYPE: Int\n     val DELETE\_STATUS: Int\n     val LINK\_STATUS: Int\n     val  
 VALIDATE\_STATUS: Int\n     val ATTACHED\_SHADERS: Int\n     val ACTIVE\_UNIFORMS: Int\n     val  
 ACTIVE\_ATTRIBUTES: Int\n     val SHADING\_LANGUAGE\_VERSION: Int\n     val  
 CURRENT\_PROGRAM: Int\n     val NEVER: Int\n     val LESS: Int\n     val EQUAL: Int\n     val

LEQUAL: Int\n val GREATER: Int\n val NOTEQUAL: Int\n val GEQUAL: Int\n val ALWAYS:  
 Int\n val KEEP: Int\n val REPLACE: Int\n val  
 INCR: Int\n val DECR: Int\n val INVERT: Int\n val INCR\_WRAP: Int\n val DECR\_WRAP: Int\n  
 val VENDOR: Int\n val RENDERER: Int\n val VERSION: Int\n val NEAREST: Int\n val  
 LINEAR: Int\n val NEAREST\_MIPMAP\_NEAREST: Int\n val LINEAR\_MIPMAP\_NEAREST: Int\n  
 val NEAREST\_MIPMAP\_LINEAR: Int\n val LINEAR\_MIPMAP\_LINEAR: Int\n val  
 TEXTURE\_MAG\_FILTER: Int\n val TEXTURE\_MIN\_FILTER: Int\n val TEXTURE\_WRAP\_S: Int\n  
 val TEXTURE\_WRAP\_T: Int\n val TEXTURE\_2D: Int\n val TEXTURE: Int\n val  
 TEXTURE\_CUBE\_MAP: Int\n val TEXTURE\_BINDING\_CUBE\_MAP: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_X: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_X: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Y: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Y: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Z: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Z: Int\n val  
 MAX\_CUBE\_MAP\_TEXTURE\_SIZE: Int\n  
 val TEXTURE0: Int\n val TEXTURE1: Int\n val TEXTURE2: Int\n val TEXTURE3: Int\n  
 val TEXTURE4: Int\n val TEXTURE5: Int\n val TEXTURE6: Int\n val TEXTURE7: Int\n val  
 TEXTURE8: Int\n val TEXTURE9: Int\n val TEXTURE10: Int\n val TEXTURE11: Int\n val  
 TEXTURE12: Int\n val TEXTURE13: Int\n val TEXTURE14: Int\n val TEXTURE15: Int\n val  
 TEXTURE16: Int\n val TEXTURE17: Int\n val TEXTURE18: Int\n val TEXTURE19: Int\n val  
 TEXTURE20: Int\n val TEXTURE21: Int\n val TEXTURE22: Int\n val TEXTURE23: Int\n val  
 TEXTURE24: Int\n val TEXTURE25: Int\n val TEXTURE26: Int\n val TEXTURE27: Int\n val  
 TEXTURE28: Int\n val TEXTURE29: Int\n val TEXTURE30: Int\n val TEXTURE31: Int\n val  
 ACTIVE\_TEXTURE: Int\n val REPEAT: Int\n val CLAMP\_TO\_EDGE: Int\n val  
 MIRRORED\_REPEAT:  
 Int\n val FLOAT\_VEC2: Int\n val FLOAT\_VEC3: Int\n val FLOAT\_VEC4: Int\n val  
 INT\_VEC2: Int\n val INT\_VEC3: Int\n val INT\_VEC4: Int\n val BOOL: Int\n val BOOL\_VEC2:  
 Int\n val BOOL\_VEC3: Int\n val BOOL\_VEC4: Int\n val FLOAT\_MAT2: Int\n val  
 FLOAT\_MAT3: Int\n val FLOAT\_MAT4: Int\n val SAMPLER\_2D: Int\n val SAMPLER\_CUBE:  
 Int\n val VERTEX\_ATTRIB\_ARRAY\_ENABLED: Int\n val VERTEX\_ATTRIB\_ARRAY\_SIZE: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_STRIDE: Int\n val VERTEX\_ATTRIB\_ARRAY\_TYPE: Int\n val  
 VERTEX\_ATTRIB\_ARRAY\_NORMALIZED: Int\n val VERTEX\_ATTRIB\_ARRAY\_POINTER: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_BUFFER\_BINDING: Int\n val  
 IMPLEMENTATION\_COLOR\_READ\_TYPE: Int\n val IMPLEMENTATION\_COLOR\_READ\_FORMAT:  
 Int\n val COMPILE\_STATUS: Int\n val LOW\_FLOAT: Int\n val MEDIUM\_FLOAT: Int\n val  
 HIGH\_FLOAT: Int\n val LOW\_INT: Int\n  
 val MEDIUM\_INT: Int\n val HIGH\_INT: Int\n val FRAMEBUFFER: Int\n val  
 RENDERBUFFER: Int\n val RGBA4: Int\n val RGB5\_A1: Int\n val RGB565: Int\n val  
 DEPTH\_COMPONENT16: Int\n val STENCIL\_INDEX: Int\n val STENCIL\_INDEX8: Int\n val  
 DEPTH\_STENCIL: Int\n val RENDERBUFFER\_WIDTH: Int\n val RENDERBUFFER\_HEIGHT: Int\n  
 val RENDERBUFFER\_INTERNAL\_FORMAT: Int\n val RENDERBUFFER\_RED\_SIZE: Int\n val  
 RENDERBUFFER\_GREEN\_SIZE: Int\n val RENDERBUFFER\_BLUE\_SIZE: Int\n val  
 RENDERBUFFER\_ALPHA\_SIZE: Int\n val RENDERBUFFER\_DEPTH\_SIZE: Int\n val  
 RENDERBUFFER\_STENCIL\_SIZE: Int\n val FRAMEBUFFER\_ATTACHMENT\_OBJECT\_TYPE: Int\n  
 val FRAMEBUFFER\_ATTACHMENT\_OBJECT\_NAME: Int\n val  
 FRAMEBUFFER\_ATTACHMENT\_TEXTURE\_LEVEL: Int\n val  
 FRAMEBUFFER\_ATTACHMENT\_TEXTURE\_CUBE\_MAP\_FACE: Int\n val COLOR\_ATTACHMENT0:  
 Int\n val DEPTH\_ATTACHMENT: Int\n  
 val STENCIL\_ATTACHMENT: Int\n val DEPTH\_STENCIL\_ATTACHMENT: Int\n val NONE: Int\n  
 val FRAMEBUFFER\_COMPLETE: Int\n val FRAMEBUFFER\_INCOMPLETE\_ATTACHMENT: Int\n



```

val FRAMEBUFFER_INCOMPLETE_MISSING_ATTACHMENT: Int
val FRAMEBUFFER_INCOMPLETE_DIMENSIONS: Int
val FRAMEBUFFER_UNSUPPORTED: Int
val FRAMEBUFFER_BINDING: Int
val RENDERBUFFER_BINDING: Int
val MAX_RENDERBUFFER_SIZE: Int
val INVALID_FRAMEBUFFER_OPERATION: Int
val UNPACK_FLIP_Y_WEBGL: Int
val UNPACK_PREMULTIPLY_ALPHA_WEBGL: Int
val CONTEXT_LOST_WEBGL: Int
val UNPACK_COLORSPACE_CONVERSION_WEBGL: Int
val BROWSER_DEFAULT_WEBGL: Int
}

/** Exposes the JavaScript
[WebGLRenderingContext](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderingContext) to Kotlin
*/
public external abstract class WebGLRenderingContext : WebGLRenderingContextBase, RenderingContext {
    companion object {
        val DEPTH_BUFFER_BIT: Int
        val STENCIL_BUFFER_BIT: Int
        val COLOR_BUFFER_BIT: Int
        val POINTS: Int
        val LINES: Int
        val LINE_LOOP: Int
        val LINE_STRIP: Int
        val TRIANGLES: Int
        val TRIANGLE_STRIP: Int
        val TRIANGLE_FAN: Int
        val ZERO: Int
        val ONE: Int
        val SRC_COLOR: Int
        val ONE_MINUS_SRC_COLOR: Int
        val SRC_ALPHA: Int
        val ONE_MINUS_SRC_ALPHA: Int
        val DST_ALPHA: Int
        val ONE_MINUS_DST_ALPHA: Int
        val DST_COLOR: Int
        val ONE_MINUS_DST_COLOR: Int
        val SRC_ALPHA_SATURATE: Int
        val FUNC_ADD: Int
        val BLEND_EQUATION: Int
        val BLEND_EQUATION_RGB: Int
        val BLEND_EQUATION_ALPHA: Int
        val FUNC_SUBTRACT: Int
        val FUNC_REVERSE_SUBTRACT: Int
        val BLEND_DST_RGB: Int
        val BLEND_SRC_RGB: Int
        val BLEND_DST_ALPHA: Int
        val BLEND_SRC_ALPHA: Int
        val CONSTANT_COLOR: Int
        val ONE_MINUS_CONSTANT_COLOR: Int
        val CONSTANT_ALPHA: Int
        val ONE_MINUS_CONSTANT_ALPHA: Int
        val BLEND_COLOR: Int
        val ARRAY_BUFFER: Int
        val ELEMENT_ARRAY_BUFFER: Int
        val ARRAY_BUFFER_BINDING: Int
        val ELEMENT_ARRAY_BUFFER_BINDING: Int
        val STREAM_DRAW: Int
        val STATIC_DRAW: Int
        val DYNAMIC_DRAW: Int
        val BUFFER_SIZE: Int
        val BUFFER_USAGE: Int
        val CURRENT_VERTEX_ATTRIB: Int
        val FRONT: Int
        val BACK: Int
        val FRONT_AND_BACK: Int
        val CULL_FACE: Int
        val BLEND: Int
        val DITHER: Int
        val STENCIL_TEST: Int
        val DEPTH_TEST: Int
        val SCISSOR_TEST: Int
        val POLYGON_OFFSET_FILL: Int
        val SAMPLE_ALPHA_TO_COVERAGE: Int
        val SAMPLE_COVERAGE: Int
        val NO_ERROR: Int
        val INVALID_ENUM: Int
        val INVALID_VALUE: Int
        val INVALID_OPERATION: Int
        val OUT_OF_MEMORY: Int
        val CW: Int
        val CCW: Int
        val LINE_WIDTH: Int
        val ALIASED_POINT_SIZE_RANGE: Int
        val ALIASED_LINE_WIDTH_RANGE: Int
        val CULL_FACE_MODE: Int
        val FRONT_FACE: Int
        val DEPTH_RANGE: Int
        val DEPTH_WRITEMASK: Int
        val DEPTH_CLEAR_VALUE: Int
        val DEPTH_FUNC: Int
        val STENCIL_CLEAR_VALUE: Int
        val STENCIL_FUNC: Int
        val STENCIL_FAIL: Int
        val STENCIL_PASS_DEPTH_FAIL: Int
        val STENCIL_PASS_DEPTH_PASS: Int
        val STENCIL_REF: Int
        val STENCIL_VALUE_MASK: Int
        val STENCIL_WRITEMASK: Int
        val STENCIL_BACK_FUNC: Int
        val STENCIL_BACK_FAIL: Int
        val STENCIL_BACK_PASS_DEPTH_FAIL: Int
        val STENCIL_BACK_PASS_DEPTH_PASS: Int
        val STENCIL_BACK_REF: Int
        val STENCIL_BACK_VALUE_MASK: Int
        val STENCIL_BACK_WRITEMASK: Int
        val VIEWPORT: Int
        val SCISSOR_BOX: Int
        val COLOR_CLEAR_VALUE: Int
        val COLOR_WRITEMASK: Int
        val UNPACK_ALIGNMENT: Int
        val PACK_ALIGNMENT: Int
        val MAX_TEXTURE_SIZE: Int
        val MAX_VIEWPORT_DIMS: Int
        val SUBPIXEL_BITS: Int
        val RED_BITS: Int
        val GREEN_BITS: Int
        val BLUE_BITS: Int
        val ALPHA_BITS: Int
        val DEPTH_BITS: Int
        val STENCIL_BITS: Int
        val POLYGON_OFFSET_UNITS: Int
        val POLYGON_OFFSET_FACTOR: Int
        val TEXTURE_BINDING_2D: Int
        val SAMPLE_BUFFERS: Int
        val SAMPLES: Int
    }
}

```

SAMPLE\_COVERAGE\_VALUE: Int\n val SAMPLE\_COVERAGE\_INVERT: Int\n val  
 COMPRESSED\_TEXTURE\_FORMATS: Int\n val DONT\_CARE: Int\n val FASTEST: Int\n val  
 NICEST: Int\n val GENERATE\_MIPMAP\_HINT: Int\n val BYTE: Int\n val UNSIGNED\_BYTE:  
 Int\n val SHORT: Int\n val UNSIGNED\_SHORT: Int\n val INT: Int\n val  
 UNSIGNED\_INT: Int\n val FLOAT: Int\n val DEPTH\_COMPONENT: Int\n val ALPHA: Int\n  
 val RGB: Int\n val RGBA: Int\n val LUMINANCE: Int\n val LUMINANCE\_ALPHA: Int\n val  
 UNSIGNED\_SHORT\_4\_4\_4\_4: Int\n val UNSIGNED\_SHORT\_5\_5\_5\_1: Int\n val  
 UNSIGNED\_SHORT\_5\_6\_5: Int\n val FRAGMENT\_SHADER: Int\n val VERTEX\_SHADER: Int\n  
 val MAX\_VERTEX\_ATTRIBS: Int\n val MAX\_VERTEX\_UNIFORM\_VECTORS: Int\n val  
 MAX\_VARYING\_VECTORS: Int\n val MAX\_COMBINED\_TEXTURE\_IMAGE\_UNITS: Int\n val  
 MAX\_VERTEX\_TEXTURE\_IMAGE\_UNITS: Int\n val MAX\_TEXTURE\_IMAGE\_UNITS: Int\n val  
 MAX\_FRAGMENT\_UNIFORM\_VECTORS: Int\n val SHADER\_TYPE: Int\n val DELETE\_STATUS:  
 Int\n val LINK\_STATUS: Int\n val VALIDATE\_STATUS: Int\n val ATTACHED\_SHADERS: Int\n  
 val ACTIVE\_UNIFORMS: Int\n val ACTIVE\_ATTRIBUTES: Int\n val  
 SHADING\_LANGUAGE\_VERSION: Int\n val CURRENT\_PROGRAM:  
 Int\n val NEVER: Int\n val LESS: Int\n val EQUAL: Int\n val LEQUAL: Int\n val  
 GREATER: Int\n val NOTEQUAL: Int\n val GEQUAL: Int\n val ALWAYS: Int\n val KEEP:  
 Int\n val REPLACE: Int\n val INCR: Int\n val DECR: Int\n val INVERT: Int\n val  
 INCR\_WRAP: Int\n val DECR\_WRAP: Int\n val VENDOR: Int\n val RENDERER: Int\n val  
 VERSION: Int\n val NEAREST: Int\n val LINEAR: Int\n val NEAREST\_MIPMAP\_NEAREST: Int\n  
 val LINEAR\_MIPMAP\_NEAREST: Int\n val NEAREST\_MIPMAP\_LINEAR: Int\n val  
 LINEAR\_MIPMAP\_LINEAR: Int\n val TEXTURE\_MAG\_FILTER: Int\n val TEXTURE\_MIN\_FILTER:  
 Int\n val TEXTURE\_WRAP\_S: Int\n val TEXTURE\_WRAP\_T: Int\n val TEXTURE\_2D: Int\n  
 val TEXTURE: Int\n val TEXTURE\_CUBE\_MAP: Int\n val TEXTURE\_BINDING\_CUBE\_MAP: Int\n  
 val TEXTURE\_CUBE\_MAP\_POSITIVE\_X: Int\n  
 val TEXTURE\_CUBE\_MAP\_NEGATIVE\_X: Int\n val TEXTURE\_CUBE\_MAP\_POSITIVE\_Y: Int\n  
 val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Y: Int\n val TEXTURE\_CUBE\_MAP\_POSITIVE\_Z: Int\n val  
 TEXTURE\_CUBE\_MAP\_NEGATIVE\_Z: Int\n val MAX\_CUBE\_MAP\_TEXTURE\_SIZE: Int\n val  
 TEXTURE0: Int\n val TEXTURE1: Int\n val TEXTURE2: Int\n val TEXTURE3: Int\n val  
 TEXTURE4: Int\n val TEXTURE5: Int\n val TEXTURE6: Int\n val TEXTURE7: Int\n val  
 TEXTURE8: Int\n val TEXTURE9: Int\n val TEXTURE10: Int\n val TEXTURE11: Int\n val  
 TEXTURE12: Int\n val TEXTURE13: Int\n val TEXTURE14: Int\n val TEXTURE15: Int\n val  
 TEXTURE16: Int\n val TEXTURE17: Int\n val TEXTURE18: Int\n val TEXTURE19: Int\n val  
 TEXTURE20: Int\n val TEXTURE21: Int\n val TEXTURE22: Int\n val TEXTURE23: Int\n val  
 TEXTURE24: Int\n val TEXTURE25: Int\n val  
 TEXTURE26: Int\n val TEXTURE27: Int\n val TEXTURE28: Int\n val TEXTURE29: Int\n val  
 TEXTURE30: Int\n val TEXTURE31: Int\n val ACTIVE\_TEXTURE: Int\n val REPEAT: Int\n  
 val CLAMP\_TO\_EDGE: Int\n val MIRRORED\_REPEAT: Int\n val FLOAT\_VEC2: Int\n val  
 FLOAT\_VEC3: Int\n val FLOAT\_VEC4: Int\n val INT\_VEC2: Int\n val INT\_VEC3: Int\n val  
 INT\_VEC4: Int\n val BOOL: Int\n val BOOL\_VEC2: Int\n val BOOL\_VEC3: Int\n val  
 BOOL\_VEC4: Int\n val FLOAT\_MAT2: Int\n val FLOAT\_MAT3: Int\n val FLOAT\_MAT4: Int\n  
 val SAMPLER\_2D: Int\n val SAMPLER\_CUBE: Int\n val VERTEX\_ATTRIB\_ARRAY\_ENABLED:  
 Int\n val VERTEX\_ATTRIB\_ARRAY\_SIZE: Int\n val VERTEX\_ATTRIB\_ARRAY\_STRIDE: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_TYPE: Int\n val VERTEX\_ATTRIB\_ARRAY\_NORMALIZED: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_POINTER: Int\n val VERTEX\_ATTRIB\_ARRAY\_BUFFER\_BINDING:  
 Int\n val IMPLEMENTATION\_COLOR\_READ\_TYPE: Int\n val  
 IMPLEMENTATION\_COLOR\_READ\_FORMAT: Int\n val COMPILE\_STATUS: Int\n val  
 LOW\_FLOAT: Int\n val MEDIUM\_FLOAT: Int\n val HIGH\_FLOAT: Int\n val LOW\_INT: Int\n



```

Byte = asDynamic()[index]\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun Int8Array.set(index: Int,
value: Byte) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[UInt8Array](https://developer.mozilla.org/en/docs/Web/API/UInt8Array) to Kotlin\n
*/\n\npublic external open class UInt8Array : ArrayBufferView {\n
    constructor(length: Int)\n
    constructor(array:
UInt8Array)\n
    constructor(array: Array<Byte>)\n
    constructor(buffer: ArrayBuffer, byteOffset: Int =
definedExternally, length: Int = definedExternally)\n
    open val length: Int\n
    override val buffer: ArrayBuffer\n
    override val byteOffset: Int\n
    override val byteLength: Int\n
    fun set(array: UInt8Array, offset: Int =
definedExternally)\n
    fun set(array: Array<Byte>, offset: Int = definedExternally)\n
    fun subarray(start: Int, end:
Int): UInt8Array\n\n
    companion object {\n
        val BYTES_PER_ELEMENT: Int\n
    }\n\n
}\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun UInt8Array.get(index: Int):
Byte = asDynamic()[index]\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun UInt8Array.set(index: Int,
value: Byte) { asDynamic()[index]
= value }\n\n/**\n * Exposes the JavaScript
[UInt8ClampedArray](https://developer.mozilla.org/en/docs/Web/API/UInt8ClampedArray) to Kotlin\n
*/\n\npublic external open class UInt8ClampedArray : ArrayBufferView {\n
    constructor(length: Int)\n
    constructor(array:
UInt8ClampedArray)\n
    constructor(array: Array<Byte>)\n
    constructor(buffer: ArrayBuffer, byteOffset: Int =
definedExternally, length: Int = definedExternally)\n
    open val length: Int\n
    override val buffer: ArrayBuffer\n
    override val byteOffset: Int\n
    override val byteLength: Int\n
    fun set(array: UInt8ClampedArray, offset: Int =
definedExternally)\n
    fun set(array: Array<Byte>, offset: Int = definedExternally)\n
    fun subarray(start: Int, end:
Int): UInt8ClampedArray\n\n
    companion object {\n
        val BYTES_PER_ELEMENT: Int\n
    }\n\n
}\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun
UInt8ClampedArray.get(index: Int): Byte = asDynamic()[index]\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun
UInt8ClampedArray.set(index: Int, value: Byte) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Int16Array](https://developer.mozilla.org/en/docs/Web/API/Int16Array) to Kotlin\n
*/\n\npublic external open class Int16Array : ArrayBufferView {\n
    constructor(length: Int)\n
    constructor(array: Int16Array)\n
    constructor(array: Array<Short>)\n
    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n
    open val length: Int\n
    override val buffer: ArrayBuffer\n
    override val byteOffset:
Int\n
    override val byteLength: Int\n
    fun set(array: Int16Array, offset: Int = definedExternally)\n
    fun set(array:
Array<Short>, offset: Int = definedExternally)\n
    fun subarray(start: Int, end: Int): Int16Array\n\n
    companion
object {\n
        val BYTES_PER_ELEMENT: Int\n
    }\n\n
}\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun Int16Array.get(index: Int):
Short = asDynamic()[index]\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun Int16Array.set(index: Int,
value: Short) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[UInt16Array](https://developer.mozilla.org/en/docs/Web/API/UInt16Array) to Kotlin\n
*/\n\npublic external open class UInt16Array : ArrayBufferView {\n
    constructor(length: Int)\n
    constructor(array: UInt16Array)\n
    constructor(array: Array<Short>)\n
    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n
    open val length: Int\n
    override val buffer: ArrayBuffer\n
    override val byteOffset:
Int\n
    override val byteLength: Int\n
    fun set(array: UInt16Array, offset: Int = definedExternally)\n
    fun set(array:
Array<Short>, offset: Int = definedExternally)\n
    fun subarray(start: Int, end: Int): UInt16Array\n\n
    companion object {\n
        val BYTES_PER_ELEMENT:
Int\n
    }\n\n
}\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun UInt16Array.get(index: Int):

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Short = asDynamic()[index]\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Uint16Array.set(index: Int,
value: Short) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Int32Array](https://developer.mozilla.org/en/docs/Web/API/Int32Array) to Kotlin\n *\npublic external open class
Int32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Int32Array)\n
constructor(array: Array<Int>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int
= definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset: Int\n
override
  val byteLength: Int\n  fun set(array: Int32Array, offset: Int = definedExternally)\n  fun set(array: Array<Int>,
offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Int32Array\n\n  companion object {\n    val
BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Int32Array.get(index: Int): Int
= asDynamic()[index]\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Int32Array.set(index: Int,
value: Int) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Uint32Array](https://developer.mozilla.org/en/docs/Web/API/Uint32Array) to Kotlin\n *\npublic external open
class Uint32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Uint32Array)\n
constructor(array: Array<Int>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int
= definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset: Int\n
override val byteLength: Int\n  fun set(array: Uint32Array, offset: Int = definedExternally)\n  fun set(array:
Array<Int>, offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Uint32Array\n\n  companion
object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Uint32Array.get(index: Int):
Int = asDynamic()[index]\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Uint32Array.set(index: Int,
value: Int) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Float32Array](https://developer.mozilla.org/en/docs/Web/API/Float32Array) to Kotlin\n *\npublic external open
class Float32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array:
Float32Array)\n  constructor(array: Array<Float>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int =
definedExternally, length: Int = definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n
override val byteOffset: Int\n  override val byteLength: Int\n  fun set(array: Float32Array, offset: Int =
definedExternally)\n  fun set(array: Array<Float>, offset: Int = definedExternally)\n  fun subarray(start: Int, end:
Int): Float32Array\n\n  companion object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Float32Array.get(index: Int):
Float = asDynamic()[index]\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Float32Array.set(index: Int,
value: Float) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Float64Array](https://developer.mozilla.org/en/docs/Web/API/Float64Array)
to Kotlin\n *\npublic external open class Float64Array : ArrayBufferView {\n  constructor(length: Int)\n
constructor(array: Float64Array)\n  constructor(array: Array<Double>)\n  constructor(buffer: ArrayBuffer,
byteOffset: Int = definedExternally, length: Int = definedExternally)\n  open val length: Int\n  override val buffer:
ArrayBuffer\n  override val byteOffset: Int\n  override val byteLength: Int\n  fun set(array: Float64Array, offset:
Int = definedExternally)\n  fun set(array: Array<Double>, offset: Int = definedExternally)\n  fun subarray(start:
Int, end: Int): Float64Array\n\n  companion object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,
\`"INVISIBLE_MEMBER"\`)@kotlin.internal.InlineOnly\npublic inline operator fun Float64Array.get(index: Int):
Double = asDynamic()[index]\n\n@Suppress(\`"INVISIBLE_REFERENCE"\`,

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\ "INVISIBLE_MEMBER" ) \n @kotlin.internal.InlineOnly \n public inline operator
fun Float64Array.set(index: Int, value: Double) { asDynamic()[index] = value } \n \n /** \n * Exposes the JavaScript
[DataView](https://developer.mozilla.org/en/docs/Web/API/DataView) to Kotlin \n \n public external open class
DataView(buffer: ArrayBuffer, byteOffset: Int = definedExternally, byteLength: Int = definedExternally) :
ArrayBufferView { \n override val buffer: ArrayBuffer \n override val byteOffset: Int \n override val
byteLength: Int \n fun getInt8(byteOffset: Int): Byte \n fun getUInt8(byteOffset: Int): Byte \n fun
getInt16(byteOffset: Int, littleEndian: Boolean = definedExternally): Short \n fun getUInt16(byteOffset: Int,
littleEndian: Boolean = definedExternally): Short \n fun getInt32(byteOffset: Int, littleEndian: Boolean =
definedExternally): Int \n fun getUInt32(byteOffset: Int, littleEndian: Boolean = definedExternally): Int \n fun
getFloat32(byteOffset: Int, littleEndian: Boolean = definedExternally): Float \n fun getFloat64(byteOffset: Int,
littleEndian: Boolean = definedExternally): Double \n fun setInt8(byteOffset: Int, value: Byte) \n fun
setUInt8(byteOffset: Int, value: Byte) \n fun setInt16(byteOffset: Int, value: Short, littleEndian: Boolean =
definedExternally) \n fun setUInt16(byteOffset: Int, value: Short, littleEndian: Boolean = definedExternally) \n
fun setInt32(byteOffset: Int, value: Int, littleEndian: Boolean = definedExternally) \n fun setUInt32(byteOffset: Int,
value: Int, littleEndian: Boolean = definedExternally) \n fun setFloat32(byteOffset: Int, value: Float, littleEndian:
Boolean = definedExternally) \n fun setFloat64(byteOffset: Int, value: Double, littleEndian: Boolean =
definedExternally) \n } \n \n public external interface BufferDataSource \n \n public external interface
TexImageSource", /* \n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors. \n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt
file. \n \n */ \n \n // NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT! \n \n // See github.com/kotlin/dukat for
details \n \n package org.w3c.dom.clipboard \n \n import kotlin.js.* \n import org.khronos.webgl.* \n import
org.w3c.dom.* \n import org.w3c.dom.events.* \n \n public external interface ClipboardEventInit : EventInit { \n var
clipboardData: DataTransfer? /* = null */ \n get() = definedExternally \n set(value) =
definedExternally \n } \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun ClipboardEventInit(clipboardData:
DataTransfer? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
ClipboardEventInit { \n val o = js("{}") \n o["clipboardData"] = clipboardData \n o["bubbles"] = bubbles \n
o["cancelable"] = cancelable \n o["composed"] = composed \n return o \n } \n \n /** \n * Exposes the JavaScript
[ClipboardEvent](https://developer.mozilla.org/en/docs/Web/API/ClipboardEvent)
to Kotlin \n \n public external open class ClipboardEvent(type: String, eventInitDict: ClipboardEventInit =
definedExternally) : Event { \n open val clipboardData: DataTransfer? \n \n companion object { \n val NONE:
Short \n val CAPTURING_PHASE: Short \n val AT_TARGET: Short \n val BUBBLING_PHASE:
Short \n } \n } \n \n /** \n * Exposes the JavaScript
[Clipboard](https://developer.mozilla.org/en/docs/Web/API/Clipboard) to Kotlin \n \n public external abstract class
Clipboard : EventTarget { \n fun read(): Promise<DataTransfer> \n fun readText(): Promise<String> \n fun
write(data: DataTransfer): Promise<Unit> \n fun writeText(data: String): Promise<Unit> \n } \n \n public external
interface ClipboardPermissionDescriptor { \n var allowWithoutGesture: Boolean? /* = false */ \n get() =
definedExternally \n set(value) = definedExternally \n } \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun
ClipboardPermissionDescriptor(allowWithoutGesture:
Boolean? = false): ClipboardPermissionDescriptor { \n val o = js("{}") \n o["allowWithoutGesture"] =
allowWithoutGesture \n return o \n } \n \n /* \n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file. \n \n */ \n \n // NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT! \n \n // See
github.com/kotlin/dukat for details \n \n package org.w3c.dom.css \n \n import kotlin.js.* \n import
org.khronos.webgl.* \n import org.w3c.dom.* \n \n public external abstract class MediaList : ItemArrayLike<String>
{ \n open var mediaText: String \n fun appendMedium(medium: String) \n fun deleteMedium(medium: String) \n
override fun item(index: Int): String? \n } \n \n @Suppress("INVISIBLE_REFERENCE",

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\@kotlin.internal.InlineOnly\npublic inline operator fun MediaList.get(index: Int):
String? = asDynamic()[index]\n\n/**\n
 * Exposes the JavaScript [StyleSheet](https://developer.mozilla.org/en/docs/Web/API/StyleSheet) to Kotlin\n
*/\npublic external abstract class StyleSheet {\n    open val type: String\n    open val href: String?\n    open val
ownerNode: UnionElementOrProcessingInstruction?\n    open val parentStyleSheet: StyleSheet?\n    open val title:
String?\n    open val media: MediaList\n    open var disabled: Boolean\n}\n\n/**\n * Exposes the JavaScript
[CSSStyleSheet](https://developer.mozilla.org/en/docs/Web/API/CSSStyleSheet) to Kotlin\n */\npublic external
abstract class CSSStyleSheet : StyleSheet {\n    open val ownerRule: CSSRule?\n    open val cssRules:
CSSRuleList\n    fun insertRule(rule: String, index: Int): Int\n    fun deleteRule(index: Int)\n}\n\n/**\n * Exposes the
JavaScript [StyleSheetList](https://developer.mozilla.org/en/docs/Web/API/StyleSheetList) to Kotlin\n */\npublic
external abstract class StyleSheetList : ItemArrayLike<StyleSheet> {\n    override fun item(index:
Int): StyleSheet?\n}\n\n@Suppress("INVISIBLE_REFERENCE"),
\@kotlin.internal.InlineOnly\npublic inline operator fun StyleSheetList.get(index: Int):
StyleSheet? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[LinkStyle](https://developer.mozilla.org/en/docs/Web/API/LinkStyle) to Kotlin\n */\npublic external interface
LinkStyle {\n    val sheet: StyleSheet?\n    get() = definedExternally\n}\n\n/**\n * Exposes the JavaScript
[CSSRuleList](https://developer.mozilla.org/en/docs/Web/API/CSSRuleList) to Kotlin\n */\npublic external abstract
class CSSRuleList : ItemArrayLike<CSSRule> {\n    override fun item(index: Int):
CSSRule?\n}\n\n@Suppress("INVISIBLE_REFERENCE"),
\@kotlin.internal.InlineOnly\npublic inline operator fun CSSRuleList.get(index: Int):
CSSRule? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[CSSRule](https://developer.mozilla.org/en/docs/Web/API/CSSRule) to Kotlin\n */\npublic external abstract class
CSSRule
{\n    open val type: Short\n    open var cssText: String\n    open val parentRule: CSSRule?\n    open val
parentStyleSheet: CSSStyleSheet?\n\n    companion object {\n        val STYLE_RULE: Short\n        val
CHARSET_RULE: Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val
FONT_FACE_RULE: Short\n        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n        val
NAMESPACE_RULE: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[CSSStyleRule](https://developer.mozilla.org/en/docs/Web/API/CSSStyleRule) to Kotlin\n */\npublic external
abstract class CSSStyleRule : CSSRule {\n    open var selectorText: String\n    open val style:
CSSStyleDeclaration\n\n    companion object {\n        val STYLE_RULE: Short\n        val CHARSET_RULE:
Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val FONT_FACE_RULE: Short\n
        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n        val NAMESPACE_RULE: Short\n
    }\n}\n\npublic external
abstract class CSSImportRule : CSSRule {\n    open val href: String\n    open val media: MediaList\n    open val
styleSheet: CSSStyleSheet\n\n    companion object {\n        val STYLE_RULE: Short\n        val CHARSET_RULE:
Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val FONT_FACE_RULE: Short\n
        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n        val NAMESPACE_RULE: Short\n
    }\n}\n\n/**\n * Exposes the JavaScript
[CSSGroupingRule](https://developer.mozilla.org/en/docs/Web/API/CSSGroupingRule) to Kotlin\n */\npublic
external abstract class CSSGroupingRule : CSSRule {\n    open val cssRules: CSSRuleList\n    fun insertRule(rule:
String, index: Int): Int\n    fun deleteRule(index: Int)\n\n    companion object {\n        val STYLE_RULE: Short\n
        val CHARSET_RULE: Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val
FONT_FACE_RULE: Short\n        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n
        val NAMESPACE_RULE: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[CSSMediaRule](https://developer.mozilla.org/en/docs/Web/API/CSSMediaRule) to Kotlin\n */\npublic external
abstract class CSSMediaRule : CSSGroupingRule {\n    open val media: MediaList\n\n    companion object {\n       
val STYLE_RULE: Short\n        val CHARSET_RULE: Short\n        val IMPORT_RULE: Short\n        val

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MEDIA_RULE: Short\n    val FONT_FACE_RULE: Short\n    val PAGE_RULE: Short\n    val
MARGIN_RULE: Short\n    val NAMESPACE_RULE: Short\n } \n \n /** \n * Exposes the JavaScript
[CSSPageRule](https://developer.mozilla.org/en/docs/Web/API/CSSPageRule) to Kotlin \n */ \n public external
abstract class CSSPageRule : CSSGroupingRule { \n    open var selectorText: String \n    open val style:
CSSStyleDeclaration \n \n    companion object { \n        val STYLE_RULE: Short\n        val CHARSET_RULE:
Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val FONT_FACE_RULE:
Short\n        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n        val NAMESPACE_RULE: Short\n
} \n \n \n public external abstract class CSSMarginRule : CSSRule { \n    open val name: String \n    open val style:
CSSStyleDeclaration \n \n    companion object { \n        val STYLE_RULE: Short\n        val CHARSET_RULE:
Short\n        val IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val FONT_FACE_RULE: Short\n
        val PAGE_RULE: Short\n        val MARGIN_RULE: Short\n        val NAMESPACE_RULE: Short\n
} \n \n \n /** \n * Exposes the JavaScript
[CSSNamespaceRule](https://developer.mozilla.org/en/docs/Web/API/CSSNamespaceRule) to Kotlin \n */ \n public
external abstract class CSSNamespaceRule : CSSRule { \n    open val namespaceURI: String \n    open val prefix:
String \n \n    companion object { \n        val STYLE_RULE: Short\n        val CHARSET_RULE: Short\n        val
IMPORT_RULE: Short\n        val MEDIA_RULE: Short\n        val FONT_FACE_RULE: Short\n        val
PAGE_RULE:
Short\n        val MARGIN_RULE: Short\n        val NAMESPACE_RULE: Short\n    } \n \n \n /** \n * Exposes the
JavaScript [CSSStyleDeclaration](https://developer.mozilla.org/en/docs/Web/API/CSSStyleDeclaration) to Kotlin \n
*/ \n public external abstract class CSSStyleDeclaration : ItemArrayLike<String> { \n    open var cssText: String \n
open val parentRule: CSSRule? \n    open var cssFloat: String \n    open var alignContent: String \n    open var
alignItems: String \n    open var alignSelf: String \n    open var animation: String \n    open var animationDelay:
String \n    open var animationDirection: String \n    open var animationDuration: String \n    open var
animationFillMode: String \n    open var animationIterationCount: String \n    open var animationName: String \n
open var animationPlayState: String \n    open var animationTimingFunction: String \n    open var backfaceVisibility:
String \n    open var background: String \n    open var backgroundAttachment: String \n    open var backgroundClip:
String \n    open var backgroundColor: String \n    open var backgroundImage: String \n    open var
backgroundOrigin: String \n    open var backgroundPosition: String \n    open var backgroundRepeat: String \n    open
var backgroundSize: String \n    open var border: String \n    open var borderBottom: String \n    open var
borderBottomColor: String \n    open var borderBottomLeftRadius: String \n    open var borderBottomRightRadius:
String \n    open var borderBottomStyle: String \n    open var borderBottomWidth: String \n    open var
borderCollapse: String \n    open var borderColor: String \n    open var borderImage: String \n    open var
borderImageOutset: String \n    open var borderImageRepeat: String \n    open var borderImageSlice: String \n    open
var borderImageSource: String \n    open var borderImageWidth: String \n    open var borderLeft: String \n    open var
borderLeftColor: String \n    open var borderLeftStyle: String \n    open var borderLeftWidth: String \n    open var
borderRadius:
String \n    open var borderRight: String \n    open var borderRightColor: String \n    open var borderRightStyle:
String \n    open var borderRightWidth: String \n    open var borderSpacing: String \n    open var borderStyle: String \n
open var borderTop: String \n    open var borderTopColor: String \n    open var borderTopLeftRadius: String \n
open var borderTopRightRadius: String \n    open var borderTopStyle: String \n    open var borderTopWidth: String \n
open var borderWidth: String \n    open var bottom: String \n    open var boxDecorationBreak: String \n    open var
boxShadow: String \n    open var boxSizing: String \n    open var breakAfter: String \n    open var breakBefore:
String \n    open var breakInside: String \n    open var captionSide: String \n    open var clear: String \n    open var clip:
String \n    open var color: String \n    open var columnCount: String \n    open var columnFill: String \n    open var
columnGap: String \n    open var columnRule: String \n    open var columnRuleColor:
String \n    open var columnRuleStyle: String \n    open var columnRuleWidth: String \n    open var columnSpan:
String \n    open var columnWidth: String \n    open var columns: String \n    open var content: String \n    open var
counterIncrement: String \n    open var counterReset: String \n    open var cursor: String \n    open var direction:

```



String\n open var display: String\n open var emptyCells: String\n open var filter: String\n open var flex: String\n open var flexBasis: String\n open var flexDirection: String\n open var flexFlow: String\n open var flexGrow: String\n open var flexShrink: String\n open var flexWrap: String\n open var font: String\n open var fontFamily: String\n open var fontFeatureSettings: String\n open var fontKerning: String\n open var fontLanguageOverride: String\n open var fontSize: String\n open var fontSizeAdjust: String\n open var fontStretch: String\n open var fontStyle: String\n open var fontSynthesis: String\n open var fontVariant: String\n open var fontVariantAlternates: String\n open var fontVariantCaps: String\n open var fontVariantEastAsian: String\n open var fontVariantLigatures: String\n open var fontVariantNumeric: String\n open var fontVariantPosition: String\n open var fontWeight: String\n open var hangingPunctuation: String\n open var height: String\n open var hyphens: String\n open var imageOrientation: String\n open var imageRendering: String\n open var imageResolution: String\n open var imeMode: String\n open var justifyContent: String\n open var left: String\n open var letterSpacing: String\n open var lineBreak: String\n open var lineHeight: String\n open var listStyle: String\n open var listStyleImage: String\n open var listStylePosition: String\n open var listStyleType: String\n open var margin: String\n open var marginBottom: String\n open var marginLeft: String\n open var marginRight: String\n open var marginTop: String\n open var mark: String\n open var markAfter: String\n open var markBefore: String\n open var marks: String\n open var marqueeDirection: String\n open var marqueePlayCount: String\n open var marqueeSpeed: String\n open var marqueeStyle: String\n open var mask: String\n open var maskType: String\n open var maxHeight: String\n open var maxWidth: String\n open var minHeight: String\n open var minWidth: String\n open var navDown: String\n open var navIndex: String\n open var navLeft: String\n open var navRight: String\n open var navUp: String\n open var objectFit: String\n open var objectPosition: String\n open var opacity: String\n open var order: String\n open var orphans: String\n open var outline: String\n open var outlineColor: String\n open var outlineOffset: String\n open var outlineStyle: String\n open var outlineWidth: String\n open var overflowWrap: String\n open var overflowX: String\n open var overflowY: String\n open var padding: String\n open var paddingBottom: String\n open var paddingLeft: String\n open var paddingRight: String\n open var paddingTop: String\n open var pageBreakAfter: String\n open var pageBreakBefore: String\n open var pageBreakInside: String\n open var perspective: String\n open var perspectiveOrigin: String\n open var phonemes: String\n open var position: String\n open var quotes: String\n open var resize: String\n open var rest: String\n open var restAfter: String\n open var restBefore: String\n open var right: String\n open var tabSize: String\n open var tableLayout: String\n open var textAlign: String\n open var textAlignLast: String\n open var textCombineUpright: String\n open var textDecoration: String\n open var textDecorationColor: String\n open var textDecorationLine: String\n open var textDecorationStyle: String\n open var textIndent: String\n open var textJustify: String\n open var textOrientation: String\n open var textOverflow: String\n open var textShadow: String\n open var textTransform: String\n open var textUnderlinePosition: String\n open var top: String\n open var transform: String\n open var transformOrigin: String\n open var transformStyle: String\n open var transition: String\n open var transitionDelay: String\n open var transitionDuration: String\n open var transitionProperty: String\n open var transitionTimingFunction: String\n open var unicodeBidi: String\n open var verticalAlign: String\n open var visibility: String\n open var voiceBalance: String\n open var voiceDuration: String\n open var voicePitch: String\n open var voicePitchRange: String\n open var voiceRate: String\n open var voiceStress: String\n open var voiceVolume: String\n open var whiteSpace: String\n open var widows: String\n open var width: String\n open var wordBreak: String\n open var wordSpacing: String\n open var wordWrap: String\n open var writingMode: String\n open var zIndex: String\n open var \_dashed\_attribute: String\n open var \_camel\_cased\_attribute: String\n open var \_webkit\_cased\_attribute: String\n fun getPropertyValue(property: String): String\n fun getPropertyPriority(property: String): String\n fun setProperty(property: String, value: String, priority: String = definedExternally)\n fun setPropertyValue(property: String, value: String)\n fun setPropertyPriority(property: String, priority: String)\n fun removeProperty(property: String): String\n override

```

fun item(index: Int): String\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
CSSStyleDeclaration.get(index: Int): String? = asDynamic()[index]\n\npublic external interface
ElementCSSInlineStyle {\n    val style: CSSStyleDeclaration\n}\n\n/**\n * Exposes the JavaScript [CSS](https://developer.mozilla.org/en/docs/Web/API/CSS) to Kotlin\n */\n\npublic
external abstract class CSS {\n    companion object {\n        fun escape(ident: String): String\n    }\n}\n\npublic
external interface UnionElementOrProcessingInstruction\", \"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n\n//
See github.com/kotlin/dukat for details\n\npackage org.w3c.dom.encryptedmedia\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.*\nimport org.w3c.dom.events.*\n\n/**\n * Exposes the JavaScript
[MediaKeySystemConfiguration](https://developer.mozilla.org/en/docs/Web/API/MediaKeySystemConfiguration)
to Kotlin\n */\n\npublic external interface MediaKeySystemConfiguration {\n    var label: String? /* = \"\" */\n
    get() = definedExternally\n    set(value) = definedExternally\n    var initDataTypes: Array<String>? /* =
arrayOf() */\n    get() = definedExternally\n    set(value) = definedExternally\n    var audioCapabilities:
Array<MediaKeySystemMediaCapability>? /* = arrayOf() */\n    get() = definedExternally\n    set(value) =
definedExternally\n    var videoCapabilities: Array<MediaKeySystemMediaCapability>? /* = arrayOf() */\n
    get() = definedExternally\n    set(value) = definedExternally\n    var distinctiveIdentifier:
MediaKeysRequirement? /* = MediaKeysRequirement.OPTIONAL */\n    get() = definedExternally\n
    set(value) = definedExternally\n    var persistentState: MediaKeysRequirement? /* =
MediaKeysRequirement.OPTIONAL */\n    get() = definedExternally\n    set(value) = definedExternally\n
    var sessionTypes: Array<String>?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MediaKeySystemConfiguration(label:
String? = \"\", initDataTypes: Array<String>? = arrayOf(), audioCapabilities:
Array<MediaKeySystemMediaCapability>? = arrayOf(), videoCapabilities:
Array<MediaKeySystemMediaCapability>? = arrayOf(), distinctiveIdentifier: MediaKeysRequirement? =
MediaKeysRequirement.OPTIONAL, persistentState: MediaKeysRequirement? =
MediaKeysRequirement.OPTIONAL, sessionTypes: Array<String>? = undefined): MediaKeySystemConfiguration
{\n    val o = js(\"({})\")\n    o[\"label\"] = label\n    o[\"initDataTypes\"] = initDataTypes\n
    o[\"audioCapabilities\"] = audioCapabilities\n    o[\"videoCapabilities\"] = videoCapabilities\n
    o[\"distinctiveIdentifier\"] = distinctiveIdentifier\n    o[\"persistentState\"] = persistentState\n
    o[\"sessionTypes\"] = sessionTypes\n    return o\n}\n\npublic external interface MediaKeySystemMediaCapability {\n
    var contentType: String? /* = \"\" */\n    get() = definedExternally\n    set(value) = definedExternally\n
    var robustness: String? /* = \"\" */\n    get() = definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaKeySystemMediaCapability(contentType: String? = \"\", robustness: String? = \"\"):
MediaKeySystemMediaCapability {\n    val o = js(\"({})\")\n    o[\"contentType\"] = contentType\n
    o[\"robustness\"] = robustness\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MediaKeySystemAccess](https://developer.mozilla.org/en/docs/Web/API/MediaKeySystemAccess) to Kotlin\n */\n\npublic
external abstract class MediaKeySystemAccess {\n    open val keySystem: String\n    fun
getConfiguration(): MediaKeySystemConfiguration\n    fun createMediaKeys(): Promise<MediaKeys>\n}\n\n/**\n *
Exposes the JavaScript [MediaKeys](https://developer.mozilla.org/en/docs/Web/API/MediaKeys) to Kotlin\n */\n\npublic
external
abstract class MediaKeys {\n    fun createSession(sessionType: MediaKeySessionType = definedExternally):
MediaKeySession\n    fun setServerCertificate(serverCertificate: dynamic): Promise<Boolean>\n}\n\n/**\n *
Exposes the JavaScript [MediaKeySession](https://developer.mozilla.org/en/docs/Web/API/MediaKeySession) to

```

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Kotlin\n */\npublic external abstract class MediaKeySession : EventTarget {\n    open val sessionId: String\n    open val expiration: Double\n    open val closed: Promise<Unit>\n    open val keyStatuses: MediaKeyStatusMap\n    open var onkeystatuseschange: ((Event) -> dynamic)?\n    open var onmessage: ((MessageEvent) -> dynamic)?\n    fun generateRequest(initDataType: String, initData: dynamic): Promise<Unit>\n    fun load(sessionId: String): Promise<Boolean>\n    fun update(response: dynamic): Promise<Unit>\n    fun close(): Promise<Unit>\n    fun remove(): Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript
[MediaKeyStatusMap](https://developer.mozilla.org/en/docs/Web/API/MediaKeyStatusMap)
to Kotlin\n */\npublic external abstract class MediaKeyStatusMap {\n    open val size: Int\n    fun has(keyId: dynamic): Boolean\n    fun get(keyId: dynamic): Any?\n}\n\n/**\n * Exposes the JavaScript
[MediaKeyMessageEvent](https://developer.mozilla.org/en/docs/Web/API/MediaKeyMessageEvent) to Kotlin\n
*/\npublic external open class MediaKeyMessageEvent(type: String, eventInitDict: MediaKeyMessageEventInit) :
Event {\n    open val messageType: MediaKeyMessageType\n    open val message: ArrayBuffer\n\n    companion
object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface MediaKeyMessageEventInit : EventInit {\n    var
messageType: MediaKeyMessageType?\n    var message:
ArrayBuffer?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaKeyMessageEventInit(messageType: MediaKeyMessageType?, message:
ArrayBuffer?, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
MediaKeyMessageEventInit {\n    val o = js(\"({})\")\n    o[\"messageType\"] = messageType\n    o[\"message\"] =
message\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return
o\n}\n\npublic external open class MediaEncryptedEvent(type: String, eventInitDict: MediaEncryptedEventInit =
definedExternally) : Event {\n    open val initDataType: String\n    open val initData: ArrayBuffer?\n\n    companion
object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface MediaEncryptedEventInit : EventInit {\n    var
initDataType: String? /* = \"\" */\n    get() = definedExternally\n    set(value) = definedExternally\n    var
initData: ArrayBuffer? /* = null */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaEncryptedEventInit(initDataType: String? = \"\", initData: ArrayBuffer? = null, bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): MediaEncryptedEventInit {\n    val o = js(\"({})\")\n
o[\"initDataType\"] = initDataType\n    o[\"initData\"] = initData\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"]
= cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaKeysRequirement {\n    companion object\n}\n\npublic inline val
MediaKeysRequirement.Companion.REQUIRED: MediaKeysRequirement get() =
\"required\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\npublic inline val
MediaKeysRequirement.Companion.OPTIONAL: MediaKeysRequirement get() =
\"optional\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\npublic
inline val MediaKeysRequirement.Companion.NOT_ALLOWED: MediaKeysRequirement get() = \"not-
allowed\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaKeySessionType {\n    companion object\n}\n\npublic inline val
MediaKeySessionType.Companion.TEMPORARY: MediaKeySessionType get() =
\"temporary\".asDynamic().unsafeCast<MediaKeySessionType>()\n\npublic inline val
MediaKeySessionType.Companion.PERSISTENT_LICENSE: MediaKeySessionType get() = \"persistent-
license\".asDynamic().unsafeCast<MediaKeySessionType>()\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external

```

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interface MediaKeyStatus {\n  companion object\n}\n\npublic inline val MediaKeyStatus.Companion.USABLE:
MediaKeyStatus get() = \"usable\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic
inline val MediaKeyStatus.Companion.EXPIRED: MediaKeyStatus get() =
\"expired\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.RELEASED: MediaKeyStatus get() =
\"released\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.OUTPUT_RESTRICTED: MediaKeyStatus get() = \"output-
restricted\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.OUTPUT_DOWNSCALED: MediaKeyStatus get() = \"output-
downscaled\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.STATUS_PENDING: MediaKeyStatus get() = \"status-
pending\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.INTERNAL_ERROR: MediaKeyStatus get() = \"internal-
error\".asDynamic().unsafeCast<MediaKeyStatus>()\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic
external interface MediaKeyMessageType {\n  companion object\n}\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_REQUEST: MediaKeyMessageType get() = \"license-
request\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_RENEWAL: MediaKeyMessageType get() = \"license-
renewal\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_RELEASE: MediaKeyMessageType get() = \"license-
release\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.INDIVIDUALIZATION_REQUEST: MediaKeyMessageType get() =
\"individualization-request\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\n/*\n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-
GENERATED, DO NOT EDIT!\n\n//
See github.com/kotlin/dukat for details\n\npackage org.w3c.dom.events\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.*\n\n/**\n * Exposes the JavaScript
[UIEvent](https://developer.mozilla.org/en/docs/Web/API/UIEvent) to Kotlin\n\n * public external open class
UIEvent(type: String, eventInitDict: UIEventInit = definedExternally) : Event {\n  open val view: Window?\n
open val detail: Int\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n
val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface UIEventInit :
EventInit {\n  var view: Window? /* = null */\n    get() = definedExternally\n    set(value) =
definedExternally\n  var detail: Int? /* = 0 */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun UIEventInit(view: Window? =
null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
UIEventInit {\n  val o = js(\"({})\")\n  o[\"view\"] = view\n  o[\"detail\"] = detail\n  o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[FocusEvent](https://developer.mozilla.org/en/docs/Web/API/FocusEvent) to Kotlin\n\n * public external open class
FocusEvent(type: String, eventInitDict: FocusEventInit = definedExternally) : UIEvent {\n  open val relatedTarget:
EventTarget?\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val
AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface FocusEventInit :
UIEventInit {\n  var relatedTarget: EventTarget? /* = null */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic

```

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inline fun FocusEventInit(relatedTarget: EventTarget? = null, view: Window? = null, detail: Int? = 0, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): FocusEventInit {
    val o = js("{}")
    o["relatedTarget"] = relatedTarget
    o["view"] = view
    o["detail"] = detail
    o["bubbles"] = bubbles
    o["cancelable"] = cancelable
    o["composed"] = composed
    return o
}

/** Exposes the JavaScript [MouseEvent](https://developer.mozilla.org/en/docs/Web/API/MouseEvent)
to Kotlin */
@public external open class MouseEvent(type: String, eventInitDict: MouseEventInit =
definedExternally) : UIEvent, UnionElementOrMouseEvent {
    open val screenX: Int
    open val screenY: Int
    open val clientX: Int
    open val clientY: Int
    open val ctrlKey: Boolean
    open val shiftKey: Boolean
    open val altKey: Boolean
    open val metaKey: Boolean
    open val button: Short
    open val buttons: Short
    open val relatedTarget: EventTarget?
    open val region: String?
    open val pageX:
Double
    open val pageY: Double
    open val x: Double
    open val y: Double
    open val offsetX: Double
    open val offsetY: Double
    fun getModifierState(keyArg: String): Boolean

    companion object {
        val NONE: Short
        val CAPTURING_PHASE: Short
        val AT_TARGET: Short
        val
BUBBLING_PHASE: Short
    }

    public external interface MouseEventInit : EventModifierInit {
        var
screenX: Int? /* = 0 */
        get() = definedExternally
        set(value) = definedExternally
        var screenY: Int? /*
= 0 */
        get() = definedExternally
        set(value) = definedExternally
        var clientX: Int? /* = 0 */
        get() = definedExternally
        set(value) = definedExternally
        var clientY: Int? /* = 0 */
        get() =
definedExternally
        set(value) = definedExternally
        var button: Short?
/* = 0 */
        get() = definedExternally
        set(value) = definedExternally
        var buttons: Short? /* = 0 */
        get() = definedExternally
        set(value) = definedExternally
        var relatedTarget: EventTarget? /* = null */
        get() = definedExternally
        set(value) = definedExternally
        var region: String? /* = null */
        get() =
definedExternally
        set(value) = definedExternally
    }

    @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
    @kotlin.internal.InlineOnly
    public inline fun MouseEventInit(screenX: Int? = 0,
screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget:
EventTarget? = null, region: String? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean?
= false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false,
modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper:
Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper:
Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? =
null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
MouseEventInit {
        val o = js("{}")
        o["screenX"] = screenX
        o["screenY"] = screenY
        o["clientX"] = clientX
        o["clientY"] = clientY
        o["button"] = button
        o["buttons"] = buttons
        o["relatedTarget"] = relatedTarget
        o["region"] = region
        o["ctrlKey"] = ctrlKey
        o["shiftKey"] =
shiftKey
        o["altKey"] = altKey
        o["metaKey"] = metaKey
        o["modifierAltGraph"] =
modifierAltGraph
        o["modifierCapsLock"] = modifierCapsLock
        o["modifierFn"] = modifierFn
        o["modifierFnLock"] = modifierFnLock
        o["modifierHyper"] = modifierHyper
        o["modifierNumLock"] =
modifierNumLock
        o["modifierScrollLock"] = modifierScrollLock
        o["modifierSuper"] = modifierSuper
        o["modifierSymbol"] = modifierSymbol
        o["modifierSymbolLock"] = modifierSymbolLock
        o["view"] =
view
        o["detail"] = detail
        o["bubbles"] = bubbles
        o["cancelable"] = cancelable
        o["composed"] =
composed
        return o
    }

    public external interface EventModifierInit : UIEventInit {
        var ctrlKey: Boolean?
/* = false */
        get() = definedExternally
        set(value) = definedExternally
        var shiftKey: Boolean? /* =
false */
        get() = definedExternally
        set(value) = definedExternally
        var altKey: Boolean? /* = false
*/
        get() = definedExternally
        set(value) = definedExternally
        var metaKey: Boolean? /* = false */
        get() = definedExternally
        set(value) = definedExternally
        var modifierAltGraph: Boolean? /* = false */
        get() = definedExternally
        set(value) = definedExternally
        var modifierCapsLock: Boolean? /* = false */
        get() = definedExternally
        set(value) =
definedExternally
        var modifierFn: Boolean? /* = false */
        get() = definedExternally
        set(value) =

```

```

definedExternally\n    var modifierFnLock: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var modifierHyper: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var modifierNumLock: Boolean? /* = false */\n        get() = definedExternally\n
set(value) = definedExternally\n    var modifierScrollLock: Boolean? /* = false */\n        get() = definedExternally\n
    set(value) = definedExternally\n    var modifierSuper: Boolean? /* = false */\n        get() = definedExternally\n
set(value) = definedExternally\n    var modifierSymbol: Boolean? /* = false */\n        get() = definedExternally\n
set(value) = definedExternally\n    var
    modifierSymbolLock: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun EventModifierInit(ctrlKey: Boolean? =
false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph:
Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? =
false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false,
modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view:
Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): EventModifierInit {\n    val o = js(\"({})\")\n    o[\"ctrlKey\"] = ctrlKey\n    o[\"shiftKey\"] = shiftKey\n
o[\"altKey\"] = altKey\n    o[\"metaKey\"] = metaKey\n    o[\"modifierAltGraph\"]
= modifierAltGraph\n    o[\"modifierCapsLock\"] = modifierCapsLock\n    o[\"modifierFn\"] = modifierFn\n
o[\"modifierFnLock\"] = modifierFnLock\n    o[\"modifierHyper\"] = modifierHyper\n    o[\"modifierNumLock\"] =
modifierNumLock\n    o[\"modifierScrollLock\"] = modifierScrollLock\n    o[\"modifierSuper\"] = modifierSuper\n
o[\"modifierSymbol\"] = modifierSymbol\n    o[\"modifierSymbolLock\"] = modifierSymbolLock\n    o[\"view\"] =
view\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] =
composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[WheelEvent](https://developer.mozilla.org/en/docs/Web/API/WheelEvent) to Kotlin\n */\npublic external open
class WheelEvent(type: String, eventInitDict: WheelEventInit = definedExternally) : MouseEvent {\n    open val
deltaX: Double\n    open val deltaY: Double\n    open val deltaZ: Double\n    open val deltaMode: Int\n\n    companion object {\n
        val DOM_DELTA_PIXEL: Int\n        val DOM_DELTA_LINE: Int\n        val DOM_DELTA_PAGE: Int\n
        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
        BUBBLING_PHASE: Short\n    }\n\n    public external interface WheelEventInit : MouseEventInit {\n        var
deltaX: Double? /* = 0.0 */\n            get() = definedExternally\n            set(value) = definedExternally\n        var deltaY:
Double? /* = 0.0 */\n            get() = definedExternally\n            set(value) = definedExternally\n        var deltaZ: Double? /*
= 0.0 */\n            get() = definedExternally\n            set(value) = definedExternally\n        var deltaMode: Int? /* = 0 */\n
            get() = definedExternally\n            set(value) = definedExternally\n    }\n\n    @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n    @kotlin.internal.InlineOnly\n    public inline fun WheelEventInit(deltaX: Double? = 0.0,
deltaY: Double? = 0.0, deltaZ: Double? = 0.0, deltaMode: Int? = 0, screenX: Int? = 0, screenY: Int? = 0, clientX:
Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, region:
String? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean?
= false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false,
modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false,
modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false,
modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): WheelEventInit {\n        val o = js(\"({})\")\n
o[\"deltaX\"] = deltaX\n        o[\"deltaY\"] = deltaY\n        o[\"deltaZ\"] = deltaZ\n        o[\"deltaMode\"] = deltaMode\n
o[\"screenX\"] = screenX\n        o[\"screenY\"] = screenY\n        o[\"clientX\"] = clientX\n        o[\"clientY\"] = clientY\n
o[\"button\"] = button\n        o[\"buttons\"] = buttons\n        o[\"relatedTarget\"] = relatedTarget\n        o[\"region\"] =
region\n        o[\"ctrlKey\"] = ctrlKey\n        o[\"shiftKey\"] = shiftKey\n        o[\"altKey\"] = altKey\n        o[\"metaKey\"] =
metaKey\n        o[\"modifierAltGraph\"] = modifierAltGraph\n        o[\"modifierCapsLock\"] = modifierCapsLock\n

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o["modifierFn"] = modifierFn\n  o["modifierFnLock"] = modifierFnLock\n  o["modifierHyper"] =
modifierHyper\n  o["modifierNumLock"] = modifierNumLock\n  o["modifierScrollLock"] =
modifierScrollLock\n  o["modifierSuper"] = modifierSuper\n  o["modifierSymbol"] = modifierSymbol\n
o["modifierSymbolLock"] = modifierSymbolLock\n  o["view"] = view\n  o["detail"] = detail\n
o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return
o\n}\n\n/**\n * Exposes the JavaScript [InputEvent](https://developer.mozilla.org/en/docs/Web/API/InputEvent) to
Kotlin\n */\npublic external
  open class InputEvent(type: String, eventInitDict: InputEventInit = definedExternally) : UIEvent {\n  open val
data: String\n  open val isComposing: Boolean\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface InputEventInit : UIEventInit {\n  var data: String? /* = \"\" */\n  get() =
definedExternally\n  set(value) = definedExternally\n  var isComposing: Boolean? /* = false */\n  get() =
definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun InputEventInit(data: String? = \"\",
isComposing: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable:
Boolean? = false, composed: Boolean? = false): InputEventInit {\n  val o = js(\"({})\")\n  o[\"data\"] = data\n
o[\"isComposing\"]
= isComposing\n  o[\"view\"] = view\n  o[\"detail\"] = detail\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] =
cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[KeyboardEvent](https://developer.mozilla.org/en/docs/Web/API/KeyboardEvent) to Kotlin\n */\npublic external
  open class KeyboardEvent(type: String, eventInitDict: KeyboardEventInit = definedExternally) : UIEvent {\n
  open val key: String\n  open val code: String\n  open val location: Int\n  open val ctrlKey: Boolean\n  open val
shiftKey: Boolean\n  open val altKey: Boolean\n  open val metaKey: Boolean\n  open val repeat: Boolean\n
  open val isComposing: Boolean\n  open val charCode: Int\n  open val keyCode: Int\n  open val which: Int\n
  fun getModifierState(keyArg: String): Boolean\n\n  companion object {\n    val
DOM_KEY_LOCATION_STANDARD: Int\n    val DOM_KEY_LOCATION_LEFT: Int\n    val
DOM_KEY_LOCATION_RIGHT: Int\n
    val DOM_KEY_LOCATION_NUMPAD: Int\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n
    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface
KeyboardEventInit : EventModifierInit {\n  var key: String? /* = \"\" */\n  get() = definedExternally\n
set(value) = definedExternally\n  var code: String? /* = \"\" */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var location: Int? /* = 0 */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var repeat: Boolean? /* = false */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var isComposing: Boolean? /* = false */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun KeyboardEventInit(key: String? = \"\",
code: String? = \"\", location: Int? = 0, repeat:
Boolean? = false, isComposing: Boolean? = false, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey:
Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? =
false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false,
modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false,
modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): KeyboardEventInit {\n  val
o = js(\"({})\")\n  o[\"key\"] = key\n  o[\"code\"] = code\n  o[\"location\"] = location\n  o[\"repeat\"] = repeat\n
o[\"isComposing\"] = isComposing\n  o[\"ctrlKey\"] = ctrlKey\n  o[\"shiftKey\"] = shiftKey\n  o[\"altKey\"] =
altKey\n  o[\"metaKey\"] = metaKey\n  o[\"modifierAltGraph\"] = modifierAltGraph\n
o[\"modifierCapsLock\"]

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= modifierCapsLock\n  o["modifierFn"] = modifierFn\n  o["modifierFnLock"] = modifierFnLock\n
o["modifierHyper"] = modifierHyper\n  o["modifierNumLock"] = modifierNumLock\n
o["modifierScrollLock"] = modifierScrollLock\n  o["modifierSuper"] = modifierSuper\n
o["modifierSymbol"] = modifierSymbol\n  o["modifierSymbolLock"] = modifierSymbolLock\n  o["view"] =
view\n  o["detail"] = detail\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] =
composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[CompositionEvent](https://developer.mozilla.org/en/docs/Web/API/CompositionEvent) to Kotlin\n *\npublic
external open class CompositionEvent(type: String, eventInitDict: CompositionEventInit = definedExternally) :
UIEvent {\n  open val data: String\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
  }\n}\n\npublic external interface CompositionEventInit : UIEventInit {\n  var data: String? /* = "" */\n
get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun CompositionEventInit(data: String? =
"", view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): CompositionEventInit {\n  val o = js("{}")\n  o["data"] = data\n  o["view"] = view\n
o["detail"] = detail\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] =
composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[Event](https://developer.mozilla.org/en/docs/Web/API/Event) to Kotlin\n *\npublic external open class
Event(type: String, eventInitDict: EventInit = definedExternally) {\n  open val type: String\n  open val target:
EventTarget?\n  open val currentTarget:
EventTarget?\n  open val eventPhase: Short\n  open val bubbles: Boolean\n  open val cancelable: Boolean\n
open val defaultPrevented: Boolean\n  open val composed: Boolean\n  open val isTrusted: Boolean\n  open val
timeStamp: Number\n  fun composedPath(): Array<EventTarget>\n  fun stopPropagation()\n  fun
stopImmediatePropagation()\n  fun preventDefault()\n  fun initEvent(type: String, bubbles: Boolean, cancelable:
Boolean)\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val
AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[EventTarget](https://developer.mozilla.org/en/docs/Web/API/EventTarget) to Kotlin\n *\npublic external abstract
class EventTarget {\n  fun addEventListener(type: String, callback: EventListener?, options: dynamic =
definedExternally)\n  fun addEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic =
definedExternally)\n
  fun removeEventListener(type: String, callback: EventListener?, options: dynamic = definedExternally)\n  fun
removeEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic = definedExternally)\n  fun
dispatchEvent(event: Event): Boolean\n}\n\n/**\n * Exposes the JavaScript
[EventListener](https://developer.mozilla.org/en/docs/Web/API/EventListener) to Kotlin\n *\npublic external
interface EventListener {\n  fun handleEvent(event: Event)\n}\n\n", /*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.dom\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport
org.w3c.dom.encryptedmedia.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport
org.w3c.dom.mediasource.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport
org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport
org.w3c.xhr.*\n\npublic external abstract class HTMLAllCollection {\n  open val length: Int\n  fun
item(nameOrIndex: String = definedExternally): UnionElementOrHTMLCollection?\n  fun namedItem(name:
String): UnionElementOrHTMLCollection?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLAllCollection.get(index: Int): Element? =
asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",

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\@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLAllCollection.get(name: String): UnionElementOrHTMLCollection? = asDynamic()[name]\n\n/**\n *
Exposes the JavaScript
[HTMLFormControlsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLFormControlsCollection)
to
Kotlin\n */\npublic external abstract class HTMLFormControlsCollection : HTMLCollection\n\n/**\n * Exposes the JavaScript [RadioNodeList](https://developer.mozilla.org/en/docs/Web/API/RadioNodeList) to Kotlin\n
*/\npublic external abstract class RadioNodeList : NodeList, UnionElementOrRadioNodeList {\n    open var value:
String\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptionsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionsCollection) to Kotlin\n
*/\npublic external abstract class HTMLOptionsCollection : HTMLCollection {\n    override var length: Int\n    open
var selectedIndex: Int\n    fun add(element: UnionHTMLOptGroupElementOrHTMLOptionElement, before:
dynamic = definedExternally)\n    fun remove(index: Int)\n}\n\n@Suppress(\\"INVISIBLE_REFERENCE\",
\\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLOptionsCollection.set(index: Int, option: HTMLOptionElement?) { asDynamic()[index] = option }\n\n/**\n *
Exposes the JavaScript [HTMLInputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLInputElement)
to Kotlin\n */\npublic external abstract class HTMLInputElement : Element, GlobalEventHandlers,
DocumentAndElementEventHandlers, ElementContentEditable, ElementCSSInlineStyle {\n    open var title:
String\n    open var lang: String\n    open var translate: Boolean\n    open var dir: String\n    open val dataset:
DOMStringMap\n    open var hidden: Boolean\n    open var tabIndex: Int\n    open var accessKey: String\n    open
val accessKeyLabel: String\n    open var draggable: Boolean\n    open val dropzone: DOMTokenList\n    open var
contextMenu: HTMLMenuElement?\n    open var spellcheck: Boolean\n    open var innerText: String\n    open val
offsetParent: Element?\n    open val offsetTop: Int\n    open val offsetLeft: Int\n    open val offsetWidth: Int\n    open
val offsetHeight: Int\n    fun click()\n    fun focus()\n    fun blur()\n    fun forceSpellCheck()\n\n    companion object
{\n        val ELEMENT_NODE: Short\n
        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
        PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
        DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
        DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
        DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
        DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLUnknownElement](https://developer.mozilla.org/en/docs/Web/API/HTMLUnknownElement) to Kotlin\n
*/\npublic external abstract class HTMLUnknownElement : HTMLInputElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
        Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
        ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
        PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
        DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
        DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
        DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
        DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[DOMStringMap](https://developer.mozilla.org/en/docs/Web/API/DOMStringMap) to Kotlin\n */\npublic external
abstract class DOMStringMap\n\n@Suppress(\\"INVISIBLE_REFERENCE\",

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\ "INVISIBLE_MEMBER" )\n@kotlin.internal.InlineOnly\npublic inline operator fun DOMStringMap.get(name:
String): String? = asDynamic()[name]\n\n@Suppress(\ "INVISIBLE_REFERENCE" ),
\ "INVISIBLE_MEMBER" )\n@kotlin.internal.InlineOnly\npublic inline operator fun DOMStringMap.set(name:
String, value: String) { asDynamic()[name] = value }\n\n/**\n * Exposes the JavaScript
[HTMLHtmlElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHtmlElement) to Kotlin\n *\npublic
external abstract class HTMLHtmlElement : HTMLElement {\n    open var version: String\n\n    companion object
{\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLHeadElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadElement) to
Kotlin\n *\npublic external abstract class HTMLHeadElement : HTMLElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING:
Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n
val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the
JavaScript [HTMLTitleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTitleElement) to Kotlin\n
*\npublic external abstract class HTMLTitleElement : HTMLElement {\n    open var text: String\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING:
Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n
val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the
JavaScript [HTMLBaseElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBaseElement) to Kotlin\n
*\npublic external abstract class HTMLBaseElement : HTMLElement {\n    open var href: String\n    open var
target: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED:
Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val
DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n

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val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLLinkElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLinkElement) to Kotlin\n */\npublic
external abstract class HTMLLinkElement : HTMLElement, LinkStyle {\n    open var href: String\n    open var
crossOrigin: String?\n    open var rel: String\n    open var `as`: RequestDestination\n    open val relList:
DOMTokenList\n    open var media: String\n    open var nonce: String\n    open var hreflang: String\n    open var
type: String\n    open val sizes: DOMTokenList\n    open varreferrerPolicy: String\n    open var charset: String\n
open var rev: String\n    open var target: String\n    open var scope: String\n    open var workerType:
WorkerType\n\n    companion object
    {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLMetaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMetaElement) to Kotlin\n */\npublic
external abstract class HTMLMetaElement : HTMLElement {\n    open var name: String\n    open var httpEquiv:
String\n    open var content: String\n    open var scheme: String\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLStyleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLStyleElement) to Kotlin\n */\npublic
external abstract class HTMLStyleElement : HTMLElement, LinkStyle {\n    open var media: String\n    open var
nonce: String\n    open var type: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLBodyElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBodyElement)
to Kotlin\n */\npublic external abstract class HTMLBodyElement : HTMLElement, WindowEventHandlers {\n
open var text: String\n    open var link: String\n    open var vLink: String\n    open var aLink: String\n    open var
bgColor: String\n    open var background: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val

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PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLHeadingElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadingElement) to Kotlin\n
*/\npublic external abstract class HTMLHeadingElement : HTMLElement {\n    open var align: String\n\n
companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLParagraphElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParagraphElement) to Kotlin\n
*/\npublic external abstract class HTMLParagraphElement : HTMLElement {\n    open var align: String\n\n
companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS:
Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLHRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHRElement) to Kotlin\n
*/\npublic external abstract class HTMLHRElement : HTMLElement {\n    open var align: String\n    open var color: String\n
    open var noShade: Boolean\n    open var size: String\n    open var width: String\n\n
companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n
    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING:
Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val
DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLPreElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPreElement) to Kotlin\n
*/\npublic external abstract class HTMLPreElement : HTMLElement {\n    open var width: Int\n\n
companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val

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DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n  
val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING:  
Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val  
DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLQuoteElement](https://developer.mozilla.org/en/docs/Web/API/HTMLQuoteElement) to Kotlin \n \* \n public  
external abstract class HTMLQuoteElement : HTMLElement { \n open var cite: String \n \n companion object { \n  
val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED:  
Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val  
DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLLOListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLOListElement) to Kotlin \n \* \n public  
external abstract class HTMLLOListElement : HTMLElement { \n open var reversed: Boolean \n open var start:  
Int \n open var type: String \n open var compact: Boolean \n \n companion object { \n val  
ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE:  
Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n  
val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n  
val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY:  
Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes  
the JavaScript [HTMLULListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLULListElement) to  
Kotlin \n \* \n public external abstract class HTMLULListElement : HTMLElement { \n open var compact: Boolean \n  
open var type: String \n \n companion object { \n val ELEMENT\_NODE: Short\n val  
ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val  
ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val  
PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE:  
Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLLIElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLIElement) to Kotlin \n \* \n public  
external abstract class HTMLLIElement : HTMLElement { \n open var value: Int \n open var type: String \n \n  
companion object { \n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val  
TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE:  
Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val  
COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n

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    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val
NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val
DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLDListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDListElement) to
Kotlin\n */\npublic external abstract class HTMLDListElement : HTMLInputElement {\n    open var compact:
Boolean\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE:
Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n
val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLDivElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDivElement) to Kotlin\n
*/\npublic external abstract class HTMLDivElement : HTMLInputElement {\n    open var align: String\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE:
Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n
val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLAnchorElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAnchorElement) to
Kotlin\n */\npublic external abstract class HTMLAnchorElement : HTMLInputElement, HTMLHyperlinkElementUtils
{\n    open var target: String\n    open var download: String\n    open var ping: String\n    open var rel: String\n
open val relList: DOMTokenList\n    open var hreflang: String\n    open var type: String\n    open var text: String\n
open var referrerPolicy: String\n    open var coords: String\n    open var charset:
String\n    open var name: String\n    open var rev: String\n    open var shape: String\n\n    companion object {\n
val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLDataElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataElement) to Kotlin\n
*/\npublic external abstract class HTMLDataElement : HTMLInputElement {\n    open var value: String\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n

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    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLTimeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTimeElement) to Kotlin \n
*\npublic external abstract class HTMLTimeElement : HTMLElement { \n    open var dateTime: String \n \n
companion object { \n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLSpanElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSpanElement)
to Kotlin \n *\npublic external abstract class HTMLSpanElement : HTMLElement { \n    companion object { \n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLBRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBRElement) to Kotlin \n *\npublic
external abstract class HTMLBRElement : HTMLElement { \n    open var clear: String \n \n
companion object { \n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLHyperlinkElementUtils](https://developer.mozilla.org/en/docs/Web/API/HTMLHyperlinkElementUtils)
to Kotlin \n *\npublic external interface HTMLHyperlinkElementUtils { \n    var href: String\n    val origin: String \n
var protocol: String\n    var username: String\n    var password: String\n    var host: String\n    var hostname:
String\n    var port: String\n    var pathname: String\n    var search: String\n    var hash: String \n} \n \n /** \n * Exposes
the JavaScript [HTMLModElement](https://developer.mozilla.org/en/docs/Web/API/HTMLModElement) to
Kotlin \n *\npublic external abstract class HTMLModElement : HTMLElement { \n    open var cite: String\n    open
var dateTime: String \n \n
companion object { \n    val ELEMENT_NODE: Short\n    val
ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val

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DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE:
Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n
val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n
    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLPictureElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPictureElement) to
Kotlin\n */\npublic external abstract class HTMLPictureElement : HTMLInputElement {\n    companion object {\n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE:
Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n
val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n
    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLSourceElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSourceElement) to
Kotlin\n */\npublic external abstract class HTMLSourceElement : HTMLInputElement {\n    open var src: String\n
open var type: String\n    open var srcset: String\n    open var sizes: String\n    open var media: String\n\n
companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLImageElement](https://developer.mozilla.org/en/docs/Web/API/HTMLImageElement) to Kotlin\n
*/\npublic external abstract class HTMLImageElement : HTMLInputElement, HTMLImageElement,
TexImageSource {\n    open var alt: String\n    open var src: String\n    open var srcset: String\n    open var sizes:
String\n    open var crossOrigin: String?\n    open var useMap: String\n    open var isMap: Boolean\n    open var
width: Int\n    open var height: Int\n    open val naturalWidth:
Int\n    open val naturalHeight: Int\n    open val complete: Boolean\n    open val currentSrc: String\n    open var
referrerPolicy: String\n    open var name: String\n    open var lowsrc: String\n    open var align: String\n    open var
hspace: Int\n    open var vspace: Int\n    open var longDesc: String\n    open var border: String\n    open val x: Int\n
open val y: Int\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n
        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes

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    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLParamElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParamElement) to Kotlin\n
*/\npublic external abstract class HTMLParamElement : HTMLInputElement {\n    open var name:
String\n    open var value: String\n    open var type: String\n    open var valueType: String\n\n    companion object
{\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLVideoElement](https://developer.mozilla.org/en/docs/Web/API/HTMLVideoElement)
to Kotlin\n */\npublic external abstract class HTMLVideoElement : HTMLMediaElement, CanvasImageSource,
TexImageSource {\n    open var width: Int\n    open var height: Int\n    open val videoWidth: Int\n    open val
videoHeight: Int\n    open var poster: String\n    open var playsInline: Boolean\n\n    companion object {\n        val
NETWORK_EMPTY: Short\n        val NETWORK_IDLE: Short\n        val NETWORK_LOADING: Short\n
val NETWORK_NO_SOURCE: Short\n        val HAVE_NOTHING: Short\n        val HAVE_METADATA:
Short\n        val HAVE_CURRENT_DATA: Short\n        val HAVE_FUTURE_DATA: Short\n        val
HAVE_ENOUGH_DATA: Short\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE:
Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLAudioElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAudioElement) to Kotlin\n
*/\npublic external abstract class HTMLAudioElement : HTMLMediaElement {\n    companion object {\n        val
NETWORK_EMPTY: Short\n        val NETWORK_IDLE: Short\n        val NETWORK_LOADING: Short\n
val NETWORK_NO_SOURCE: Short\n        val HAVE_NOTHING: Short\n        val HAVE_METADATA:
Short\n        val HAVE_CURRENT_DATA: Short\n        val HAVE_FUTURE_DATA: Short\n        val
HAVE_ENOUGH_DATA: Short\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTrackElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTrackElement) to Kotlin\n
*/\npublic external abstract class HTMLTrackElement : HTMLInputElement {\n    open var kind: String\n    open var src: String\n
open var srclang: String\n    open var

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label: String\n open var default: Boolean\n open val readyState: Short\n open val track: TextTrack\n\n
companion object {\n val NONE: Short\n val LOADING: Short\n val LOADED: Short\n val
ERROR: Short\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val
TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n
* Exposes the JavaScript
[HTMLMediaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMediaElement) to Kotlin\n
*/\n\npublic external abstract class HTMLMediaElement : HTMLElement {\n open val error: MediaError?\n open
var src: String\n open var srcObject: MediaProvider?\n open val currentSrc: String\n open var crossOrigin:
String?\n open val networkState: Short\n open val preload: String\n open val buffered: TimeRanges\n open
val readyState: Short\n open val seeking: Boolean\n open var currentTime: Double\n open val duration:
Double\n open val paused: Boolean\n open var defaultPlaybackRate: Double\n open var playbackRate:
Double\n open val played: TimeRanges\n open val seekable: TimeRanges\n open val ended: Boolean\n open
var autoplay: Boolean\n open var loop: Boolean\n open var controls: Boolean\n open var volume: Double\n
open var muted: Boolean\n open var defaultMuted: Boolean\n open val audioTracks:
AudioTrackList\n open val videoTracks: VideoTrackList\n open val textTracks: TextTrackList\n open val
mediaKeys: MediaKeys?\n open var onencrypted: ((Event) -> dynamic)?\n open var onwaitingforkey: ((Event) -
> dynamic)?\n fun load()\n fun canPlayType(type: String): CanPlayTypeResult\n fun fastSeek(time: Double)\n
fun getStartDate(): dynamic\n fun play(): Promise<Unit>\n fun pause()\n fun addTextTrack(kind:
TextTrackKind, label: String = definedExternally, language: String = definedExternally): TextTrack\n fun
setMediaKeys(mediaKeys: MediaKeys?): Promise<Unit>\n\n companion object {\n val
NETWORK_EMPTY: Short\n val NETWORK_IDLE: Short\n val NETWORK_LOADING: Short\n
val NETWORK_NO_SOURCE: Short\n val HAVE_NOTHING: Short\n val HAVE_METADATA:
Short\n val HAVE_CURRENT_DATA: Short\n val HAVE_FUTURE_DATA: Short\n val
HAVE_ENOUGH_DATA: Short\n val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n
* Exposes the JavaScript
[MediaError](https://developer.mozilla.org/en/docs/Web/API/MediaError) to Kotlin\n
*/\n\npublic external abstract
class MediaError {\n open val code: Short\n\n companion object {\n val MEDIA_ERR_ABORTED: Short\n
val MEDIA_ERR_NETWORK:
Short\n val MEDIA_ERR_DECODE: Short\n val MEDIA_ERR_SRC_NOT_SUPPORTED: Short\n
}\n}\n\n/**\n
* Exposes the JavaScript
[AudioTrackList](https://developer.mozilla.org/en/docs/Web/API/AudioTrackList) to Kotlin\n
*/\n\npublic external
abstract class AudioTrackList : EventTarget {\n open val length: Int\n open var onchange: ((Event) ->
dynamic)?\n open var onaddtrack: ((TrackEvent) -> dynamic)?\n open var onremovetrack: ((TrackEvent) ->

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dynamic)?\n fun getTrackById(id: String): AudioTrack?\n}\n\n@Suppress("\nINVISIBLE_REFERENCE",
"\nINVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun AudioTrackList.get(index:
Int): AudioTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[AudioTrack](https://developer.mozilla.org/en/docs/Web/API/AudioTrack) to Kotlin\n *\npublic external abstract
class AudioTrack : UnionAudioTrackOrTextTrackOrVideoTrack {\n open val id: String\n open val kind:
String\n open val label: String\n
open val language: String\n open var enabled: Boolean\n open val sourceBuffer: SourceBuffer?\n}\n\n/**\n *
Exposes the JavaScript [VideoTrackList](https://developer.mozilla.org/en/docs/Web/API/VideoTrackList) to
Kotlin\n *\npublic external abstract class VideoTrackList : EventTarget {\n open val length: Int\n open val
selectedIndex: Int\n open var onchange: ((Event) -> dynamic)?\n open var onaddtrack: ((TrackEvent) ->
dynamic)?\n open var onremovetrack: ((TrackEvent) -> dynamic)?\n fun getTrackById(id: String):
VideoTrack?\n}\n\n@Suppress("\nINVISIBLE_REFERENCE",
"\nINVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun VideoTrackList.get(index:
Int): VideoTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[VideoTrack](https://developer.mozilla.org/en/docs/Web/API/VideoTrack) to Kotlin\n *\npublic external abstract
class VideoTrack : UnionAudioTrackOrTextTrackOrVideoTrack {\n open val id: String\n open val kind:
String\n
open val label: String\n open val language: String\n open var selected: Boolean\n open val sourceBuffer:
SourceBuffer?\n}\n\npublic external abstract class TextTrackList : EventTarget {\n open val length: Int\n open
var onchange: ((Event) -> dynamic)?\n open var onaddtrack: ((TrackEvent) -> dynamic)?\n open var
onremovetrack: ((TrackEvent) -> dynamic)?\n fun getTrackById(id: String):
TextTrack?\n}\n\n@Suppress("\nINVISIBLE_REFERENCE",
"\nINVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun TextTrackList.get(index: Int):
TextTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[TextTrack](https://developer.mozilla.org/en/docs/Web/API/TextTrack) to Kotlin\n *\npublic external abstract
class TextTrack : EventTarget, UnionAudioTrackOrTextTrackOrVideoTrack {\n open val kind: TextTrackKind\n
open val label: String\n open val language: String\n open val id: String\n open val
inBandMetadataTrackDispatchType: String\n
open var mode: TextTrackMode\n open val cues: TextTrackCueList?\n open val activeCues:
TextTrackCueList?\n open var oncuechange: ((Event) -> dynamic)?\n open val sourceBuffer: SourceBuffer?\n
fun addCue(cue: TextTrackCue)\n fun removeCue(cue: TextTrackCue)\n}\n\npublic external abstract class
TextTrackCueList {\n open val length: Int\n fun getCueById(id: String):
TextTrackCue?\n}\n\n@Suppress("\nINVISIBLE_REFERENCE",
"\nINVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun TextTrackCueList.get(index:
Int): TextTrackCue? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[TextTrackCue](https://developer.mozilla.org/en/docs/Web/API/TextTrackCue) to Kotlin\n *\npublic external
abstract class TextTrackCue : EventTarget {\n open val track: TextTrack?\n open var id: String\n open var
startTime: Double\n open var endTime: Double\n open var pauseOnExit: Boolean\n open var onenter: ((Event)
-> dynamic)?\n open var onexit: ((Event)
-> dynamic)?\n}\n\n/**\n * Exposes the JavaScript
[TimeRanges](https://developer.mozilla.org/en/docs/Web/API/TimeRanges) to Kotlin\n *\npublic external abstract
class TimeRanges {\n open val length: Int\n fun start(index: Int): Double\n fun end(index: Int):
Double\n}\n\n/**\n * Exposes the JavaScript
[TrackEvent](https://developer.mozilla.org/en/docs/Web/API/TrackEvent) to Kotlin\n *\npublic external open class
TrackEvent(type: String, eventInitDict: TrackEventInit = definedExternally) : Event {\n open val track:
UnionAudioTrackOrTextTrackOrVideoTrack?\n\n companion object {\n val NONE: Short\n val
CAPTURING_PHASE: Short\n val AT_TARGET: Short\n val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface TrackEventInit : EventInit {\n var track:

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UnionAudioTrackOrTextTrackOrVideoTrack? /* = null */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic
inline fun TrackEventInit(track: UnionAudioTrackOrTextTrackOrVideoTrack? = null, bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): TrackEventInit {\n    val o = js(\"({})\")\n    o[\"track\"]
= track\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return
o\n}\n\n/**\n * Exposes the JavaScript
[HTMLMapElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMapElement) to Kotlin\n */\n\npublic
external abstract class HTMLMapElement : HTMLInputElement {\n    open var name: String\n    open val areas:
HTMLCollection\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n
        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val
NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n\n}\n\n/**\n * Exposes
the JavaScript [HTMLAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAreaElement) to
Kotlin\n */\n\npublic external abstract class HTMLAreaElement : HTMLInputElement, HTMLHyperlinkElementUtils {\n
open var alt: String\n    open var coords: String\n    open var shape: String\n    open var target: String\n
open var download: String\n    open var ping: String\n    open var rel: String\n    open val relList: DOMTokenList\n
open var referrerPolicy: String\n    open var noHref: Boolean\n\n    companion object {\n        val ELEMENT_NODE:
Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val
DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val
DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n\n}\n\n/**\n * Exposes the JavaScript
[HTMLTableElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableElement) to Kotlin\n */\n\npublic
external abstract class HTMLTableElement : HTMLInputElement {\n    open var caption:
HTMLTableCaptionElement?\n    open var tHead:
HTMLTableSectionElement?\n    open var tFoot: HTMLTableSectionElement?\n    open val tBodies:
HTMLCollection\n    open val rows: HTMLCollection\n    open var align: String\n    open var border: String\n
open var frame: String\n    open var rules: String\n    open var summary: String\n    open var width: String\n
open var bgColor: String\n    open var cellPadding: String\n    open var cellSpacing: String\n    fun createCaption():
HTMLTableCaptionElement\n    fun deleteCaption()\n    fun createTHead(): HTMLTableSectionElement\n    fun
deleteTHead()\n    fun createTFoot(): HTMLTableSectionElement\n    fun deleteTFoot()\n    fun createTBody():
HTMLTableSectionElement\n    fun insertRow(index: Int = definedExternally): HTMLTableRowElement\n    fun
deleteRow(index: Int)\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n

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    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLTableCaptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCaptionElement) to Kotlin \n
*\npublic external abstract class HTMLTableCaptionElement : HTMLInputElement { \n    open var align:
String \n \n    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLTableColElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableColElement) to Kotlin \n
*\npublic external abstract class HTMLTableColElement : HTMLInputElement { \n    open var span: Int \n    open var
align: String \n    open var ch: String \n    open var chOff: String \n    open var vAlign: String \n    open var width:
String \n \n    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLTableSectionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableSectionElement) to
Kotlin \n
*\npublic external abstract class HTMLTableSectionElement : HTMLInputElement { \n    open val rows:
HTMLCollection \n \n    open var align: String \n    open var ch: String \n    open var chOff: String \n    open var vAlign: String \n    fun
insertRow(index: Int = definedExternally): HTMLInputElement \n    fun deleteRow(index: Int) \n \n    companion object
{ \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLTableRowElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableRowElement) to Kotlin \n
*\npublic external abstract class HTMLTableRowElement : HTMLInputElement { \n    open val rowIndex: Int \n    open
val sectionRowIndex: Int \n    open val cells: HTMLCollection \n    open var align: String \n    open var ch: String \n
    open var chOff: String \n    open var vAlign: String \n    open var bgColor: String \n    fun insertCell(index: Int =

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definedExternally): HTMLElement\n fun deleteCell(index: Int)\n\n companion object {\n val
ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE:
Short\n val DOCUMENT_POSITION_DISCONNECTED: Short\n val
DOCUMENT_POSITION_PRECEDING: Short\n val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n val DOCUMENT_POSITION_CONTAINED_BY:
Short\n val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes
the JavaScript [HTMLTableCellElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCellElement)
to Kotlin\n */\npublic external abstract class HTMLTableCellElement : HTMLElement {\n open var colSpan:
Int\n open var rowSpan: Int\n open var headers: String\n open val cellIndex: Int\n open var scope: String\n
open var abbr: String\n open var align: String\n open var axis: String\n open var height: String\n open var
width: String\n open var ch: String\n open var chOff: String\n open var noWrap: Boolean\n open var vAlign:
String\n open var bgColor: String\n\n companion object {\n val ELEMENT_NODE:
Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[HTMLFormElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFormElement) to Kotlin\n */\npublic
external abstract class HTMLFormElement : HTMLElement {\n open var acceptCharset: String\n open var
action: String\n
open var autocomplete: String\n open var enctype: String\n open var encoding: String\n open var method:
String\n open var name: String\n open var noValidate: Boolean\n open var target: String\n open val
elements: HTMLFormControlsCollection\n open val length: Int\n fun submit()\n fun reset()\n fun
checkValidity(): Boolean\n fun reportValidity(): Boolean\n\n companion object {\n val ELEMENT_NODE:
Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE:
Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING:
Short\n val DOCUMENT_POSITION_CONTAINS: Short\n val
DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n
}\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLFormElement.get(index: Int): Element? =
asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLFormElement.get(name: String): UnionElementOrRadioNodeList? = asDynamic()[name]\n\n/**\n * Exposes

```

the JavaScript [HTMLLabelElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLabelElement) to Kotlin

```

public external abstract class HTMLLabelElement : HTMLElement {
    open val form: HTMLFormElement?
    open var htmlFor: String
    open val control: HTMLElement?
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}

```

\* Exposes the JavaScript [HTMLInputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLInputElement) to Kotlin

```

public external abstract class HTMLInputElement : HTMLElement {
    open var accept: String
    open var alt: String
    open var autocomplete: String
    open var autofocus: Boolean
    open var defaultChecked: Boolean
    open var checked: Boolean
    open var dirName: String
    open var disabled: Boolean
    open val form: HTMLFormElement?
    open val files: FileList?
    open var formAction: String
    open var formEnctype: String
    open var formMethod: String
    open var formNoValidate: Boolean
    open var formTarget: String
    open var height: Int
    open var indeterminate: Boolean
    open var inputMode: String
    open val list: HTMLElement?
    open var max: String
    open var maxLength: Int
    open var min: String
    open var minLength: Int
    open var multiple: Boolean
    open var name: String
    open var pattern: String
    open var placeholder: String
    open var readOnly: Boolean
    open var required: Boolean
    open var size: Int
    open var src: String
    open var step: String
    open var type: String
    open var defaultValue: String
    open var value: String
    open var valueAsDate: dynamic
    open var valueAsNumber: Double
    open var width: Int
    open val willValidate: Boolean
    open val validity: ValidityState
    open val validationMessage: String
    open val labels: NodeList
    open var selectionStart: Int?
    open var selectionEnd: Int?
    open var selectionDirection: String?
    open var align: String
    open var useMap: String
    fun stepUp(n: Int = definedExternally)
    fun stepDown(n: Int = definedExternally)
    fun checkValidity(): Boolean
    fun reportValidity(): Boolean
    fun setCustomValidity(error: String)
    fun select()
    fun setRangeText(replacement: String)
    fun setRangeText(replacement: String, start: Int, end: Int, selectionMode: SelectionMode = definedExternally)
    fun setSelectionRange(start: Int, end: Int, direction: String = definedExternally)
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}

```

\* Exposes the JavaScript [HTMLButtonElement](https://developer.mozilla.org/en/docs/Web/API/HTMLButtonElement) to Kotlin

```

public external abstract class HTMLButtonElement : HTMLElement {
    open var autofocus: Boolean
    open var disabled: Boolean
    open val form: HTMLFormElement?
    open var formAction: String
    open var formEnctype: String
    open var formMethod: String
    open var formNoValidate: Boolean
    open var formTarget: String
    open var name: String
    open var type: String
    open var value: String
    open var menu: HTMLMenuElement?
    open val willValidate: Boolean
}

```



```

open val validity: ValidityState\n  open val validationMessage: String\n  open val labels: NodeList\n  fun
checkValidity(): Boolean\n  fun reportValidity(): Boolean\n  fun setCustomValidity(error: String)\n\n
companion object {\n  val ELEMENT_NODE: Short\n  val ATTRIBUTE_NODE: Short\n  val
TEXT_NODE: Short\n  val CDATA_SECTION_NODE: Short\n  val ENTITY_REFERENCE_NODE:
Short\n  val ENTITY_NODE: Short\n  val PROCESSING_INSTRUCTION_NODE: Short\n  val
COMMENT_NODE: Short\n  val DOCUMENT_NODE: Short\n  val DOCUMENT_TYPE_NODE: Short\n
  val DOCUMENT_FRAGMENT_NODE: Short\n  val NOTATION_NODE: Short\n  val
DOCUMENT_POSITION_DISCONNECTED: Short\n  val DOCUMENT_POSITION_PRECEDING: Short\n
  val DOCUMENT_POSITION_FOLLOWING: Short\n  val DOCUMENT_POSITION_CONTAINS:
Short\n  val DOCUMENT_POSITION_CONTAINED_BY: Short\n  val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[HTMLSelectElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSelectElement) to Kotlin\n *^\npublic
external abstract class HTMLSelectElement : HTMLInputElement, ItemArrayLike<Element> {\n  open var
autocomplete: String\n  open var autofocus: Boolean\n  open var disabled: Boolean\n  open val form:
HTMLFormElement?\n  open var multiple: Boolean\n  open var name: String\n  open var required: Boolean\n
open var size: Int\n  open val type: String\n  open val options: HTMLOptionsCollection\n  override var length:
Int\n  open val selectedOptions: HTMLCollection\n  open var selectedIndex: Int\n  open var value: String\n
open val willValidate: Boolean\n  open val validity: ValidityState\n  open val validationMessage:
String\n  open val labels: NodeList\n  fun namedItem(name: String): HTMLOptionElement?\n  fun
add(element: UnionHTMLOptGroupElementOrHTMLOptionElement, before: dynamic = definedExternally)\n
fun remove(index: Int)\n  fun checkValidity(): Boolean\n  fun reportValidity(): Boolean\n  fun
setCustomValidity(error: String)\n  override fun item(index: Int): Element?\n\n  companion object {\n  val
ELEMENT_NODE: Short\n  val ATTRIBUTE_NODE: Short\n  val TEXT_NODE: Short\n  val
CDATA_SECTION_NODE: Short\n  val ENTITY_REFERENCE_NODE: Short\n  val ENTITY_NODE:
Short\n  val PROCESSING_INSTRUCTION_NODE: Short\n  val COMMENT_NODE: Short\n  val
DOCUMENT_NODE: Short\n  val DOCUMENT_TYPE_NODE: Short\n  val
DOCUMENT_FRAGMENT_NODE: Short\n  val NOTATION_NODE: Short\n  val
DOCUMENT_POSITION_DISCONNECTED: Short\n  val DOCUMENT_POSITION_PRECEDING: Short\n
  val DOCUMENT_POSITION_FOLLOWING:
Short\n  val DOCUMENT_POSITION_CONTAINS: Short\n  val
DOCUMENT_POSITION_CONTAINED_BY: Short\n  val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n
}\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLSelectElement.get(index: Int): Element? =
asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLSelectElement.set(index: Int, option: HTMLOptionElement?) { asDynamic()[index] = option }\n\n/**\n *
Exposes the JavaScript
[HTMLDataListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataListElement) to Kotlin\n *^\npublic
external abstract class HTMLDataListElement : HTMLInputElement {\n  open val options:
HTMLCollection\n\n  companion object {\n  val ELEMENT_NODE: Short\n  val ATTRIBUTE_NODE:
Short\n  val TEXT_NODE: Short\n  val CDATA_SECTION_NODE: Short\n  val
ENTITY_REFERENCE_NODE:
Short\n  val ENTITY_NODE: Short\n  val PROCESSING_INSTRUCTION_NODE: Short\n  val
COMMENT_NODE: Short\n  val DOCUMENT_NODE: Short\n  val DOCUMENT_TYPE_NODE: Short\n
  val DOCUMENT_FRAGMENT_NODE: Short\n  val NOTATION_NODE: Short\n  val
DOCUMENT_POSITION_DISCONNECTED: Short\n  val DOCUMENT_POSITION_PRECEDING: Short\n

```

```

    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptGroupElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptGroupElement) to Kotlin\n
*\n\npublic external abstract class HTMLOptGroupElement : HTMLInputElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n    open var disabled: Boolean\n    open var label:
String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionElement) to Kotlin\n
*\n\npublic external abstract class HTMLOptionElement : HTMLInputElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n    open var disabled: Boolean\n    open var form:
HTMLFormElement?\n
    open var label: String\n    open var defaultSelected: Boolean\n    open var selected: Boolean\n    open var value:
String\n    open var text: String\n    open val index: Int\n\n    companion object {\n        val ELEMENT_NODE:
Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE:
Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTextAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTextAreaElement) to Kotlin\n
*\n\npublic external abstract class HTMLTextAreaElement : HTMLInputElement {\n    open var autocomplete: String\n
open var autofocus: Boolean\n    open var cols: Int\n    open var dirName: String\n    open var disabled: Boolean\n
open val form: HTMLFormElement?\n    open var inputMode: String\n    open var maxLength: Int\n    open var
minLength: Int\n    open var name: String\n    open var placeholder: String\n    open var readOnly: Boolean\n    open
var required: Boolean\n    open var rows: Int\n    open var wrap: String\n    open val type: String\n    open var
defaultValue: String\n    open var value: String\n    open val textLength: Int\n    open val willValidate: Boolean\n
open val validity: ValidityState\n    open val validationMessage: String\n    open val labels: NodeList\n    open var
selectionStart: Int?\n    open var selectionEnd: Int?\n    open var selectionDirection:
String?\n
    fun checkValidity(): Boolean\n    fun reportValidity(): Boolean\n    fun setCustomValidity(error:
String)\n    fun select()\n    fun setRangeText(replacement: String)\n    fun setRangeText(replacement: String, start:
Int, end: Int, selectionMode: SelectionMode = definedExternally)\n    fun setSelectionRange(start: Int, end: Int,
direction: String = definedExternally)\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val

```

```

DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n
        val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLKeygenElement](https://developer.mozilla.org/en/docs/Web/API/HTMLKeygenElement) to Kotlin\n
*\npublic external abstract class HTMLKeygenElement : HTMLInputElement {\n    open var autofocus:
Boolean\n    open var challenge: String\n    open var disabled: Boolean\n    open val form: HTMLFormElement?\n
open var keytype: String\n    open var name: String\n    open val type: String\n    open val willValidate: Boolean\n
open val validity: ValidityState\n    open val validationMessage: String\n    open val labels: NodeList\n    fun
checkValidity(): Boolean\n    fun reportValidity(): Boolean\n    fun setCustomValidity(error: String)\n\n
companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val
TEXT_NODE: Short\n        val CDATA_SECTION_NODE:
Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLOutputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOutputElement) to Kotlin\n
*\npublic external abstract class HTMLOutputElement : HTMLInputElement {\n    open val htmlFor: DOMTokenList\n
open val form: HTMLFormElement?\n    open var name: String\n    open val type: String\n    open var
defaultValue: String\n    open
var value: String\n    open val willValidate: Boolean\n    open val validity: ValidityState\n    open val
validationMessage: String\n    open val labels: NodeList\n    fun checkValidity(): Boolean\n    fun reportValidity():
Boolean\n    fun setCustomValidity(error: String)\n\n
companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLProgressElement](https://developer.mozilla.org/en/docs/Web/API/HTMLProgressElement) to Kotlin\n
*\npublic external abstract class HTMLProgressElement : HTMLInputElement {\n    open var value: Double\n    open
var max: Double\n    open val position: Double\n    open val labels: NodeList\n\n
companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n

```

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    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY:
Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript [HTMLMeterElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMeterElement) to
Kotlin\n */\npublic external abstract class HTMLMeterElement : HTMLElement {\n    open var value: Double\n
open var min: Double\n    open var max: Double\n    open var low: Double\n    open var high: Double\n    open var
optimum: Double\n    open val labels: NodeList\n\n    companion object {\n        val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n
        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n
val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n        }\n}\n\n/**\n * Exposes
the JavaScript [HTMLFieldSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFieldSetElement) to
Kotlin\n */\npublic external abstract class HTMLFieldSetElement : HTMLElement {\n    open var disabled:
Boolean\n    open val form: HTMLFormElement?\n    open var name: String\n    open val type: String\n    open val
elements: HTMLCollection\n    open val willValidate: Boolean\n    open val validity: ValidityState\n    open val
validationMessage: String\n    fun checkValidity(): Boolean\n    fun reportValidity(): Boolean\n    fun
setCustomValidity(error: String)\n\n    companion object {\n        val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n        }\n}\n\n/**\n * Exposes the JavaScript
[HTMLLegendElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLegendElement) to Kotlin\n
*/\npublic external abstract class HTMLLegendElement : HTMLElement {\n    open val form:
HTMLFormElement?\n    open var align: String\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n        }\n}\n\n/**\n * Exposes the JavaScript
[ValidityState](https://developer.mozilla.org/en/docs/Web/API/ValidityState) to Kotlin\n */\npublic external
abstract class ValidityState {\n    open val valueMissing: Boolean\n    open val typeMismatch:
Boolean\n    open val patternMismatch: Boolean\n    open val tooLong: Boolean\n    open val tooShort: Boolean\n
open val rangeUnderflow: Boolean\n    open val rangeOverflow: Boolean\n    open val stepMismatch: Boolean\n
open val badInput: Boolean\n    open val customError: Boolean\n    open val valid: Boolean\n}\n\n/**\n * Exposes
the JavaScript [HTMLDetailsElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDetailsElement) to

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```

Kotlin\n */\npublic external abstract class HTMLDetailsElement : HTMLInputElement {\n  open var open: Boolean\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external abstract class HTMLMenuElement : HTMLInputElement {\n  open var type: String\n  open var label: String\n  open var compact: Boolean\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external abstract class HTMLMenuItemElement : HTMLInputElement {\n  open var type: String\n  open var label: String\n  open var icon: String\n  open var disabled: Boolean\n  open var checked: Boolean\n  open var radiogroup: String\n  open var default: Boolean\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external open class RelatedEvent(type: String, eventInitDict: RelatedEventInit = definedExternally) : Event {\n  open val relatedTarget: EventTarget?\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface RelatedEventInit : EventInit {\n  var relatedTarget: EventTarget? /* = null */\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun RelatedEventInit(relatedTarget: EventTarget? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): RelatedEventInit {\n  val o = js("{}")\n  o["relatedTarget"] = relatedTarget\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript [HTMLDialogElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDialogElement) to Kotlin\n */\n\npublic external abstract class HTMLDialogElement : HTMLInputElement {\n  open var open: Boolean\n  open var returnValue: String\n  fun show(anchor: UnionElementOrMouseEvent = definedExternally)\n  fun showModal(anchor: UnionElementOrMouseEvent = definedExternally)\n  fun close(returnValue: String =

```

```

definedExternally))\n\n companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n}\n}\n\n/**\n * Exposes the JavaScript [HTMLScriptElement](https://developer.mozilla.org/en/docs/Web/API/HTMLScriptElement) to Kotlin\n */\n\npublic external abstract class HTMLScriptElement : HTMLElement, HTMLOrSVGScriptElement {\n    open var src: String\n    open var type: String\n    open var charset: String\n    open var async: Boolean\n    open var defer: Boolean\n    open var crossOrigin: String?\n    open var text: String\n    open var nonce: String\n    open var event: String\n    open var htmlFor: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript [HTMLTemplateElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTemplateElement) to Kotlin\n */\n\npublic external abstract class HTMLTemplateElement : HTMLElement {\n    open val content: DocumentFragment\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript [HTMLSlotElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSlotElement) to Kotlin\n */\n\npublic external abstract class HTMLSlotElement : HTMLElement {\n    fun assignedNodes(options: AssignedNodesOptions = definedExternally): Array<Node>\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface

```

```

AssignedNodesOptions {
    var flatten: Boolean? /* = false */
    get() = definedExternally
    set(value) =
definedExternally
}
@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun AssignedNodesOptions(flatten:
Boolean? = false): AssignedNodesOptions {
    val o = js("{}")
    o["flatten"] = flatten
    return
o
}
/**
 * Exposes the JavaScript
[HTMLCanvasElement](https://developer.mozilla.org/en/docs/Web/API/HTMLCanvasElement) to Kotlin
*/
public external abstract class HTMLCanvasElement : HTMLDivElement, CanvasImageSource, TexImageSource {
    open var width: Int
    open var height: Int
    fun getContext(contextId: String, vararg arguments: Any?):
RenderingContext?
    fun toDataURL(type: String = definedExternally, quality: Any? = definedExternally):
String
    fun toBlob(_callback: (Blob?) -> Unit, type: String = definedExternally, quality: Any? =
definedExternally)
}
companion object {
    val ELEMENT_NODE: Short
    val ATTRIBUTE_NODE: Short
    val TEXT_NODE: Short
    val
CDATA_SECTION_NODE: Short
    val ENTITY_REFERENCE_NODE: Short
    val ENTITY_NODE:
Short
    val PROCESSING_INSTRUCTION_NODE: Short
    val COMMENT_NODE: Short
    val
DOCUMENT_NODE: Short
    val DOCUMENT_TYPE_NODE: Short
    val
DOCUMENT_FRAGMENT_NODE: Short
    val NOTATION_NODE: Short
    val
DOCUMENT_POSITION_DISCONNECTED: Short
    val DOCUMENT_POSITION_PRECEDING: Short
    val
DOCUMENT_POSITION_FOLLOWING: Short
    val DOCUMENT_POSITION_CONTAINS: Short
    val
DOCUMENT_POSITION_CONTAINED_BY: Short
    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
}
}
public external interface
CanvasRenderingContext2DSettings {
    var alpha: Boolean? /* = true */
    get() = definedExternally
    set(value) = definedExternally
}
@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public
inline fun CanvasRenderingContext2DSettings(alpha: Boolean? = true): CanvasRenderingContext2DSettings {
    val o = js("{}")
    o["alpha"] = alpha
    return o
}
/**
 * Exposes the JavaScript
[CanvasRenderingContext2D](https://developer.mozilla.org/en/docs/Web/API/CanvasRenderingContext2D) to
Kotlin
*/
public external abstract class CanvasRenderingContext2D : CanvasState, CanvasTransform,
CanvasCompositing, CanvasImageSmoothing, CanvasFillStrokeStyles, CanvasShadowStyles, CanvasFilters,
CanvasRect, CanvasDrawPath, CanvasUserInterface, CanvasText, CanvasDrawImage, CanvasHitRegion,
CanvasImageData, CanvasPathDrawingStyles, CanvasTextDrawingStyles, CanvasPath, RenderingContext {
    open val canvas: HTMLCanvasElement
}
public external interface CanvasState {
    fun save()
    fun
restore()
}
public external interface CanvasTransform {
    fun scale(x: Double, y: Double)
    fun
rotate(angle: Double)
    fun translate(x:
Double, y: Double)
    fun transform(a: Double, b: Double, c: Double, d: Double, e: Double, f: Double)
    fun
getTransform(): DOMMatrix
    fun setTransform(a: Double, b: Double, c: Double, d: Double, e: Double, f:
Double)
    fun setTransform(transform: dynamic = definedExternally)
    fun resetTransform()
}
public
external interface CanvasCompositing {
    var globalAlpha: Double
    var globalCompositeOperation:
String
}
public external interface CanvasImageSmoothing {
    var imageSmoothingEnabled: Boolean
    var
imageSmoothingQuality: ImageSmoothingQuality
}
public external interface CanvasFillStrokeStyles {
    var
strokeStyle: dynamic
    get() = definedExternally
    set(value) = definedExternally
    var fillStyle:
dynamic
    get() = definedExternally
    set(value) = definedExternally
    fun createLinearGradient(x0:
Double, y0: Double, x1: Double, y1: Double): CanvasGradient
    fun createRadialGradient(x0: Double, y0:
Double,
r0: Double, x1: Double, y1: Double, r1: Double): CanvasGradient
    fun createPattern(image:
CanvasImageSource, repetition: String): CanvasPattern?
}
public external interface CanvasShadowStyles {
    var
shadowOffsetX: Double
    var shadowOffsetY: Double
    var shadowBlur: Double
    var shadowColor:
String
}
public external interface CanvasFilters {
    var filter: String
}
public external interface
CanvasRect {
    fun clearRect(x: Double, y: Double, w: Double, h: Double)
    fun fillRect(x: Double, y: Double,
w: Double, h: Double, fillStyle: dynamic)
    fun strokeRect(x: Double, y: Double, w: Double, h: Double,
strokeStyle: dynamic)
}

```

```

w: Double, h: Double)\n fun strokeRect(x: Double, y: Double, w: Double, h: Double)\n}\n\npublic external
interface CanvasDrawPath {\n fun beginPath()\n fun fill(fillRule: CanvasFillRule = definedExternally)\n fun
fill(path: Path2D, fillRule: CanvasFillRule = definedExternally)\n fun stroke()\n fun stroke(path: Path2D)\n
fun clip(fillRule: CanvasFillRule = definedExternally)\n fun clip(path: Path2D, fillRule: CanvasFillRule =
definedExternally)\n
fun resetClip()\n fun isPointInPath(x: Double, y: Double, fillRule: CanvasFillRule = definedExternally):
Boolean\n fun isPointInPath(path: Path2D, x: Double, y: Double, fillRule: CanvasFillRule = definedExternally):
Boolean\n fun isPointInStroke(x: Double, y: Double): Boolean\n fun isPointInStroke(path: Path2D, x: Double,
y: Double): Boolean\n}\n\npublic external interface CanvasUserInterface {\n fun drawFocusIfNeeded(element:
Element)\n fun drawFocusIfNeeded(path: Path2D, element: Element)\n fun scrollPathIntoView()\n fun
scrollPathIntoView(path: Path2D)\n}\n\npublic external interface CanvasText {\n fun fillText(text: String, x:
Double, y: Double, maxWidth: Double = definedExternally)\n fun strokeText(text: String, x: Double, y: Double,
maxWidth: Double = definedExternally)\n fun measureText(text: String): TextMetrics\n}\n\npublic external
interface CanvasDrawImage {\n fun drawImage(image: CanvasImageSource, dx: Double, dy: Double)\n
fun drawImage(image: CanvasImageSource, dx: Double, dy: Double, dw: Double, dh: Double)\n fun
drawImage(image: CanvasImageSource, sx: Double, sy: Double, sw: Double, sh: Double, dx: Double, dy: Double,
dw: Double, dh: Double)\n}\n\npublic external interface CanvasHitRegion {\n fun addHitRegion(options:
HitRegionOptions = definedExternally)\n fun removeHitRegion(id: String)\n fun clearHitRegions()\n}\n\npublic
external interface CanvasImageData {\n fun createImageData(sw: Double, sh: Double): ImageData\n fun
createImageData(imagedata: ImageData): ImageData\n fun getImageData(sx: Double, sy: Double, sw: Double, sh:
Double): ImageData\n fun putImageData(imagedata: ImageData, dx: Double, dy: Double)\n fun
putImageData(imagedata: ImageData, dx: Double, dy: Double, dirtyX: Double, dirtyY: Double, dirtyWidth: Double,
dirtyHeight: Double)\n}\n\npublic external interface CanvasPathDrawingStyles {\n var lineWidth: Double\n var
lineCap: CanvasLineCap\n
var lineJoin: CanvasLineJoin\n var miterLimit: Double\n var lineDashOffset: Double\n fun
setLineDash(segments: Array<Double>)\n fun getLineDash(): Array<Double>\n}\n\npublic external interface
CanvasTextDrawingStyles {\n var font: String\n var textAlign: CanvasTextAlign\n var textBaseline:
CanvasTextBaseline\n var direction: CanvasDirection\n}\n\npublic external interface CanvasPath {\n fun
closePath()\n fun moveTo(x: Double, y: Double)\n fun lineTo(x: Double, y: Double)\n fun
quadraticCurveTo(cpx: Double, cpy: Double, x: Double, y: Double)\n fun bezierCurveTo(cp1x: Double, cp1y:
Double, cp2x: Double, cp2y: Double, x: Double, y: Double)\n fun arcTo(x1: Double, y1: Double, x2: Double, y2:
Double, radius: Double)\n fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radiusX: Double, radiusY:
Double, rotation: Double)\n fun rect(x: Double, y: Double, w: Double, h: Double)\n fun arc(x: Double, y:
Double, radius: Double, startAngle: Double,
endAngle: Double, anticlockwise: Boolean = definedExternally)\n fun ellipse(x: Double, y: Double, radiusX:
Double, radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean =
definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[CanvasGradient](https://developer.mozilla.org/en/docs/Web/API/CanvasGradient) to Kotlin\n */\n\npublic external
abstract class CanvasGradient {\n fun addColorStop(offset: Double, color: String)\n}\n\n/**\n * Exposes the
JavaScript [CanvasPattern](https://developer.mozilla.org/en/docs/Web/API/CanvasPattern) to Kotlin\n */\n\npublic
external abstract class CanvasPattern {\n fun setTransform(transform: dynamic = definedExternally)\n}\n\n/**\n *
Exposes the JavaScript [TextMetrics](https://developer.mozilla.org/en/docs/Web/API/TextMetrics) to Kotlin\n
*/\n\npublic external abstract class TextMetrics {\n open val width: Double\n open val actualBoundingBoxLeft:
Double\n open val actualBoundingBoxRight: Double\n
open val fontBoundingBoxAscent: Double\n open val fontBoundingBoxDescent: Double\n open val
actualBoundingBoxAscent: Double\n open val actualBoundingBoxDescent: Double\n open val
emHeightAscent: Double\n open val emHeightDescent: Double\n open val hangingBaseline: Double\n open
val alphabeticBaseline: Double\n open val ideographicBaseline: Double\n}\n\npublic external interface

```



```

HitRegionOptions {
    var path: Path2D? /* = null */
    get() = definedExternally
    set(value) =
    definedExternally
    var fillRule: CanvasFillRule? /* = CanvasFillRule.NONZERO */
    get() =
    definedExternally
    set(value) = definedExternally
    var id: String? /* = "" */
    get() =
    definedExternally
    set(value) = definedExternally
    var parentID: String? /* = null */
    get() =
    definedExternally
    set(value) = definedExternally
    var cursor: String? /* = "inherit" */
    get() =
    definedExternally
    set(value)
    = definedExternally
    var control: Element? /* = null */
    get() = definedExternally
    set(value) =
    definedExternally
    var label: String? /* = null */
    get() = definedExternally
    set(value) =
    definedExternally
    var role: String? /* = null */
    get() = definedExternally
    set(value) =
    definedExternally
}
@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun HitRegionOptions(path: Path2D? =
null, fillRule: CanvasFillRule? = CanvasFillRule.NONZERO, id: String? = "", parentID: String? = null, cursor:
String? = "inherit", control: Element? = null, label: String? = null, role: String? = null): HitRegionOptions {
    val
o = js("{}")
    o["path"] = path
    o["fillRule"] = fillRule
    o["id"] = id
    o["parentID"] = parentID
    o["cursor"] = cursor
    o["control"] = control
    o["label"] = label
    o["role"] = role
    return
o
}
/**
 * Exposes the JavaScript [ImageData](https://developer.mozilla.org/en/docs/Web/API/ImageData) to Kotlin
 */
public external open class ImageData : ImageBitmapSource, TexImageSource {
    constructor(sw: Int, sh:
Int)
    constructor(data: Uint8ClampedArray, sw: Int, sh: Int = definedExternally)
    open val width: Int
    open
val height: Int
    open val data: Uint8ClampedArray
}
/**
 * Exposes the JavaScript
[Path2D](https://developer.mozilla.org/en/docs/Web/API/Path2D) to Kotlin
 */
public external open class
Path2D() : CanvasPath {
    constructor(path: Path2D)
    constructor(paths: Array<Path2D>, fillRule:
CanvasFillRule = definedExternally)
    constructor(d: String)
    fun addPath(path: Path2D, transform: dynamic =
definedExternally)
    override fun closePath()
    override fun moveTo(x: Double, y: Double)
    override fun
lineTo(x: Double, y: Double)
    override fun quadraticCurveTo(cpx: Double, cpy: Double, x: Double, y: Double)
    override fun bezierCurveTo(cp1x:
Double, cp1y: Double, cp2x: Double, cp2y: Double, x: Double, y: Double)
    override fun arcTo(x1: Double, y1:
Double, x2: Double, y2: Double, radius: Double)
    override fun arcTo(x1: Double, y1: Double, x2: Double, y2:
Double, radiusX: Double, radiusY: Double, rotation: Double)
    override fun rect(x: Double, y: Double, w: Double,
h: Double)
    override fun arc(x: Double, y: Double, radius: Double, startAngle: Double, endAngle: Double,
anticlockwise: Boolean /* = definedExternally */)
    override fun ellipse(x: Double, y: Double, radiusX: Double,
radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean /* =
definedExternally */)
}
/**
 * Exposes the JavaScript
[ImageBitmapRenderingContext](https://developer.mozilla.org/en/docs/Web/API/ImageBitmapRenderingContext)
to Kotlin
 */
public external abstract class ImageBitmapRenderingContext {
    open val canvas:
HTMLCanvasElement
    fun transferFromImageBitmap(bitmap:
ImageBitmap?)
}
public external interface ImageBitmapRenderingContextSettings {
    var alpha: Boolean? /*
= true */
    get() = definedExternally
    set(value) =
definedExternally
}
@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun
ImageBitmapRenderingContextSettings(alpha: Boolean? = true): ImageBitmapRenderingContextSettings {
    val o
= js("{}")
    o["alpha"] = alpha
    return o
}
/**
 * Exposes the JavaScript
[CustomElementRegistry](https://developer.mozilla.org/en/docs/Web/API/CustomElementRegistry) to Kotlin
 */
public external abstract class CustomElementRegistry {
    fun define(name: String, constructor: () -> dynamic,
options: ElementDefinitionOptions = definedExternally)
    fun get(name: String): Any?
    fun
whenDefined(name: String): Promise<Unit>
}
public external interface ElementDefinitionOptions {
    var
extends: String?
    get() = definedExternally
}

```

```

    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ElementDefinitionOptions(extends:
String? = undefined): ElementDefinitionOptions {\n    val o = js(\"({})\")\n    o[\"extends\"] = extends\n    return
o\n}\n\npublic external interface ElementContentEditable {\n    var contentEditable: String\n    val
isContentEditable: Boolean\n}\n\n/**\n * Exposes the JavaScript
[DataTransfer](https://developer.mozilla.org/en/docs/Web/API/DataTransfer) to Kotlin\n */\npublic external
abstract class DataTransfer {\n    open var dropEffect: String\n    open var effectAllowed: String\n    open val items:
DataTransferItemList\n    open val types: Array<out String>\n    open val files: FileList\n    fun
setDragImage(image: Element, x: Int, y: Int)\n    fun getData(format: String): String\n    fun setData(format: String,
data: String)\n    fun clearData(format: String = definedExternally)\n}\n\n/**\n * Exposes the
JavaScript [DataTransferItemList](https://developer.mozilla.org/en/docs/Web/API/DataTransferItemList) to
Kotlin\n */\npublic external abstract class DataTransferItemList {\n    open val length: Int\n    fun add(data: String,
type: String): DataTransferItem?\n    fun add(data: File): DataTransferItem?\n    fun remove(index: Int)\n    fun
clear()\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
DataTransferItemList.get(index: Int): DataTransferItem? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[DataTransferItem](https://developer.mozilla.org/en/docs/Web/API/DataTransferItem) to Kotlin\n */\npublic
external abstract class DataTransferItem {\n    open val kind: String\n    open val type: String\n    fun
getAsString(_callback: ((String) -> Unit)?)\n    fun getAsFile(): File?\n}\n\n/**\n * Exposes the JavaScript
[DragEvent](https://developer.mozilla.org/en/docs/Web/API/TouchEvent) to Kotlin\n */\npublic external
open class DragEvent(type: String, eventInitDict: DragEventInit = definedExternally) : MouseEvent {\n    open val
dataTransfer: DataTransfer?\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE:
Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n\n    public external interface
DragEventInit : MouseEventInit {\n        var dataTransfer: DataTransfer? /* = null */\n        get() = definedExternally\n
        set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun DragEventInit(dataTransfer:
DataTransfer? = null, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0,
buttons: Short? = 0, relatedTarget: EventTarget? = null, region: String? = null, ctrlKey: Boolean? = false, shiftKey:
Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false,
modifierCapsLock: Boolean?
= false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false,
modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false,
modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): DragEventInit {\n    val o =
js(\"({})\")\n    o[\"dataTransfer\"] = dataTransfer\n    o[\"screenX\"] = screenX\n    o[\"screenY\"] = screenY\n
    o[\"clientX\"] = clientX\n    o[\"clientY\"] = clientY\n    o[\"button\"] = button\n    o[\"buttons\"] = buttons\n
    o[\"relatedTarget\"] = relatedTarget\n    o[\"region\"] = region\n    o[\"ctrlKey\"] = ctrlKey\n    o[\"shiftKey\"] =
shiftKey\n    o[\"altKey\"] = altKey\n    o[\"metaKey\"] = metaKey\n    o[\"modifierAltGraph\"] =
modifierAltGraph\n    o[\"modifierCapsLock\"] = modifierCapsLock\n    o[\"modifierFn\"] = modifierFn\n
    o[\"modifierFnLock\"] = modifierFnLock\n    o[\"modifierHyper\"] = modifierHyper\n    o[\"modifierNumLock\"]
= modifierNumLock\n    o[\"modifierScrollLock\"] = modifierScrollLock\n    o[\"modifierSuper\"] =
modifierSuper\n    o[\"modifierSymbol\"] = modifierSymbol\n    o[\"modifierSymbolLock\"] =
modifierSymbolLock\n    o[\"view\"] = view\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n
    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[Window](https://developer.mozilla.org/en/docs/Web/API/Window) to Kotlin\n */\npublic external abstract class
Window : EventTarget, GlobalEventHandlers, WindowEventHandlers, WindowOrWorkerGlobalScope,
WindowSessionStorage, WindowLocalStorage, GlobalPerformance, UnionMessagePortOrWindowProxy {\n    open
val window: Window\n    open val self: Window\n    open val document: Document\n    open var name: String\n

```

```

open val location: Location\n open val history: History\n open
val customElements: CustomElementRegistry\n open val locationbar: BarProp\n open val menubar: BarProp\n
open val personalbar: BarProp\n open val scrollbars: BarProp\n open val statusbar: BarProp\n open val
toolbar: BarProp\n open var status: String\n open val closed: Boolean\n open val frames: Window\n open val
length: Int\n open val top: Window\n open var opener: Any?\n open val parent: Window\n open val
frameElement: Element?\n open val navigator: Navigator\n open val applicationCache: ApplicationCache\n
open val external: External\n open val screen: Screen\n open val innerWidth: Int\n open val innerHeight: Int\n
open val scrollX: Double\n open val pageXOffset: Double\n open val scrollY: Double\n open val
pageYOffset: Double\n open val screenX: Int\n open val screenY: Int\n open val outerWidth: Int\n open val
outerHeight: Int\n open val devicePixelRatio: Double\n fun close()\n fun stop()\n
fun focus()\n fun blur()\n fun open(url: String = definedExternally, target: String = definedExternally,
features: String = definedExternally): Window?\n fun alert()\n fun alert(message: String)\n fun
confirm(message: String = definedExternally): Boolean\n fun prompt(message: String = definedExternally,
default: String = definedExternally): String?\n fun print()\n fun requestAnimationFrame(callback: (Double) ->
Unit): Int\n fun cancelAnimationFrame(handle: Int)\n fun postMessage(message: Any?, targetOrigin: String,
transfer: Array<dynamic> = definedExternally)\n fun captureEvents()\n fun releaseEvents()\n fun
matchMedia(query: String): MediaQueryList\n fun moveTo(x: Int, y: Int)\n fun moveBy(x: Int, y: Int)\n fun
resizeTo(x: Int, y: Int)\n fun resizeBy(x: Int, y: Int)\n fun scroll(options: ScrollToOptions = definedExternally)\n
fun scroll(x: Double, y: Double)\n fun scrollTo(options: ScrollToOptions = definedExternally)\n
fun scrollTo(x: Double, y: Double)\n fun scrollBy(options: ScrollToOptions = definedExternally)\n fun
scrollBy(x: Double, y: Double)\n fun getComputedStyle(elt: Element, pseudoElt: String? = definedExternally):
CSSStyleDeclaration\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Window.get(name: String):
dynamic = asDynamic()[name]\n\npublic external abstract class BarProp {\n open val visible: Boolean\n}\n\n/**\n * Exposes the JavaScript [History](https://developer.mozilla.org/en/docs/Web/API/History) to Kotlin\n */\n\npublic
external abstract class History {\n open val length: Int\n open var scrollRestoration: ScrollRestoration\n open
val state: Any?\n fun go(delta: Int = definedExternally)\n fun back()\n fun forward()\n fun pushState(data:
Any?, title: String, url: String? = definedExternally)\n fun replaceState(data: Any?, title: String, url: String? =
definedExternally)\n}\n\n/**\n * Exposes the JavaScript [Location](https://developer.mozilla.org/en/docs/Web/API/Location) to Kotlin\n
*/\n\npublic external abstract class Location {\n open var href: String\n open val origin: String\n open var
protocol: String\n open var host: String\n open var hostname: String\n open var port: String\n open var
pathname: String\n open var search: String\n open var hash: String\n open val ancestorOrigins: Array<out
String>\n fun assign(url: String)\n fun replace(url: String)\n fun reload()\n}\n\n/**\n * Exposes the JavaScript
[PopStateEvent](https://developer.mozilla.org/en/docs/Web/API/PopStateEvent) to Kotlin\n */\n\npublic external
open class PopStateEvent(type: String, eventInitDict: PopStateEventInit = definedExternally) : Event {\n open val
state: Any?\n\n companion object {\n val NONE: Short\n val CAPTURING_PHASE: Short\n val
AT_TARGET: Short\n val BUBBLING_PHASE: Short\n }\n}\n\npublic external interface
PopStateEventInit : EventInit {\n var state: Any? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun PopStateEventInit(state: Any? = null,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PopStateEventInit {\n val o
= js(\"({})\")\n o[\"state\"] = state\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n
o[\"composed\"] = composed\n return o\n}\n\n/**\n * Exposes the JavaScript
[HashChangeEvent](https://developer.mozilla.org/en/docs/Web/API/HashChangeEvent) to Kotlin\n */\n\npublic
external open class HashChangeEvent(type: String, eventInitDict: HashChangeEventInit = definedExternally) :
Event {\n open val oldURL: String\n open val newURL: String\n\n companion object {\n val NONE:
Short\n val CAPTURING_PHASE: Short\n val AT_TARGET: Short\n

```

```

    val BUBBLING_PHASE: Short<Int>
}

public external interface HashChangeEventInit : EventInit {
    var oldURL: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
    var newURL: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun HashChangeEventInit(oldURL: String? = "", newURL: String? = "", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): HashChangeEventInit {
    val o = js("{}")
    o["oldURL"] = oldURL
    o["newURL"] = newURL
    o["bubbles"] = bubbles
    o["cancelable"] = cancelable
    o["composed"] = composed
    return o
}

/** Exposes the JavaScript [PageTransitionEvent](https://developer.mozilla.org/en/docs/Web/API/PageTransitionEvent) to Kotlin */
public external open class PageTransitionEvent(type: String, eventInitDict: PageTransitionEventInit = definedExternally) : Event {
    open val persisted: Boolean
}

companion object {
    val NONE: Short
    val CAPTURING_PHASE: Short
    val AT_TARGET: Short
    val BUBBLING_PHASE: Short
}

public external interface PageTransitionEventInit : EventInit {
    var persisted: Boolean? /* = false */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun PageTransitionEventInit(persisted: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PageTransitionEventInit {
    val o = js("{}")
    o["persisted"] = persisted
    o["bubbles"] = bubbles
    o["cancelable"] = cancelable
    o["composed"] = composed
    return o
}

/** Exposes the JavaScript [BeforeUnloadEvent](https://developer.mozilla.org/en/docs/Web/API/BeforeUnloadEvent) to Kotlin */
public external open class BeforeUnloadEvent : Event {
    var returnValue: String
}

companion object {
    val NONE: Short
    val CAPTURING_PHASE: Short
    val AT_TARGET: Short
    val BUBBLING_PHASE: Short
}

public external abstract class ApplicationCache : EventTarget {
    open val status: Short
    open var onchecking: ((Event) -> dynamic)?
    open var onerror: ((Event) -> dynamic)?
    open var onnoupdate: ((Event) -> dynamic)?
    open var ondownloading: ((Event) -> dynamic)?
    open var onprogress: ((ProgressEvent) -> dynamic)?
    open var onupdateready: ((Event) -> dynamic)?
    open var oncached: ((Event) -> dynamic)?
    open var onobsolete: ((Event) -> dynamic)?
    fun update()
    fun abort()
    fun swapCache()
}

companion object {
    val UNCACHED: Short
    val IDLE: Short
    val CHECKING: Short
    val DOWNLOADING: Short
    val UPDATEREADY: Short
    val OBSOLETE: Short
}

/** Exposes the JavaScript [NavigatorOnLine](https://developer.mozilla.org/en/docs/Web/API/NavigatorOnLine) to Kotlin */
public external interface NavigatorOnLine {
    val onLine: Boolean
}

/** Exposes the JavaScript [ErrorEvent](https://developer.mozilla.org/en/docs/Web/API/ErrorEvent) to Kotlin */
public external open class ErrorEvent(type: String, eventInitDict: ErrorEventInit = definedExternally) : Event {
    open val message: String
    open val filename: String
    open val lineno: Int
    open val colno: Int
    open val error: Any?
}

companion object {
    val NONE: Short
    val CAPTURING_PHASE: Short
    val AT_TARGET: Short
    val BUBBLING_PHASE: Short
}

public external interface ErrorEventInit : EventInit {
    var message: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
    var filename: String? /* = "" */
    /* */
    get() = definedExternally
    set(value) = definedExternally
    var lineno: Int? /* = 0 */
    get() = definedExternally
    set(value) = definedExternally
    var colno: Int? /* = 0 */
    get() = definedExternally
    set(value) = definedExternally
    var error: Any? /* = null */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun ErrorEventInit(message: String? = "", filename: String? = "", lineno: Int? = 0, colno: Int? = 0, error: Any? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ErrorEventInit {
    val o = js("{}")
    o["message"] = message
    o["filename"] = filename
    o["lineno"] = lineno
    o["colno"] = colno
    o["error"] = error
}

```

```

o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n
return o\n}\n\n/**\n * Exposes the JavaScript
[PromiseRejectionEvent](https://developer.mozilla.org/en/docs/Web/API/PromiseRejectionEvent) to Kotlin\n
*/\npublic external open class PromiseRejectionEvent(type: String, eventInitDict: PromiseRejectionEventInit) :
Event {\n  open val promise: Promise<Any?>\n  open val reason: Any?\n\n  companion object {\n    val
NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val
BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface PromiseRejectionEventInit : EventInit {\n  var
promise: Promise<Any?>?\n  var reason: Any?\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun PromiseRejectionEventInit(promise:
Promise<Any?>?, reason: Any? = undefined, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): PromiseRejectionEventInit
{\n  val o = js("{}")\n  o["promise"] = promise\n  o["reason"] = reason\n  o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[GlobalEventHandlers](https://developer.mozilla.org/en/docs/Web/API/GlobalEventHandlers) to Kotlin\n
*/\npublic external interface GlobalEventHandlers {\n  var onabort: ((Event) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var onblur: ((FocusEvent) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var oncancel: ((Event) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var oncanplay: ((Event) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var oncanplaythrough: ((Event) -> dynamic)?\n  get()
= definedExternally\n  set(value) = definedExternally\n  var onchange:
((Event) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var onclick:
((MouseEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var onclose:
((Event) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var oncontextmenu:
((MouseEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var
oncuechange: ((Event) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var
ondblclick: ((MouseEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n
var ondrag: ((DragEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var
ondragend: ((DragEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var
ondragenter: ((DragEvent) -> dynamic)?\n  get()
= definedExternally\n  set(value) = definedExternally\n  var ondragexit: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var ondragleave: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var ondragover: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var ondragstart: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var ondrop: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var ondurationchange: ((Event) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var onemptied: ((Event) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var onended: ((Event) -> dynamic)?\n  get() =
definedExternally\n  set(value)
= definedExternally\n  var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var onfocus: ((FocusEvent) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var oninput: ((InputEvent) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var oninvalid: ((Event) -> dynamic)?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var onkeydown: ((KeyboardEvent) -> dynamic)?\n
get() = definedExternally\n  set(value) = definedExternally\n  var onkeypress: ((KeyboardEvent) ->
dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var onkeyup: ((KeyboardEvent)
-> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var onload: ((Event) ->
dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n

```

```

var onloadeddata: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
var onloadedmetadata: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onloadend: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onloadstart: ((ProgressEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onmousedown: ((MouseEvent) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onmouseenter: ((MouseEvent) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onmouseleave: ((MouseEvent) ->
dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var onmousemove:
((MouseEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
    var onmouseout: ((MouseEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onmouseover: ((MouseEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onmouseup: ((MouseEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onwheel: ((WheelEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onpause: ((Event) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onplay: ((Event) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onplaying: ((Event) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onprogress: ((ProgressEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onratechange: ((Event) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onreset: ((Event) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onresize: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onscroll: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onseeked: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onseeking: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onselect: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onshow: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onstalled: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n
    var onsubmit: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
onsuspend: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
ontimeupdate: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
ontoggle: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
onvolumechange: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
var onwaiting: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
ongotpointercapture: ((PointerEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onlostpointercapture: ((PointerEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onpointerdown:
((PointerEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
onpointermove: ((PointerEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onpointerup: ((PointerEvent) -> dynamic)?\n    get() = definedExternally\n
set(value) = definedExternally\n    var onpointercancel: ((PointerEvent) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onpointerover: ((PointerEvent) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onpointerout: ((PointerEvent) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onpointerenter: ((PointerEvent) ->
dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var onpointerleave:
((PointerEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n}\n\n/**\n

```

\* Exposes the JavaScript

[WindowEventHandlers](<https://developer.mozilla.org/en/docs/Web/API/WindowEventHandlers>) to Kotlin\n

```

*/\npublic external interface WindowEventHandlers {\n    var onafterprint: ((Event) -> dynamic)?\n    get() =

```

```

definedExternally\n    set(value) = definedExternally\n    var onbeforeprint: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onbeforeunload: ((BeforeUnloadEvent) ->
String?)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var onhashchange:
((HashChangeEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
onlanguagechange: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
var onmessage: ((MessageEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onoffline: ((Event) -> dynamic)?\n
    get() = definedExternally\n    set(value) = definedExternally\n    var ononline: ((Event) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onpagehide: ((PageTransitionEvent) ->
dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var onpageshow:
((PageTransitionEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n    var
onpopstate: ((PopStateEvent) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
var onrejectionhandled: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var onstorage: ((StorageEvent) -> dynamic)?\n    get() = definedExternally\n    set(value)
= definedExternally\n    var onunhandledrejection: ((PromiseRejectionEvent) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onunload: ((Event) ->
dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n}\n\npublic external interface
DocumentAndElementEventHandlers {\n    var oncopy: ((ClipboardEvent) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var oncut: ((ClipboardEvent) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var onpaste: ((ClipboardEvent) -> dynamic)?\n    get()
= definedExternally\n    set(value) = definedExternally\n}\n\n/**\n * Exposes the JavaScript
[WindowOrWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WindowOrWorkerGlobalScope)
to Kotlin\n */\n\npublic external interface WindowOrWorkerGlobalScope {\n    val origin: String\n    val caches:
CacheStorage\n    fun btoa(data: String): String\n    fun atob(data: String): String\n    fun setTimeout(handler:
dynamic, timeout: Int = definedExternally, vararg arguments: Any?): Int\n    fun clearTimeout(handle: Int =
definedExternally)\n
    fun setInterval(handler: dynamic, timeout: Int = definedExternally, vararg arguments: Any?): Int\n    fun
clearInterval(handle: Int = definedExternally)\n    fun createImageBitmap(image: ImageBitmapSource, options:
ImageBitmapOptions = definedExternally): Promise<ImageBitmap>\n    fun createImageBitmap(image:
ImageBitmapSource, sx: Int, sy: Int, sw: Int, sh: Int, options: ImageBitmapOptions = definedExternally):
Promise<ImageBitmap>\n    fun fetch(input: dynamic, init: RequestInit = definedExternally):
Promise<Response>\n}\n\n/**\n * Exposes the JavaScript
[Navigator](https://developer.mozilla.org/en/docs/Web/API/Navigator) to Kotlin\n */\n\npublic external abstract class
Navigator : NavigatorID, NavigatorLanguage, NavigatorOnLine, NavigatorContentUtils, NavigatorCookies,
NavigatorPlugins, NavigatorConcurrentHardware {\n    open val clipboard: Clipboard\n    open val mediaDevices:
MediaDevices\n    open val maxTouchPoints: Int\n    open val serviceWorker: ServiceWorkerContainer\n
    fun requestMediaKeySystemAccess(keySystem: String, supportedConfigurations:
Array<MediaKeySystemConfiguration>): Promise<MediaKeySystemAccess>\n    fun getUserMedia(constraints:
MediaStreamConstraints, successCallback: (MediaStream) -> Unit, errorCallback: (dynamic) -> Unit)\n    fun
vibrate(pattern: dynamic): Boolean\n}\n\n/**\n * Exposes the JavaScript
[NavigatorID](https://developer.mozilla.org/en/docs/Web/API/NavigatorID) to Kotlin\n */\n\npublic external interface
NavigatorID {\n    val appCodeName: String\n    val appName: String\n    val appVersion: String\n    val platform:
String\n    val product: String\n    val productSub: String\n    val userAgent: String\n    val vendor: String\n    val
vendorSub: String\n    val oscpu: String\n    fun taintEnabled(): Boolean\n}\n\n/**\n * Exposes the JavaScript
[NavigatorLanguage](https://developer.mozilla.org/en/docs/Web/API/NavigatorLanguage) to Kotlin\n */\n\npublic
external interface NavigatorLanguage {\n    val language: String\n
    val languages: Array<out String>\n}\n\npublic external interface NavigatorContentUtils {\n    fun
registerProtocolHandler(scheme: String, url: String, title: String)\n    fun registerContentHandler(mimeType: String,

```





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ResizeQuality? = ResizeQuality.LOW): ImageBitmapOptions {\n  val o = js("{}")\n  o["imageOrientation"]
= imageOrientation\n  o["premultiplyAlpha"] = premultiplyAlpha\n  o["colorSpaceConversion"] =
colorSpaceConversion\n
  o["resizeWidth"] = resizeWidth\n  o["resizeHeight"] = resizeHeight\n  o["resizeQuality"] = resizeQuality\n
return o}\n\n/**\n * Exposes the JavaScript
[MessageEvent](https://developer.mozilla.org/en/docs/Web/API/MessageEvent) to Kotlin\n */\npublic external open
class MessageEvent(type: String, eventInitDict: MessageEventInit = definedExternally) : Event {\n  open val data:
Any?\n  open val origin: String\n  open val lastEventId: String\n  open val source:
UnionMessagePortOrWindowProxy?\n  open val ports: Array<out MessagePort>\n  fun initMessageEvent(type:
String, bubbles: Boolean, cancelable: Boolean, data: Any?, origin: String, lastEventId: String, source:
UnionMessagePortOrWindowProxy?, ports: Array<MessagePort>)\n\n  companion object {\n    val NONE:
Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE:
Short\n  }\n}\n\npublic external interface MessageEventInit : EventInit {\n  var
data: Any? /* = null */\n  get() = definedExternally\n  set(value) = definedExternally\n  var origin: String?
/* = "" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var lastEventId: String? /* =
"" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var source:
UnionMessagePortOrWindowProxy? /* = null */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var ports: Array<MessagePort>? /* = arrayOf() */\n  get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MessageEventInit(data: Any? = null,
origin: String? = "", lastEventId: String? = "", source: UnionMessagePortOrWindowProxy? = null, ports:
Array<MessagePort>? = arrayOf(), bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): MessageEventInit {\n  val o
= js("{}")\n  o["data"] = data\n  o["origin"] = origin\n  o["lastEventId"] = lastEventId\n  o["source"] =
source\n  o["ports"] = ports\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] =
composed\n  return o}\n\n/**\n * Exposes the JavaScript
[EventSource](https://developer.mozilla.org/en/docs/Web/API/EventSource) to Kotlin\n */\npublic external open
class EventSource(url: String, eventSourceInitDict: EventSourceInit = definedExternally) : EventTarget {\n  open
val url: String\n  open val withCredentials: Boolean\n  open val readyState: Short\n  var onopen: ((Event) ->
dynamic)?\n  var onmessage: ((MessageEvent) -> dynamic)?\n  var onerror: ((Event) -> dynamic)?\n  fun
close()\n\n  companion object {\n    val CONNECTING: Short\n    val OPEN: Short\n    val CLOSED:
Short\n  }\n}\n\npublic external interface EventSourceInit {\n  var withCredentials: Boolean? /* = false */\n
get() = definedExternally\n
  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun EventSourceInit(withCredentials:
Boolean? = false): EventSourceInit {\n  val o = js("{}")\n  o["withCredentials"] = withCredentials\n  return
o}\n\n/**\n * Exposes the JavaScript [WebSocket](https://developer.mozilla.org/en/docs/Web/API/WebSocket) to
Kotlin\n */\npublic external open class WebSocket(url: String, protocols: dynamic = definedExternally) :
EventTarget {\n  open val url: String\n  open val readyState: Short\n  open val bufferedAmount: Number\n  var
onopen: ((Event) -> dynamic)?\n  var onerror: ((Event) -> dynamic)?\n  var onclose: ((Event) ->
dynamic)?\n  open val extensions: String\n  open val protocol: String\n  var onmessage: ((MessageEvent) ->
dynamic)?\n  var
binaryType: BinaryType\n  fun close(code: Short = definedExternally, reason: String = definedExternally)\n  fun
send(data: String)\n  fun send(data: Blob)\n  fun send(data: ArrayBuffer)\n  fun send(data:
ArrayBufferView)\n\n  companion object {\n    val CONNECTING: Short\n    val OPEN: Short\n    val
CLOSING: Short\n    val CLOSED: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[CloseEvent](https://developer.mozilla.org/en/docs/Web/API/CloseEvent) to Kotlin\n */\npublic external open
class CloseEvent(type: String, eventInitDict: CloseEventInit = definedExternally) : Event {\n  open val wasClean:
Boolean\n  open val code: Short\n  open val reason: String\n\n  companion object {\n    val NONE: Short\n

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val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface CloseEventInit : EventInit {\n    var wasClean: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var code: Short? /* = 0 */\n    get() =
definedExternally\n    set(value)
= definedExternally\n    var reason: String? /* = \"\" */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun CloseEventInit(wasClean: Boolean? =
false, code: Short? = 0, reason: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): CloseEventInit {\n    val o = js(\"({})\")\n    o[\"wasClean\"] = wasClean\n    o[\"code\"] = code\n    o[\"reason\"] = reason\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] =
composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MessageChannel](https://developer.mozilla.org/en/docs/Web/API/MessageChannel) to Kotlin\n */\n\npublic external
open class MessageChannel {\n    open val port1: MessagePort\n    open val port2: MessagePort\n}\n\n/**\n *
Exposes the JavaScript [MessagePort](https://developer.mozilla.org/en/docs/Web/API/MessagePort)
to Kotlin\n */\n\npublic external abstract class MessagePort : EventTarget, UnionMessagePortOrWindowProxy,
UnionMessagePortOrServiceWorker, UnionClientOrMessagePortOrServiceWorker {\n    open var onmessage:
((MessageEvent) -> dynamic)?\n    fun postMessage(message: Any?, transfer: Array<dynamic> =
definedExternally)\n    fun start()\n    fun close()\n}\n\n/**\n * Exposes the JavaScript
[BroadcastChannel](https://developer.mozilla.org/en/docs/Web/API/BroadcastChannel) to Kotlin\n */\n\npublic
external open class BroadcastChannel(name: String) : EventTarget {\n    open val name: String\n    var onmessage:
((MessageEvent) -> dynamic)?\n    fun postMessage(message: Any?)\n    fun close()\n}\n\n/**\n * Exposes the
JavaScript [WorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WorkerGlobalScope) to Kotlin\n
*/\n\npublic external abstract class WorkerGlobalScope : EventTarget, WindowOrWorkerGlobalScope,
GlobalPerformance {\n    open val self: WorkerGlobalScope\n    open
val location: WorkerLocation\n    open val navigator: WorkerNavigator\n    open var onerror: ((dynamic, String, Int,
Int, Any?) -> dynamic)?\n    open var onlanguagechange: ((Event) -> dynamic)?\n    open var onoffline: ((Event) ->
dynamic)?\n    open var online: ((Event) -> dynamic)?\n    open var onrejectionhandled: ((Event) -> dynamic)?\n
open var onunhandledrejection: ((PromiseRejectionEvent) -> dynamic)?\n    fun importScripts(vararg urls:
String)\n}\n\n/**\n * Exposes the JavaScript
[DedicatedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/DedicatedWorkerGlobalScope) to
Kotlin\n */\n\npublic external abstract class DedicatedWorkerGlobalScope : WorkerGlobalScope {\n    open var
onmessage: ((MessageEvent) -> dynamic)?\n    fun postMessage(message: Any?, transfer: Array<dynamic> =
definedExternally)\n    fun close()\n}\n\n/**\n * Exposes the JavaScript
[SharedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/SharedWorkerGlobalScope) to
Kotlin\n */\n\npublic
external abstract class SharedWorkerGlobalScope : WorkerGlobalScope {\n    open val name: String\n    open val
applicationCache: ApplicationCache\n    open var onconnect: ((Event) -> dynamic)?\n    fun close()\n}\n\n/**\n *
Exposes the JavaScript [AbstractWorker](https://developer.mozilla.org/en/docs/Web/API/AbstractWorker) to
Kotlin\n */\n\npublic external interface AbstractWorker {\n    var onerror: ((Event) -> dynamic)?\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n/**\n * Exposes the JavaScript
[Worker](https://developer.mozilla.org/en/docs/Web/API/Worker) to Kotlin\n */\n\npublic external open class
Worker(scriptURL: String, options: WorkerOptions = definedExternally) : EventTarget, AbstractWorker {\n    var
onmessage: ((MessageEvent) -> dynamic)?\n    override var onerror: ((Event) -> dynamic)?\n    fun terminate()\n
fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally)\n}\n\n\npublic external interface
WorkerOptions
{\n    var type: WorkerType? /* = WorkerType.CLASSIC */\n    get() = definedExternally\n    set(value) =
definedExternally\n    var credentials: RequestCredentials? /* = RequestCredentials.OMIT */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n\n@Suppress(\"INVISIBLE_REFERENCE\",

```



```

external abstract class HTMLAppletElement : HTMLInputElement {
    open var align: String
    open var alt: String
    open var archive: String
    open var code: String
    open var codeBase: String
    open var height: String
    open var hspace: Int
    open var name: String
    open var _object: String
    open var vspace: Int
    open var width: String
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short }

/** Exposes the JavaScript [HTMLMarqueeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMarqueeElement) to Kotlin */
public external abstract class HTMLMarqueeElement : HTMLInputElement {
    open var behavior: String
    open var bgColor: String
    open var direction: String
    open var height: String
    open var hspace: Int
    open var loop: Int
    open var scrollAmount: Int
    open var scrollDelay: Int
    open var trueSpeed: Boolean
    open var vspace: Int
    open var width: String
    open var onbounce: ((Event) -> dynamic)?
    open var onfinish: ((Event) -> dynamic)?
    open var onstart: ((Event) -> dynamic)?
    fun start()
    fun stop()
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short }

/** Exposes the JavaScript [HTMLFrameSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFrameSetElement) to Kotlin */
public external abstract class HTMLFrameSetElement : HTMLInputElement, WindowEventHandlers {
    open var cols: String
    open var rows: String
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short }

public external abstract class HTMLFrameElement : HTMLInputElement {
    open var name: String
    open var scrolling: String
    open var src: String
    open var frameBorder: String
    open var longDesc: String
    open var noResize: Boolean
    open val contentDocument: Document?
    open val contentWindow: Window?
    open var marginHeight: String
    open var marginWidth: String
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE:

```

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Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external abstract class
HTMLDirectoryElement : HTMLElement {\n    open var compact: Boolean\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLFontElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFontElement) to Kotlin\n */\n\npublic
external abstract class HTMLFontElement : HTMLElement {\n    open var color: String\n    open
var face: String\n    open var size: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface External
{\n    fun AddSearchProvider()\n    fun IsSearchProviderInstalled()\n}\n\npublic external interface EventInit {\n
var bubbles: Boolean?

/* = false */\n    get() = definedExternally\n    set(value) = definedExternally\n    var cancelable: Boolean? /* =
false */\n    get() = definedExternally\n    set(value) = definedExternally\n    var composed: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\n\npublic inline fun EventInit(bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): EventInit {\n    val o = js(\"({})\")\n    o[\"bubbles\"] =
bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the
JavaScript [CustomEvent](https://developer.mozilla.org/en/docs/Web/API/CustomEvent) to Kotlin\n */\n\npublic
external open class CustomEvent(type: String, eventInitDict: CustomEventInit = definedExternally) : Event {\n
    open val detail: Any?\n    fun initCustomEvent(type: String, bubbles:
Boolean, cancelable: Boolean, detail: Any?)\n\n    companion object {\n        val NONE: Short\n        val
CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n
    }\n}\n\npublic external interface CustomEventInit : EventInit {\n    var detail: Any? /* = null */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\n\npublic inline fun CustomEventInit(detail: Any? = null,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): CustomEventInit {\n    val o
= js(\"({})\")\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n

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o["composed"] = composed\n    return o\n}\n\npublic external interface EventListenerOptions {\n    var capture:
Boolean? /* = false */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun EventListenerOptions(capture:
Boolean? = false): EventListenerOptions {\n    val o = js("{}")\n    o["capture"] = capture\n    return
o\n}\n\npublic external interface AddEventListenerOptions : EventListenerOptions {\n    var passive: Boolean? /* =
false */\n    get() = definedExternally\n    set(value) = definedExternally\n    var once: Boolean? /* = false */\n
    get() = definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun AddEventListenerOptions(passive:
Boolean? = false, once: Boolean? = false, capture: Boolean? = false): AddEventListenerOptions {\n    val o =
js("{}")\n    o["passive"] = passive\n    o["once"] = once\n    o["capture"] = capture\n    return o\n}\n\npublic
external interface NonElementParentNode {\n    fun getElementById(elementId: String): Element?\n}\n\n/**\n * Exposes the JavaScript
[DocumentOrShadowRoot](https://developer.mozilla.org/en/docs/Web/API/DocumentOrShadowRoot) to Kotlin\n
*\npublic external interface DocumentOrShadowRoot {\n    val fullscreenElement: Element?\n    get() =
definedExternally\n}\n\n/**\n * Exposes the JavaScript
[ParentNode](https://developer.mozilla.org/en/docs/Web/API/ParentNode) to Kotlin\n *\npublic external interface
ParentNode {\n    val children: HTMLCollection\n    val firstElementChild: Element?\n    get() =
definedExternally\n    val lastElementChild: Element?\n    get() = definedExternally\n    val childElementCount:
Int\n    fun prepend(vararg nodes: dynamic)\n    fun append(vararg nodes: dynamic)\n    fun querySelector(selectors:
String): Element?\n    fun querySelectorAll(selectors: String): NodeList\n}\n\n/**\n * Exposes the JavaScript
[NonDocumentTypeChildNode](https://developer.mozilla.org/en/docs/Web/API/NonDocumentTypeChildNode) to
Kotlin\n *\npublic external interface
NonDocumentTypeChildNode {\n    val previousElementSibling: Element?\n    get() = definedExternally\n    val
nextElementSibling: Element?\n    get() = definedExternally\n}\n\n/**\n * Exposes the JavaScript
[ChildNode](https://developer.mozilla.org/en/docs/Web/API/ChildNode) to Kotlin\n *\npublic external interface
ChildNode {\n    fun before(vararg nodes: dynamic)\n    fun after(vararg nodes: dynamic)\n    fun
replaceWith(vararg nodes: dynamic)\n    fun remove()\n}\n\n/**\n * Exposes the JavaScript
[Slotable](https://developer.mozilla.org/en/docs/Web/API/Slotable) to Kotlin\n *\npublic external interface Slotable
{\n    val assignedSlot: HTMLSlotElement?\n    get() = definedExternally\n}\n\n/**\n * Exposes the JavaScript
[NodeList](https://developer.mozilla.org/en/docs/Web/API/NodeList) to Kotlin\n *\npublic external abstract class
NodeList : ItemArrayLike<Node> {\n    override fun item(index: Int):
Node?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic
inline operator fun NodeList.get(index: Int): Node? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[HTMLCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLCollection) to Kotlin\n *\npublic
external abstract class HTMLCollection : ItemArrayLike<Element>, UnionElementOrHTMLCollection {\n
    override fun item(index: Int): Element?\n    fun namedItem(name: String):
Element?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun HTMLCollection.get(index:
Int): Element? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun HTMLCollection.get(name:
String): Element? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript
[MutationObserver](https://developer.mozilla.org/en/docs/Web/API/MutationObserver) to Kotlin\n *\npublic
external open class MutationObserver(callback: (Array<MutationRecord>,
MutationObserver) -> Unit) {\n    fun observe(target: Node, options: MutationObserverInit = definedExternally)\n
    fun disconnect()\n    fun takeRecords(): Array<MutationRecord>\n}\n\n/**\n * Exposes the JavaScript
[MutationObserverInit](https://developer.mozilla.org/en/docs/Web/API/MutationObserverInit) to Kotlin\n

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*\npublic external interface MutationObserverInit {\n    var childList: Boolean? /* = false */\n        get() =
definedExternally\n    set(value) = definedExternally\n    var attributes: Boolean?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var characterData: Boolean?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var subtree: Boolean? /* = false */\n        get() =
definedExternally\n    set(value) = definedExternally\n    var attributeOldValue: Boolean?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var characterDataOldValue: Boolean?\n        get() =
definedExternally\n
    set(value) = definedExternally\n    var attributeFilter: Array<String>?\n        get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress(\n    "INVISIBLE_REFERENCE",
    "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MutationObserverInit(childList:
Boolean? = false, attributes: Boolean? = undefined, characterData: Boolean? = undefined, subtree: Boolean? = false,
attributeOldValue: Boolean? = undefined, characterDataOldValue: Boolean? = undefined, attributeFilter:
Array<String>? = undefined): MutationObserverInit {\n    val o = js(\n    "{")\n    o["childList"] = childList\n
o["attributes"] = attributes\n    o["characterData"] = characterData\n    o["subtree"] = subtree\n
o["attributeOldValue"] = attributeOldValue\n    o["characterDataOldValue"] = characterDataOldValue\n
o["attributeFilter"] = attributeFilter\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MutationRecord](https://developer.mozilla.org/en/docs/Web/API/MutationRecord)
to Kotlin\n */\npublic external abstract class MutationRecord {\n    open val type: String\n    open val target:
Node\n    open val addedNodes: NodeList\n    open val removedNodes: NodeList\n    open val previousSibling:
Node?\n    open val nextSibling: Node?\n    open val attributeName: String?\n    open val attributeNamespace:
String?\n    open val oldValue: String?\n}\n\n/**\n * Exposes the JavaScript
[Node](https://developer.mozilla.org/en/docs/Web/API/Node)
to Kotlin\n */\npublic external abstract class Node :
EventTarget {\n    open val nodeType: Short\n    open val nodeName: String\n    open val baseURI: String\n    open
val isConnected: Boolean\n    open val ownerDocument: Document?\n    open val parentNode: Node?\n    open val
parentElement: Element?\n    open val childNodes: NodeList\n    open val firstChild: Node?\n    open val lastChild:
Node?\n    open val previousSibling: Node?\n    open val nextSibling: Node?\n    open var nodeValue: String?\n
    open var textContent: String?\n    fun getRootNode(options: GetRootNodeOptions = definedExternally): Node\n
fun hasChildNodes(): Boolean\n    fun normalize()\n    fun cloneNode(deep: Boolean = definedExternally): Node\n
fun isEqualNode(otherNode: Node?): Boolean\n    fun isSameNode(otherNode: Node?): Boolean\n    fun
compareDocumentPosition(other: Node): Short\n    fun contains(other: Node?): Boolean\n    fun
lookupPrefix(namespace: String?): String?\n    fun lookupNamespaceURI(prefix: String?): String?\n    fun
isDefaultNamespace(namespace: String?): Boolean\n    fun insertBefore(node: Node, child: Node?): Node\n    fun
appendChild(node: Node): Node\n    fun replaceChild(node: Node, child: Node): Node\n    fun removeChild(child:
Node): Node\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n
        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface
GetRootNodeOptions {\n    var composed: Boolean? /* = false */\n        get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\n    "INVISIBLE_REFERENCE",
    "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun GetRootNodeOptions(composed:
Boolean? = false): GetRootNodeOptions {\n    val o = js(\n    "{")\n    o["composed"] = composed\n    return
o\n}\n\n/**\n * Exposes the JavaScript

```

[Document](https://developer.mozilla.org/en/docs/Web/API/Document) to Kotlin\n \*\npublic external open class Document : Node, GlobalEventHandlers, DocumentAndElementEventHandlers, NonElementParentNode, DocumentOrShadowRoot, ParentNode, GeometryUtils {\n open val implementation: DOMImplementation\n open val URL: String\n open val documentURI: String\n open val origin: String\n open val compatMode: String\n open val characterSet: String\n open val charset: String\n open val inputEncoding: String\n open val contentType: String\n open val doctype: DocumentType?\n open val documentElement: Element?\n open val location: Location?\n var domain: String\n open val referrer: String\n var cookie: String\n open val lastModified: String\n open val readyState: DocumentReadyState\n var title: String\n var dir: String\n var body: HTMLElement?\n open val head: HTMLHeadElement?\n open val images: HTMLCollection\n open val embeds: HTMLCollection\n open val plugins: HTMLCollection\n open val links: HTMLCollection\n open val forms: HTMLCollection\n open val scripts: HTMLCollection\n open val currentScript: HTMLScriptElement?\n open val defaultView: Window?\n open val activeElement: Element?\n var designMode: String\n var onreadystatechange: ((Event) -> dynamic)?\n var fgColor: String\n var linkColor: String\n var vlinkColor: String\n var alinkColor: String\n var bgColor: String\n open val anchors: HTMLCollection\n open val applets: HTMLCollection\n open val all: HTMLAllCollection\n open val scrollingElement: Element?\n open val styleSheets: StyleSheetList\n open val rootElement: SVGSVGElement?\n open val fullscreenEnabled: Boolean\n open val fullscreen: Boolean\n var onfullscreenchange: ((Event) -> dynamic)?\n var onfullscreenerror: ((Event) -> dynamic)?\n override var onabort: ((Event) -> dynamic)?\n override var onblur: ((FocusEvent) -> dynamic)?\n override var oncancel: ((Event) -> dynamic)?\n override var oncanplay: ((Event) -> dynamic)?\n override var oncanplaythrough: ((Event) -> dynamic)?\n override var onchange: ((Event) -> dynamic)?\n override var onclick: ((MouseEvent) -> dynamic)?\n override var onclose: ((Event) -> dynamic)?\n override var oncontextmenu: ((MouseEvent) -> dynamic)?\n override var oncuechange: ((Event) -> dynamic)?\n override var ondblclick: ((MouseEvent) -> dynamic)?\n override var ondrag: ((DragEvent) -> dynamic)?\n override var ondragend: ((DragEvent) -> dynamic)?\n override var ondragenter: ((DragEvent) -> dynamic)?\n override var ondragexit: ((DragEvent) -> dynamic)?\n override var ondragleave: ((DragEvent) -> dynamic)?\n override var ondragover: ((DragEvent) -> dynamic)?\n override var ondragstart: ((DragEvent) -> dynamic)?\n override var ondrop: ((DragEvent) -> dynamic)?\n override var ondurationchange: ((Event) -> dynamic)?\n override var onemptied: ((Event) -> dynamic)?\n override var onended: ((Event) -> dynamic)?\n override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n override var onfocus: ((FocusEvent) -> dynamic)?\n override var oninput: ((InputEvent) -> dynamic)?\n override var oninvalid: ((Event) -> dynamic)?\n override var onkeydown: ((KeyboardEvent) -> dynamic)?\n override var onkeypress: ((KeyboardEvent) -> dynamic)?\n override var onkeyup: ((KeyboardEvent) -> dynamic)?\n override var onload: ((Event) -> dynamic)?\n override var onloadeddata: ((Event) -> dynamic)?\n override var onloadedmetadata: ((Event) -> dynamic)?\n override var onloadend: ((Event) -> dynamic)?\n override var onloadstart: ((ProgressEvent) -> dynamic)?\n override var onmousedown: ((MouseEvent) -> dynamic)?\n override var onmouseenter: ((MouseEvent) -> dynamic)?\n override var onmouseleave: ((MouseEvent) -> dynamic)?\n override var onmousemove: ((MouseEvent) -> dynamic)?\n override var onmouseout: ((MouseEvent) -> dynamic)?\n override var onmouseover: ((MouseEvent) -> dynamic)?\n override var onmouseup: ((MouseEvent) -> dynamic)?\n override var onwheel: ((WheelEvent) -> dynamic)?\n override var onpause: ((Event) -> dynamic)?\n override var onplay: ((Event) -> dynamic)?\n override var onplaying: ((Event) -> dynamic)?\n override var onprogress: ((ProgressEvent) -> dynamic)?\n override var onratechange: ((Event) -> dynamic)?\n override var onreset: ((Event) -> dynamic)?\n override var onresize: ((Event) -> dynamic)?\n override var onscroll: ((Event) -> dynamic)?\n override var onseeked: ((Event) -> dynamic)?\n override var onseeking: ((Event) -> dynamic)?\n override var onselect: ((Event) -> dynamic)?\n override var onshow: ((Event) -> dynamic)?\n override var onstalled: ((Event) -> dynamic)?\n override var onsubmit: ((Event) -> dynamic)?\n override var onsuspend: ((Event) -> dynamic)?\n



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    override var ontimeupdate: ((Event) -> dynamic)?\n    override var ontoggle: ((Event) -> dynamic)?\n    override
var onvolumechange: ((Event) -> dynamic)?\n    override var onwaiting: ((Event) -> dynamic)?\n    override var
ongotpointercapture: ((PointerEvent) -> dynamic)?\n    override var onlostpointercapture: ((PointerEvent) ->
dynamic)?\n    override var onpointerdown: ((PointerEvent) -> dynamic)?\n    override var onpointermove:
((PointerEvent) -> dynamic)?\n    override var onpointerup: ((PointerEvent) -> dynamic)?\n    override var
onpointercancel: ((PointerEvent) -> dynamic)?\n    override var onpointerover: ((PointerEvent) -> dynamic)?\n
override var onpointerout: ((PointerEvent) -> dynamic)?\n    override var onpointerenter: ((PointerEvent) ->
dynamic)?\n    override var onpointerleave: ((PointerEvent) -> dynamic)?\n    override var oncopy:
((ClipboardEvent) -> dynamic)?\n    override var oncut: ((ClipboardEvent) -> dynamic)?\n    override var onpaste:
((ClipboardEvent)
-> dynamic)?\n    override val fullscreenElement: Element?\n    override val children: HTMLCollection\n    override
val firstElementChild: Element?\n    override val lastElementChild: Element?\n    override val childElementCount:
Int\n    fun getElementsByTagName(qualifiedName: String): HTMLCollection\n    fun
getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection\n    fun
getElementsByTagName(className: String): HTMLCollection\n    fun createElement(localName: String,
options: ElementCreationOptions = definedExternally): Element\n    fun createElementNS(namespace: String?,
qualifiedName: String, options: ElementCreationOptions = definedExternally): Element\n    fun
createDocumentFragment(): DocumentFragment\n    fun createTextNode(data: String): Text\n    fun
createCDATASection(data: String): CDATASection\n    fun createComment(data: String): Comment\n    fun
createProcessingInstruction(target: String, data: String): ProcessingInstruction\n    fun importNode(node:
Node, deep: Boolean = definedExternally): Node\n    fun adoptNode(node: Node): Node\n    fun
createAttribute(localName: String): Attr\n    fun createAttributeNS(namespace: String?, qualifiedName: String):
Attr\n    fun createEvent(`interface`: String): Event\n    fun createRange(): Range\n    fun createNodeIterator(root:
Node, whatToShow: Int = definedExternally, filter: NodeFilter? = definedExternally): NodeIterator\n    fun
createNodeIterator(root: Node, whatToShow: Int = definedExternally, filter: ((Node) -> Short)? =
definedExternally): NodeIterator\n    fun createTreeWalker(root: Node, whatToShow: Int = definedExternally, filter:
NodeFilter? = definedExternally): TreeWalker\n    fun createTreeWalker(root: Node, whatToShow: Int =
definedExternally, filter: ((Node) -> Short)? = definedExternally): TreeWalker\n    fun
getElementsByTagName(elementName: String): NodeList\n    fun open(type: String = definedExternally, replace:
String = definedExternally): Document\n    fun
open(url: String, name: String, features: String): Window\n    fun close()\n    fun write(vararg text: String)\n    fun
writeln(vararg text: String)\n    fun hasFocus(): Boolean\n    fun execCommand(commandId: String, showUI:
Boolean = definedExternally, value: String = definedExternally): Boolean\n    fun
queryCommandEnabled(commandId: String): Boolean\n    fun queryCommandIndeterm(commandId: String):
Boolean\n    fun queryCommandState(commandId: String): Boolean\n    fun queryCommandSupported(commandId:
String): Boolean\n    fun queryCommandValue(commandId: String): String\n    fun clear()\n    fun captureEvents()\n
fun releaseEvents()\n    fun elementFromPoint(x: Double, y: Double): Element?\n    fun elementsFromPoint(x:
Double, y: Double): Array<Element>\n    fun caretPositionFromPoint(x: Double, y: Double): CaretPosition?\n    fun
createTouch(view: Window, target: EventTarget, identifier: Int, pageX: Int, pageY: Int, screenX: Int, screenY: Int):
Touch\n    fun createTouchList(vararg
touches: Touch): TouchList\n    fun exitFullscreen(): Promise<Unit>\n    override fun getElementById(elementId:
String): Element?\n    override fun prepend(vararg nodes: dynamic)\n    override fun append(vararg nodes:
dynamic)\n    override fun querySelector(selectors: String): Element?\n    override fun querySelectorAll(selectors:
String): NodeList\n    override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */):
Array<DOMQuad>\n    override fun convertQuadFromNode(quad: dynamic, from: dynamic, options:
ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n    override fun convertRectFromNode(rect:
DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n
override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* =

```

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definedExternally */): DOMPoint\n\n companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n}\n}\n\n@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun Document.get(name: String): dynamic = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [XMLDocument](https://developer.mozilla.org/en/docs/Web/API/XMLDocument) to Kotlin\n */\npublic external open class XMLDocument : Document {\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface ElementCreationOptions {\n    var `is`: String?\n    get() = definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ElementCreationOptions(`is`: String? = undefined): ElementCreationOptions {\n    val o = js("{}")\n    o["is"] = `is`\n    return o\n}\n\n/**\n * Exposes the JavaScript [DOMImplementation](https://developer.mozilla.org/en/docs/Web/API/DOMImplementation) to Kotlin\n */\npublic external abstract class DOMImplementation {\n    fun createDocumentType(qualifiedName: String, publicId: String, systemId: String): DocumentType\n    fun createDocument(namespace: String?, qualifiedName: String, doctype: DocumentType? = definedExternally): XMLDocument\n    fun createHTMLDocument(title: String = definedExternally): Document\n    fun hasFeature(): Boolean\n}\n\n/**\n * Exposes the JavaScript [DocumentType](https://developer.mozilla.org/en/docs/Web/API/DocumentType) to Kotlin\n */\npublic external abstract class DocumentType : Node, ChildNode {\n    open val name: String\n    open val publicId: String\n    open val systemId: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript [DocumentFragment](https://developer.mozilla.org/en/docs/Web/API/DocumentFragment) to Kotlin\n */\npublic

```

```

external open class DocumentFragment : Node, NonElementParentNode, ParentNode
{
    override val children: HTMLCollection
    override val firstElementChild: Element?
    override val lastElementChild: Element?
    override val childElementCount: Int
    override fun getElementById(elementId: String): Element?
    override fun prepend(vararg nodes: dynamic)
    override fun append(vararg nodes: dynamic)
    override fun querySelector(selectors: String): Element?
    override fun querySelectorAll(selectors: String): NodeList
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}
*n * Exposes the JavaScript [ShadowRoot](https://developer.mozilla.org/en/docs/Web/API/ShadowRoot) to Kotlin
*^/npublic external open class ShadowRoot : DocumentFragment, DocumentOrShadowRoot {
    open val mode: ShadowRootMode
    open val host: Element
    override val fullscreenElement: Element?
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}
*n * Exposes the JavaScript [Element](https://developer.mozilla.org/en/docs/Web/API/Element) to Kotlin
*^/npublic external abstract class Element : Node, ParentNode, NonDocumentTypeChildNode, ChildNode, Slotable, GeometryUtils, UnionElementOrHTMLCollection, UnionElementOrRadioNodeList, UnionElementOrMouseEvent, UnionElementOrProcessingInstruction {
    open val namespaceURI: String?
    open val prefix: String?
    open val localName: String
    open val tagName: String
    open var id: String
    open var className: String
    open val classList: DOMTokenList
    open var slot: String
    open val attributes: NamedNodeMap
    open val shadowRoot: ShadowRoot?
    open var scrollTop: Double
    open var scrollLeft: Double
    open val scrollWidth: Int
    open val scrollHeight: Int
    open val clientTop: Int
    open val clientLeft: Int
    open val clientWidth: Int
    open val clientHeight: Int
    open var innerHTML: String
    open var outerHTML: String
    fun hasAttributes(): Boolean
    fun getAttributeNames(): Array<String>
    fun getAttribute(qualifiedName: String): String?
    fun getAttributeNS(namespace: String?, localName: String): String?
    fun setAttribute(qualifiedName: String, value: String)
    fun setAttributeNS(namespace: String?, qualifiedName: String, value: String)
    fun removeAttribute(qualifiedName: String)
    fun removeAttributeNS(namespace: String?, localName: String)
    fun hasAttribute(qualifiedName: String): Boolean
    fun hasAttributeNS(namespace: String?, localName: String): Boolean
    fun getAttributeNode(qualifiedName: String): Attr?
    fun getAttributeNodeNS(namespace: String?, localName: String): Attr?
    fun setAttributeNode(attr: Attr): Attr?
    fun setAttributeNodeNS(attr: Attr): Attr?
    fun removeAttributeNode(attr: Attr): Attr
    fun attachShadow(init: ShadowRootInit): ShadowRoot
    fun closest(selectors: String): Element?
    fun matches(selectors: String): Boolean
    fun webkitMatchesSelector(selectors: String): Boolean
    fun getElementsByTagName(qualifiedName: String): HTMLCollection
    fun getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection
}

```

```

fun getElementsByClassName(classNames: String): HTMLCollection\n fun insertAdjacentElement(where: String,
element: Element): Element?\n fun insertAdjacentText(where: String, data: String)\n fun getClientRects():
Array<DOMRect>\n fun getBoundingClientRect(): DOMRect\n fun scrollIntoView()\n fun
scrollIntoView(arg: dynamic)\n fun scroll(options: ScrollToOptions = definedExternally)\n fun scroll(x: Double,
y:
Double)\n fun scrollTo(options: ScrollToOptions = definedExternally)\n fun scrollTo(x: Double, y: Double)\n
fun scrollBy(options: ScrollToOptions = definedExternally)\n fun scrollBy(x: Double, y: Double)\n fun
insertAdjacentHTML(position: String, text: String)\n fun setPointerCapture(pointerId: Int)\n fun
releasePointerCapture(pointerId: Int)\n fun hasPointerCapture(pointerId: Int): Boolean\n fun requestFullscreen():
Promise<Unit>\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE:
Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING:
Short\n val DOCUMENT_POSITION_FOLLOWING: Short\n val
DOCUMENT_POSITION_CONTAINS: Short\n val DOCUMENT_POSITION_CONTAINED_BY: Short\n
val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n\n\npublic external interface
ShadowRootInit {\n var mode: ShadowRootMode?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ShadowRootInit(mode:
ShadowRootMode?): ShadowRootInit {\n val o = js("{}")\n o["mode"] = mode\n return o\n}\n\n\n *
Exposes the JavaScript [NamedNodeMap](https://developer.mozilla.org/en/docs/Web/API/NamedNodeMap) to
Kotlin\n *\npublic external abstract class NamedNodeMap : ItemArrayLike<Attr> {\n fun
getNamedItemNS(namespace: String?, localName: String): Attr?\n fun setNamedItem(attr: Attr): Attr?\n fun
setNamedItemNS(attr: Attr): Attr?\n fun removeNamedItem(qualifiedName: String): Attr\n fun
removeNamedItemNS(namespace: String?,
localName: String): Attr\n override fun item(index: Int): Attr?\n fun getNamedItem(qualifiedName: String):
Attr?\n}\n\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun NamedNodeMap.get(index:
Int): Attr? = asDynamic()[index]\n\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
NamedNodeMap.get(qualifiedName: String): Attr? = asDynamic()[qualifiedName]\n\n\n * Exposes the
JavaScript [Attr](https://developer.mozilla.org/en/docs/Web/API/Attr) to Kotlin\n *\npublic external abstract class
Attr : Node {\n open val namespaceURI: String?\n open val prefix: String?\n open val localName: String\n
open val name: String\n open var value: String\n open val ownerElement: Element?\n open val specified:
Boolean\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val
ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE:
Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n\n * Exposes the JavaScript
[CharacterData](https://developer.mozilla.org/en/docs/Web/API/CharacterData) to Kotlin\n *\npublic external
abstract class CharacterData : Node, NonDocumentTypeChildNode, ChildNode {\n open var data: String\n open

```

```

val length: Int\n fun substringData(offset: Int, count: Int): String\n fun appendData(data:
String)\n fun insertData(offset: Int, data: String)\n fun deleteData(offset: Int, count: Int)\n fun
replaceData(offset: Int, count: Int, data: String)\n\n companion object {\n val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[Text](https://developer.mozilla.org/en/docs/Web/API/Text)
to Kotlin\n */\npublic external open class Text(data: String = definedExternally) : CharacterData, Slotable,
GeometryUtils {\n open val wholeText: String\n override val assignedSlot: HTMLSlotElement?\n override val
previousElementSibling: Element?\n override val nextElementSibling: Element?\n fun splitText(offset: Int):
Text\n override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n
override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad\n override fun convertRectFromNode(rect: DOMRectReadOnly, from:
dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n override fun
convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMPoint\n override fun before(vararg nodes: dynamic)\n override fun after(vararg
nodes:
dynamic)\n override fun replaceWith(vararg nodes: dynamic)\n override fun remove()\n\n companion object
{\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val
ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE:
Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[CDATASection](https://developer.mozilla.org/en/docs/Web/API/CDATASection) to Kotlin\n
*/\npublic external open class CDATASection : Text {\n companion object {\n val ELEMENT_NODE:
Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE:
Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[ProcessingInstruction](https://developer.mozilla.org/en/docs/Web/API/ProcessingInstruction) to Kotlin\n
*/\npublic external abstract
class ProcessingInstruction : CharacterData, LinkStyle, UnionElementOrProcessingInstruction {\n open val
target: String\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE:

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Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[Comment](https://developer.mozilla.org/en/docs/Web/API/Comment) to Kotlin \n */ \n public external open class Comment(data: String = definedExternally) : CharacterData { \n
    override val previousElementSibling: Element? \n    override val nextElementSibling: Element? \n    override fun
before(vararg nodes: dynamic) \n    override fun after(vararg nodes: dynamic) \n    override fun replaceWith(vararg
nodes: dynamic) \n    override fun remove() \n \n    companion object { \n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n
        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes
the JavaScript [Range](https://developer.mozilla.org/en/docs/Web/API/Range) to Kotlin \n */ \n public external open
class Range { \n    open val startContainer: Node \n    open val startOffset: Int \n    open val endContainer: Node \n
    open val endOffset: Int \n    open val collapsed: Boolean \n    open val commonAncestorContainer: Node \n    fun
setStart(node: Node, offset: Int) \n    fun setEnd(node: Node, offset: Int) \n    fun setStartBefore(node: Node) \n    fun
setStartAfter(node: Node) \n    fun setEndBefore(node: Node) \n    fun setEndAfter(node: Node) \n    fun
collapse(toStart: Boolean = definedExternally) \n    fun selectNode(node: Node) \n    fun selectNodeContents(node:
Node) \n    fun compareBoundaryPoints(how: Short, sourceRange: Range): Short \n    fun deleteContents() \n    fun
extractContents(): DocumentFragment \n
    fun cloneContents(): DocumentFragment \n    fun insertNode(node: Node) \n    fun surroundContents(newParent:
Node) \n    fun cloneRange(): Range \n    fun detach() \n    fun isPointInRange(node: Node, offset: Int): Boolean \n
    fun comparePoint(node: Node, offset: Int): Short \n    fun intersectsNode(node: Node): Boolean \n    fun
getClientRects(): Array<DOMRect> \n    fun getBoundingClientRect(): DOMRect \n    fun
createContextualFragment(fragment: String): DocumentFragment \n \n    companion object { \n        val
START_TO_START: Short\n        val START_TO_END: Short\n        val END_TO_END: Short\n        val
END_TO_START: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[NodeIterator](https://developer.mozilla.org/en/docs/Web/API/NodeIterator) to Kotlin \n */ \n public external abstract
class NodeIterator { \n    open val root: Node \n    open val referenceNode: Node \n    open val
pointerBeforeReferenceNode: Boolean \n    open val whatToShow: Int \n    open val filter: NodeFilter? \n
    fun nextNode(): Node? \n    fun previousNode(): Node? \n    fun detach() \n} \n \n /** \n * Exposes the JavaScript
[TreeWalker](https://developer.mozilla.org/en/docs/Web/API/TreeWalker) to Kotlin \n */ \n public external abstract
class TreeWalker { \n    open val root: Node \n    open val whatToShow: Int \n    open val filter: NodeFilter? \n    open
var currentNode: Node \n    fun parentNode(): Node? \n    fun firstChild(): Node? \n    fun lastChild(): Node? \n    fun
previousSibling(): Node? \n    fun nextSibling(): Node? \n    fun previousNode(): Node? \n    fun nextNode():
Node? \n} \n \n /** \n * Exposes the JavaScript
[NodeFilter](https://developer.mozilla.org/en/docs/Web/API/NodeFilter) to Kotlin \n

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\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun DOMRectInit(x: Double? = 0.0, y:
Double? = 0.0, width: Double? = 0.0, height: Double? = 0.0): DOMRectInit {\n  val o = js\{"{ }\"}\n  o\["x"] =
x\n  o\["y"] = y\n  o\["width"] = width\n  o\["height"] = height\n  return o\n}\n\npublic external interface
DOMRectList : ItemArrayLike<DOMRect> {\n  override fun item(index: Int):
DOMRect?\n}\n\n@Suppress(\`INVISIBLE_REFERENCE\`,
\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline operator fun DOMRectList.get(index: Int):
DOMRect? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[DOMQuad](https://developer.mozilla.org/en/docs/Web/API/DOMQuad)
to Kotlin\n */\npublic external open class DOMQuad {\n  constructor(p1: DOMPointInit = definedExternally, p2:
DOMPointInit = definedExternally, p3: DOMPointInit = definedExternally, p4: DOMPointInit =
definedExternally)\n  constructor(rect: DOMRectInit)\n  open val p1: DOMPoint\n  open val p2: DOMPoint\n
open val p3: DOMPoint\n  open val p4: DOMPoint\n  open val bounds: DOMRectReadOnly\n}\n\n/**\n *
Exposes the JavaScript
[DOMMatrixReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMMatrixReadOnly) to Kotlin\n
*/\npublic external open class DOMMatrixReadOnly(numberSequence: Array<Double>) {\n  open val a: Double\n
open val b: Double\n  open val c: Double\n  open val d: Double\n  open val e: Double\n  open val f: Double\n
open val m11: Double\n  open val m12: Double\n  open val m13: Double\n  open val m14: Double\n  open val
m21: Double\n  open val m22: Double\n  open val m23: Double\n  open val m24: Double\n  open val m31:
Double\n  open val m32: Double\n  open val m33: Double\n  open val m34: Double\n  open val m41: Double\n
open val m42: Double\n  open val m43: Double\n  open val m44: Double\n  open val is2D: Boolean\n  open
val isIdentity: Boolean\n  fun translate(tx: Double, ty: Double, tz: Double = definedExternally): DOMMatrix\n
fun scale(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n
fun scale3d(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally, originZ:
Double = definedExternally): DOMMatrix\n  fun scaleNonUniform(scaleX: Double, scaleY: Double =
definedExternally, scaleZ: Double = definedExternally, originX: Double = definedExternally, originY: Double =
definedExternally, originZ: Double = definedExternally): DOMMatrix\n  fun rotate(angle: Double, originX:
Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n  fun rotateFromVector(x:
Double, y: Double):
DOMMatrix\n  fun rotateAxisAngle(x: Double, y: Double, z: Double, angle: Double): DOMMatrix\n  fun
skewX(sx: Double): DOMMatrix\n  fun skewY(sy: Double): DOMMatrix\n  fun multiply(other: DOMMatrix):
DOMMatrix\n  fun flipX(): DOMMatrix\n  fun flipY(): DOMMatrix\n  fun inverse(): DOMMatrix\n  fun
transformPoint(point: DOMPointInit = definedExternally): DOMPoint\n  fun toFloat32Array(): Float32Array\n
fun toFloat64Array(): Float64Array\n}\n\n/**\n * Exposes the JavaScript
[DOMMatrix](https://developer.mozilla.org/en/docs/Web/API/DOMMatrix) to Kotlin\n */\npublic external open
class DOMMatrix() : DOMMatrixReadOnly {\n  constructor(transformList: String)\n  constructor(other:
DOMMatrixReadOnly)\n  constructor(array32: Float32Array)\n  constructor(array64: Float64Array)\n
constructor(numberSequence: Array<Double>)\n  override var a: Double\n  override var b: Double\n  override
var c: Double\n  override var d: Double\n  override var e: Double\n
override var f: Double\n  override var m11: Double\n  override var m12: Double\n  override var m13:
Double\n  override var m14: Double\n  override var m21: Double\n  override var m22: Double\n  override var
m23: Double\n  override var m24: Double\n  override var m31: Double\n  override var m32: Double\n  override
var m33: Double\n  override var m34: Double\n  override var m41: Double\n  override var m42: Double\n
override var m43: Double\n  override var m44: Double\n  fun multiplySelf(other: DOMMatrix): DOMMatrix\n
fun preMultiplySelf(other: DOMMatrix): DOMMatrix\n  fun translateSelf(tx: Double, ty: Double, tz: Double =
definedExternally): DOMMatrix\n  fun scaleSelf(scale: Double, originX: Double = definedExternally, originY:
Double = definedExternally): DOMMatrix\n  fun scale3dSelf(scale: Double, originX: Double = definedExternally,
originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix\n  fun
scaleNonUniformSelf(scaleX:

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Double, scaleY: Double = definedExternally, scaleZ: Double = definedExternally, originX: Double =
definedExternally, originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix fun
rotateSelf(angle: Double, originX: Double = definedExternally, originY: Double = definedExternally):
DOMMatrix fun rotateFromVectorSelf(x: Double, y: Double): DOMMatrix fun rotateAxisAngleSelf(x:
Double, y: Double, z: Double, angle: Double): DOMMatrix fun skewXSelf(sx: Double): DOMMatrix fun
skewYSelf(sy: Double): DOMMatrix fun invertSelf(): DOMMatrix fun setMatrixValue(transformList:
String): DOMMatrix}\n\npublic external interface ScrollOptions {\n    var behavior: ScrollBehavior? /* =
ScrollBehavior.AUTO */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ScrollOptions(behavior:
ScrollBehavior?
= ScrollBehavior.AUTO): ScrollOptions {\n    val o = js("{}")\n    o["behavior"] = behavior\n    return
o\n}\n\n/**\n * Exposes the JavaScript
[ScrollToOptions](https://developer.mozilla.org/en/docs/Web/API/ScrollToOptions) to Kotlin\n */\npublic external
interface ScrollToOptions : ScrollOptions {\n    var left: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var top: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ScrollToOptions(left: Double? =
undefined, top: Double? = undefined, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollToOptions {\n
val o = js("{}")\n    o["left"] = left\n    o["top"] = top\n    o["behavior"] = behavior\n    return o\n}\n\n/**\n *
Exposes the JavaScript [MediaQueryList](https://developer.mozilla.org/en/docs/Web/API/MediaQueryList) to
Kotlin\n */\npublic
external abstract class MediaQueryList : EventTarget {\n    open val media: String\n    open val matches: Boolean\n
    open var onchange: ((Event) -> dynamic)?\n    fun addListener(listener: EventListener?)\n    fun
addListener(listener: ((Event) -> Unit)?)\n    fun removeListener(listener: EventListener?)\n    fun
removeListener(listener: ((Event) -> Unit)?)\n}\n\n/**\n * Exposes the JavaScript
[MediaQueryListEvent](https://developer.mozilla.org/en/docs/Web/API/MediaQueryListEvent) to Kotlin\n */\npublic
external open class MediaQueryListEvent(type: String, eventInitDict: MediaQueryListEventInit =
definedExternally) : Event {\n    open val media: String\n    open val matches: Boolean\n\n    companion object {\n
val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface MediaQueryListEventInit : EventInit {\n    var
media: String? /* = "" */\n    get() = definedExternally\n
    set(value) = definedExternally\n    var matches: Boolean? /* = false */\n    get() = definedExternally\n
    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MediaQueryListEventInit(media:
String? = "", matches: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): MediaQueryListEventInit {\n    val o = js("{}")\n    o["media"] = media\n    o["matches"] =
matches\n    o["bubbles"] = bubbles\n    o["cancelable"] = cancelable\n    o["composed"] = composed\n    return
o\n}\n\n/**\n * Exposes the JavaScript [Screen](https://developer.mozilla.org/en/docs/Web/API/Screen) to Kotlin\n */\npublic
external abstract class Screen {\n    open val availWidth: Int\n    open val availHeight: Int\n    open val
width: Int\n    open val height: Int\n    open val colorDepth: Int\n    open val pixelDepth: Int\n}\n\n/**\n * Exposes
the
JavaScript [CaretPosition](https://developer.mozilla.org/en/docs/Web/API/CaretPosition) to Kotlin\n */\npublic
external abstract class CaretPosition {\n    open val offsetNode: Node\n    open val offset: Int\n    fun
getClientRect(): DOMRect?\n}\n\npublic external interface ScrollIntoViewOptions : ScrollOptions {\n    var block:
ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n    get() = definedExternally\n    set(value) =
definedExternally\n    var inline: ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",

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\ "INVISIBLE_MEMBER"\n@kotlin.internal.InlineOnly\npublic inline fun ScrollIntoViewOptions(block:
ScrollLogicalPosition? = ScrollLogicalPosition.CENTER, inline: ScrollLogicalPosition? =
ScrollLogicalPosition.CENTER, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollIntoViewOptions {\n
val o = js("{}")\n  o["block"] = block\n
  o["inline"] = inline\n  o["behavior"] = behavior\n  return o\n}\n\npublic external interface BoxQuadOptions
{\n  var box: CSSBoxType? /* = CSSBoxType.BORDER */\n    get() = definedExternally\n    set(value) =
definedExternally\n  var relativeTo: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
\ "INVISIBLE_MEMBER"\n@kotlin.internal.InlineOnly\npublic inline fun BoxQuadOptions(box: CSSBoxType?
= CSSBoxType.BORDER, relativeTo: dynamic = undefined): BoxQuadOptions {\n  val o = js("{}")\n
o["box"] = box\n  o["relativeTo"] = relativeTo\n  return o\n}\n\npublic external interface
ConvertCoordinateOptions {\n  var fromBox: CSSBoxType? /* = CSSBoxType.BORDER */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var toBox: CSSBoxType? /* = CSSBoxType.BORDER
*/\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
\ "INVISIBLE_MEMBER"\n@kotlin.internal.InlineOnly\npublic inline fun ConvertCoordinateOptions(fromBox:
CSSBoxType? = CSSBoxType.BORDER, toBox: CSSBoxType? = CSSBoxType.BORDER):
ConvertCoordinateOptions {\n  val o = js("{}")\n  o["fromBox"] = fromBox\n  o["toBox"] = toBox\n
return o\n}\n\n/**\n * Exposes the JavaScript
[GeometryUtils](https://developer.mozilla.org/en/docs/Web/API/GeometryUtils) to Kotlin\n */\npublic external
interface GeometryUtils {\n  fun getBoxQuads(options: BoxQuadOptions = definedExternally):
Array<DOMQuad>\n  fun convertQuadFromNode(quad: dynamic, from: dynamic, options:
ConvertCoordinateOptions = definedExternally): DOMQuad\n  fun convertRectFromNode(rect:
DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions = definedExternally): DOMQuad\n  fun
convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions =
definedExternally): DOMPoint\n}\n\n/**\n * Exposes the JavaScript
[Touch](https://developer.mozilla.org/en/docs/Web/API/Touch) to Kotlin\n */\npublic external abstract class Touch
{\n  open val identifier: Int\n  open val target: EventTarget\n  open val screenX: Int\n  open val screenY: Int\n
open val clientX: Int\n  open val clientY: Int\n  open val pageX: Int\n  open val pageY: Int\n  open val region:
String?\n}\n\npublic external abstract class TouchList : ItemArrayLike<Touch> {\n  override fun item(index: Int):
Touch?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
\ "INVISIBLE_MEMBER"\n@kotlin.internal.InlineOnly\npublic inline operator fun TouchList.get(index: Int):
Touch? = asDynamic()[index]\n\npublic external open class TouchEvent : UIEvent {\n  open val touches:
TouchList\n  open val targetTouches: TouchList\n  open val changedTouches: TouchList\n  open val altKey:
Boolean\n  open val metaKey: Boolean\n  open val ctrlKey: Boolean\n  open val shiftKey: Boolean\n\n
companion object {\n  val NONE:
Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE:
Short\n  }\n}\n\n/**\n * Exposes the JavaScript [Image](https://developer.mozilla.org/en/docs/Web/API/Image) to
Kotlin\n */\npublic external open class Image(width: Int = definedExternally, height: Int = definedExternally) :
HTMLImageElement {\n  override var onabort: ((Event) -> dynamic)?\n  override var onblur: ((FocusEvent) ->
dynamic)?\n  override var onCancel: ((Event) -> dynamic)?\n  override var oncanplay: ((Event) -> dynamic)?\n
override var oncanplaythrough: ((Event) -> dynamic)?\n  override var onchange: ((Event) -> dynamic)?\n
override var onclick: ((MouseEvent) -> dynamic)?\n  override var onclose: ((Event) -> dynamic)?\n  override var
oncontextmenu: ((MouseEvent) -> dynamic)?\n  override var oncuechange: ((Event) -> dynamic)?\n  override var
ondblclick: ((MouseEvent) -> dynamic)?\n  override var ondrag: ((DragEvent) -> dynamic)?\n  override var
ondragend: ((DragEvent) -> dynamic)?\n  override var ondragenter: ((DragEvent) -> dynamic)?\n  override var
ondragexit: ((DragEvent) -> dynamic)?\n  override var ondragleave: ((DragEvent) -> dynamic)?\n  override var
ondragover: ((DragEvent) -> dynamic)?\n  override var

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ondrop: ((DragEvent) -> dynamic)?\n  override var ondurationchange: ((Event) -> dynamic)?\n  override var
onemptied: ((Event) -> dynamic)?\n  override var onended: ((Event) -> dynamic)?\n  override var onerror:
((dynamic, String, Int, Int, Any?) -> dynamic)?\n  override var onfocus: ((FocusEvent) -> dynamic)?\n  override
var oninput: ((InputEvent) -> dynamic)?\n  override var oninvalid: ((Event) -> dynamic)?\n  override var
onkeydown: ((KeyboardEvent) -> dynamic)?\n  override var onkeypress: ((KeyboardEvent) -> dynamic)?\n
override var onkeyup: ((KeyboardEvent) -> dynamic)?\n  override var onload: ((Event) -> dynamic)?\n  override
var onloadeddata: ((Event) -> dynamic)?\n  override var onloadedmetadata: ((Event) -> dynamic)?\n  override
var onloadend: ((Event) -> dynamic)?\n  override var onloadstart: ((ProgressEvent) -> dynamic)?\n  override var
onmousedown: ((MouseEvent) -> dynamic)?\n  override var onmouseenter: ((MouseEvent) -> dynamic)?\n
override var onmouseleave: ((MouseEvent) -> dynamic)?\n  override var onmousemove: ((MouseEvent) ->
dynamic)?\n  override var onmouseout: ((MouseEvent) -> dynamic)?\n  override var onmouseover:
((MouseEvent) -> dynamic)?\n  override var onmouseup: ((MouseEvent) -> dynamic)?\n  override var onwheel:
((WheelEvent) -> dynamic)?\n  override var onpause: ((Event) -> dynamic)?\n  override var onplay: ((Event) ->
dynamic)?\n  override var onplaying: ((Event) -> dynamic)?\n  override var onprogress: ((ProgressEvent) ->
dynamic)?\n  override var onratechange: ((Event) -> dynamic)?\n  override var onreset: ((Event) -> dynamic)?\n
override var
onresize: ((Event) -> dynamic)?\n  override var onscroll: ((Event) -> dynamic)?\n  override var onseeked:
((Event) -> dynamic)?\n  override var onseeking: ((Event) -> dynamic)?\n  override var onselect: ((Event) ->
dynamic)?\n  override var onshow: ((Event) -> dynamic)?\n  override var onstalled: ((Event) -> dynamic)?\n
override var onsubmit: ((Event) -> dynamic)?\n  override var onsuspend: ((Event) -> dynamic)?\n  override var
ontimeupdate: ((Event) -> dynamic)?\n  override var ontoggle: ((Event) -> dynamic)?\n  override var
onvolumechange: ((Event) -> dynamic)?\n  override var onwaiting: ((Event) -> dynamic)?\n  override var
ongotpointercapture: ((PointerEvent) -> dynamic)?\n  override var onlostpointercapture: ((PointerEvent) ->
dynamic)?\n  override var onpointerdown: ((PointerEvent) -> dynamic)?\n  override var onpointermove:
((PointerEvent) -> dynamic)?\n  override var onpointerup: ((PointerEvent) -> dynamic)?\n  override var
onpointercancel:
((PointerEvent) -> dynamic)?\n  override var onpointerover: ((PointerEvent) -> dynamic)?\n  override var
onpointerout: ((PointerEvent) -> dynamic)?\n  override var onpointerenter: ((PointerEvent) -> dynamic)?\n
override var onpointerleave: ((PointerEvent) -> dynamic)?\n  override var oncopy: ((ClipboardEvent) ->
dynamic)?\n  override var oncut: ((ClipboardEvent) -> dynamic)?\n  override var onpaste: ((ClipboardEvent) ->
dynamic)?\n  override var contentEditable: String\n  override val isContentEditable: Boolean\n  override val
style: CSSStyleDeclaration\n  override val children: HTMLCollection\n  override val firstElementChild:
Element?\n  override val lastElementChild: Element?\n  override val childElementCount: Int\n  override val
previousElementSibling: Element?\n  override val nextElementSibling: Element?\n  override val assignedSlot:
HTMLSlotElement?\n  override fun prepend(vararg nodes: dynamic)\n  override fun append(vararg nodes:
dynamic)\n
  override fun querySelector(selectors: String): Element?\n  override fun querySelectorAll(selectors: String):
NodeList\n  override fun before(vararg nodes: dynamic)\n  override fun after(vararg nodes: dynamic)\n  override
fun replaceWith(vararg nodes: dynamic)\n  override fun remove()\n  override fun getBoxQuads(options:
BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n  override fun convertQuadFromNode(quad:
dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n  override
fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad\n  override fun convertPointFromNode(point: DOMPointInit, from: dynamic,
options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n\n  companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n
    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val

```

```

DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external open class
Audio(src: String = definedExternally) : HTMLAudioElement {\n    override var onabort: ((Event) -> dynamic)?\n
override var onblur: ((FocusEvent) -> dynamic)?\n    override var oncancel: ((Event) -> dynamic)?\n    override var
oncanplay: ((Event) -> dynamic)?\n    override var oncanplaythrough: ((Event) -> dynamic)?\n    override var
onchange: ((Event)
-> dynamic)?\n    override var onclick: ((MouseEvent) -> dynamic)?\n    override var onclose: ((Event) ->
dynamic)?\n    override var oncontextmenu: ((MouseEvent) -> dynamic)?\n    override var oncuechange: ((Event) ->
dynamic)?\n    override var ondblclick: ((MouseEvent) -> dynamic)?\n    override var ondrag: ((DragEvent) ->
dynamic)?\n    override var ondragend: ((DragEvent) -> dynamic)?\n    override var ondragenter: ((DragEvent) ->
dynamic)?\n    override var ondragexit: ((DragEvent) -> dynamic)?\n    override var ondragleave: ((DragEvent) ->
dynamic)?\n    override var ondragover: ((DragEvent) -> dynamic)?\n    override var ondragstart: ((DragEvent) ->
dynamic)?\n    override var ondrop: ((DragEvent) -> dynamic)?\n    override var ondurationchange: ((Event) ->
dynamic)?\n    override var onemptied: ((Event) -> dynamic)?\n    override var onended: ((Event) -> dynamic)?\n
override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n    override var onfocus: ((FocusEvent)
-> dynamic)?\n    override var oninput: ((InputEvent) -> dynamic)?\n    override var oninvalid: ((Event) ->
dynamic)?\n    override var onkeydown: ((KeyboardEvent) -> dynamic)?\n    override var onkeypress:
((KeyboardEvent) -> dynamic)?\n    override var onkeyup: ((KeyboardEvent) -> dynamic)?\n    override var onload:
((Event) -> dynamic)?\n    override var onloadeddata: ((Event) -> dynamic)?\n    override var onloadedmetadata:
((Event) -> dynamic)?\n    override var onloadend: ((Event) -> dynamic)?\n    override var onloadstart:
((ProgressEvent) -> dynamic)?\n    override var onmousedown: ((MouseEvent) -> dynamic)?\n    override var
onmouseenter: ((MouseEvent) -> dynamic)?\n    override var onmouseleave: ((MouseEvent) -> dynamic)?\n
override var onmousemove: ((MouseEvent) -> dynamic)?\n    override var onmouseout: ((MouseEvent) ->
dynamic)?\n    override var onmouseover: ((MouseEvent) -> dynamic)?\n    override var onmouseup: ((MouseEvent)
-> dynamic)?\n    override var onwheel:
((WheelEvent) -> dynamic)?\n    override var onpause: ((Event) -> dynamic)?\n    override var onplay: ((Event) ->
dynamic)?\n    override var onplaying: ((Event) -> dynamic)?\n    override var onprogress: ((ProgressEvent) ->
dynamic)?\n    override var onratechange: ((Event) -> dynamic)?\n    override var onreset: ((Event) -> dynamic)?\n
override var onresize: ((Event) -> dynamic)?\n    override var onscroll: ((Event) -> dynamic)?\n    override var
onseeked: ((Event) -> dynamic)?\n    override var onseeking: ((Event) -> dynamic)?\n    override var onselect:
((Event) -> dynamic)?\n    override var onshow: ((Event) -> dynamic)?\n    override var onstalled: ((Event) ->
dynamic)?\n    override var onsubmit: ((Event) -> dynamic)?\n    override var onsuspend: ((Event) -> dynamic)?\n
override var ontimeupdate: ((Event) -> dynamic)?\n    override var ontoggle: ((Event) -> dynamic)?\n    override var
onvolumechange: ((Event) -> dynamic)?\n    override var onwaiting: ((Event) -> dynamic)?\n
    override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n    override var onlostpointercapture:
((PointerEvent) -> dynamic)?\n    override var onpointerdown: ((PointerEvent) -> dynamic)?\n    override var
onpointermove: ((PointerEvent) -> dynamic)?\n    override var onpointerup: ((PointerEvent) -> dynamic)?\n
override var onpointercancel: ((PointerEvent) -> dynamic)?\n    override var onpointerover: ((PointerEvent) ->
dynamic)?\n    override var onpointerout: ((PointerEvent) -> dynamic)?\n    override var onpointerenter:
((PointerEvent) -> dynamic)?\n    override var onpointerleave: ((PointerEvent) -> dynamic)?\n    override var
oncopy: ((ClipboardEvent) -> dynamic)?\n    override var oncut: ((ClipboardEvent) -> dynamic)?\n    override var
onpaste: ((ClipboardEvent) -> dynamic)?\n    override var contentEditable: String\n    override val
isContentEditable: Boolean\n    override val style: CSSStyleDeclaration\n    override val children:
HTMLCollection\n    override val

```

```

firstElementChild: Element? override val lastElementChild: Element? override val childElementCount:
Int override val previousElementSibling: Element? override val nextElementSibling: Element? override
val assignedSlot: HTMLSlotElement? override fun prepend(vararg nodes: dynamic) override fun
append(vararg nodes: dynamic) override fun querySelector(selectors: String): Element? override fun
querySelectorAll(selectors: String): NodeList override fun before(vararg nodes: dynamic) override fun
after(vararg nodes: dynamic) override fun replaceWith(vararg nodes: dynamic) override fun remove()
override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad> override
fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad override fun convertRectFromNode(rect: DOMRectReadOnly, from:
dynamic, options: ConvertCoordinateOptions
/* = definedExternally */): DOMQuad override fun convertPointFromNode(point: DOMPointInit, from:
dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint
companion object {
val NETWORK_EMPTY: Short
val NETWORK_IDLE: Short
val NETWORK_LOADING: Short
val NETWORK_NO_SOURCE: Short
val HAVE_NOTHING: Short
val HAVE_METADATA:
Short
val HAVE_CURRENT_DATA: Short
val HAVE_FUTURE_DATA: Short
val
HAVE_ENOUGH_DATA: Short
val ELEMENT_NODE: Short
val ATTRIBUTE_NODE: Short
val TEXT_NODE: Short
val CDATA_SECTION_NODE: Short
val ENTITY_REFERENCE_NODE:
Short
val ENTITY_NODE: Short
val PROCESSING_INSTRUCTION_NODE: Short
val
COMMENT_NODE: Short
val DOCUMENT_NODE: Short
val DOCUMENT_TYPE_NODE: Short
val
DOCUMENT_FRAGMENT_NODE: Short
val NOTATION_NODE: Short
val
DOCUMENT_POSITION_DISCONNECTED:
Short
val DOCUMENT_POSITION_PRECEDING: Short
val
DOCUMENT_POSITION_FOLLOWING: Short
val DOCUMENT_POSITION_CONTAINS: Short
val
DOCUMENT_POSITION_CONTAINED_BY: Short
val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
}
}
/** Exposes the JavaScript
[Option](https://developer.mozilla.org/en/docs/Web/API/Option) to Kotlin
*/
@public external open class
Option(text: String = definedExternally, value: String = definedExternally, defaultSelected: Boolean =
definedExternally, selected: Boolean = definedExternally) : HTMLOptionElement {
override var onabort:
((Event) -> dynamic)? override var onblur: ((FocusEvent) -> dynamic)? override var oncancel: ((Event) ->
dynamic)? override var oncanplay: ((Event) -> dynamic)? override var oncanplaythrough: ((Event) ->
dynamic)? override var onchange: ((Event) -> dynamic)? override var onclick: ((MouseEvent) ->
dynamic)? override var onclose:
((Event) -> dynamic)? override var oncontextmenu: ((MouseEvent) -> dynamic)? override var
oncuechange: ((Event) -> dynamic)? override var ondblclick: ((MouseEvent) -> dynamic)? override var
ondrag: ((DragEvent) -> dynamic)? override var ondragend: ((DragEvent) -> dynamic)? override var
ondragenter: ((DragEvent) -> dynamic)? override var ondragexit: ((DragEvent) -> dynamic)? override var
ondragleave: ((DragEvent) -> dynamic)? override var ondragover: ((DragEvent) -> dynamic)? override var
ondragstart: ((DragEvent) -> dynamic)? override var ondrop: ((DragEvent) -> dynamic)? override var
ondurationchange: ((Event) -> dynamic)? override var onemptied: ((Event) -> dynamic)? override var
onended: ((Event) -> dynamic)? override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?
override var onfocus: ((FocusEvent) -> dynamic)? override var oninput: ((InputEvent) -> dynamic)?
override
var oninvalid:
((Event) -> dynamic)? override var onkeydown: ((KeyboardEvent) -> dynamic)? override var onkeypress:
((KeyboardEvent) -> dynamic)? override var onkeyup: ((KeyboardEvent) -> dynamic)? override var onload:
((Event) -> dynamic)? override var onloadeddata: ((Event) -> dynamic)? override var onloadedmetadata:
((Event) -> dynamic)? override var onloadend: ((Event) -> dynamic)? override var onloadstart:
((ProgressEvent) -> dynamic)? override var onmousedown: ((MouseEvent) -> dynamic)? override var
onmouseenter: ((MouseEvent) -> dynamic)? override var onmouseleave: ((MouseEvent) -> dynamic)?

```

```

override var onmousemove: ((MouseEvent) -> dynamic)?\n  override var onmouseout: ((MouseEvent) ->
dynamic)?\n  override var onmouseover: ((MouseEvent) -> dynamic)?\n  override var onmouseup: ((MouseEvent)
-> dynamic)?\n  override var onwheel: ((WheelEvent) -> dynamic)?\n  override var onpause: ((Event) ->
dynamic)?\n  override
  var onplay: ((Event) -> dynamic)?\n  override var onplaying: ((Event) -> dynamic)?\n  override var onprogress:
((ProgressEvent) -> dynamic)?\n  override var onratechange: ((Event) -> dynamic)?\n  override var onreset:
((Event) -> dynamic)?\n  override var onresize: ((Event) -> dynamic)?\n  override var onscroll: ((Event) ->
dynamic)?\n  override var onseeked: ((Event) -> dynamic)?\n  override var onseeking: ((Event) -> dynamic)?\n
override var onselect: ((Event) -> dynamic)?\n  override var onshow: ((Event) -> dynamic)?\n  override var
onstalled: ((Event) -> dynamic)?\n  override var onsubmit: ((Event) -> dynamic)?\n  override var onsuspend:
((Event) -> dynamic)?\n  override var ontimeupdate: ((Event) -> dynamic)?\n  override var ontoggle: ((Event) ->
dynamic)?\n  override var onvolumechange: ((Event) -> dynamic)?\n  override var onwaiting: ((Event) ->
dynamic)?\n  override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n  override var
onlostpointercapture:
((PointerEvent) -> dynamic)?\n  override var onpointerdown: ((PointerEvent) -> dynamic)?\n  override var
onpointermove: ((PointerEvent) -> dynamic)?\n  override var onpointerup: ((PointerEvent) -> dynamic)?\n
override var onpointercancel: ((PointerEvent) -> dynamic)?\n  override var onpointerover: ((PointerEvent) ->
dynamic)?\n  override var onpointerout: ((PointerEvent) -> dynamic)?\n  override var onpointerenter:
((PointerEvent) -> dynamic)?\n  override var onpointerleave: ((PointerEvent) -> dynamic)?\n  override var
oncopy: ((ClipboardEvent) -> dynamic)?\n  override var oncut: ((ClipboardEvent) -> dynamic)?\n  override var
onpaste: ((ClipboardEvent) -> dynamic)?\n  override var contentEditable: String\n  override val
isContentEditable: Boolean\n  override val style: CSSStyleDeclaration\n  override val children:
HTMLCollection\n  override val firstElementChild: Element?\n  override val lastElementChild: Element?\n
override val
  childElementCount: Int\n  override val previousElementSibling: Element?\n  override val nextElementSibling:
Element?\n  override val assignedSlot: HTMLSlotElement?\n  override fun prepend(vararg nodes: dynamic)\n
override fun append(vararg nodes: dynamic)\n  override fun querySelector(selectors: String): Element?\n
override fun querySelectorAll(selectors: String): NodeList\n  override fun before(vararg nodes: dynamic)\n
override fun after(vararg nodes: dynamic)\n  override fun replaceWith(vararg nodes: dynamic)\n  override fun
remove()\n  override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n
  override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad\n  override fun convertRectFromNode(rect: DOMRectReadOnly, from:
dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n  override fun
convertPointFromNode(point: DOMPointInit,
  from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n\n  companion object
{\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
    ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
    Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
    DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
    DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
    DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n\n  public external interface
UnionElementOrHTMLCollection\n\n  public external interface UnionElementOrRadioNodeList\n\n  public
external interface UnionHTMLOptGroupElementOrHTMLOptionElement\n\n  public external interface
UnionAudioTrackOrTextTrackOrVideoTrack\n\n  public external interface UnionElementOrMouseEvent\n\n  public
external interface UnionMessagePortOrWindowProxy\n\n  public external interface MediaProvider\n\n  public

```

```

external interface RenderingContext\n\npublic external interface HTMLOrSVGImageElement :
CanvasImageSource\n\npublic external interface CanvasImageSource : ImageBitmapSource\n\npublic external
interface ImageBitmapSource\n\npublic external interface HTMLOrSVGScriptElement\n\n/* please, don't
implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface DocumentReadyState {\n  companion object\n}\n\npublic inline val
DocumentReadyState.Companion.LOADING: DocumentReadyState get() =
"loading".asDynamic().unsafeCast<DocumentReadyState>()\n\npublic inline val
DocumentReadyState.Companion.INTERACTIVE: DocumentReadyState get() =
"interactive".asDynamic().unsafeCast<DocumentReadyState>()\n\npublic
inline val DocumentReadyState.Companion.COMPLETE: DocumentReadyState get() =
"complete".asDynamic().unsafeCast<DocumentReadyState>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface CanPlayTypeResult {\n  companion object\n}\n\npublic inline val
CanPlayTypeResult.Companion.EMPTY: CanPlayTypeResult get() =
"".asDynamic().unsafeCast<CanPlayTypeResult>()\n\npublic inline val CanPlayTypeResult.Companion.MAYBE:
CanPlayTypeResult get() = "maybe".asDynamic().unsafeCast<CanPlayTypeResult>()\n\npublic inline val
CanPlayTypeResult.Companion.PROBABLY: CanPlayTypeResult get() =
"probably".asDynamic().unsafeCast<CanPlayTypeResult>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface TextTrackMode {\n  companion object\n}\n\npublic
inline val TextTrackMode.Companion.DISABLED: TextTrackMode get() =
"disabled".asDynamic().unsafeCast<TextTrackMode>()\n\npublic inline val
TextTrackMode.Companion.HIDDEN: TextTrackMode get() =
"hidden".asDynamic().unsafeCast<TextTrackMode>()\n\npublic inline val
TextTrackMode.Companion.SHOWING: TextTrackMode get() =
"showing".asDynamic().unsafeCast<TextTrackMode>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface TextTrackKind {\n  companion object\n}\n\npublic inline val TextTrackKind.Companion.SUBTITLES:
TextTrackKind get() = "subtitles".asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.CAPTIONS: TextTrackKind get() =
"captions".asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.DESCRPTIONS: TextTrackKind get() =
"descriptions".asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.CHAPTERS:
TextTrackKind get() = "chapters".asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.METADATA: TextTrackKind get() =
"metadata".asDynamic().unsafeCast<TextTrackKind>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface SelectionMode {\n  companion object\n}\n\npublic inline val SelectionMode.Companion.SELECT:
SelectionMode get() = "select".asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val
SelectionMode.Companion.START: SelectionMode get() =
"start".asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val SelectionMode.Companion.END:
SelectionMode get() = "end".asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val
SelectionMode.Companion.PRESERVE: SelectionMode get() =
"preserve".asDynamic().unsafeCast<SelectionMode>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic

```

```

external interface CanvasFillRule {
    companion object
}
public inline val
CanvasFillRule.Companion.NONZERO: CanvasFillRule get() =
    "nonzero".asDynamic().unsafeCast<CanvasFillRule>()
public inline val
CanvasFillRule.Companion.EVENODD: CanvasFillRule get() =
    "evenodd".asDynamic().unsafeCast<CanvasFillRule>()
n/* please, don't implement this interface!
*/
@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface ImageSmoothingQuality {
    companion object
}
public inline val
ImageSmoothingQuality.Companion.LOW: ImageSmoothingQuality get() =
    "low".asDynamic().unsafeCast<ImageSmoothingQuality>()
public inline val
ImageSmoothingQuality.Companion.MEDIUM: ImageSmoothingQuality get() =
    "medium".asDynamic().unsafeCast<ImageSmoothingQuality>()
public inline val
ImageSmoothingQuality.Companion.HIGH: ImageSmoothingQuality get() =
    "high".asDynamic().unsafeCast<ImageSmoothingQuality>()
n/*
please, don't implement this interface!
*/
@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface CanvasLineCap {
    companion object
}
public inline val CanvasLineCap.Companion.BUTT:
CanvasLineCap get() = "butt".asDynamic().unsafeCast<CanvasLineCap>()
public inline val
CanvasLineCap.Companion.ROUND: CanvasLineCap get() =
    "round".asDynamic().unsafeCast<CanvasLineCap>()
public inline val CanvasLineCap.Companion.SQUARE:
CanvasLineCap get() = "square".asDynamic().unsafeCast<CanvasLineCap>()
n/* please, don't implement this
interface!
*/
@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public
external interface CanvasLineJoin {
    companion object
}
public inline val
CanvasLineJoin.Companion.ROUND: CanvasLineJoin get() =
    "round".asDynamic().unsafeCast<CanvasLineJoin>()
public inline val CanvasLineJoin.Companion.BEVEL:
CanvasLineJoin get() = "bevel".asDynamic().unsafeCast<CanvasLineJoin>()
public
inline val CanvasLineJoin.Companion.MITER: CanvasLineJoin get() =
    "miter".asDynamic().unsafeCast<CanvasLineJoin>()
n/* please, don't implement this interface!
*/
@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface CanvasTextAlign {
    companion object
}
public inline val CanvasTextAlign.Companion.START:
CanvasTextAlign get() = "start".asDynamic().unsafeCast<CanvasTextAlign>()
public inline val
CanvasTextAlign.Companion.END: CanvasTextAlign get() =
    "end".asDynamic().unsafeCast<CanvasTextAlign>()
public inline val CanvasTextAlign.Companion.LEFT:
CanvasTextAlign get() = "left".asDynamic().unsafeCast<CanvasTextAlign>()
public inline val
CanvasTextAlign.Companion.RIGHT: CanvasTextAlign get() =
    "right".asDynamic().unsafeCast<CanvasTextAlign>()
public inline val
CanvasTextAlign.Companion.CENTER: CanvasTextAlign get() =
    "center".asDynamic().unsafeCast<CanvasTextAlign>()
n/* please, don't implement this interface!
*/
@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface CanvasTextBaseline {
    companion object
}
public inline val CanvasTextBaseline.Companion.TOP:
CanvasTextBaseline get() = "top".asDynamic().unsafeCast<CanvasTextBaseline>()
public inline val
CanvasTextBaseline.Companion.HANGING: CanvasTextBaseline get() =
    "hanging".asDynamic().unsafeCast<CanvasTextBaseline>()
public inline val
CanvasTextBaseline.Companion.MIDDLE: CanvasTextBaseline get() =
    "middle".asDynamic().unsafeCast<CanvasTextBaseline>()
public inline val
CanvasTextBaseline.Companion.ALPHABETIC: CanvasTextBaseline get() =
    "alphabetic".asDynamic().unsafeCast<CanvasTextBaseline>()
public inline val
CanvasTextBaseline.Companion.IDEOGRAPHIC: CanvasTextBaseline get() =
    "ideographic".asDynamic().unsafeCast<CanvasTextBaseline>()
public inline val

```



```

CanvasTextBaseline.Companion.BOTTOM: CanvasTextBaseline get() =
    \"bottom\".asDynamic().unsafeCast<CanvasTextBaseline>()\n\n/*
    please, don't implement this interface!
    */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface CanvasDirection {\n    companion object\n}\n\npublic inline val CanvasDirection.Companion.LTR:
CanvasDirection get() = \"ltr\".asDynamic().unsafeCast<CanvasDirection>()\n\npublic inline val
CanvasDirection.Companion.RTL: CanvasDirection get() =
    \"rtl\".asDynamic().unsafeCast<CanvasDirection>()\n\npublic inline val CanvasDirection.Companion.INHERIT:
CanvasDirection get() = \"inherit\".asDynamic().unsafeCast<CanvasDirection>()\n\n/* please, don't implement this
interface! */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic
external interface ScrollRestoration {\n    companion object\n}\n\npublic inline val
ScrollRestoration.Companion.AUTO: ScrollRestoration get() =
    \"auto\".asDynamic().unsafeCast<ScrollRestoration>()\n\npublic inline val
ScrollRestoration.Companion.MANUAL: ScrollRestoration get() =
    \"manual\".asDynamic().unsafeCast<ScrollRestoration>()\n\n/*
    please, don't implement this interface!
    */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface ImageOrientation {\n    companion object\n}\n\npublic inline val ImageOrientation.Companion.NONE:
ImageOrientation get() = \"none\".asDynamic().unsafeCast<ImageOrientation>()\n\npublic inline val
ImageOrientation.Companion.FLIPY: ImageOrientation get() =
    \"flipY\".asDynamic().unsafeCast<ImageOrientation>()\n\n/* please, don't implement this interface!
    */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface PremultiplyAlpha {\n    companion object\n}\n\npublic inline val PremultiplyAlpha.Companion.NONE:
PremultiplyAlpha get() = \"none\".asDynamic().unsafeCast<PremultiplyAlpha>()\n\npublic inline val
PremultiplyAlpha.Companion.PREMULTIPLY: PremultiplyAlpha get() =
    \"premultiply\".asDynamic().unsafeCast<PremultiplyAlpha>()\n\npublic inline val
PremultiplyAlpha.Companion.DEFAULT:
    PremultiplyAlpha get() = \"default\".asDynamic().unsafeCast<PremultiplyAlpha>()\n\n/* please, don't implement
this interface! */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic
external interface ColorSpaceConversion {\n    companion object\n}\n\npublic inline val
ColorSpaceConversion.Companion.NONE: ColorSpaceConversion get() =
    \"none\".asDynamic().unsafeCast<ColorSpaceConversion>()\n\npublic inline val
ColorSpaceConversion.Companion.DEFAULT: ColorSpaceConversion get() =
    \"default\".asDynamic().unsafeCast<ColorSpaceConversion>()\n\n/* please, don't implement this interface!
    */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface ResizeQuality {\n    companion object\n}\n\npublic inline val ResizeQuality.Companion.PIXELATED:
ResizeQuality get() = \"pixelated\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic inline val
ResizeQuality.Companion.LOW: ResizeQuality get() =
    \"low\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic
    inline val ResizeQuality.Companion.MEDIUM: ResizeQuality get() =
    \"medium\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic inline val ResizeQuality.Companion.HIGH:
ResizeQuality get() = \"high\".asDynamic().unsafeCast<ResizeQuality>()\n\n/* please, don't implement this
interface! */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic
external interface BinaryType {\n    companion object\n}\n\npublic inline val BinaryType.Companion.BLOB:
BinaryType get() = \"blob\".asDynamic().unsafeCast<BinaryType>()\n\npublic inline val
BinaryType.Companion.ARRAYBUFFER: BinaryType get() =
    \"arraybuffer\".asDynamic().unsafeCast<BinaryType>()\n\n/* please, don't implement this interface!
    */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external

```

```

interface WorkerType {\n  companion object{\n}\n\npublic inline val WorkerType.Companion.CLASSIC:
WorkerType get() = \"classic\".asDynamic().unsafeCast<WorkerType>()\n\npublic
  inline val WorkerType.Companion.MODULE: WorkerType get() =
  \"module\".asDynamic().unsafeCast<WorkerType>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ShadowRootMode {\n  companion object{\n}\n\npublic inline val ShadowRootMode.Companion.OPEN:
ShadowRootMode get() = \"open\".asDynamic().unsafeCast<ShadowRootMode>()\n\npublic inline val
ShadowRootMode.Companion.CLOSED: ShadowRootMode get() =
  \"closed\".asDynamic().unsafeCast<ShadowRootMode>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ScrollBehavior {\n  companion object{\n}\n\npublic inline val ScrollBehavior.Companion.AUTO:
ScrollBehavior get() = \"auto\".asDynamic().unsafeCast<ScrollBehavior>()\n\npublic inline val
ScrollBehavior.Companion.INSTANT: ScrollBehavior get() =
  \"instant\".asDynamic().unsafeCast<ScrollBehavior>()\n\npublic
  inline val ScrollBehavior.Companion.SMOOTH: ScrollBehavior get() =
  \"smooth\".asDynamic().unsafeCast<ScrollBehavior>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ScrollLogicalPosition {\n  companion object{\n}\n\npublic inline val
ScrollLogicalPosition.Companion.START: ScrollLogicalPosition get() =
  \"start\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.CENTER: ScrollLogicalPosition get() =
  \"center\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.END: ScrollLogicalPosition get() =
  \"end\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.NEAREST: ScrollLogicalPosition get() =
  \"nearest\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic
  external interface CSSBoxType {\n  companion object{\n}\n\npublic inline val
CSSBoxType.Companion.MARGIN: CSSBoxType get() =
  \"margin\".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val CSSBoxType.Companion.BORDER:
CSSBoxType get() = \"border\".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val
CSSBoxType.Companion.PADDING: CSSBoxType get() =
  \"padding\".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val CSSBoxType.Companion.CONTENT:
CSSBoxType get() = \"content\".asDynamic().unsafeCast<CSSBoxType>()\", \"/*\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n *^\n\n// NOTE: THIS FILE IS AUTO-GENERATED,
DO NOT EDIT!\n\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.fetch\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.files.*\nimport
org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript
[Headers](https://developer.mozilla.org/en/docs/Web/API/Headers) to Kotlin\n *^\n\npublic external open class
Headers(init: dynamic = definedExternally) {\n  fun append(name: String, value: String)\n  fun delete(name:
String)\n  fun get(name: String): String?\n  fun has(name: String): Boolean\n  fun set(name: String, value:
String)\n}\n\n/**\n * Exposes the JavaScript [Body](https://developer.mozilla.org/en/docs/Web/API/Body) to
Kotlin\n *^\n\npublic external interface Body {\n  val bodyUsed: Boolean\n  fun arrayBuffer():
Promise<ArrayBuffer>\n  fun blob(): Promise<Blob>\n  fun formData(): Promise<FormData>\n  fun json():
Promise<Any?>\n  fun text(): Promise<String>\n}\n\n/**\n * Exposes the JavaScript
[Request](https://developer.mozilla.org/en/docs/Web/API/Request) to Kotlin\n *^\n\npublic external open class
Request(input: dynamic, init: RequestInit = definedExternally) : Body {\n  open val method: String\n  open val

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url: String\n  open val headers: Headers\n  open val type: RequestType\n  open val destination:
RequestDestination\n  open val referrer: String\n  open val referrerPolicy: dynamic\n  open val mode:
RequestMode\n  open val credentials: RequestCredentials\n  open val cache: RequestCache\n  open val redirect:
RequestRedirect\n  open val integrity: String\n  open val keepalive: Boolean\n  override val bodyUsed:
Boolean\n  fun clone(): Request\n  override fun arrayBuffer(): Promise<ArrayBuffer>\n  override fun blob():
Promise<Blob>\n  override fun formData(): Promise<FormData>\n  override fun json(): Promise<Any?>\n
override fun text(): Promise<String>\n}\n\npublic external interface RequestInit {\n  var method: String?\n
get() = definedExternally\n  set(value) = definedExternally\n  var headers: dynamic\n  get() =
definedExternally\n  set(value) = definedExternally\n  var body: dynamic\n  get() = definedExternally\n
set(value) = definedExternally\n  var referrer: String?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var referrerPolicy: dynamic\n  get() = definedExternally\n  set(value) =
definedExternally\n  var mode: RequestMode?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var credentials: RequestCredentials?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var cache: RequestCache?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var redirect: RequestRedirect?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var integrity: String?\n  get() = definedExternally\n  set(value) = definedExternally\n
var keepalive: Boolean?\n  get() = definedExternally\n  set(value) = definedExternally\n  var window:
Any?\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun RequestInit(method: String? =
undefined, headers: dynamic = undefined, body: dynamic = undefined, referrer: String? = undefined, referrerPolicy:
dynamic = undefined, mode: RequestMode? = undefined, credentials: RequestCredentials? = undefined, cache:
RequestCache? = undefined, redirect: RequestRedirect? = undefined, integrity: String? = undefined, keepalive:
Boolean? = undefined, window: Any? = undefined): RequestInit {\n  val o = js(\"({})\")\n  o[\"method\"] =
method\n  o[\"headers\"] = headers\n  o[\"body\"] = body\n  o[\"referrer\"] = referrer\n  o[\"referrerPolicy\"] =
referrerPolicy\n  o[\"mode\"] = mode\n  o[\"credentials\"] = credentials\n  o[\"cache\"] = cache\n  o[\"redirect\"]
= redirect\n  o[\"integrity\"] = integrity\n  o[\"keepalive\"] = keepalive\n  o[\"window\"] = window\n  return
o\n}\n\n/*\n * Exposes the JavaScript [Response](https://developer.mozilla.org/en/docs/Web/API/Response)
to Kotlin\n * \npublic external open class Response(body: dynamic = definedExternally, init: ResponseInit =
definedExternally) : Body {\n  open val type: ResponseType\n  open val url: String\n  open val redirected:
Boolean\n  open val status: Short\n  open val ok: Boolean\n  open val statusText: String\n  open val headers:
Headers\n  open val body: dynamic\n  open val trailer: Promise<Headers>\n  override val bodyUsed: Boolean\n
fun clone(): Response\n  override fun arrayBuffer(): Promise<ArrayBuffer>\n  override fun blob():
Promise<Blob>\n  override fun formData(): Promise<FormData>\n  override fun json(): Promise<Any?>\n
override fun text(): Promise<String>\n\n  companion object {\n    fun error(): Response\n    fun redirect(url:
String, status: Short = definedExternally): Response\n  }\n}\n\npublic external interface ResponseInit {\n  var
status: Short? /* = 200 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var statusText: String? /* = \"OK\" */\n  get() = definedExternally\n
set(value) = definedExternally\n  var headers: dynamic\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ResponseInit(status: Short? = 200,
statusText: String? = \"OK\", headers: dynamic = undefined): ResponseInit {\n  val o = js(\"({})\")\n  o[\"status\"]
= status\n  o[\"statusText\"] = statusText\n  o[\"headers\"] = headers\n  return o\n}\n\n/* please, don't implement
this interface! */\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic
external interface RequestType {\n  companion object\n}\n\npublic inline val RequestType.Companion.EMPTY:
RequestType\nget() = \"\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val
RequestType.Companion.AUDIO: RequestType\nget() =
\"audio\".asDynamic().unsafeCast<RequestType>()\n\npublic

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inline val RequestType.Companion.FONT: RequestType get() =
\"font\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val RequestType.Companion.IMAGE:
RequestType get() = \"image\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val
RequestType.Companion.SCRIPT: RequestType get() =
\"script\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val RequestType.Companion.STYLE:
RequestType get() = \"style\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val
RequestType.Companion.TRACK: RequestType get() =
\"track\".asDynamic().unsafeCast<RequestType>()\n\npublic inline val RequestType.Companion.VIDEO:
RequestType get() = \"video\".asDynamic().unsafeCast<RequestType>()\n\n/* please, don't implement this
interface! *\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic
external interface RequestDestination {\n  companion object\n}\n\npublic inline val
RequestDestination.Companion.EMPTY: RequestDestination
get() = \"\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.DOCUMENT: RequestDestination get() =
\"document\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.EMBED: RequestDestination get() =
\"embed\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.FONT: RequestDestination get() =
\"font\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.IMAGE: RequestDestination get() =
\"image\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.MANIFEST: RequestDestination get() =
\"manifest\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.MEDIA: RequestDestination get() =
\"media\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.OBJECT: RequestDestination get()
= \"object\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.REPORT: RequestDestination get() =
\"report\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.SCRIPT: RequestDestination get() =
\"script\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.SERVICEMANIFEST: RequestDestination get() =
\"serviceworker\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.SHAREDWORKER: RequestDestination get() =
\"sharedworker\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.STYLE: RequestDestination get() =
\"style\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.WORKER: RequestDestination get() =
\"worker\".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.XSLT: RequestDestination
get() = \"xslt\".asDynamic().unsafeCast<RequestDestination>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface RequestMode {\n  companion object\n}\n\npublic inline val RequestMode.Companion.NAVIGATE:
RequestMode get() = \"navigate\".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val
RequestMode.Companion.SAME_ORIGIN: RequestMode get() = \"same-
origin\".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val RequestMode.Companion.NO_CORS:
RequestMode get() = \"no-cors\".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val
RequestMode.Companion.CORS: RequestMode get() = \"cors\".asDynamic().unsafeCast<RequestMode>()\n\n/*

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please, don't implement this interface!

```
*\n@JsName("\null")\n@Suppress("\NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external
interface RequestCredentials {\n  companion object\n}\n\npublic inline val RequestCredentials.Companion.OMIT:
RequestCredentials
get() = "\omit".asDynamic().unsafeCast<RequestCredentials>()\n\npublic inline val
RequestCredentials.Companion.SAME_ORIGIN: RequestCredentials get() = "\same-
origin".asDynamic().unsafeCast<RequestCredentials>()\n\npublic inline val
RequestCredentials.Companion.INCLUDE: RequestCredentials get() =
"\include".asDynamic().unsafeCast<RequestCredentials>()\n\n/* please, don't implement this interface!
*\n@JsName("\null")\n@Suppress("\NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external
interface RequestCache {\n  companion object\n}\n\npublic inline val RequestCache.Companion.DEFAULT:
RequestCache get() = "\default".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.NO_STORE: RequestCache get() = "\no-
store".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val RequestCache.Companion.RELOAD:
RequestCache get() = "\reload".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.NO_CACHE: RequestCache get()
= "\no-cache".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.FORCE_CACHE: RequestCache get() = "\force-
cache".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.ONLY_IF_CACHED: RequestCache get() = "\only-if-
cached".asDynamic().unsafeCast<RequestCache>()\n\n/* please, don't implement this interface!
*\n@JsName("\null")\n@Suppress("\NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external
interface RequestRedirect {\n  companion object\n}\n\npublic inline val RequestRedirect.Companion.FOLLOW:
RequestRedirect get() = "\follow".asDynamic().unsafeCast<RequestRedirect>()\n\npublic inline val
RequestRedirect.Companion.ERROR: RequestRedirect get() =
"\error".asDynamic().unsafeCast<RequestRedirect>()\n\npublic inline val RequestRedirect.Companion.MANUAL:
RequestRedirect get() = "\manual".asDynamic().unsafeCast<RequestRedirect>()\n\n/* please, don't implement this
interface! *\n@JsName("\null")\n@Suppress("\NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic
external interface ResponseType {\n  companion object\n}\n\npublic inline val
ResponseType.Companion.BASIC: ResponseType get() =
"\basic".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val ResponseType.Companion.CORS:
ResponseType get() = "\cors".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val
ResponseType.Companion.DEFAULT: ResponseType get() =
"\default".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val ResponseType.Companion.ERROR:
ResponseType get() = "\error".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val
ResponseType.Companion.OPAQUE: ResponseType get() =
"\opaque".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val
ResponseType.Companion.OPAQUEREDIRECT: ResponseType get() =
"\opaqueredirect".asDynamic().unsafeCast<ResponseType>()", /*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n *\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO
NOT EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.dom.mediacapture\n\nimport
kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\nimport org.w3c.dom.events.*\n\n/* Exposes
the JavaScript [MediaStream](https://developer.mozilla.org/en/docs/Web/API/MediaStream) to Kotlin\n *\n\npublic
external open class MediaStream() : EventTarget, MediaProvider {\n  constructor(stream: MediaStream)\n
constructor(tracks: Array<MediaStreamTrack>)\n  open val id: String\n  open val active: Boolean\n  var
onaddtrack: ((MediaStreamTrackEvent) -> dynamic)?\n  var onremovetrack: ((MediaStreamTrackEvent) ->
dynamic)?\n  fun getAudioTracks(): Array<MediaStreamTrack>\n  fun getVideoTracks():
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Array<MediaStreamTrack>\n fun getTracks(): Array<MediaStreamTrack>\n fun getTrackById(trackId: String):
MediaStreamTrack?\n fun addTrack(track: MediaStreamTrack)\n
fun removeTrack(track: MediaStreamTrack)\n fun clone(): MediaStream\n}\n\n/**\n * Exposes the JavaScript
[MediaStreamTrack](https://developer.mozilla.org/en/docs/Web/API/MediaStreamTrack) to Kotlin\n */\npublic
external abstract class MediaStreamTrack : EventTarget {\n open val kind: String\n open val id: String\n open
val label: String\n open var enabled: Boolean\n open val muted: Boolean\n open var onmute: ((Event) ->
dynamic)?\n open var onunmute: ((Event) -> dynamic)?\n open val readyState: MediaStreamTrackState\n
open var onended: ((Event) -> dynamic)?\n open var onoverconstrained: ((Event) -> dynamic)?\n fun clone():
MediaStreamTrack\n fun stop()\n fun getCapabilities(): MediaTrackCapabilities\n fun getConstraints():
MediaTrackConstraints\n fun getSettings(): MediaTrackSettings\n fun applyConstraints(constraints:
MediaTrackConstraints = definedExternally): Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript
[MediaTrackSupportedConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaTrackSupportedConstrain
ts)
to Kotlin\n */\npublic external interface MediaTrackSupportedConstraints {\n var width: Boolean? /* = true */\n
get() = definedExternally\n set(value) = definedExternally\n var height: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var aspectRatio: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var frameRate: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var facingMode: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var resizeMode: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var volume: Boolean? /* = true */\n get() =
definedExternally\n set(value) = definedExternally\n var sampleRate:
Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var sampleSize:
Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var
echoCancellation: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n
var autoGainControl: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n
var noiseSuppression: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n
var latency: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var
channelCount: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var
deviceId: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var
groupId: Boolean? /* = true */\n get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaTrackSupportedConstraints(width: Boolean? = true, height: Boolean? = true, aspectRatio: Boolean? = true,
frameRate: Boolean? = true, facingMode: Boolean? = true, resizeMode: Boolean? = true, volume: Boolean? = true,
sampleRate: Boolean? = true, sampleSize: Boolean? = true, echoCancellation: Boolean? = true, autoGainControl:
Boolean? = true, noiseSuppression: Boolean? = true, latency: Boolean? = true, channelCount: Boolean? = true,
deviceId: Boolean? = true, groupId: Boolean? = true): MediaTrackSupportedConstraints {\n val o = js("{}")\n
o["width"] = width\n o["height"] = height\n o["aspectRatio"] = aspectRatio\n o["frameRate"] =
frameRate\n o["facingMode"] = facingMode\n o["resizeMode"] = resizeMode\n o["volume"] = volume\n
o["sampleRate"] = sampleRate\n o["sampleSize"]
= sampleSize\n o["echoCancellation"] = echoCancellation\n o["autoGainControl"] = autoGainControl\n
o["noiseSuppression"] = noiseSuppression\n o["latency"] = latency\n o["channelCount"] = channelCount\n
o["deviceId"] = deviceId\n o["groupId"] = groupId\n return o\n}\n\npublic external interface
MediaTrackCapabilities {\n var width: ULongRange?\n get() = definedExternally\n set(value) =
definedExternally\n var height: ULongRange?\n get() = definedExternally\n set(value) =
definedExternally\n var aspectRatio: DoubleRange?\n get() = definedExternally\n set(value) =
definedExternally\n var frameRate: DoubleRange?\n get() = definedExternally\n set(value) =
definedExternally\n var facingMode: Array<String>?\n get() = definedExternally\n set(value) =

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definedExternally\n    var resizeMode: Array<String>?\n        get() = definedExternally\n        set(value) =
definedExternally\n
    var volume: DoubleRange?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
sampleRate: ULongRange?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
sampleSize: ULongRange?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
echoCancellation: Array<Boolean>?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
autoGainControl: Array<Boolean>?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
noiseSuppression: Array<Boolean>?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
latency: DoubleRange?\n        get() = definedExternally\n        set(value) = definedExternally\n    var channelCount:
ULongRange?\n        get() = definedExternally\n        set(value) = definedExternally\n    var deviceId: String?\n
get() = definedExternally\n        set(value) = definedExternally\n
    var groupId: String?\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackCapabilities(width:
ULongRange? = undefined, height: ULongRange? = undefined, aspectRatio: DoubleRange? = undefined,
frameRate: DoubleRange? = undefined, facingMode: Array<String>? = undefined, resizeMode: Array<String>? =
undefined, volume: DoubleRange? = undefined, sampleRate: ULongRange? = undefined, sampleSize:
ULongRange? = undefined, echoCancellation: Array<Boolean>? = undefined, autoGainControl: Array<Boolean>?
= undefined, noiseSuppression: Array<Boolean>? = undefined, latency: DoubleRange? = undefined, channelCount:
ULongRange? = undefined, deviceId: String? = undefined, groupId: String? = undefined): MediaTrackCapabilities
{\n    val o = js(\"({})\")\n    o[\"width\"] = width\n    o[\"height\"] = height\n    o[\"aspectRatio\"] = aspectRatio\n
o[\"frameRate\"]
= frameRate\n    o[\"facingMode\"] = facingMode\n    o[\"resizeMode\"] = resizeMode\n    o[\"volume\"] =
volume\n    o[\"sampleRate\"] = sampleRate\n    o[\"sampleSize\"] = sampleSize\n    o[\"echoCancellation\"] =
echoCancellation\n    o[\"autoGainControl\"] = autoGainControl\n    o[\"noiseSuppression\"] = noiseSuppression\n
o[\"latency\"] = latency\n    o[\"channelCount\"] = channelCount\n    o[\"deviceId\"] = deviceId\n    o[\"groupId\"] =
groupId\n    return o\n}\n\n**\n * Exposes the JavaScript
[MediaTrackConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaTrackConstraints) to Kotlin\n
*\npublic external interface MediaTrackConstraints : MediaTrackConstraintSet {\n    var advanced:
Array<MediaTrackConstraintSet>?\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackConstraints(advanced:
Array<MediaTrackConstraintSet>?
= undefined, width: dynamic = undefined, height: dynamic = undefined, aspectRatio: dynamic = undefined,
frameRate: dynamic = undefined, facingMode: dynamic = undefined, resizeMode: dynamic = undefined, volume:
dynamic = undefined, sampleRate: dynamic = undefined, sampleSize: dynamic = undefined, echoCancellation:
dynamic = undefined, autoGainControl: dynamic = undefined, noiseSuppression: dynamic = undefined, latency:
dynamic = undefined, channelCount: dynamic = undefined, deviceId: dynamic = undefined, groupId: dynamic =
undefined): MediaTrackConstraints {\n    val o = js(\"({})\")\n    o[\"advanced\"] = advanced\n    o[\"width\"] =
width\n    o[\"height\"] = height\n    o[\"aspectRatio\"] = aspectRatio\n    o[\"frameRate\"] = frameRate\n
o[\"facingMode\"] = facingMode\n    o[\"resizeMode\"] = resizeMode\n    o[\"volume\"] = volume\n
o[\"sampleRate\"] = sampleRate\n    o[\"sampleSize\"] = sampleSize\n    o[\"echoCancellation\"] =
echoCancellation\n    o[\"autoGainControl\"] =
autoGainControl\n    o[\"noiseSuppression\"] = noiseSuppression\n    o[\"latency\"] = latency\n
o[\"channelCount\"] = channelCount\n    o[\"deviceId\"] = deviceId\n    o[\"groupId\"] = groupId\n    return
o\n}\n\npublic external interface MediaTrackConstraintSet {\n    var width: dynamic\n        get() =
definedExternally\n        set(value) = definedExternally\n    var height: dynamic\n        get() = definedExternally\n
set(value) = definedExternally\n    var aspectRatio: dynamic\n        get() = definedExternally\n        set(value) =

```

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definedExternally\n    var frameRate: dynamic\n        get() = definedExternally\n        set(value) =
definedExternally\n    var facingMode: dynamic\n        get() = definedExternally\n        set(value) =
definedExternally\n    var resizeMode: dynamic\n        get() = definedExternally\n        set(value) =
definedExternally\n    var volume: dynamic\n        get() = definedExternally\n        set(value) = definedExternally\n
var sampleRate:
dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n    var sampleSize: dynamic\n
get() = definedExternally\n    set(value) = definedExternally\n    var echoCancellation: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n    var autoGainControl: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n    var noiseSuppression: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n    var latency: dynamic\n    get() = definedExternally\n
set(value) = definedExternally\n    var channelCount: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n    var deviceId: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n
var groupId: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic
inline fun MediaTrackConstraintSet(width: dynamic = undefined, height: dynamic = undefined, aspectRatio:
dynamic = undefined, frameRate: dynamic = undefined, facingMode: dynamic = undefined, resizeMode: dynamic =
undefined, volume: dynamic = undefined, sampleRate: dynamic = undefined, sampleSize: dynamic = undefined,
echoCancellation: dynamic = undefined, autoGainControl: dynamic = undefined, noiseSuppression: dynamic =
undefined, latency: dynamic = undefined, channelCount: dynamic = undefined, deviceId: dynamic = undefined,
groupId: dynamic = undefined): MediaTrackConstraintSet {\n    val o = js(\"({})\")\n    o[\"width\"] = width\n
o[\"height\"] = height\n    o[\"aspectRatio\"] = aspectRatio\n    o[\"frameRate\"] = frameRate\n    o[\"facingMode\"]
= facingMode\n    o[\"resizeMode\"] = resizeMode\n    o[\"volume\"] = volume\n    o[\"sampleRate\"] =
sampleRate\n    o[\"sampleSize\"] = sampleSize\n    o[\"echoCancellation\"] = echoCancellation\n
o[\"autoGainControl\"]
= autoGainControl\n    o[\"noiseSuppression\"] = noiseSuppression\n    o[\"latency\"] = latency\n
o[\"channelCount\"] = channelCount\n    o[\"deviceId\"] = deviceId\n    o[\"groupId\"] = groupId\n    return
o\n}\n\n/**\n * Exposes the JavaScript
[MediaTrackSettings](https://developer.mozilla.org/en/docs/Web/API/MediaTrackSettings) to Kotlin\n\n*\n\npublic
external interface MediaTrackSettings {\n    var width: Int?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var height: Int?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
aspectRatio: Double?\n        get() = definedExternally\n        set(value) = definedExternally\n    var frameRate:
Double?\n        get() = definedExternally\n        set(value) = definedExternally\n    var facingMode: String?\n
get() = definedExternally\n        set(value) = definedExternally\n    var resizeMode: String?\n        get() =
definedExternally\n        set(value)
= definedExternally\n    var volume: Double?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var sampleRate: Int?\n        get() = definedExternally\n        set(value) = definedExternally\n
var sampleSize: Int?\n        get() = definedExternally\n        set(value) = definedExternally\n    var echoCancellation:
Boolean?\n        get() = definedExternally\n        set(value) = definedExternally\n    var autoGainControl: Boolean?\n
get() = definedExternally\n        set(value) = definedExternally\n    var noiseSuppression: Boolean?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var latency: Double?\n        get() = definedExternally\n
set(value) = definedExternally\n    var channelCount: Int?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var deviceId: String?\n        get() = definedExternally\n        set(value) = definedExternally\n
var groupId: String?\n
get() = definedExternally\n        set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackSettings(width: Int? =
undefined, height: Int? = undefined, aspectRatio: Double? = undefined, frameRate: Double? = undefined,
facingMode: String? = undefined, resizeMode: String? = undefined, volume: Double? = undefined, sampleRate: Int?

```



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= undefined, sampleSize: Int? = undefined, echoCancellation: Boolean? = undefined, autoGainControl: Boolean? =
undefined, noiseSuppression: Boolean? = undefined, latency: Double? = undefined, channelCount: Int? = undefined,
deviceId: String? = undefined, groupId: String? = undefined): MediaTrackSettings {\n  val o = js("{}")\n
o["width"] = width\n  o["height"] = height\n  o["aspectRatio"] = aspectRatio\n  o["frameRate"] =
frameRate\n  o["facingMode"] = facingMode\n  o["resizeMode"] = resizeMode\n  o["volume"] = volume\n
o["sampleRate"]
= sampleRate\n  o["sampleSize"] = sampleSize\n  o["echoCancellation"] = echoCancellation\n
o["autoGainControl"] = autoGainControl\n  o["noiseSuppression"] = noiseSuppression\n  o["latency"] =
latency\n  o["channelCount"] = channelCount\n  o["deviceId"] = deviceId\n  o["groupId"] = groupId\n
return o}\n\n/**\n * Exposes the JavaScript
[MediaStreamTrackEvent](https://developer.mozilla.org/en/docs/Web/API/MediaStreamTrackEvent) to Kotlin\n
*/\n\npublic external open class MediaStreamTrackEvent(type: String, eventInitDict: MediaStreamTrackEventInit) :
Event {\n  open val track: MediaStreamTrack\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface MediaStreamTrackEventInit : EventInit {\n  var track:
MediaStreamTrack?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic
inline fun MediaStreamTrackEventInit(track: MediaStreamTrack?, bubbles: Boolean? = false, cancelable: Boolean?
= false, composed: Boolean? = false): MediaStreamTrackEventInit {\n  val o = js("{}")\n  o["track"] =
track\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return
o}\n\npublic external open class OverconstrainedErrorEvent(type: String, eventInitDict:
OverconstrainedErrorEventInit) : Event {\n  open val error: dynamic\n\n  companion object {\n    val NONE:
Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE:
Short\n  }\n}\n\npublic external interface OverconstrainedErrorEventInit : EventInit {\n  var error: dynamic /* =
null */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun OverconstrainedErrorEventInit(error:
dynamic = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
OverconstrainedErrorEventInit {\n  val o = js("{}")\n  o["error"] = error\n  o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o}\n\n\n/**\n * Exposes the JavaScript
[MediaDevices](https://developer.mozilla.org/en/docs/Web/API/MediaDevices) to Kotlin\n
*/\n\npublic external
abstract class MediaDevices : EventTarget {\n  open var ondevicechange: ((Event) -> dynamic)?\n  fun
enumerateDevices(): Promise<Array<MediaDeviceInfo>>\n  fun getSupportedConstraints():
MediaTrackSupportedConstraints\n  fun getUserMedia(constraints: MediaStreamConstraints = definedExternally):
Promise<MediaStream>\n}\n\n/**\n * Exposes the JavaScript
[MediaDeviceInfo](https://developer.mozilla.org/en/docs/Web/API/MediaDeviceInfo) to Kotlin\n
*/\n\npublic
external abstract class MediaDeviceInfo {\n  open val deviceId: String\n  open val kind:
MediaDeviceKind\n  open val label: String\n  open val groupId: String\n  fun toJSON(): dynamic\n}\n\npublic
external abstract class InputDeviceInfo : MediaDeviceInfo {\n  fun getCapabilities():
MediaTrackCapabilities\n}\n\n/**\n * Exposes the JavaScript
[MediaStreamConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaStreamConstraints) to Kotlin\n
*/\n\npublic external interface MediaStreamConstraints {\n  var video: dynamic /* = false */\n  get() =
definedExternally\n  set(value) = definedExternally\n  var audio: dynamic /* = false */\n  get() =
definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun MediaStreamConstraints(video:
dynamic = false, audio: dynamic = false): MediaStreamConstraints {\n  val o = js("{}")\n  o["video"] =
video\n  o["audio"] = audio\n  return o}\n\n\npublic external interface ConstrainsablePattern

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{\n  var onoverconstrained: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) =
definedExternally\n  fun getCapabilities(): Capabilities\n  fun getConstraints(): Constraints\n  fun getSettings():
Settings\n  fun applyConstraints(constraints: Constraints = definedExternally): Promise<Unit>\n}\n\n/**\n *
Exposes the JavaScript [DoubleRange](https://developer.mozilla.org/en/docs/Web/API/DoubleRange) to Kotlin\n
*/\npublic external interface DoubleRange {\n  var max: Double?\n    get() = definedExternally\n    set(value)
= definedExternally\n  var min: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleRange(max: Double? =
undefined, min: Double? = undefined): DoubleRange {\n  val o = js(\"({})\")\n  o[\"max\"] = max\n  o[\"min\"] =
min\n  return o\n}\n\npublic external interface
ConstrainDoubleRange : DoubleRange {\n  var exact: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n  var ideal: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainDoubleRange(exact: Double?
= undefined, ideal: Double? = undefined, max: Double? = undefined, min: Double? = undefined):
ConstrainDoubleRange {\n  val o = js(\"({})\")\n  o[\"exact\"] = exact\n  o[\"ideal\"] = ideal\n  o[\"max\"] =
max\n  o[\"min\"] = min\n  return o\n}\n\npublic external interface ULongRange {\n  var max: Int?\n    get() =
definedExternally\n    set(value) = definedExternally\n  var min: Int?\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ULongRange(max: Int?
= undefined, min: Int? = undefined): ULongRange {\n  val o = js(\"({})\")\n  o[\"max\"] = max\n  o[\"min\"] =
min\n  return o\n}\n\npublic external interface ConstrainULongRange : ULongRange {\n  var exact: Int?\n
get() = definedExternally\n    set(value) = definedExternally\n  var ideal: Int?\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainULongRange(exact: Int? =
undefined, ideal: Int? = undefined, max: Int? = undefined, min: Int? = undefined): ConstrainULongRange {\n  val o
= js(\"({})\")\n  o[\"exact\"] = exact\n  o[\"ideal\"] = ideal\n  o[\"max\"] = max\n  o[\"min\"] = min\n  return
o\n}\n\n/**\n * Exposes the JavaScript
[ConstrainBooleanParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainBooleanParameters) to
Kotlin\n */\npublic external interface ConstrainBooleanParameters {\n  var exact:
Boolean?\n    get() = definedExternally\n    set(value) = definedExternally\n  var ideal: Boolean?\n    get()
= definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainBooleanParameters(exact:
Boolean? = undefined, ideal: Boolean? = undefined): ConstrainBooleanParameters {\n  val o = js(\"({})\")\n
o[\"exact\"] = exact\n  o[\"ideal\"] = ideal\n  return o\n}\n\n/**\n * Exposes the JavaScript
[ConstrainDOMStringParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainDOMStringParameters)
to Kotlin\n */\npublic external interface ConstrainDOMStringParameters {\n  var exact: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n  var ideal: dynamic\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic
inline fun ConstrainDOMStringParameters(exact: dynamic = undefined, ideal: dynamic = undefined):
ConstrainDOMStringParameters {\n  val o = js(\"({})\")\n  o[\"exact\"] = exact\n  o[\"ideal\"] = ideal\n  return
o\n}\n\npublic external interface Capabilities\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun Capabilities(): Capabilities {\n  val o
= js(\"({})\")\n  return o\n}\n\npublic external interface Settings\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun Settings(): Settings {\n  val o =
js(\"({})\")\n  return o\n}\n\npublic external interface ConstraintSet\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ConstraintSet(): ConstraintSet {\n

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val o = js("{}")\n    return o\n}\n\npublic external interface Constraints : ConstraintSet {\n    var advanced:
Array<ConstraintSet>?\n
    get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun Constraints(advanced:
Array<ConstraintSet>? = undefined): Constraints {\n    val o = js("{}")\n    o[\"advanced\"] = advanced\n    return o\n}\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaStreamTrackState {\n    companion object\n}\n\npublic inline val
MediaStreamTrackState.Companion.LIVE: MediaStreamTrackState get() =
\"live\".asDynamic().unsafeCast<MediaStreamTrackState>()\n\npublic inline val
MediaStreamTrackState.Companion.ENDED: MediaStreamTrackState get() =
\"ended\".asDynamic().unsafeCast<MediaStreamTrackState>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface VideoFacingModeEnum {\n
    companion object\n}\n\npublic inline val VideoFacingModeEnum.Companion.USER: VideoFacingModeEnum
get() = \"user\".asDynamic().unsafeCast<VideoFacingModeEnum>()\n\npublic inline val
VideoFacingModeEnum.Companion.ENVIRONMENT: VideoFacingModeEnum get() =
\"environment\".asDynamic().unsafeCast<VideoFacingModeEnum>()\n\npublic inline val
VideoFacingModeEnum.Companion.LEFT: VideoFacingModeEnum get() =
\"left\".asDynamic().unsafeCast<VideoFacingModeEnum>()\n\npublic inline val
VideoFacingModeEnum.Companion.RIGHT: VideoFacingModeEnum get() =
\"right\".asDynamic().unsafeCast<VideoFacingModeEnum>()\n\n/* please, don't implement this interface!
*\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface VideoResizeModeEnum {\n    companion object\n}\n\npublic inline val
VideoResizeModeEnum.Companion.NONE: VideoResizeModeEnum get() =
\"none\".asDynamic().unsafeCast<VideoResizeModeEnum>()\n\npublic inline val
VideoResizeModeEnum.Companion.CROP_AND_SCALE:
VideoResizeModeEnum get() = \"crop-and-scale\".asDynamic().unsafeCast<VideoResizeModeEnum>()\n\n/*
please, don't implement this interface!
*\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaDeviceKind {\n    companion object\n}\n\npublic inline val
MediaDeviceKind.Companion.AUDIOINPUT: MediaDeviceKind get() =
\"audioinput\".asDynamic().unsafeCast<MediaDeviceKind>()\n\npublic inline val
MediaDeviceKind.Companion.AUDIOOUTPUT: MediaDeviceKind get() =
\"audiooutput\".asDynamic().unsafeCast<MediaDeviceKind>()\n\npublic inline val
MediaDeviceKind.Companion.VIDEOINPUT: MediaDeviceKind get() =
\"videoinput\".asDynamic().unsafeCast<MediaDeviceKind>()\", \"/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT!\n\n// See github.com/kotlin/dukat
for details\n\npackage org.w3c.dom.mediasource\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport
org.w3c.dom.*\nimport org.w3c.dom.events.*\n\n/**\n * Exposes the JavaScript
[MediaSource](https://developer.mozilla.org/en/docs/Web/API/MediaSource) to Kotlin\n */\n\npublic external open
class MediaSource : EventTarget, MediaProvider {\n    open val sourceBuffers: SourceBufferList\n    open val
activeSourceBuffers: SourceBufferList\n    open val readyState: ReadyState\n    var duration: Double\n    var
onSourceOpen: ((Event) -> dynamic)?\n    var onSourceEnded: ((Event) -> dynamic)?\n    var onSourceClose: ((Event)
-> dynamic)?\n    fun addSourceBuffer(type: String): SourceBuffer\n    fun removeSourceBuffer(sourceBuffer:

```



```

definedExternally\n    set(value) = definedExternally\n    var isPrimary: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun PointerEventInit(pointerId: Int? = 0,
width: Double? = 1.0, height: Double? = 1.0, pressure: Float? = 0f, tangentialPressure: Float? = 0f, tiltX: Int? = 0,
tiltY: Int? = 0, twist: Int? = 0, pointerType: String? = \"\", isPrimary: Boolean? = false, screenX: Int? = 0, screenY:
Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? =
null, region: String? = null, ctrlKey: Boolean? = false, shiftKey:
Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false,
modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false,
modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false,
modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view:
Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): PointerEventInit {\n    val o = js(\"({})\")\n    o[\"pointerId\"] = pointerId\n    o[\"width\"] = width\n    o[\"height\"] = height\n    o[\"pressure\"] = pressure\n    o[\"tangentialPressure\"] = tangentialPressure\n    o[\"tiltX\"] = tiltX\n    o[\"tiltY\"] = tiltY\n    o[\"twist\"] = twist\n    o[\"pointerType\"] = pointerType\n    o[\"isPrimary\"] = isPrimary\n    o[\"screenX\"] = screenX\n    o[\"screenY\"] = screenY\n    o[\"clientX\"]
= clientX\n    o[\"clientY\"] = clientY\n    o[\"button\"] = button\n    o[\"buttons\"] = buttons\n    o[\"relatedTarget\"]
= relatedTarget\n    o[\"region\"] = region\n    o[\"ctrlKey\"] = ctrlKey\n    o[\"shiftKey\"] = shiftKey\n    o[\"altKey\"]
= altKey\n    o[\"metaKey\"] = metaKey\n    o[\"modifierAltGraph\"] = modifierAltGraph\n    o[\"modifierCapsLock\"]
= modifierCapsLock\n    o[\"modifierFn\"] = modifierFn\n    o[\"modifierFnLock\"] =
modifierFnLock\n    o[\"modifierHyper\"] = modifierHyper\n    o[\"modifierNumLock\"] = modifierNumLock\n    o[\"modifierScrollLock\"]
= modifierScrollLock\n    o[\"modifierSuper\"] = modifierSuper\n    o[\"modifierSymbol\"] = modifierSymbol\n    o[\"modifierSymbolLock\"]
= modifierSymbolLock\n    o[\"view\"] =
view\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] =
composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[PointerEvent](https://developer.mozilla.org/en/docs/Web/API/PointerEvent)
to Kotlin\n\n * \n\npublic external open class PointerEvent(type: String, eventInitDict: PointerEventInit =
definedExternally) : MouseEvent {\n    open val pointerId: Int\n    open val width: Double\n    open val height:
Double\n    open val pressure: Float\n    open val tangentialPressure: Float\n    open val tiltX: Int\n    open val tiltY:
Int\n    open val twist: Int\n    open val pointerType: String\n    open val isPrimary: Boolean\n\n    companion object
{\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n}\n\n\", \"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n\n * \n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n\n// See
github.com/kotlin/dukat for details\n\npackage org.w3c.dom.svg\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport
org.w3c.dom.*\nimport org.w3c.dom.css.*\n\n/**\n * Exposes the JavaScript
[SVGElement](https://developer.mozilla.org/en/docs/Web/API/SVGElement) to Kotlin\n\n * \n\npublic external
abstract class SVGElement : Element, ElementCSSInlineStyle, GlobalEventHandlers, SVGElementInstance {\n    open val dataset: DOMStringMap\n    open val ownerSVGElement: SVGSVGElement?\n    open val
viewportElement: SVGElement?\n    open var tabIndex: Int\n    fun focus()\n    fun blur()\n\n    companion object
{\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n

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    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING:
Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val
DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface
SVGBoundingBoxOptions {\n    var fill: Boolean? /* = true */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var stroke: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var markers: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var clipped: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun SVGBoundingBoxOptions(fill:
Boolean? = true, stroke: Boolean? = false, markers: Boolean? = false, clipped: Boolean?
= false): SVGBoundingBoxOptions {\n    val o = js(\"({})\")\n    o[\"fill\"] = fill\n    o[\"stroke\"] = stroke\n    o[\"markers\"] = markers\n    o[\"clipped\"] = clipped\n    return o\n}\n\n/**\n * Exposes the JavaScript
[SVGGraphicsElement](https://developer.mozilla.org/en/docs/Web/API/SVGGraphicsElement) to Kotlin\n
*/\n\npublic external abstract class SVGGraphicsElement : SVGElement, SVGTests {\n    open val transform:
SVGAnimatedTransformList\n    fun getBBox(options: SVGBoundingBoxOptions = definedExternally):
DOMRect\n    fun getCTM(): DOMMatrix?\n    fun getScreenCTM(): DOMMatrix?\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGGeometryElement](https://developer.mozilla.org/en/docs/Web/API/SVGGeometryElement) to Kotlin\n
*/\n\npublic external abstract class SVGGeometryElement : SVGGraphicsElement {\n    open val pathLength:
SVGAnimatedNumber\n    fun isPointInFill(point: DOMPoint): Boolean\n    fun isPointInStroke(point: DOMPoint):
Boolean\n    fun getTotalLength(): Float\n    fun getPointAtLength(distance: Float): DOMPoint\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGNumber](https://developer.mozilla.org/en/docs/Web/API/SVGNumber) to Kotlin\n
*/\n\npublic external
abstract class SVGNumber {\n    open var value: Float\n}\n\n/**\n * Exposes the JavaScript
[SVGLength](https://developer.mozilla.org/en/docs/Web/API/SVGLength) to Kotlin\n
*/\n\npublic external abstract
class SVGLength {\n    open val unitType: Short\n    open
var value: Float\n    open var valueInSpecifiedUnits: Float\n    open var valueAsString: String\n    fun
newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits: Float)\n    fun convertToSpecifiedUnits(unitType:
Short)\n\n    companion object {\n        val SVG_LENGTHTYPE_UNKNOWN: Short\n        val
SVG_LENGTHTYPE_NUMBER: Short\n        val SVG_LENGTHTYPE_PERCENTAGE: Short\n        val
SVG_LENGTHTYPE_EMS: Short\n        val SVG_LENGTHTYPE_EXS: Short\n        val

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SVG_LENGTHTYPE_PX: Short\n    val SVG_LENGTHTYPE_CM: Short\n    val
SVG_LENGTHTYPE_MM: Short\n    val SVG_LENGTHTYPE_IN: Short\n    val SVG_LENGTHTYPE_PT:
Short\n    val SVG_LENGTHTYPE_PC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAngle) to Kotlin\n *\npublic external abstract
class SVGAngle {\n    open val unitType: Short\n    open var value: Float\n    open var valueInSpecifiedUnits:
Float\n    open var valueAsString: String\n    fun
    newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits: Float)\n    fun
convertToSpecifiedUnits(unitType: Short)\n\n    companion object {\n        val SVG_ANGLETYPE_UNKNOWN:
Short\n        val SVG_ANGLETYPE_UNSPECIFIED: Short\n        val SVG_ANGLETYPE_DEG: Short\n        val
SVG_ANGLETYPE_RAD: Short\n        val SVG_ANGLETYPE_GRAD: Short\n    }\n}\n\npublic external abstract
class SVGNameList {\n    open val length: Int\n    open val numberOfItems: Int\n    fun clear()\n    fun
initialize(newItem: dynamic): dynamic\n    fun insertItemBefore(newItem: dynamic, index: Int): dynamic\n    fun
replaceItem(newItem: dynamic, index: Int): dynamic\n    fun removeItem(index: Int): dynamic\n    fun
appendItem(newItem: dynamic): dynamic\n    fun getItem(index: Int):
dynamic\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNameList.get(index: Int):
dynamic = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNameList.set(index: Int,
newItem: dynamic) { asDynamic()[index] = newItem }\n\n/**\n * Exposes the JavaScript
[SVGNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGNumberList) to Kotlin\n *\npublic external
abstract class SVGNumberList {\n    open val length: Int\n    open val numberOfItems: Int\n    fun clear()\n    fun
initialize(newItem: SVGNumber): SVGNumber\n    fun insertItemBefore(newItem: SVGNumber, index: Int):
SVGNumber\n    fun replaceItem(newItem: SVGNumber, index: Int): SVGNumber\n    fun removeItem(index: Int):
SVGNumber\n    fun appendItem(newItem: SVGNumber): SVGNumber\n    fun getItem(index: Int):
SVGNumber\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNumberList.get(index:
Int): SVGNumber? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic
inline operator fun SVGNumberList.set(index: Int, newItem: SVGNumber) { asDynamic()[index] = newItem
}\n\n/**\n * Exposes the JavaScript
[SVGLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGLengthList) to Kotlin\n *\npublic external
abstract class SVGLengthList {\n    open val length: Int\n    open val numberOfItems: Int\n    fun clear()\n    fun
initialize(newItem: SVGLength): SVGLength\n    fun insertItemBefore(newItem: SVGLength, index: Int):
SVGLength\n    fun replaceItem(newItem: SVGLength, index: Int): SVGLength\n    fun removeItem(index: Int):
SVGLength\n    fun appendItem(newItem: SVGLength): SVGLength\n    fun getItem(index: Int):
SVGLength\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGLengthList.get(index:
Int): SVGLength? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGLengthList.set(index:
Int, newItem: SVGLength) { asDynamic()[index] = newItem }\n\n/**\n * Exposes the JavaScript
[SVGAnimatedBoolean](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedBoolean) to Kotlin\n *\npublic external abstract class SVGAnimatedBoolean {\n    open var baseVal: Boolean\n    open val animVal:
Boolean\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedEnumeration](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedEnumeration) to
Kotlin\n *\npublic external abstract class SVGAnimatedEnumeration {\n    open var baseVal: Short\n    open val
animVal: Short\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedInteger](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedInteger) to Kotlin\n *\npublic external abstract class SVGAnimatedInteger {\n    open var baseVal: Int\n    open val animVal:

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Int\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedNumber](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumber) to Kotlin\n
*\npublic external abstract class SVGAnimatedNumber
{\n  open var baseVal: Float\n  open val animVal: Float\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedLength](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLength) to Kotlin\n
*\npublic external abstract class SVGAnimatedLength {\n  open val baseVal: SVGLength\n  open val animVal:
SVGLength\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedAngle) to Kotlin\n *\npublic
external abstract class SVGAnimatedAngle {\n  open val baseVal: SVGAngle\n  open val animVal:
SVGAngle\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedString](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedString) to Kotlin\n *\npublic
external abstract class SVGAnimatedString {\n  open var baseVal: String\n  open val animVal: String\n}\n\n/**\n
 * Exposes the JavaScript [SVGAnimatedRect](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedRect)
to Kotlin\n *\npublic external abstract class SVGAnimatedRect
{\n  open val baseVal: DOMRect\n  open val animVal: DOMRectReadOnly\n}\n\n/**\n * Exposes the
JavaScript [SVGAnimatedNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumberList)
to Kotlin\n *\npublic external abstract class SVGAnimatedNumberList {\n  open val baseVal: SVGNumberList\n
open val animVal: SVGNumberList\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLengthList) to Kotlin\n
*\npublic external abstract class SVGAnimatedLengthList {\n  open val baseVal: SVGLengthList\n  open val
animVal: SVGLengthList\n}\n\n/**\n * Exposes the JavaScript
[SVGStringList](https://developer.mozilla.org/en/docs/Web/API/SVGStringList) to Kotlin\n *\npublic external
abstract class SVGStringList {\n  open val length: Int\n  open val numberOfItems: Int\n  fun clear()\n  fun
initialize(newItem: String): String\n  fun insertItemBefore(newItem: String, index: Int): String\n  fun
replaceItem(newItem:
String, index: Int): String\n  fun removeItem(index: Int): String\n  fun appendItem(newItem: String): String\n
fun getItem(index: Int): String\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGStringList.get(index:
Int): String? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGStringList.set(index: Int,
newItem: String) { asDynamic()[index] = newItem }\n\n/**\n * Exposes the JavaScript
[SVGUnitTypes](https://developer.mozilla.org/en/docs/Web/API/SVGUnitTypes) to Kotlin\n
*\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external interface SVGUnitTypes
{\n  companion object {\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val
SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGTests](https://developer.mozilla.org/en/docs/Web/API/SVGTests)
to Kotlin\n *\npublic external interface SVGTests {\n  val requiredExtensions: SVGStringList\n  val
systemLanguage: SVGStringList\n}\n\npublic external interface SVGFitToViewBox {\n  val viewBox:
SVGAnimatedRect\n  val preserveAspectRatio: SVGAnimatedPreserveAspectRatio\n}\n\n/**\n * Exposes the
JavaScript [SVGZoomAndPan](https://developer.mozilla.org/en/docs/Web/API/SVGZoomAndPan) to Kotlin\n
*\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external interface
SVGZoomAndPan {\n  var zoomAndPan: Short\n\n  companion object {\n    val
SVG_ZOOMANDPAN_UNKNOWN: Short\n    val SVG_ZOOMANDPAN_DISABLE: Short\n    val
SVG_ZOOMANDPAN_MAGNIFY: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGURIReference](https://developer.mozilla.org/en/docs/Web/API/SVGURIReference) to Kotlin\n *\npublic
external interface SVGURIReference {\n  val href: SVGAnimatedString\n}\n\n/**\n * Exposes the JavaScript
[SVGSVGElement](https://developer.mozilla.org/en/docs/Web/API/SVGSVGElement)

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to Kotlin\n */\npublic external abstract class SVGSVGElement : SVGGraphicsElement, SVGFitToViewBox,
SVGZoomAndPan, WindowEventHandlers {\n    open val x: SVGAnimatedLength\n    open val y:
SVGAnimatedLength\n    open val width: SVGAnimatedLength\n    open val height: SVGAnimatedLength\n    open
var currentScale: Float\n    open val currentTranslate: DOMPointReadOnly\n    fun getIntersectionList(rect:
DOMRectReadOnly, referenceElement: SVGElement?): NodeList\n    fun getEnclosureList(rect:
DOMRectReadOnly, referenceElement: SVGElement?): NodeList\n    fun checkIntersection(element: SVGElement,
rect: DOMRectReadOnly): Boolean\n    fun checkEnclosure(element: SVGElement, rect: DOMRectReadOnly):
Boolean\n    fun deselectAll()\n    fun createSVGNumber(): SVGNumber\n    fun createSVGLength(): SVGLength\n
fun createSVGAngle(): SVGAngle\n    fun createSVGPoint(): DOMPoint\n    fun createSVGMatrix():
DOMMatrix\n    fun createSVGRect(): DOMRect\n
    fun createSVGTransform(): SVGTransform\n    fun createSVGTransformFromMatrix(matrix:
DOMMatrixReadOnly): SVGTransform\n    fun getElementById(elementId: String): Element\n    fun
suspendRedraw(maxWaitMilliseconds: Int): Int\n    fun unsuspendRedraw(suspendHandleID: Int)\n    fun
unsuspendRedrawAll()\n    fun forceRedraw()\n\n    companion object {\n        val
SVG_ZOOMANDPAN_UNKNOWN: Short\n        val SVG_ZOOMANDPAN_DISABLE: Short\n        val
SVG_ZOOMANDPAN_MAGNIFY: Short\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING:
Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n\n    /**\n     * Exposes the
JavaScript [SVGGElement](https://developer.mozilla.org/en/docs/Web/API/SVGGElement) to Kotlin\n */\npublic
external abstract class SVGGElement : SVGGraphicsElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS:
Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n\n    /**\n     * Exposes the
JavaScript [SVGDefsElement](https://developer.mozilla.org/en/docs/Web/API/SVGDefsElement) to Kotlin\n */\npublic
external abstract class SVGDefsElement : SVGGraphicsElement {\n    companion object {\n        val

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ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGDescElement](https://developer.mozilla.org/en/docs/Web/API/SVGDescElement) to Kotlin\n
*\npublic external abstract class SVGDescElement : SVGElement {\n    companion object {\n    val ELEMENT_NODE:
Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE:
Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC:
Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGMetadataElement](https://developer.mozilla.org/en/docs/Web/API/SVGMetadataElement) to Kotlin\n
*\npublic external abstract class SVGMetadataElement : SVGElement {\n    companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC:
Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGTitleElement](https://developer.mozilla.org/en/docs/Web/API/SVGTitleElement) to Kotlin\n
*\npublic external abstract class SVGTitleElement : SVGElement {\n    companion object {\n    val ELEMENT_NODE:
Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE:
Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGSymbolElement](https://developer.mozilla.org/en/docs/Web/API/SVGSymbolElement) to Kotlin\n
*\npublic external abstract class SVGSymbolElement : SVGGraphicsElement, SVGFitToViewBox {\n    companion object
{\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n

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val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n
* Exposes the JavaScript [SVGUseElement](https://developer.mozilla.org/en/docs/Web/API/SVGUseElement) to
Kotlin\n * \n\npublic external abstract class SVGUseElement : SVGGraphicsElement, SVGURIReference {\n    open
val x: SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open val width: SVGAnimatedLength\n
open val height: SVGAnimatedLength\n    open val instanceRoot: SVGElement?\n    open val
animatedInstanceRoot: SVGElement?\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING:
Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external open class
SVGUseElementShadowRoot : ShadowRoot {\n    companion object {\n        val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external
interface SVGElementInstance {\n    val correspondingElement: SVGElement?\n    get() = definedExternally\n
val correspondingUseElement: SVGUseElement?\n    get() = definedExternally\n}\n\npublic external open class
ShadowAnimation(source: dynamic, newTarget: dynamic) {\n    open val sourceAnimation: dynamic\n}\n\n/**\n
* Exposes the JavaScript [SVGSwitchElement](https://developer.mozilla.org/en/docs/Web/API/SVGSwitchElement)
to Kotlin\n * \n\npublic external abstract class SVGSwitchElement : SVGGraphicsElement {\n    companion object
{\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE:
Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface
GetSVGDocument {\n    fun getSVGDocument(): Document\n}\n\n/**\n
* Exposes the JavaScript
[SVGStyleElement](https://developer.mozilla.org/en/docs/Web/API/SVGStyleElement) to Kotlin\n * \n\npublic

```

```

external abstract class SVGStyleElement : SVGElement, LinkStyle {
    open var type: String
    open var media: String
    open var title: String
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}

/** Exposes the JavaScript [SVGTransform](https://developer.mozilla.org/en/docs/Web/API/SVGTransform) to Kotlin */
public external abstract class SVGTransform {
    open val type: Short
    open val matrix: DOMMatrix
    open val angle: Float
    fun setMatrix(matrix: DOMMatrixReadOnly)
    fun setTranslate(tx: Float, ty: Float)
    fun setScale(sx: Float, sy: Float)
    fun setRotate(angle: Float, cx: Float, cy: Float)
    fun setSkewX(angle: Float)
    fun setSkewY(angle: Float)
    companion object {
        val SVG_TRANSFORM_UNKNOWN: Short
        val SVG_TRANSFORM_MATRIX: Short
        val SVG_TRANSFORM_TRANSLATE: Short
        val SVG_TRANSFORM_SCALE: Short
        val SVG_TRANSFORM_ROTATE: Short
        val SVG_TRANSFORM_SKEWX: Short
        val SVG_TRANSFORM_SKEWY: Short
    }
}

/** Exposes the JavaScript [SVGTransformList](https://developer.mozilla.org/en/docs/Web/API/SVGTransformList) to Kotlin */
public external abstract class SVGTransformList {
    open val length: Int
    open val numberOfItems: Int
    fun clear()
    fun initialize(newItem: SVGTransform): SVGTransform
    fun insertItemBefore(newItem: SVGTransform, index: Int): SVGTransform
    fun replaceItem(newItem: SVGTransform, index: Int): SVGTransform
    fun removeItem(index: Int): SVGTransform
    fun appendItem(newItem: SVGTransform): SVGTransform
    fun createSVGTransformFromMatrix(matrix: DOMMatrixReadOnly): SVGTransform
    fun consolidate(): SVGTransform?
    fun getItem(index: Int): SVGTransform
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline operator fun SVGTransformList.get(index: Int): SVGTransform? = asDynamic()[index]

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline operator fun SVGTransformList.set(index: Int, newItem: SVGTransform) { asDynamic()[index] = newItem }

/** Exposes the JavaScript [SVGAnimatedTransformList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedTransformList) to Kotlin */
public external abstract class SVGAnimatedTransformList {
    open val baseVal: SVGTransformList
    open val animVal: SVGTransformList
}

/** Exposes the JavaScript [SVGPreserveAspectRatio](https://developer.mozilla.org/en/docs/Web/API/SVGPreserveAspectRatio) to Kotlin */
public external abstract class SVGPreserveAspectRatio {
    open var align: Short
    open var meetOrSlice: Short
    companion object {
        val SVG_PRESERVEASPECTRATIO_UNKNOWN: Short
        val SVG_PRESERVEASPECTRATIO_NONE: Short
        val SVG_PRESERVEASPECTRATIO_XMINYMIN: Short
        val SVG_PRESERVEASPECTRATIO_XMIDYMIN: Short
        val SVG_PRESERVEASPECTRATIO_XMAXYMIN: Short
        val SVG_PRESERVEASPECTRATIO_XMINYMID: Short
        val SVG_PRESERVEASPECTRATIO_XMIDYMID: Short
        val SVG_PRESERVEASPECTRATIO_XMAXYMID: Short
        val SVG_PRESERVEASPECTRATIO_XMINYMAX: Short
        val SVG_PRESERVEASPECTRATIO_XMIDYMAX: Short
        val SVG_PRESERVEASPECTRATIO_XMAXYMAX: Short
        val SVG_MEETORSLICE_UNKNOWN: Short
    }
}

```

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    val SVG_MEETORSlice_MEET: Short\n    val SVG_MEETORSlice_SLICE: Short\n    }\n}\n\n/**\n *
Exposes the JavaScript
[SVGAnimatedPreserveAspectRatio](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedPreserveAspect
Ratio) to Kotlin\n */\npublic external abstract class
SVGAnimatedPreserveAspectRatio {\n    open val baseVal: SVGPreserveAspectRatio\n    open val animVal:
SVGPreserveAspectRatio\n}\n\n/**\n * Exposes the JavaScript
[SVGPathElement](https://developer.mozilla.org/en/docs/Web/API/SVGPathElement) to Kotlin\n */\npublic
external abstract class SVGPathElement : SVGGeometryElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val
DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGRectElement](https://developer.mozilla.org/en/docs/Web/API/SVGRectElement) to Kotlin\n */\npublic
external abstract class SVGRectElement : SVGGeometryElement {\n    open val x: SVGAnimatedLength\n    open
val y: SVGAnimatedLength\n    open val width: SVGAnimatedLength\n    open val height: SVGAnimatedLength\n
    open val rx: SVGAnimatedLength\n    open val ry: SVGAnimatedLength\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n
        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING:
Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n        val
DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY: Short\n
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the
JavaScript [SVGCircleElement](https://developer.mozilla.org/en/docs/Web/API/SVGCircleElement) to Kotlin\n
*/\npublic external abstract class SVGCircleElement : SVGGeometryElement {\n    open val cx:
SVGAnimatedLength\n    open val cy: SVGAnimatedLength\n    open val r: SVGAnimatedLength\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE:
Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGEllipseElement](https://developer.mozilla.org/en/docs/Web/API/SVGEllipseElement) to Kotlin\n */\npublic
external abstract class SVGEllipseElement : SVGGeometryElement {\n    open val cx: SVGAnimatedLength\n
    open val cy: SVGAnimatedLength\n    open val rx: SVGAnimatedLength\n    open val ry: SVGAnimatedLength\n
    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val
TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:

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Short\n    val ENTITY_NODE: Short\n
        val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[SVGLineElement](https://developer.mozilla.org/en/docs/Web/API/SVGLineElement) to Kotlin \n * \n public
external abstract class SVGLineElement : SVGGeometryElement { \n    open val x1: SVGAnimatedLength \n    open
val y1: SVGAnimatedLength \n    open val x2: SVGAnimatedLength \n    open val y2: SVGAnimatedLength \n \n
companion object { \n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE:
Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[SVGMeshElement](https://developer.mozilla.org/en/docs/Web/API/SVGMeshElement) to Kotlin \n * \n public
external abstract class SVGMeshElement : SVGGeometryElement, SVGURIReference { \n    companion object { \n
    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE:
Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[SVGAnimatedPoints](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedPoints) to Kotlin \n * \n public
external interface SVGAnimatedPoints { \n    val points: SVGPointList \n    val animatedPoints:
SVGPointList \n} \n \n public external abstract class SVGPointList { \n    open val length: Int \n
    open val numberOfItems: Int \n    fun clear() \n    fun initialize(newItem: DOMPoint): DOMPoint \n    fun
insertItemBefore(newItem: DOMPoint, index: Int): DOMPoint \n    fun replaceItem(newItem: DOMPoint, index:
Int): DOMPoint \n    fun removeItem(index: Int): DOMPoint \n    fun appendItem(newItem: DOMPoint):
DOMPoint \n    fun getItem(index: Int): DOMPoint \n} \n \n @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\") \n @kotlin.internal.InlineOnly \n public inline operator fun SVGPointList.get(index: Int):
DOMPoint? = asDynamic()[index] \n \n @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\") \n @kotlin.internal.InlineOnly \n public inline operator fun SVGPointList.set(index: Int,
newItem: DOMPoint) { asDynamic()[index] = newItem } \n \n /** \n * Exposes the JavaScript
[SVGPolylineElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolylineElement) to Kotlin \n * \n public
external abstract class SVGPolylineElement : SVGGeometryElement, SVGAnimatedPoints { \n
companion object { \n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:

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Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGPolygonElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolygonElement) to Kotlin\n
*/\npublic external abstract class SVGPolygonElement : SVGGeometryElement, SVGAnimatedPoints {\n
companion object {\n
    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGTextContentElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextContentElement) to Kotlin\n
*/\npublic external abstract class SVGTextContentElement : SVGGraphicsElement {\n    open val textLength:
SVGAnimatedLength\n    open val lengthAdjust: SVGAnimatedEnumeration\n    fun getNumberOfChars(): Int\n
fun getComputedTextLength(): Float\n    fun getSubStringLength(charnum: Int, nchars: Int): Float\n    fun
getStartPositionOfChar(charnum: Int): DOMPoint\n    fun getEndPositionOfChar(charnum: Int): DOMPoint\n    fun
getExtentOfChar(charnum: Int): DOMRect\n    fun getRotationOfChar(charnum: Int): Float\n    fun
getCharNumAtPosition(point: DOMPoint): Int\n    fun selectSubString(charnum: Int, nchars: Int)\n\n    companion
object {\n        val LENGTHADJUST_UNKNOWN: Short\n        val LENGTHADJUST_SPACING: Short\n
        val LENGTHADJUST_SPACINGANDGLYPHS: Short\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n
        val DOCUMENT_TYPE_NODE: Short\n        val DOCUMENT_FRAGMENT_NODE: Short\n        val
NOTATION_NODE: Short\n        val DOCUMENT_POSITION_DISCONNECTED: Short\n        val
DOCUMENT_POSITION_PRECEDING: Short\n        val DOCUMENT_POSITION_FOLLOWING: Short\n
        val DOCUMENT_POSITION_CONTAINS: Short\n        val DOCUMENT_POSITION_CONTAINED_BY:
Short\n        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes
the JavaScript
[SVGTextPositioningElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextPositioningElement) to
Kotlin\n */\npublic external abstract class SVGTextPositioningElement : SVGTextContentElement {\n    open val x:
SVGAnimatedLengthList\n    open val y: SVGAnimatedLengthList\n    open val dx: SVGAnimatedLengthList\n
open val dy: SVGAnimatedLengthList\n    open val rotate: SVGAnimatedNumberList\n\n    companion object {\n
        val LENGTHADJUST_UNKNOWN: Short\n        val LENGTHADJUST_SPACING: Short\n        val
LENGTHADJUST_SPACINGANDGLYPHS:
Short\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val

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DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val

DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val

DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [SVGTextElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextElement) to Kotlin\n \*\npublic external abstract class SVGTextElement : SVGTextPositioningElement {\n companion object {\n val LENGTHADJUST\_UNKNOWN: Short\n val LENGTHADJUST\_SPACING: Short\n val LENGTHADJUST\_SPACINGANDGLYPHS: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [SVGTSpanElement](https://developer.mozilla.org/en/docs/Web/API/SVGTSpanElement) to Kotlin\n \*\npublic external abstract class SVGTSpanElement : SVGTextPositioningElement {\n companion object {\n val LENGTHADJUST\_UNKNOWN: Short\n val LENGTHADJUST\_SPACING: Short\n val LENGTHADJUST\_SPACINGANDGLYPHS: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [SVGTextPathElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextPathElement) to Kotlin\n \*\npublic external abstract class SVGTextPathElement : SVGTextContentElement, SVGURIReference {\n open val startOffset: SVGAnimatedLength\n open val method: SVGAnimatedEnumeration\n open val spacing: SVGAnimatedEnumeration\n\n companion object {\n val TEXTPATH\_METHODTYPE\_UNKNOWN: Short\n val TEXTPATH\_METHODTYPE\_ALIGN: Short\n val TEXTPATH\_METHODTYPE\_STRETCH: Short\n val TEXTPATH\_SPACINGTYPE\_UNKNOWN: Short\n val TEXTPATH\_SPACINGTYPE\_AUTO: Short\n val TEXTPATH\_SPACINGTYPE\_EXACT: Short\n val LENGTHADJUST\_UNKNOWN: Short\n val LENGTHADJUST\_SPACING: Short\n val LENGTHADJUST\_SPACINGANDGLYPHS: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n



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    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGImageElement](https://developer.mozilla.org/en/docs/Web/API/SVGImageElement) to Kotlin\n */\npublic
external abstract class SVGImageElement : SVGGraphicsElement, SVGURIReference,
HTMLOrSVGImageElement {\n    open val x: SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open
val width: SVGAnimatedLength\n    open val height: SVGAnimatedLength\n    open val preserveAspectRatio:
SVGAnimatedPreserveAspectRatio\n    open var crossOrigin: String?\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGForeignObjectElement](https://developer.mozilla.org/en/docs/Web/API/SVGForeignObjectElement)
to Kotlin\n */\npublic external abstract class SVGForeignObjectElement : SVGGraphicsElement {\n    open val x:
SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open val width: SVGAnimatedLength\n    open val
height: SVGAnimatedLength\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC:
Short\n    }\n}\n\npublic external abstract class SVGMarkerElement : SVGElement, SVGFitToViewBox {\n    open
val refX: SVGAnimatedLength\n    open val refY: SVGAnimatedLength\n    open val markerUnits:
SVGAnimatedEnumeration\n    open val markerWidth: SVGAnimatedLength\n    open val markerHeight:
SVGAnimatedLength\n    open val orientType: SVGAnimatedEnumeration\n    open val orientAngle:
SVGAnimatedAngle\n    open var orient: String\n    fun setOrientToAuto()\n    fun setOrientToAngle(angle:
SVGAngle)\n\n    companion object {\n        val SVG_MARKERUNITS_UNKNOWN: Short\n        val
SVG_MARKERUNITS_USERSPACEONUSE: Short\n        val SVG_MARKERUNITS_STROKEWIDTH:
Short\n        val SVG_MARKER_ORIENT_UNKNOWN: Short\n        val SVG_MARKER_ORIENT_AUTO:
Short\n        val SVG_MARKER_ORIENT_ANGLE: Short\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n
        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n\n/**\n * Exposes the JavaScript
[SVGSolidcolorElement](https://developer.mozilla.org/en/docs/Web/API/SVGSolidcolorElement) to Kotlin\n

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*\npublic external abstract class SVGSolidcolorElement : SVGElement {\n  companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n
    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGGradientElement) to Kotlin\n
*\npublic external abstract class SVGGradientElement : SVGElement, SVGURIReference, SVGUnitTypes {\n
open val gradientUnits: SVGAnimatedEnumeration\n  open val gradientTransform: SVGAnimatedTransformList\n
open val spreadMethod: SVGAnimatedEnumeration\n\n  companion object {\n
    val SVG_SPREADMETHOD_UNKNOWN: Short\n    val SVG_SPREADMETHOD_PAD: Short\n    val
SVG_SPREADMETHOD_REFLECT: Short\n    val SVG_SPREADMETHOD_REPEAT: Short\n    val
SVG_UNIT_TYPE_UNKNOWN: Short\n    val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val
SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n    val ELEMENT_NODE: Short\n    val
ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n
    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the
JavaScript
[SVGLinearGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGLinearGradientElement) to
Kotlin\n
*\npublic external abstract class SVGLinearGradientElement : SVGGradientElement {\n  open val x1:
SVGAnimatedLength\n  open val y1: SVGAnimatedLength\n  open val x2: SVGAnimatedLength\n  open val
y2: SVGAnimatedLength\n\n  companion object {\n    val SVG_SPREADMETHOD_UNKNOWN: Short\n
    val SVG_SPREADMETHOD_PAD: Short\n    val SVG_SPREADMETHOD_REFLECT: Short\n    val
SVG_SPREADMETHOD_REPEAT: Short\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val
SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n
    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGRadialGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGRadialGradientElement) to
Kotlin\n
*\npublic external abstract class SVGRadialGradientElement : SVGGradientElement {\n  open val cx:
SVGAnimatedLength\n  open val cy: SVGAnimatedLength\n  open val r: SVGAnimatedLength\n  open val fx:

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SVGAnimatedLength\n open val fy: SVGAnimatedLength\n open val fr: SVGAnimatedLength\n\n companion
object {\n val SVG_SPREADMETHOD_UNKNOWN: Short\n val SVG_SPREADMETHOD_PAD:
Short\n val SVG_SPREADMETHOD_REFLECT: Short\n val SVG_SPREADMETHOD_REPEAT:
Short\n val SVG_UNIT_TYPE_UNKNOWN: Short\n val SVG_UNIT_TYPE_USERSPACEONUSE:
Short\n val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY:
Short\n val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\npublic external
abstract class SVGMeshGradientElement : SVGGradientElement {\n companion object {\n val
SVG_SPREADMETHOD_UNKNOWN: Short\n val SVG_SPREADMETHOD_PAD: Short\n val
SVG_SPREADMETHOD_REFLECT: Short\n val SVG_SPREADMETHOD_REPEAT: Short\n val
SVG_UNIT_TYPE_UNKNOWN: Short\n val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n val
SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n val ELEMENT_NODE: Short\n val
ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED:
Short\n val DOCUMENT_POSITION_PRECEDING: Short\n val
DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\npublic external abstract class
SVGMeshrowElement : SVGElement {\n companion object {\n val ELEMENT_NODE: Short\n val
ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\npublic external abstract class
SVGMeshpatchElement : SVGElement {\n companion object {\n val ELEMENT_NODE: Short\n val
ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val

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DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [SVGStopElement](https://developer.mozilla.org/en/docs/Web/API/SVGStopElement) to Kotlin\n \*/\npublic external abstract class SVGStopElement : SVGElement {\n open val offset: SVGAnimatedNumber\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val

DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [SVGPatternElement](https://developer.mozilla.org/en/docs/Web/API/SVGPatternElement) to Kotlin\n \*/\npublic external abstract class SVGPatternElement : SVGElement, SVGFitToViewBox, SVGURIReference, SVGUnitTypes {\n open val patternUnits: SVGAnimatedEnumeration\n open val patternContentUnits: SVGAnimatedEnumeration\n open val patternTransform: SVGAnimatedTransformList\n\n open val x: SVGAnimatedLength\n open val y: SVGAnimatedLength\n open val width: SVGAnimatedLength\n open val height: SVGAnimatedLength\n\n companion object {\n val SVG\_UNIT\_TYPE\_UNKNOWN: Short\n val SVG\_UNIT\_TYPE\_USERSPACEONUSE: Short\n val SVG\_UNIT\_TYPE\_OBJECTBOUNDINGBOX: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val

DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\npublic external abstract class SVGHatchElement : SVGElement {\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\npublic external abstract class SVGHatchpathElement : SVGElement {\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING:

Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val  
DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[SVGCursorElement](https://developer.mozilla.org/en/docs/Web/API/SVGCursorElement) to Kotlin \n \* \n public  
external abstract class SVGCursorElement : SVGElement, SVGURIReference { \n open val x:  
SVGAnimatedLength \n open val y: SVGAnimatedLength \n \n companion object { \n val  
ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING:  
Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val  
DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n  
val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the  
JavaScript [SVGScriptElement](https://developer.mozilla.org/en/docs/Web/API/SVGScriptElement) to Kotlin \n  
\* \n public external abstract class SVGScriptElement : SVGElement, SVGURIReference,  
HTMLOrSVGScriptElement { \n open var type: String \n open var crossOrigin: String? \n \n companion object  
{ \n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n  
val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val  
ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE:  
Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE:  
Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val  
DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n  
val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY:  
Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes  
the JavaScript [SVGAEElement](https://developer.mozilla.org/en/docs/Web/API/SVGAEElement) to Kotlin \n  
\* \n public external abstract class SVGAEElement : SVGGraphicsElement, SVGURIReference { \n open val target:  
SVGAnimatedString \n open val download: SVGAnimatedString \n open val rel: SVGAnimatedString \n open  
val relList: SVGAnimatedString \n open val hreflang: SVGAnimatedString \n open val type:  
SVGAnimatedString \n \n companion object { \n val ELEMENT\_NODE: Short\n val  
ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val  
ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[SVGViewElement](https://developer.mozilla.org/en/docs/Web/API/SVGViewElement) to Kotlin \n \* \n public  
external abstract class SVGViewElement : SVGElement, SVGFitToViewBox, SVGZoomAndPan { \n companion  
object { \n val SVG\_ZOOMANDPAN\_UNKNOWN: Short\n val SVG\_ZOOMANDPAN\_DISABLE:  
Short\n val SVG\_ZOOMANDPAN\_MAGNIFY: Short\n val ELEMENT\_NODE: Short\n val  
ATTRIBUTE\_NODE:  
Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val  
ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val

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PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n } \n }", /*\n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-
GENERATED, DO NOT EDIT!\n// See github.com/kotlin/dukat for
details\n\npackage org.w3c.files\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\nimport
org.w3c.dom.events.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript
[Blob](https://developer.mozilla.org/en/docs/Web/API/Blob) to Kotlin\n */\npublic external open class
Blob(blobParts: Array<dynamic> = definedExternally, options: BlobPropertyBag = definedExternally) :
MediaPlayer, ImageBitmapSource {\n    open val size: Number\n    open val type: String\n    open val isClosed:
Boolean\n    fun slice(start: Int = definedExternally, end: Int = definedExternally, contentType: String =
definedExternally): Blob\n    fun close()\n}\n\npublic external interface BlobPropertyBag {\n    var type: String? /*
= \"\" */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun BlobPropertyBag(type: String? = \"\"):
BlobPropertyBag {\n    val o = js(\"({})\")\n
    o[\"type\"] = type\n    return o\n}\n\n/**\n * Exposes the JavaScript
[File](https://developer.mozilla.org/en/docs/Web/API/File) to Kotlin\n */\npublic external open class File(fileBits:
Array<dynamic>, fileName: String, options: FilePropertyBag = definedExternally) : Blob {\n    open val name:
String\n    open val lastModified: Int\n}\n\npublic external interface FilePropertyBag : BlobPropertyBag {\n    var
lastModified: Int?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun FilePropertyBag(lastModified: Int? =
undefined, type: String? = \"\"): FilePropertyBag {\n    val o = js(\"({})\")\n    o[\"lastModified\"] = lastModified\n
o[\"type\"] = type\n    return o\n}\n\n/**\n * Exposes the JavaScript
[FileList](https://developer.mozilla.org/en/docs/Web/API/FileList) to Kotlin\n */\npublic external abstract class
FileList : ItemArrayLike<File>
{\n    override fun item(index: Int): File?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun FileList.get(index: Int): File?
= asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[FileReader](https://developer.mozilla.org/en/docs/Web/API/FileReader) to Kotlin\n */\npublic external open class
FileReader : EventTarget {\n    open val readyState: Short\n    open val result: dynamic\n    open val error:
dynamic\n    var onloadstart: ((ProgressEvent) -> dynamic)?\n    var onprogress: ((ProgressEvent) -> dynamic)?\n
var onload: ((Event) -> dynamic)?\n    var onabort: ((Event) -> dynamic)?\n    var onerror: ((Event) ->
dynamic)?\n    var onloadend: ((Event) -> dynamic)?\n    fun readAsArrayBuffer(blob: Blob)\n    fun readAsBinaryString(blob:
Blob)\n    fun readAsText(blob: Blob, label: String = definedExternally)\n    fun readAsDataURL(blob: Blob)\n
fun abort()\n\n    companion object {\n        val EMPTY: Short\n
        val LOADING: Short\n        val DONE: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[FileReaderSync](https://developer.mozilla.org/en/docs/Web/API/FileReaderSync) to Kotlin\n */\npublic external
open class FileReaderSync {\n    fun readAsArrayBuffer(blob: Blob): ArrayBuffer\n    fun readAsBinaryString(blob:
Blob): String\n    fun readAsText(blob: Blob, label: String = definedExternally): String\n    fun
readAsDataURL(blob: Blob): String\n}
", /*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the

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license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See
github.com/kotlin/dukat for details\n\npackage org.w3c.notifications\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.events.*\nimport org.w3c.workers.*\n\n/**\n * Exposes the JavaScript
[Notification](https://developer.mozilla.org/en/docs/Web/API/Notification)
to Kotlin\n */\n\npublic external open class Notification(title: String, options: NotificationOptions =
definedExternally) : EventTarget {\n    var onclick: ((MouseEvent) -> dynamic)?\n    var onerror: ((Event) ->
dynamic)?\n    open val title: String\n    open val dir: NotificationDirection\n    open val lang: String\n    open val
body: String\n    open val tag: String\n    open val image: String\n    open val icon: String\n    open val badge:
String\n    open val sound: String\n    open val vibrate: Array<out Int>\n    open val timestamp: Number\n    open val
renotify: Boolean\n    open val silent: Boolean\n    open val noscreen: Boolean\n    open val requireInteraction:
Boolean\n    open val sticky: Boolean\n    open val data: Any?\n    open val actions: Array<out
NotificationAction>\n    fun close()\n    companion object {\n        val permission: NotificationPermission\n
val maxActions: Int\n        fun requestPermission(deprecatedCallback: (NotificationPermission)
-> Unit = definedExternally): Promise<NotificationPermission>\n    }\n}\n\npublic external interface
NotificationOptions {\n    var dir: NotificationDirection? /* = NotificationDirection.AUTO */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var lang: String? /* = "" */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var body: String? /* = "" */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var tag: String? /* = "" */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var image: String?\n    get() = definedExternally\n
set(value) = definedExternally\n    var icon: String?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var badge: String?\n    get() = definedExternally\n    set(value) = definedExternally\n
var sound: String?\n    get() = definedExternally\n    set(value) = definedExternally\n
    var vibrate: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n    var timestamp:
Number?\n    get() = definedExternally\n    set(value) = definedExternally\n    var renotify: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n    var silent: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n    var noscreen: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var requireInteraction: Boolean? /* = false */\n    get()
= definedExternally\n    set(value) = definedExternally\n    var sticky: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var data: Any? /* = null */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var actions: Array<NotificationAction>? /* = arrayOf()
*/\n    get() = definedExternally\n
    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun NotificationOptions(dir:
NotificationDirection? = NotificationDirection.AUTO, lang: String? = "", body: String? = "", tag: String? = "",
image: String? = undefined, icon: String? = undefined, badge: String? = undefined, sound: String? = undefined,
vibrate: dynamic = undefined, timestamp: Number? = undefined, renotify: Boolean? = false, silent: Boolean? =
false, noscreen: Boolean? = false, requireInteraction: Boolean? = false, sticky: Boolean? = false, data: Any? = null,
actions: Array<NotificationAction>? = arrayOf()): NotificationOptions {\n    val o = js("{}")\n    o["dir"] = dir\n
o["lang"] = lang\n    o["body"] = body\n    o["tag"] = tag\n    o["image"] = image\n    o["icon"] = icon\n
o["badge"] = badge\n    o["sound"] = sound\n    o["vibrate"] = vibrate\n    o["timestamp"] = timestamp\n
    o["renotify"] = renotify\n    o["silent"] = silent\n    o["noscreen"] = noscreen\n    o["requireInteraction"] =
requireInteraction\n    o["sticky"] = sticky\n    o["data"] = data\n    o["actions"] = actions\n    return
o\n}\n\npublic external interface NotificationAction {\n    var action: String?\n    var title: String?\n    var icon:
String?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun NotificationAction(action: String?,
title: String?, icon: String? = undefined): NotificationAction {\n    val o = js("{}")\n    o["action"] = action\n
o["title"] = title\n    o["icon"] = icon\n    return o\n}\n\npublic external interface GetNotificationOptions {\n    var

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tag: String? /* = \"\" */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic
inline fun GetNotificationOptions(tag: String? = \"\"): GetNotificationOptions {\n    val o = js(\"({})\")\n
o[\"tag\"] = tag\n    return o\n}\n\n/*\n * Exposes the JavaScript
[NotificationEvent](https://developer.mozilla.org/en/docs/Web/API/NotificationEvent) to Kotlin\n */\npublic
external open class NotificationEvent(type: String, eventInitDict: NotificationEventInit) : ExtendableEvent {\n
open val notification: Notification\n    open val action: String\n\n    companion object {\n        val NONE: Short\n
val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface NotificationEventInit : ExtendableEventInit {\n    var notification: Notification?\n
var action: String? /* = \"\" */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
NotificationEventInit(notification: Notification?, action: String? = \"\", bubbles: Boolean? = false, cancelable:
Boolean? = false, composed: Boolean? = false): NotificationEventInit {\n    val o = js(\"({})\")\n    o[\"notification\"]
= notification\n    o[\"action\"] = action\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n
o[\"composed\"] = composed\n    return o\n}\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface NotificationPermission {\n    companion object\n}\n\npublic inline val
NotificationPermission.Companion.DEFAULT: NotificationPermission get() =
\"default\".asDynamic().unsafeCast<NotificationPermission>()\n\npublic inline val
NotificationPermission.Companion.DENIED: NotificationPermission get() =
\"denied\".asDynamic().unsafeCast<NotificationPermission>()\n\npublic inline val
NotificationPermission.Companion.GRANTED: NotificationPermission get() =
\"granted\".asDynamic().unsafeCast<NotificationPermission>()\n\n/*
please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface NotificationDirection {\n    companion object\n}\n\npublic inline val
NotificationDirection.Companion.AUTO: NotificationDirection get() =
\"auto\".asDynamic().unsafeCast<NotificationDirection>()\n\npublic inline val
NotificationDirection.Companion.LTR: NotificationDirection get() =
\"ltr\".asDynamic().unsafeCast<NotificationDirection>()\n\npublic inline val
NotificationDirection.Companion.RTL: NotificationDirection get() =
\"rtl\".asDynamic().unsafeCast<NotificationDirection>()\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n/* NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n */\n
See github.com/kotlin/dukat for details\n\npackage
org.w3c.workers\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\nimport
org.w3c.dom.events.*\nimport org.w3c.fetch.*\nimport org.w3c.notifications.*\n\n/*\n * Exposes the JavaScript
[ServiceWorker](https://developer.mozilla.org/en/docs/Web/API/ServiceWorker) to Kotlin\n */\n\npublic external
abstract class ServiceWorker : EventTarget, AbstractWorker, UnionMessagePortOrServiceWorker,
UnionClientOrMessagePortOrServiceWorker {\n    open val scriptURL: String\n    open val state:
ServiceWorkerState\n    open var onstatechange: ((Event) -> dynamic)?\n    fun postMessage(message: Any?,
transfer: Array<dynamic> = definedExternally)\n}\n\n/*\n * Exposes the JavaScript
[ServiceWorkerRegistration](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerRegistration) to
Kotlin\n */\n\npublic external abstract class ServiceWorkerRegistration : EventTarget {\n    open val installing:
ServiceWorker?\n    open val waiting: ServiceWorker?\n    open val active: ServiceWorker?\n

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open val scope: String\n open var onupdatefound: ((Event) -> dynamic)?\n open val APISpace: dynamic\n
fun update(): Promise<Unit>\n fun unregister(): Promise<Boolean>\n fun showNotification(title: String,
options: NotificationOptions = definedExternally): Promise<Unit>\n fun getNotifications(filter:
GetNotificationOptions = definedExternally): Promise<Array<Notification>>\n fun methodName():
Promise<dynamic>\n}\n\n/**\n * Exposes the JavaScript
[ServiceWorkerContainer](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerContainer) to Kotlin\n
*/\npublic external abstract class ServiceWorkerContainer : EventTarget {\n open val controller:
ServiceWorker?\n open val ready: Promise<ServiceWorkerRegistration>\n open var oncontrollerchange:
((Event) -> dynamic)?\n open var onmessage: ((MessageEvent) -> dynamic)?\n fun register(scriptURL: String,
options: RegistrationOptions = definedExternally): Promise<ServiceWorkerRegistration>\n fun
getRegistration(clientURL: String = definedExternally): Promise<Any?>\n fun getRegistrations():
Promise<Array<ServiceWorkerRegistration>>\n fun startMessages()\n}\n\npublic external interface
RegistrationOptions {\n var scope: String?\n get() = definedExternally\n set(value) = definedExternally\n
var type: WorkerType? /* = WorkerType.CLASSIC */\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun RegistrationOptions(scope: String? =
undefined, type: WorkerType? = WorkerType.CLASSIC): RegistrationOptions {\n val o = js(\"({})\")\n
o[\"scope\"] = scope\n o[\"type\"] = type\n return o\n}\n\n/**\n * Exposes the JavaScript
[ServiceWorkerMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerMessageEvent) to
Kotlin\n */\npublic external open class ServiceWorkerMessageEvent(type: String, eventInitDict:
ServiceWorkerMessageEventInit
= definedExternally) : Event {\n open val data: Any?\n open val origin: String\n open val lastEventId: String\n
open val source: UnionMessagePortOrServiceWorker?\n open val ports: Array<out MessagePort>?\n
companion object {\n val NONE: Short\n val CAPTURING_PHASE: Short\n val AT_TARGET:
Short\n val BUBBLING_PHASE: Short\n }\n}\n\npublic external interface ServiceWorkerMessageEventInit :
EventInit {\n var data: Any?\n get() = definedExternally\n set(value) = definedExternally\n var origin:
String?\n get() = definedExternally\n set(value) = definedExternally\n var lastEventId: String?\n get()
= definedExternally\n set(value) = definedExternally\n var source: UnionMessagePortOrServiceWorker?\n
get() = definedExternally\n set(value) = definedExternally\n var ports: Array<MessagePort>?\n get() =
definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ServiceWorkerMessageEventInit(data:
Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source:
UnionMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles: Boolean? =
false, cancelable: Boolean? = false, composed: Boolean? = false): ServiceWorkerMessageEventInit {\n val o =
js(\"({})\")\n o[\"data\"] = data\n o[\"origin\"] = origin\n o[\"lastEventId\"] = lastEventId\n o[\"source\"] =
source\n o[\"ports\"] = ports\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] =
composed\n return o\n}\n\n/**\n * Exposes the JavaScript
[ServiceWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerGlobalScope) to
Kotlin\n */\npublic external abstract class ServiceWorkerGlobalScope : WorkerGlobalScope {\n open val clients:
Clients\n
open val registration: ServiceWorkerRegistration\n open var oninstall: ((Event) -> dynamic)?\n open var
onactivate: ((Event) -> dynamic)?\n open var onfetch: ((FetchEvent) -> dynamic)?\n open var onforeignfetch:
((Event) -> dynamic)?\n open var onmessage: ((MessageEvent) -> dynamic)?\n open var onnotificationclick:
((NotificationEvent) -> dynamic)?\n open var onnotificationclose: ((NotificationEvent) -> dynamic)?\n open var
onfunctionalevent: ((Event) -> dynamic)?\n fun skipWaiting(): Promise<Unit>\n}\n\n/**\n * Exposes the
JavaScript [Client](https://developer.mozilla.org/en/docs/Web/API/Client) to Kotlin\n */\npublic external abstract
class Client : UnionClientOrMessagePortOrServiceWorker {\n open val url: String\n open val frameType:
FrameType\n open val id: String\n fun postMessage(message: Any?, transfer: Array<dynamic> =

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definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[WindowClient](https://developer.mozilla.org/en/docs/Web/API/WindowClient)
to Kotlin\n *\npublic external abstract class WindowClient : Client {\n  open val visibilityState: dynamic\n  open
val focused: Boolean\n  fun focus(): Promise<WindowClient>\n  fun navigate(url: String):
Promise<WindowClient>\n}\n\n/**\n * Exposes the JavaScript
[Clients](https://developer.mozilla.org/en/docs/Web/API/Clients) to Kotlin\n *\npublic external abstract class
Clients {\n  fun get(id: String): Promise<Any?>\n  fun matchAll(options: ClientQueryOptions =
definedExternally): Promise<Array<Client>>\n  fun openWindow(url: String): Promise<WindowClient?>\n  fun
claim(): Promise<Unit>\n}\n\npublic external interface ClientQueryOptions {\n  var includeUncontrolled:
Boolean? /* = false */\n  get() = definedExternally\n  set(value) = definedExternally\n  var type:
ClientType? /* = ClientType.WINDOW */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic
inline fun ClientQueryOptions(includeUncontrolled: Boolean? = false, type: ClientType? = ClientType.WINDOW):
ClientQueryOptions {\n  val o = js(\"({})\")\n  o[\"includeUncontrolled\"] = includeUncontrolled\n  o[\"type\"] =
type\n  return o\n}\n\n/**\n * Exposes the JavaScript
[ExtendableEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableEvent) to Kotlin\n *\npublic external
open class ExtendableEvent(type: String, eventInitDict: ExtendableEventInit = definedExternally) : Event {\n  fun
waitUntil(f: Promise<Any?>)\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE:
Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface
ExtendableEventInit : EventInit\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun ExtendableEventInit(bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean?
= false): ExtendableEventInit {\n  val o = js(\"({})\")\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] =
cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[InstallEvent](https://developer.mozilla.org/en/docs/Web/API/InstallEvent) to Kotlin\n *\npublic external open
class InstallEvent(type: String, eventInitDict: ExtendableEventInit = definedExternally) : ExtendableEvent {\n  fun
registerForeignFetch(options: ForeignFetchOptions)\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface ForeignFetchOptions {\n  var scopes: Array<String>?\n  var origins:
Array<String>?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun ForeignFetchOptions(scopes:
Array<String>?, origins: Array<String>?): ForeignFetchOptions {\n  val o = js(\"({})\")\n
  o[\"scopes\"] = scopes\n  o[\"origins\"] = origins\n  return o\n}\n\n/**\n * Exposes the JavaScript
[FetchEvent](https://developer.mozilla.org/en/docs/Web/API/FetchEvent) to Kotlin\n *\npublic external open class
FetchEvent(type: String, eventInitDict: FetchEventInit) : ExtendableEvent {\n  open val request: Request\n  open
val clientId: String?\n  open val isReload: Boolean\n  fun respondWith(r: Promise<Response>)\n\n  companion
object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val
BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface FetchEventInit : ExtendableEventInit {\n  var
request: Request?\n  var clientId: String? /* = null */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var isReload: Boolean? /* = false */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic
inline fun FetchEventInit(request: Request?, clientId: String? = null, isReload: Boolean? = false, bubbles: Boolean?
= false, cancelable: Boolean? = false, composed: Boolean? = false): FetchEventInit {\n  val o = js(\"({})\")\n
  o[\"request\"] = request\n  o[\"clientId\"] = clientId\n  o[\"isReload\"] = isReload\n  o[\"bubbles\"] = bubbles\n
  o[\"cancelable\"] = cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\npublic external open class
ForeignFetchEvent(type: String, eventInitDict: ForeignFetchEventInit) : ExtendableEvent {\n  open val request:

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Request\n  open val origin: String\n  fun respondWith(r: Promise<ForeignFetchResponse>)\n\n  companion
object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val
BUBBLING_PHASE: Short\n  }\n\n  public external interface ForeignFetchEventInit : ExtendableEventInit {\n
var request: Request?\n  var origin: String? /* = \"null\"
*\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n  @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n  @kotlin.internal.InlineOnly\n  public inline fun ForeignFetchEventInit(request:
Request?, origin: String? = \"null\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): ForeignFetchEventInit {\n    val o = js(\"({})\")\n    o[\"request\"] = request\n    o[\"origin\"] = origin\n
o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return
o\n}\n\n  public external interface ForeignFetchResponse {\n    var response: Response?\n    var origin: String?\n
get() = definedExternally\n    set(value) = definedExternally\n    var headers: Array<String>?\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n  @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n  @kotlin.internal.InlineOnly\n  public inline fun ForeignFetchResponse(response:
Response?,
origin: String? = undefined, headers: Array<String>? = undefined): ForeignFetchResponse {\n    val o =
js(\"({})\")\n    o[\"response\"] = response\n    o[\"origin\"] = origin\n    o[\"headers\"] = headers\n    return
o\n}\n\n  /**\n   * Exposes the JavaScript
[ExtendableMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableMessageEvent) to Kotlin\n
*\n  public external open class ExtendableMessageEvent(type: String, eventInitDict: ExtendableMessageEventInit =
definedExternally) : ExtendableEvent {\n    open val data: Any?\n    open val origin: String\n    open val lastEventId:
String\n    open val source: UnionClientOrMessagePortOrServiceWorker?\n    open val ports: Array<out
MessagePort>?\n\n    companion object {\n      val NONE: Short\n      val CAPTURING_PHASE: Short\n      val
AT_TARGET: Short\n      val BUBBLING_PHASE: Short\n    }\n\n    public external interface
ExtendableMessageEventInit : ExtendableEventInit {\n      var data: Any?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var origin: String?\n      get() = definedExternally\n
set(value) = definedExternally\n      var lastEventId: String?\n      get() = definedExternally\n      set(value) =
definedExternally\n      var source: UnionClientOrMessagePortOrServiceWorker?\n      get() = definedExternally\n
set(value) = definedExternally\n      var ports: Array<MessagePort>?\n      get() = definedExternally\n
set(value) = definedExternally\n    }\n\n    @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n    @kotlin.internal.InlineOnly\n    public inline fun ExtendableMessageEventInit(data:
Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source:
UnionClientOrMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ExtendableMessageEventInit {\n
val o = js(\"({})\")\n    o[\"data\"] = data\n
o[\"origin\"] = origin\n    o[\"lastEventId\"] = lastEventId\n    o[\"source\"] = source\n    o[\"ports\"] = ports\n
o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return
o\n}\n\n  /**\n   * Exposes the JavaScript [Cache](https://developer.mozilla.org/en/docs/Web/API/Cache) to Kotlin\n
*\n  public external abstract class Cache {\n    fun match(request: dynamic, options: CacheQueryOptions =
definedExternally): Promise<Any?>\n    fun matchAll(request: dynamic = definedExternally, options:
CacheQueryOptions = definedExternally): Promise<Array<Response>>\n    fun add(request: dynamic):
Promise<Unit>\n    fun addAll(requests: Array<dynamic>): Promise<Unit>\n    fun put(request: dynamic, response:
Response): Promise<Unit>\n    fun delete(request: dynamic, options: CacheQueryOptions = definedExternally):
Promise<Boolean>\n    fun keys(request: dynamic = definedExternally, options: CacheQueryOptions =
definedExternally): Promise<Array<Request>>\n\n  public
external interface CacheQueryOptions {\n    var ignoreSearch: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var ignoreMethod: Boolean? /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var ignoreVary: Boolean? /* = false */\n    get() =

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definedExternally\n    set(value) = definedExternally\n    var cacheName: String?\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CacheQueryOptions(ignoreSearch:
Boolean? = false, ignoreMethod: Boolean? = false, ignoreVary: Boolean? = false, cacheName: String? = undefined):
CacheQueryOptions {\n    val o = js(\"({})\")\n    o[\"ignoreSearch\"] = ignoreSearch\n    o[\"ignoreMethod\"] =
ignoreMethod\n    o[\"ignoreVary\"] = ignoreVary\n    o[\"cacheName\"] = cacheName\n    return o\n}\n\npublic
external
interface CacheBatchOperation {\n    var type: String?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var request: Request?\n    get() = definedExternally\n    set(value) = definedExternally\n
var response: Response?\n    get() = definedExternally\n    set(value) = definedExternally\n    var options:
CacheQueryOptions?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CacheBatchOperation(type: String? =
undefined, request: Request? = undefined, response: Response? = undefined, options: CacheQueryOptions? =
undefined): CacheBatchOperation {\n    val o = js(\"({})\")\n    o[\"type\"] = type\n    o[\"request\"] = request\n
o[\"response\"] = response\n    o[\"options\"] = options\n    return o\n}\n\n/**\n * Exposes the JavaScript
[CacheStorage](https://developer.mozilla.org/en/docs/Web/API/CacheStorage)
to Kotlin\n */\npublic external abstract class CacheStorage {\n    fun match(request: dynamic, options:
CacheQueryOptions = definedExternally): Promise<Any?>\n    fun has(cacheName: String): Promise<Boolean>\n
fun open(cacheName: String): Promise<Cache>\n    fun delete(cacheName: String): Promise<Boolean>\n    fun
keys(): Promise<Array<String>>\n}\n\npublic external open class FunctionalEvent : ExtendableEvent {\n
companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET:
Short\n    val BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface
UnionMessagePortOrServiceWorker\n\npublic external interface
UnionClientOrMessagePortOrServiceWorker\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ServiceWorkerState {\n    companion object\n}\n\npublic inline val
ServiceWorkerState.Companion.INSTALLING: ServiceWorkerState get() =
\"installing\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.INSTALLED: ServiceWorkerState get() =
\"installed\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.ACTIVATING: ServiceWorkerState get() =
\"activating\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.ACTIVATED: ServiceWorkerState get() =
\"activated\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.REDUNDANT: ServiceWorkerState get() =
\"redundant\".asDynamic().unsafeCast<ServiceWorkerState>()\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface FrameType {\n    companion object\n}\n\npublic inline val FrameType.Companion.AUXILIARY:
FrameType get() = \"auxiliary\".asDynamic().unsafeCast<FrameType>()\n\npublic inline val
FrameType.Companion.TOP_LEVEL:
FrameType get() = \"top-level\".asDynamic().unsafeCast<FrameType>()\n\npublic inline val
FrameType.Companion.NESTED: FrameType get() = \"nested\".asDynamic().unsafeCast<FrameType>()\n\npublic
inline val FrameType.Companion.NONE: FrameType get() =
\"none\".asDynamic().unsafeCast<FrameType>()\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ClientType {\n    companion object\n}\n\npublic inline val ClientType.Companion.WINDOW: ClientType
get() = \"window\".asDynamic().unsafeCast<ClientType>()\n\npublic inline val ClientType.Companion.WORKER:

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ClientType get() = `worker`.asDynamic().unsafeCast<ClientType>()\n\npublic inline val
ClientType.Companion.SHAREDWORKER: ClientType get() =
`sharedworker`.asDynamic().unsafeCast<ClientType>()\n\npublic inline val ClientType.Companion.ALL:
ClientType get() = `all`.asDynamic().unsafeCast<ClientType>()"/*\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.xhr\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.*\nimport org.w3c.dom.events.*\nimport org.w3c.files.*\n\n/**\n *
Exposes the JavaScript
[XMLHttpRequestEventTarget](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequestEventTarget) to
Kotlin\n */\n\npublic external abstract class XMLHttpRequestEventTarget : EventTarget {\n    open var onloadstart:
((ProgressEvent) -> dynamic)?\n    open var onprogress: ((ProgressEvent) -> dynamic)?\n    open var onabort:
((Event) -> dynamic)?\n    open var onerror: ((Event) -> dynamic)?\n    open var onload: ((Event) -> dynamic)?\n
open var ontimeout: ((Event) -> dynamic)?\n    open var onloadend: ((Event) -> dynamic)?\n}\n\npublic external
abstract class XMLHttpRequestUpload : XMLHttpRequestEventTarget\n\n/**\n * Exposes the JavaScript
[XMLHttpRequest](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequest) to Kotlin\n */\n\npublic
external open class XMLHttpRequest : XMLHttpRequestEventTarget {\n    var onreadystatechange: ((Event) ->
dynamic)?\n    open val readyState: Short\n    var timeout: Int\n    var withCredentials: Boolean\n    open val upload:
XMLHttpRequestUpload\n    open val responseURL: String\n    open val status: Short\n    open val statusText:
String\n    var responseType: XMLHttpRequestResponseType\n    open val response: Any?\n    open val
responseText: String\n    open val responseXML: Document?\n    fun open(method: String, url: String)\n    fun
open(method: String, url: String, async: Boolean, username: String? = definedExternally, password: String? =
definedExternally)\n    fun setRequestHeader(name: String, value: String)\n    fun send(body: dynamic =
definedExternally)\n    fun abort()\n
    fun getResponseHeader(name: String): String?\n    fun getAllResponseHeaders(): String\n    fun
overrideMimeType(mime: String)\n}\n\ncompanion object {\n    val UNSENT: Short\n    val OPENED: Short\n
    val HEADERS_RECEIVED: Short\n    val LOADING: Short\n    val DONE: Short\n    }\n}\n\n/**\n *
Exposes the JavaScript [FormData](https://developer.mozilla.org/en/docs/Web/API/FormData) to Kotlin\n
*/\n\npublic external open class FormData(form: HTMLFormElement = definedExternally) {\n    fun append(name:
String, value: String)\n    fun append(name: String, value: Blob, filename: String = definedExternally)\n    fun
delete(name: String)\n    fun get(name: String): dynamic\n    fun getAll(name: String): Array<dynamic>\n    fun
has(name: String): Boolean\n    fun set(name: String, value: String)\n    fun set(name: String, value: Blob, filename:
String = definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[ProgressEvent](https://developer.mozilla.org/en/docs/Web/API/ProgressEvent)
to Kotlin\n */\n\npublic external open class ProgressEvent(type: String, eventInitDict: ProgressEventInit =
definedExternally) : Event {\n    open val lengthComputable: Boolean\n    open val loaded: Number\n    open val
total: Number\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val
AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface ProgressEventInit
: EventInit {\n    var lengthComputable: Boolean? /* = false */\n    get() = definedExternally\n    set(value) =
definedExternally\n    var loaded: Number? /* = 0 */\n    get() = definedExternally\n    set(value) =
definedExternally\n    var total: Number? /* = 0 */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(`INVISIBLE_REFERENCE`,
`INVISIBLE_MEMBER`)\n\n@kotlin.internal.InlineOnly\n\npublic inline fun ProgressEventInit(lengthComputable:
Boolean? = false, loaded: Number? = 0, total:
Number? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
ProgressEventInit {\n    val o = js(`{}`)\n    o[`lengthComputable`] = lengthComputable\n    o[`loaded`] =
loaded\n    o[`total`] = total\n    o[`bubbles`] = bubbles\n    o[`cancelable`] = cancelable\n    o[`composed`] =
composed\n    return o\n}\n\n/* please, don't implement this interface!

```

```

*\n@jsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external
interface XMLHttpRequestResponseType {n  companion object\n}\n\npublic inline val
XMLHttpRequestResponseType.Companion.EMPTY: XMLHttpRequestResponseType get() =
"\n".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.ARRAYBUFFER: XMLHttpRequestResponseType get() =
"arraybuffer".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.BLOB: XMLHttpRequestResponseType get() =
"blob".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic
inline val XMLHttpRequestResponseType.Companion.DOCUMENT: XMLHttpRequestResponseType get() =
"document".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.JSON: XMLHttpRequestResponseType get() =
"json".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.TEXT: XMLHttpRequestResponseType get() =
"text".asDynamic().unsafeCast<XMLHttpRequestResponseType>()","package kotlin\n\nimport
kotlin.annotation.AnnotationTarget.*\n\n/**\n * This annotation marks the standard library API that is considered
experimental and is not subject to the\n * [general compatibility
guarantees](https://kotlinlang.org/docs/reference/evolution/components-stability.html) given for the standard
library:\n * the behavior of such API may be changed or the API may be removed completely in any further
release.\n * \n * > Beware
using the annotated API especially if you're developing a library, since your library might become binary
incompatible\n * with the future versions of the standard library.\n * \n * Any usage of a declaration annotated with
`@ExperimentalStdlibApi` must be accepted either by\n * annotating that usage with the [OptIn] annotation, e.g.
`@OptIn(ExperimentalStdlibApi::class)`,\n * or by using the compiler argument `opt-
in=kotlin.ExperimentalStdlibApi`.\n * \n *@RequiresOptIn(level =
RequiresOptIn.Level.ERROR)\n@Retention(AnnotationRetention.BINARY)\n@Target(\n  CLASS,\n
ANNOTATION_CLASS,\n  PROPERTY,\n  FIELD,\n  LOCAL_VARIABLE,\n  VALUE_PARAMETER,\n
CONSTRUCTOR,\n  FUNCTION,\n  PROPERTY_GETTER,\n  PROPERTY_SETTER,\n
TYPEALIAS)\n\n@MustBeDocumented\n@SinceKotlin("1.3")\npublic annotation class
ExperimentalStdlibApi\n","/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n * \n\npackage kotlin\n\nimport
kotlin.annotation.AnnotationTarget.*\n\nimport kotlin.experimental.ExperimentalTypeInference\n\n\n/**\n * Allows to
infer generic type arguments of a function from the calls in the annotated function parameter of that function.\n * \n *
When this annotation is placed on a generic function parameter of a function,\n * it enables to infer the type
arguments of that generic function from the lambda body passed to that parameter.\n * \n * The calls that affect
inference are either members of the receiver type of an annotated function parameter or\n * extensions for that type.
The extensions must be themselves annotated with `@BuilderInference`.\n * \n * Example: we declare\n * ```\n * fun
<T> sequence(@BuilderInference block: suspend SequenceScope<T>().->Unit): Sequence<T>\n * ```\n * and use
it like\n * ```\n * val result = sequence { yield("result") }\n * ```\n * Here the type argument of the resulting
sequence is inferred to `String` from\n * the argument of the [SequenceScope.yield] function, that is called inside
the lambda passed to [sequence].\n * \n * Note: this annotation is experimental, see [ExperimentalTypeInference] on
how to opt-in for it.\n * \n *@Target(VALUE_PARAMETER, FUNCTION,
PROPERTY)\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.3")\n@ExperimentalTypeInferenc
e\n\npublic annotation class BuilderInference\n\n\n/**\n * Enables overload selection based on the type of the value
returned from lambda argument.\n * \n * When two or more function overloads have otherwise the same parameter
lists that differ only in the return type\n * of a functional parameter, this annotation enables overload selection by
the type of the value returned from\n * the lambda function passed to this functional parameter.\n * \n * Example:\n *
```
*\n * @OverloadResolutionByLambdaReturnType\n * fun create(intProducer: () -> Int): Int\n * \n * fun

```

```

create(doubleProducer: () -> Double): Double
 * The annotation being applied to one of overloads allows to
 * resolve this ambiguity by analyzing what value is returned
 * from the lambda function. This annotation is
 * also used to discriminate the annotated overloads in case if overload selection still cannot
 * choose one of them
 * even taking in account the result of lambda parameter analysis. In that case a warning is reported.
 * Note: this
 * annotation is experimental, see [ExperimentalTypeInference] on how to opt-in for it.
 *
 * @Target(FUNCTION) @Retention(AnnotationRetention.BINARY) @SinceKotlin("1.4") @Experimental
 * TypeInference
 * public annotation class OverloadResolutionByLambdaReturnType,
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 * Apache 2.0 license that can be found in the license/LICENSE.txt file.
 *
 * package kotlin
 * import
 * kotlin.annotation.AnnotationTarget
 *
 * import
 * kotlin.internal.RequireKotlin
 * import kotlin.internal.RequireKotlinVersionKind
 *
 * The experimental
 * multiplatform support API marker.
 * Any usage of a declaration annotated with
 * `@ExperimentalMultiplatform` must be accepted either by
 * annotating that usage with the [OptIn] annotation,
 * e.g. `@OptIn(ExperimentalMultiplatform::class)`,
 * or by using the compiler argument `--opt-
 * in=kotlin.ExperimentalMultiplatform`.
 *
 * @RequiresOptIn @MustBeDocumented @Target(
 * CLASS,
 * ANNOTATION_CLASS,
 * PROPERTY,
 * FIELD,
 * LOCAL_VARIABLE,
 * VALUE_PARAMETER,
 * CONSTRUCTOR,
 * FUNCTION,
 * PROPERTY_GETTER,
 * PROPERTY_SETTER,
 * TYPEALIAS)
 * @Retention(AnnotationRetention.BINARY)
 * public annotation class
 * ExperimentalMultiplatform
 *
 * Marks an expected annotation class that it isn't required to have actual
 * counterparts in all platforms.
 * This annotation is only applicable to `expect` annotation classes in multi-
 * platform projects
 * and marks that class as `optional`.
 * Optional expected class is allowed to have no corresponding actual class on
 * the platform. Optional annotations can only be used
 * to annotate something, not as types in signatures. If an
 * optional annotation has no corresponding actual class on a platform,
 * the annotation entries where it's used are
 * simply erased when compiling code on that platform.
 * Note: this annotation is experimental, see
 * [ExperimentalMultiplatform] on how to opt-in for it.
 *
 * @Target(ANNOTATION_CLASS) @Retention(AnnotationRetention.BINARY) @ExperimentalMultiplatfor
 * m
 * public annotation class OptionalExpectation
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 * Programming Language contributors.
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 * found in the license/LICENSE.txt file.
 *
 * package kotlin
 * import
 * kotlin.annotation.AnnotationRetention
 * import kotlin.annotation.AnnotationTarget
 *
 * import
 * kotlin.reflect.KClass
 *
 * Signals that the annotated annotation class is a marker of an API that requires an explicit opt-in.
 * Call sites
 * of any declaration that is either annotated with such a marker or mentions in its signature any
 * other declaration
 * that requires opt-in should opt in to the API either by using [OptIn],
 * or by being annotated with that marker
 * themselves, effectively causing further propagation of the opt-in requirement.
 * The intended uses of opt-in
 * markers include, but are not limited to the following:
 * - Experimental API for public preview that might change
 * its semantics or affect binary compatibility.
 * - Internal declarations that should not be used outside the declaring
 * library, but are `public` for technical reasons.
 * - Fragile or delicate API that needs a lot of expertise to use and
 * thus require an explicit opt-in.
 *
 * ## Contagiousness
 *
 * When a declaration is marked with an opt-in
 * requirement, it is considered to be contagious,
 * meaning that all its uses
 * or mentions in other declarations will require an explicit opt-in.
 * A rule of thumb for
 * propagating is the following: if the marked declaration ceases to exist, only
 * the places with explicit opt-in (or the
 * corresponding warning) will break. This rule does not imply transitivity,
 * e.g. the propagation does not propagate
 * opt-in through inlining, making it the responsibility of the function author
 * to mark it properly.
 *
 * ##
 * Type scopes
 *
 * A type is considered requiring opt-in if it is marked with an opt-in marker, or the outer
 * declaration (class or interface) requires opt-in.
 * Any use of any declaration that mentions such type in its

```

signature will require an explicit opt-in, even if it is not used directly on the call site, and even if such declarations do not require opt-in directly.

For example, consider the following declarations that are marked with non-propagating opt-in:

```

@UnstableApi class
Unstable {
    @OptIn(UnstableApi::class) fun foo(): Unstable = Unstable()
    @OptIn(UnstableApi::class) fun bar(arg: Unstable = Unstable()) {}
    @OptIn(UnstableApi::class) fun
Unstable?.baz() {}
}

```

and their respective call sites:

```

fun outerFun() {
    val s = foo()
    bar()
    null.baz()
}

```

Even though call sites do not mention `Unstable` type directly, the corresponding opt-in warning or error will be triggered in each call site due to propagation contagiousness. Note that the propagation is not transitive, i.e. calls to `outerFun` itself would not trigger any further opt-in requirements.

### Lexical scopes

If a type requires an opt-in, such requirement is propagated to its lexical scope and all its nested declarations. For example, for the following scope:

```

@UnstableApi class Unstable {
    fun memberFun() = ...
    class NestedClass {
        fun nestedFun() = ...
    }
}

```

Any use of `Unstable`, `NestedClass`, or their member functions will require an explicit opt-in.

### Overridden declarations

Opt-in markers are also propagated through the inheritance and interface implementation. If the base declaration requires an opt-in, overriding it requires either an explicit opt-in or propagating the opt-in requirement.

See also [Kotlin language documentation](https://kotlinlang.org/docs/opt-in-requirements.html) for more information.

@property message message to be reported on usages of API without an explicit opt-in, or empty string for the default message.

The default message is: `"This declaration is experimental and its usage should be marked with 'Marker' or '@OptIn(Marker::class)'"`, where `Marker` is the opt-in requirement marker.

@property level specifies how usages of API without an explicit opt-in are reported in code.

```

@Target(ANNOTATION_CLASS)@Retention(BINARY)@SinceKotlin("1.3")public annotation class
RequiresOptIn(val message: String = "", val level: Level = Level.ERROR) {
    /** Severity of the diagnostic that should be reported on usages which did not explicitly opted into the API either by using [OptIn] or by being annotated with the corresponding marker annotation.
    * @see RequiresOptIn for a detailed description of opt-in semantics and propagation rules.
    */
    public enum class Level {
        /** Specifies that a warning should be reported on incorrect usages of this API.
        * @see RequiresOptIn for a detailed description of opt-in semantics and propagation rules.
        */
        WARNING,
        /** Specifies that a compilation error should be reported on incorrect usages of this API.
        * @see RequiresOptIn for a detailed description of opt-in semantics and propagation rules.
        */
        ERROR,
    }
}

```

Allows to use the API denoted by the given markers in the annotated file, declaration, or expression. If a declaration is annotated with `[OptIn]`, its usages are **not** required to opt in to that API.

[markerClass] specifies marker annotations that require explicit opt-in. The marker annotation is not required to be itself marked with `[RequiresOptIn]` to enable gradual migration of API from requiring opt-in to the regular one, yet declaring such `OptIn` yields a compilation warning.

See also [Kotlin language documentation](https://kotlinlang.org/docs/opt-in-requirements.html) for more information.

@property markerClass specifies marker annotations that require explicit opt-in. @see RequiresOptIn for a detailed description of opt-in semantics and propagation rules.

```

@Target(CLASS, PROPERTY, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER, PROPERTY_SETTER, EXPRESSION, FILE, TYPEALIAS)@Retention(SOURCE)@SinceKotlin("1.3")public annotation class OptIn(
    vararg val markerClass: KClass<out Annotation>)

```

This annotation marks the experimental preview of the language feature `[SubclassOptInRequired]`.

> Note that this API is in a preview state and has a chance of being changed in the future.

Do not use it if you develop a library since your library can become source incompatible with the future versions of Kotlin.

```

@Target(CLASS)@Retention(BINARY)@SinceKotlin("1.8")public annotation class ExperimentalSubclassOptIn

```

Annotation that marks open for subclassing classes and interfaces, and makes implementation and extension of such declarations as requiring an explicit opt-in.

When applied, any attempt to subclass the target declaration will trigger an opt-in with the corresponding level and message.

The intended uses of subclass opt-in markers include, but are not limited to the following API:

- Stable to use, but unstable to implement due to its further evolution.
- Stable to use, but closed for



3rd-part implementations due to internal or technical reasons.\n \* - Stable to use, but delicate or fragile to implement.\n \* - Stable to use, but with a contract that may be weakened in the future in a backwards-incompatible\n

\* manner for external implementations.\n \*\n \* Contrary to regular [RequiresOptIn], there are three ways to opt-in into the subclassing requirement:\n \* - Annotate declaration with the marker annotation, making it propagating.\n \* - Annotate declaration with [OptIn] in order to opt in into the provided guarantees in a non-propagating manner.\n \* - Annotate declaration with [SubclassOptInRequired] with the same marker class, making it further propagating only for subclassing.\n \*\n \* Uses of this annotation are limited to open and abstract classes, and non-`fun` interfaces.\n \* Any other uses allowed by `CLASS` annotation target yield a compilation error.\n \*\n \* @property markerClass specifies marker annotation that require explicit opt-in.\n \* @see RequiresOptIn for a detailed description of opt-in semantics and propagation rules.\n

```
*\n@Target(CLASS)\n@Retention(BINARY)\n@SinceKotlin("1.8")\n@ExperimentalSubclassOptIn\npublic\nannotation class SubclassOptInRequired(\n
```

```
    val markerClass: KClass<out Annotation>\n)\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin\nProgramming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be\nfound in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport
```

```
kotlin.annotation.AnnotationRetention.BINARY\nimport kotlin.annotation.AnnotationTarget.*\nimport\nkotlin.reflect.KClass\n\n@Target(CLASS, PROPERTY, CONSTRUCTOR, FUNCTION,\n
```

```
TYPEALIAS)\n@Retention(BINARY)\ninternal annotation class WasExperimental(\n    vararg val markerClass:\nKClass<out Annotation>\n)\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language\ncontributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\nlicense/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport kotlin.js.JsName\n\n/**\n * Provides a skeletal
```

```
implementation of the read-only [Collection] interface.\n *\n * @param E the type of elements contained\nin the collection. The collection is covariant in its element type.\n */\n@SinceKotlin("1.1")\npublic abstract class
```

```
AbstractCollection<out E> protected constructor() : Collection<E> {\n    abstract override val size: Int\n    abstract\noverride fun iterator(): Iterator<E>\n\n    override fun contains(element: @UnsafeVariance E): Boolean = any { it\n== element }\n\n    override fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean =\nelements.all { contains(it) } // use when js will support bound refs: elements.all(this::contains)\n\n    override fun\nisEmpty(): Boolean = size == 0\n\n    override fun toString(): String = joinToString(", ", "[", "]")\n\n    if (it\n=== this) "(this Collection)" else it.toString()\n }\n\n /**\n * Returns new array of type `Array<Any?>` with
```

```
the elements of this collection.\n *\n * @JsName("toArray")\n protected open fun toArray(): Array<Any?> =\ncopyToArrayImpl(this)\n\n /**\n * Fills the provided
```

```
[array] or creates new array of the same type\n *\n * and fills it with the elements of this collection.\n *\n protected open fun <T> toArray(array: Array<T>): Array<T> = copyToArrayImpl(this, array)\n)\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
```

```
kotlin.collections\n\nprivate enum class State {\n    Ready,\n    NotReady,\n    Done,\n    Failed\n}\n\n/**\n * A
```

```
base class to simplify implementing iterators so that implementations only have to implement [computeNext]\n *\n * to implement the iterator, calling [done] when the iteration is complete.\n */\npublic abstract class AbstractIterator<T>
```

```
: Iterator<T> {\n    private var state = State.NotReady\n    private var nextValue: T? = null\n\n    override fun\nhasNext(): Boolean {\n        require(state != State.Failed)\n        return when (state) {\n
```

```
            State.Done -> false\n            State.Ready -> true\n            else -> tryToComputeNext()\n        }\n\n    override fun next(): T {\n        if (!hasNext()) throw NoSuchElementException()\n        state = State.NotReady\n
```

```
@Suppress("UNCHECKED_CAST")\n        return nextValue as T\n    }\n\n    private fun tryToComputeNext():\nBoolean {\n        state = State.Failed\n        computeNext()\n        return state == State.Ready\n    }\n\n /**\n * Computes the next item in the iterator.\n *\n * This callback method should call one of these two methods:\n
```

```
*\n * * [setNext] with the next value of the iteration\n * * [done] to indicate there are no more elements\n *\n * Failure to call either method will result in the iteration terminating with a failed state\n */\n abstract
```

```

protected fun computeNext(): Unit {
    /**
     * Sets the next value in the iteration, called from the
     [computeNext] function
     */
    fun setNext(value: T): Unit {
        nextValue = value
        state = State.Ready
    }
    /**
     * Sets the state
     to done so that the iteration terminates.
     */
    protected fun done() {
        state = State.Done
    }
}

/**
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 */
/**
 * Based on GWT AbstractList
 * Copyright 2007 Google Inc.
 */
package kotlin.collections

/**
 * Provides a skeletal implementation of the read-only [List] interface.
 * This class is intended to help
 implementing read-only lists so it doesn't support concurrent modification tracking.
 */
@param E the type of
elements contained in the list. The list is covariant in its element type.
@SinceKotlin("1.1")
public abstract
class AbstractList<out E> protected constructor() : AbstractCollection<E>(),
List<E> {
    abstract override val size: Int
    abstract override fun get(index: Int): E
    override fun iterator():
Iterator<E> = IteratorImpl()
    override fun indexOf(element: @UnsafeVariance E): Int = indexOfFirst { it ==
element }
    override fun lastIndexOf(element: @UnsafeVariance E): Int = indexOfLast { it == element }
    override fun listIterator(): ListIterator<E> = ListIteratorImpl(0)
    override fun listIterator(index: Int):
ListIterator<E> = ListIteratorImpl(index)
    override fun subList(fromIndex: Int, toIndex: Int): List<E> =
SubList(this, fromIndex, toIndex)
    private class SubList<out E>(private val list: AbstractList<E>, private val
fromIndex: Int, toIndex: Int) : AbstractList<E>(), RandomAccess {
        private var _size: Int = 0
        init {
            checkRangeIndexes(fromIndex, toIndex, list.size)
            this._size = toIndex - fromIndex
        }
        override fun get(index: Int): E {
            checkElementIndex(index,
_size)
            return list[fromIndex + index]
        }
        override val size: Int get() = _size
    }
    /**
     * Compares this list with other list instance with the ordered structural equality.
     */
    @return true, if
[other] instance is a [List] of the same size, which contains the same elements in the same order.
    override
fun equals(other: Any?): Boolean {
        if (other === this) return true
        if (other !is List<*>) return false
        return orderedEquals(this, other)
    }
    /**
     * Returns the hash code value for this list.
     */
    override
fun hashCode(): Int = orderedHashCode(this)
    private open inner class IteratorImpl : Iterator<E> {
        /**
         the index of the item that will be returned on the next call to [next]
         */
        protected var index = 0
        override fun hasNext(): Boolean = index < size
        override fun next(): E {
            if (!hasNext())
                throw NoSuchElementException()
            return get(index++)
        }
    }
    /**
     * Implementation of
[ListIterator] for abstract lists.
     */
    private open inner class ListIteratorImpl(index: Int) : IteratorImpl(),
ListIterator<E> {
        init {
            checkPositionIndex(index, this@AbstractList.size)
            this.index =
index
        }
        override fun hasPrevious(): Boolean = index > 0
        override fun nextIndex(): Int =
index
        override fun previous(): E {
            if (!hasPrevious()) throw NoSuchElementException()
            return get(--index)
        }
        override fun previousIndex(): Int = index - 1
    }
    internal companion
object {
        internal fun checkElementIndex(index: Int, size: Int) {
            if (index < 0 || index >= size) {
                throw IndexOutOfBoundsException("index: $index, size: $size")
            }
        }
        internal fun
checkPositionIndex(index:
Int, size: Int) {
            if (index < 0 || index > size) {
                throw IndexOutOfBoundsException("index:
$index, size: $size")
            }
        }
        internal fun checkRangeIndexes(fromIndex: Int, toIndex: Int, size:
Int) {
            if (fromIndex < 0 || toIndex > size) {
                throw IndexOutOfBoundsException("fromIndex:
$fromIndex, toIndex: $toIndex, size: $size")
            }
            if (fromIndex > toIndex) {
                throw
IllegalArgumentException("fromIndex: $fromIndex > toIndex: $toIndex")
            }
        }
        internal fun
checkBoundsIndexes(startIndex: Int, endIndex: Int, size: Int) {
            if (startIndex < 0 || endIndex > size) {
                throw IndexOutOfBoundsException("startIndex: $startIndex, endIndex: $endIndex, size: $size")
            }
            if (startIndex > endIndex) {
                throw IllegalArgumentException("startIndex: $startIndex > endIndex:
$endIndex")
            }
        }
        internal fun orderedHashCode(c: Collection<*>): Int {
            var hashCode = 1
            for (e in c) {
                hashCode = 31 * hashCode + (e?.hashCode() ?: 0)
            }
            return hashCode
        }
    }
}

```



```

companion object {
    internal fun entryHashCode(e: Map.Entry<*, *>): Int = with(e) { (key?.hashCode() ?: 0) xor (value?.hashCode() ?: 0) }
    internal fun entryToString(e: Map.Entry<*, *>): String = with(e) { "$key=$value" }
    internal fun entryEquals(e: Map.Entry<*, *>, other: Any?): Boolean {
        if (other !is Map.Entry<*, *>) return false
        return e.key == other.key && e.value == other.value
    }
}
"/**
 * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.collections
/**
 * Provides a skeletal implementation of the read-only [Set] interface.
 * This class is intended to help implementing read-only sets so it doesn't support concurrent modification tracking.
 * @param E the type of elements contained in the set. The set is covariant in its element type.
 */
@SinceKotlin("1.1")
public abstract class AbstractSet<out E> protected constructor() :
    AbstractCollection<E>(), Set<E> {
    /**
     * Compares this set with other set instance with the unordered structural equality.
     * @return true, if [other] instance is a [Set] of the same size, all elements of which are contained in this set.
     */
    override fun equals(other: Any?): Boolean {
        if (other === this) return true
        if (other !is Set<*>) return false
        return setEquals(this, other)
    }
    /**
     * Returns the hash code value for this set.
     */
    override fun hashCode(): Int = unorderedHashCode(this)
    internal companion object {
        internal fun unorderedHashCode(c: Collection<*>): Int {
            var hashCode = 0
            for (element in c) {
                hashCode += (element?.hashCode() ?: 0)
            }
            return hashCode
        }
        internal fun setEquals(c: Set<*>, other: Set<*>): Boolean {
            if (c.size != other.size) return false
            return c.containsAll(other)
        }
    }
}
"/**
 * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.collections
/**
 * Resizable-array implementation of the deque data structure.
 * The name deque is short for "double ended queue" and is usually pronounced "deck".
 * The collection provide methods for convenient access to the both ends.
 * It also implements [MutableList] interface and supports efficient get/set operations by index.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public class ArrayDeque<E> :
    AbstractMutableList<E> {
    private var head: Int = 0
    private var elementData: Array<Any?>
    override var size: Int = 0
    private set
    /**
     * Constructs an empty deque with specified [initialCapacity], or throws [IllegalArgumentException] if [initialCapacity] is negative.
     */
    public constructor(initialCapacity: Int) {
        elementData = when {
            initialCapacity == 0 -> emptyElementData
            initialCapacity > 0 -> arrayOfNulls(initialCapacity)
        }
        else -> throw IllegalArgumentException("Illegal Capacity: $initialCapacity")
    }
    /**
     * Constructs an empty deque.
     */
    public constructor() {
        elementData = emptyElementData
    }
    /**
     * Constructs a deque that contains the same elements as the specified [elements] collection in the same order.
     */
    public constructor(elements: Collection<E>) {
        elementData = elements.toArray()
        size = elementData.size
        if (elementData.isEmpty())
            elementData = emptyElementData
    }
    /**
     * Ensures that the capacity of this deque is at least equal to the specified [minCapacity].
     * If the current capacity is less than the [minCapacity], a new backing storage is allocated with greater capacity.
     * Otherwise, this method takes no action and simply returns.
     */
    private fun ensureCapacity(minCapacity: Int) {
        if (minCapacity < 0)
            throw IllegalStateException("Deque is too big.") // overflow
        if (minCapacity <= elementData.size) return
        if (elementData === emptyElementData)
            elementData = arrayOfNulls(minCapacity.coerceAtLeast(defaultMinCapacity))
        else
            val newCapacity = newCapacity(elementData.size, minCapacity)
            copyElements(newCapacity)
    }
    /**
     * Creates a new array with the specified [newCapacity] size and copies elements in the [elementData] array to it.
     */
    private fun copyElements(newCapacity: Int) {
        val newElements = arrayOfNulls<Any?>(newCapacity)
        elementData.copyInto(newElements, 0, head, elementData.size)
        elementData.copyInto(newElements, elementData.size - head, 0, head)
        head = 0
        elementData = newElements
    }
}
@kotlin.internal.InlineOnly

```

```

private inline fun internalGet(internalIndex: Int): E {
    @Suppress("UNCHECKED_CAST")
    return elementData[internalIndex] as E
}
private fun positiveMod(index: Int): Int = if (index >= elementData.size) index - elementData.size else index
private fun negativeMod(index: Int): Int = if (index < 0) index + elementData.size else index
@kotlin.internal.InlineOnly
private inline fun internalIndex(index: Int): Int = positiveMod(head + index)
private fun incremented(index: Int): Int = if (index == elementData.lastIndex) 0 else index + 1
private fun decremented(index: Int): Int = if (index == 0) elementData.lastIndex else index - 1
override fun isEmpty(): Boolean = size == 0
/**
 * Returns the first element, or throws [NoSuchElementException] if this deque is empty.
 */
public fun first(): E = if (isEmpty()) throw NoSuchElementException("ArrayDeque is empty.") else internalGet(head)
/**
 * Returns the first element, or `null` if this deque is empty.
 */
public fun firstOrNull(): E? = if (isEmpty()) null else internalGet(head)
/**
 * Returns the last element, or throws [NoSuchElementException] if this deque is empty.
 */
public fun last(): E = if (isEmpty()) throw NoSuchElementException("ArrayDeque is empty.") else internalGet(internalIndex(lastIndex))
/**
 * Returns the last element, or `null` if this deque is empty.
 */
public fun lastOrNull(): E? = if (isEmpty()) null else internalGet(internalIndex(lastIndex))
/**
 * Prepends the specified [element] to this deque.
 */
public fun addFirst(element: E) {
    ensureCapacity(size + 1)
    head = decremented(head)
    elementData[head] = element
    size += 1
}
/**
 * Appends the specified [element] to this deque.
 */
public fun addLast(element: E) {
    ensureCapacity(size + 1)
    elementData[internalIndex(size)] = element
    size += 1
}
/**
 * Removes the first element from this deque and returns that removed element, or throws [NoSuchElementException] if this deque is empty.
 */
public fun removeFirst(): E {
    if (isEmpty()) throw NoSuchElementException("ArrayDeque is empty.")
    val element = internalGet(head)
    elementData[head] = null
    head = incremented(head)
    size -= 1
    return element
}
/**
 * Removes the first element from this deque and returns that removed element, or returns `null` if this deque is empty.
 */
public fun removeFirstOrNull(): E? = if (isEmpty()) null else removeFirst()
/**
 * Removes the last element from this deque and returns that removed element, or throws [NoSuchElementException] if this deque is empty.
 */
public fun removeLast(): E {
    if (isEmpty()) throw NoSuchElementException("ArrayDeque is empty.")
    val internalLastIndex = internalIndex(lastIndex)
    val element = internalGet(internalLastIndex)
    elementData[internalLastIndex] = null
    size -= 1
    return element
}
/**
 * Removes the last element from this deque and returns that removed element, or returns `null` if this deque is empty.
 */
public fun removeLastOrNull(): E? = if (isEmpty()) null else removeLast()
// MutableList, MutableCollection
public override fun add(element: E): Boolean {
    addLast(element)
    return true
}
public override fun add(index: Int, element: E) {
    AbstractList.checkPositionIndex(index, size)
    if (index == size) {
        addLast(element)
        return
    } else if (index == 0) {
        addFirst(element)
        return
    }
    ensureCapacity(size + 1)
    // Elements in circular array lay in 2 ways:
    // 1. `head` is less than `tail`: [#, #, e1, e2, e3, #]
    // 2. `head` is greater than `tail`: [e3, #, #, #, e1, e2]
    // where head is the index of the first element in the circular array,
    // and tail is the index following the last element.
    // At this point the insertion index is not equal to head or tail.
    // Also the circular array can store at least one more element.
    // Depending on where the given element must be inserted the preceding or the succeeding
    // elements will be shifted to make room for the element to be inserted.
    // In case the preceding elements are shifted:
    // * if the insertion index is greater than the head (regardless of circular array form)
    // -> shift the preceding elements
    // * otherwise, the circular array has (2) form and the insertion index is less than tail
    // -> shift all elements in the back of the array
    // -> shift preceding elements in the front of the array
    // In case the succeeding elements are shifted:
    // * if the insertion index is less than the tail (regardless of circular array form)
    // -> shift the succeeding elements
    // * otherwise, the circular array has (2) form and the insertion index is greater than head
    // -> shift all elements in the front of the array
    // -> shift succeeding elements in the

```

```

back of the array\n\n    val internalIndex = internalIndex(index)\n\n    if (index < (size + 1) shr 1) {\n        //
closer to the first element -> shift preceding elements\n        val decrementedInternalIndex =
decremented(internalIndex)\n        val decrementedHead = decremented(head)\n        if
(decrementedInternalIndex >= head) {\n            elementData[decrementedHead] = elementData[head] // head can
be zero\n            elementData.copyInto(elementData,
head, head + 1, decrementedInternalIndex + 1)\n        } else { // head > tail\n
elementData.copyInto(elementData, head - 1, head, elementData.size) // head can't be zero\n
elementData[elementData.size - 1] = elementData[0]\n        elementData.copyInto(elementData, 0, 1,
decrementedInternalIndex + 1)\n    }\n\n    elementData[decrementedInternalIndex] = element\n
head = decrementedHead\n    } else {\n        // closer to the last element -> shift succeeding elements\n
val tail = internalIndex(size)\n        if (internalIndex < tail) {\n            elementData.copyInto(elementData,
internalIndex + 1, internalIndex, tail)\n        } else { // head > tail\n            elementData.copyInto(elementData,
1, 0, tail)\n            elementData[0] = elementData[elementData.size - 1]\n
elementData.copyInto(elementData, internalIndex + 1, internalIndex, elementData.size
- 1)\n        }\n\n        elementData[internalIndex] = element\n    }\n    size += 1\n }\n\n private fun
copyCollectionElements(internalIndex: Int, elements: Collection<E>) {\n    val iterator = elements.iterator()\n
for (index in internalIndex until elementData.size) {\n        if (!iterator.hasNext()) break\n
elementData[index] = iterator.next()\n    }\n    for (index in 0 until head) {\n        if (iterator.hasNext())
break\n        elementData[index] = iterator.next()\n    }\n    size += elements.size\n }\n\n public override
fun addAll(elements: Collection<E>): Boolean {\n    if (elements.isEmpty()) return false\n
ensureCapacity(this.size + elements.size)\n    copyCollectionElements(internalIndex(size), elements)\n    return
true\n }\n\n public override fun addAll(index: Int, elements: Collection<E>): Boolean {\n
AbstractList.checkPositionIndex(index, size)\n
if (elements.isEmpty()) {\n        return false\n    } else if (index == size) {\n        return
addAll(elements)\n    }\n\n    ensureCapacity(this.size + elements.size)\n\n    val tail = internalIndex(size)\n
val internalIndex = internalIndex(index)\n    val elementsSize = elements.size\n\n    if (index < (size + 1) shr
1) {\n        // closer to the first element -> shift preceding elements\n\n        var shiftedHead = head -
elementsSize\n\n        if (internalIndex >= head) {\n            if (shiftedHead >= 0) {\n
elementData.copyInto(elementData, shiftedHead, head, internalIndex)\n            } else { // head < tail, insertion
leads to head >= tail\n                shiftedHead += elementData.size\n                val elementsToShift =
internalIndex - head\n                val shiftToBack = elementData.size - shiftedHead\n\n                if (shiftToBack
>= elementsToShift) {\n
                    elementData.copyInto(elementData, shiftedHead, head, internalIndex)\n                } else {\n
                    elementData.copyInto(elementData, shiftedHead, head, head + shiftToBack)\n
                    elementData.copyInto(elementData, 0, head + shiftToBack, internalIndex)\n                }\n            }
        } else { // head > tail, internalIndex < tail\n            elementData.copyInto(elementData, shiftedHead, head,
elementData.size)\n            if (elementsSize >= internalIndex) {\n                elementData.copyInto(elementData,
elementData.size - elementsSize, 0, internalIndex)\n            } else {\n
                elementData.copyInto(elementData, elementData.size - elementsSize, 0, elementsSize)\n
                elementData.copyInto(elementData, 0, elementsSize, internalIndex)\n            }\n        }\n\n        head =
shiftedHead\n        copyCollectionElements(negativeMod(internalIndex
- elementsSize), elements)\n    } else {\n        // closer to the last element -> shift succeeding elements\n\n
val shiftedInternalIndex = internalIndex + elementsSize\n\n        if (internalIndex < tail) {\n            if (tail +
elementsSize <= elementData.size) {\n                elementData.copyInto(elementData, shiftedInternalIndex,
internalIndex, tail)\n            } else { // head < tail, insertion leads to head >= tail\n                if
(shiftedInternalIndex >= elementData.size) {\n                    elementData.copyInto(elementData,
shiftedInternalIndex - elementData.size, internalIndex, tail)\n                } else {\n                    val shiftToFront =
tail + elementsSize - elementData.size\n                    elementData.copyInto(elementData, 0, tail - shiftToFront,

```

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tail)\n                elementData.copyInto(elementData, shiftedInternalIndex, internalIndex, tail - shiftToFront)\n\n        }\n        }\n        } else { // head > tail, internalIndex > head\n            elementData.copyInto(elementData, elementsSize, 0, tail)\n                if (shiftedInternalIndex >= elementData.size)\n            {\n                elementData.copyInto(elementData, shiftedInternalIndex - elementData.size, internalIndex,\n                elementData.size)\n            } else {\n                elementData.copyInto(elementData, 0, elementData.size -\n                elementsSize, elementData.size)\n                elementData.copyInto(elementData, shiftedInternalIndex,\n                internalIndex, elementData.size - elementsSize)\n            }\n        }\n        copyCollectionElements(internalIndex, elements)\n    }\n    return true\n }\n\n public override fun\n get(index: Int): E {\n    AbstractList.checkNotNull(index, size)\n    return\n    internalGet(internalIndex(index))\n }\n\n public override fun set(index: Int, element: E): E {\n\n    AbstractList.checkNotNull(index,\n    size)\n    val internalIndex = internalIndex(index)\n    val oldElement = internalGet(internalIndex)\n    elementData[internalIndex] = element\n    return oldElement\n }\n\n public override fun contains(element:\n E): Boolean = indexOf(element) != -1\n\n public override fun indexOf(element: E): Int {\n    val tail =\n    internalIndex(size)\n    if (head < tail) {\n        for (index in head until tail) {\n            if (element ==\n            elementData[index]) return index - head\n        }\n    } else if (head >= tail) {\n        for (index in head until\n        elementData.size) {\n            if (element == elementData[index]) return index - head\n        }\n        for\n        (index in 0 until tail) {\n            if (element == elementData[index]) return index + elementData.size - head\n        }\n    }\n    return -1\n }\n\n public override fun lastIndexOf(element: E): Int {\n    val tail =\n    internalIndex(size)\n\n    if (head < tail) {\n        for (index in tail - 1 downTo head) {\n            if (element == elementData[index])\n            return index - head\n        }\n    } else if (head > tail) {\n        for (index in tail - 1 downTo 0) {\n            if\n            (element == elementData[index]) return index + elementData.size - head\n        }\n        for (index in\n        elementData.lastIndex downTo head) {\n            if (element == elementData[index]) return index - head\n        }\n    }\n    return -1\n }\n\n public override fun remove(element: E): Boolean {\n    val index =\n    indexOf(element)\n    if (index == -1) return false\n    removeAt(index)\n    return true\n }\n\n public\n    override fun removeAt(index: Int): E {\n    AbstractList.checkNotNull(index, size)\n    if (index ==\n    lastIndex) {\n        return removeLast()\n    } else if (index == 0) {\n        return removeFirst()\n    }\n    }\n    val internalIndex = internalIndex(index)\n    val element = internalGet(internalIndex)\n    if\n    (index < size shr 1) {\n        // closer to the first element -> shift preceding elements\n        if (internalIndex >=\n        head) {\n            elementData.copyInto(elementData, head + 1, head, internalIndex)\n        } else { // head >\n        tail, internalIndex < head\n            elementData.copyInto(elementData, 1, 0, internalIndex)\n            elementData[0] = elementData[elementData.size - 1]\n            elementData.copyInto(elementData, head + 1,\n            head, elementData.size - 1)\n        }\n        elementData[head] = null\n        head = incremented(head)\n    } else {\n        // closer to the last element -> shift succeeding elements\n        val internalLastIndex =\n        internalIndex(lastIndex)\n        if (internalIndex <= internalLastIndex) {\n            elementData.copyInto(elementData, internalIndex, internalIndex\n            + 1, internalLastIndex + 1)\n        } else { // head > tail, internalIndex > head\n            elementData.copyInto(elementData, internalIndex, internalIndex + 1, elementData.size)\n            elementData[elementData.size - 1] = elementData[0]\n            elementData.copyInto(elementData, 0, 1,\n            internalLastIndex + 1)\n        }\n        elementData[internalLastIndex] = null\n    }\n    size -= 1\n    return element\n }\n\n public override fun removeAll(elements: Collection<E>): Boolean = filterInPlace {\n    !elements.contains(it) }\n\n public override fun retainAll(elements: Collection<E>): Boolean = filterInPlace {\n    elements.contains(it) }\n\n private inline fun filterInPlace(predicate: (E) -> Boolean): Boolean {\n    if\n    (this.isEmpty() || elementData.isEmpty())\n    return false\n    val tail = internalIndex(size)\n    var\n    newTail = head\n    var modified = false\n    if (head < tail) {\n

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    for (index in head until tail) {\n        val element = elementData[index]\n\n
    @Suppress(\"UNCHECKED_CAST\")\n        if (predicate(element as E))\n
    elementData[newTail++] = element\n        else\n            modified = true\n        }\n\n
    elementData.fill(null, newTail, tail)\n    } else {\n        for (index in head until elementData.size) {\n
    val element = elementData[index]\n        elementData[index] = null\n\n
    @Suppress(\"UNCHECKED_CAST\")\n        if (predicate(element as E))\n
    elementData[newTail++] = element\n        else\n            modified = true\n        }\n\n
    newTail =\n
    positiveMod(newTail)\n        for (index in 0 until tail) {\n            val element = elementData[index]\n
    elementData[index] = null\n\n            @Suppress(\"UNCHECKED_CAST\")\n
            if (predicate(element as E)) {\n                elementData[newTail] = element\n                newTail =\n
    incremented(newTail)\n            } else {\n                modified = true\n            }\n        }\n    }\n
    if (modified)\n        size = negativeMod(newTail - head)\n        return modified\n    }\n\n
    public override fun\n
    clear() {\n        val tail = internalIndex(size)\n        if (head < tail) {\n            elementData.fill(null, head, tail)\n        }\n
    else if (isEmpty()) {\n            elementData.fill(null, head, elementData.size)\n            elementData.fill(null, 0,\n
    tail)\n        }\n        head = 0\n        size = 0\n    }\n\n
    @Suppress(\"NOTHING_TO_OVERRIDE\")\n    override\n
    fun <T> toArray(array: Array<T>): Array<T> {\n        @Suppress(\"UNCHECKED_CAST\")\n        val dest = (if\n
    (array.size >= size) array else arrayOfNulls(array, size)) as Array<Any?>\n\n        val tail = internalIndex(size)\n
    if (head\n
    < tail) {\n            elementData.copyInto(dest, startIndex = head, endIndex = tail)\n        } else if (isEmpty()) {\n
            elementData.copyInto(dest, destinationOffset = 0, startIndex = head, endIndex = elementData.size)\n
            elementData.copyInto(dest, destinationOffset = elementData.size - head, startIndex = 0, endIndex = tail)\n        }\n
        if (dest.size > size) {\n            dest[size] = null // null-terminate\n        }\n\n
        @Suppress(\"UNCHECKED_CAST\")\n        return dest as Array<T>\n    }\n\n
    @Suppress(\"NOTHING_TO_OVERRIDE\")\n    override fun toArray(): Array<Any?> {\n        return\n
    toArray(arrayOfNulls<Any?>(size))\n    }\n\n
    // for testing\n    internal fun <T> testToArray(array: Array<T>):\n
    Array<T> = toArray(array)\n    internal fun testToArray(): Array<Any?> = toArray()\n\n
    internal companion\n
    object {\n        private val emptyElementData = emptyArray<Any?>()\n        private const val maxArraySize =\n
    Int.MAX_VALUE - 8\n\n
        private const val defaultMinCapacity = 10\n\n        internal fun newCapacity(oldCapacity: Int, minCapacity: Int):\n
    Int {\n            // overflow-conscious\n            var newCapacity = oldCapacity + (oldCapacity shr 1)\n            if\n
    (newCapacity - minCapacity < 0)\n                newCapacity = minCapacity\n            if (newCapacity - maxArraySize\n
    > 0)\n                newCapacity = if (minCapacity > maxArraySize) Int.MAX_VALUE else maxArraySize\n
            return newCapacity\n        }\n\n
        // For testing only\n        internal fun internalStructure(structure: (head: Int,\n
    elements: Array<Any?>) -> Unit) {\n            val tail = internalIndex(size)\n            val head = if (isEmpty() || head < tail)\n
    head else head - elementData.size\n            structure(head, toArray())\n        }\n    }\n\n
    \"/*\n    * Copyright 2010-2018 JetBrains\n
    s.r.o. and Kotlin Programming Language contributors.\n    * Use of this source code is governed by the Apache 2.0\n
    license that can be found in the license/LICENSE.txt\n
    */\n\n
    file.\n    */\n\n
    @file:kotlin.jvm.JvmMultifileClass\n    @file:kotlin.jvm.JvmName(\"ArraysKt\")\n\n
    \npackage\n
    kotlin.collections\n\n
    \nimport kotlin.contracts.*\n\n
    /**\n    * Returns a single list of all elements from all arrays in the\n
    given array.\n    * @sample samples.collections.Arrays.Transformations.flattenArray\n    */\n\n
    public fun <T> Array<out\n
    Array<out T>>.flatten(): List<T> {\n        val result = ArrayList<T>(sumOf { it.size })\n        for (element in this) {\n
            result.addAll(element)\n        }\n        return result\n    }\n\n
    /**\n    * Returns a pair of lists, where\n    * *first* list is built from\n
    the first values of each pair from this array,\n    * *second* list is built from the second values of each pair from this\n
    array.\n    * @sample samples.collections.Arrays.Transformations.unzipArray\n    */\n\n
    public fun <T, R> Array<out\n
    Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n        val listT = ArrayList<T>(size)\n        val listR =\n
    ArrayList<R>(size)\n        for (pair in this) {\n            listT.add(pair.first)\n            listR.add(pair.second)\n
        }\n        return listT to listR\n    }\n\n
    /**\n    * Returns `true` if this nullable array is either null or empty.\n    * @sample\n
    samples.collections.Arrays.Usage.arrayIsNullOrEmpty\n
    */\n

```



```

*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun Array<*>?.isNullOrEmpty(): Boolean
{\n    contract {\n        returns(false) implies (this@isNullOrEmpty != null)\n    }\n    return this == null ||
this.isEmpty()\n}\n\n/**\n * Returns this array if it's not empty\n * or the result of calling [defaultValue] function if
the array is empty.\n *\n * @sample samples.collections.Arrays.Usage.arrayIfEmpty\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("UPPER_BOUND_CANNOT_BE_ARRAY\
")\npublic inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : Array<*>, C : R =\n    if (isEmpty())
defaultValue() else
this\n\n\n@OptIn(ExperimentalUnsignedTypes::class)\n@SinceKotlin("1.3")\n@PublishedApi\n@kotlin.jvm.Jvm
Name("contentDeepEquals")\n@kotlin.js.JsName("contentDeepEqualsImpl")\ninternal
fun <T> Array<out T>?.contentDeepEqualsImpl(other: Array<out T>?): Boolean {\n    if (this === other) return
true\n    if (this == null || other == null || this.size != other.size) return false\n\n    for (i in indices) {\n        val v1 =
this[i]\n        val v2 = other[i]\n        if (v1 === v2) {\n            continue\n        } else if (v1 == null || v2 == null) {\n
            return false\n        }\n        when {\n            v1 is Array<*> && v2 is Array<*> -> if
(!v1.contentDeepEquals(v2)) return false\n            v1 is ByteArray && v2 is ByteArray -> if
(!v1.contentEquals(v2)) return false\n            v1 is ShortArray && v2 is ShortArray -> if (!v1.contentEquals(v2))
return false\n            v1 is IntArray && v2 is IntArray -> if (!v1.contentEquals(v2)) return false\n            v1 is
LongArray && v2 is LongArray -> if (!v1.contentEquals(v2)) return false\n            v1 is FloatArray && v2 is
FloatArray -> if (!v1.contentEquals(v2)) return false\n            v1 is DoubleArray && v2 is DoubleArray -> if
(!v1.contentEquals(v2)) return false\n            v1 is CharArray && v2 is CharArray -> if (!v1.contentEquals(v2))
return false\n            v1 is BooleanArray && v2 is BooleanArray -> if (!v1.contentEquals(v2)) return false\n\n
            v1 is UByteArray && v2 is UByteArray -> if (!v1.contentEquals(v2)) return false\n            v1 is UShortArray
&& v2 is UShortArray -> if (!v1.contentEquals(v2)) return false\n            v1 is UIntArray && v2 is UIntArray -
> if (!v1.contentEquals(v2)) return false\n            v1 is ULongArray && v2 is ULongArray -> if
(!v1.contentEquals(v2)) return false\n\n            else -> if (v1 != v2) return false\n        }\n    }\n    return
true\n}\n\n\n@SinceKotlin("1.3")\n@PublishedApi\n@kotlin.jvm.JvmName("contentDeepToString")\n@kotlin.js.
JsName("contentDeepToStringImpl")\ninternal fun <T> Array<out T>?.contentDeepToStringImpl():
String {\n    if (this == null) return "null"\n    val length = size.coerceAtMost((Int.MAX_VALUE - 2) / 5) * 5 + 2
// in order not to overflow Int.MAX_VALUE\n    return buildString(length) {\n
contentDeepToStringInternal(this, mutableListOf())\n
}\n}\n\n\n@OptIn(ExperimentalUnsignedTypes::class)\nprivate fun <T> Array<out
T>.contentDeepToStringInternal(result: StringBuilder, processed: MutableList<Array<*>>) {\n    if (this in
processed) {\n        result.append("[...]")\n        return\n    }\n    processed.add(this)\n    result.append("[")\n\n    for (i
in indices) {\n        if (i != 0) {\n            result.append(", ")\n        }\n        val element = this[i]\n        when
(element) {\n            null -> result.append("null")\n            is Array<*> ->
element.contentDeepToStringInternal(result, processed)\n            is ByteArray ->
result.append(element.contentToString())\n            is ShortArray -> result.append(element.contentToString())\n
            is IntArray -> result.append(element.contentToString())\n            is LongArray ->
result.append(element.contentToString())\n            is FloatArray -> result.append(element.contentToString())\n
            is DoubleArray -> result.append(element.contentToString())\n            is CharArray ->
result.append(element.contentToString())\n            is BooleanArray -> result.append(element.contentToString())\n\n
            is UByteArray -> result.append(element.contentToString())\n            is UShortArray ->
result.append(element.contentToString())\n            is UIntArray -> result.append(element.contentToString())\n
            is ULongArray -> result.append(element.contentToString())\n\n            else ->
result.append(element.toString())\n        }\n    }\n    result.append("]")\n    processed.removeAt(processed.lastIndex)\n}
", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin.collections\n\n/**\n * Data class representing a value from a collection or sequence, along with

```

its index in that collection or sequence.  
`@property value` the underlying value.  
`@property index` the index of the value in the collection or sequence.

```

@kotlin.jvm.JvmName("get")\n\npackage kotlin.collections\n\nimport kotlin.reflect.KProperty\n\nimport kotlin.internal.Exact\n\n/**\n * Returns the value of the property for the given object from this read-only map.\n * @param thisRef the object for which the value is requested\n * @param property the metadata for the property, used to get the name of property and lookup the value corresponding to this name in the map.\n * @return the property value.\n * @throws NoSuchElementException when the map doesn't contain value for the property name and doesn't provide an implicit default (see [withDefault]).\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V, V1 : V> Map<in String, @Exact V>.getValue(thisRef: Any?, property: KProperty<*>): V1 =\n    @Suppress("UNCHECKED_CAST") (getOrDefault(property.name) as V1)\n\n/**\n * Returns the value of the property for the given object from this mutable map.\n * @param thisRef the object for which the value is requested (not used).\n * @param property the metadata for the property, used to get the name of property and lookup the value corresponding to this name in the map.\n * @return the property value.\n * @throws NoSuchElementException when the map doesn't contain value for the property name and doesn't provide an implicit default (see [withDefault]).\n */\n@kotlin.jvm.JvmName("getVar")\n@kotlin.internal.InlineOnly\npublic inline operator fun <V, V1 : V> MutableMap<in String, out @Exact V>.getValue(thisRef: Any?, property: KProperty<*>): V1 =\n    @Suppress("UNCHECKED_CAST") (getOrDefault(property.name) as V1)\n\n/**\n * Stores the value of the property for the given object in this mutable map.\n * @param thisRef the object for which the value is requested (not used).\n * @param property the metadata for the property, used to get the name of property and store the value associated with that name in the map.\n * @param value the value to set.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V> MutableMap<in String, in V>.setValue(thisRef: Any?, property: KProperty<*>, value: V) {\n    this.put(property.name, value)\n}\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("MapsKt")\n\npackage kotlin.collections\n\n/**\n * Returns the value for the given key, or the implicit default value for this map.\n * By default no implicit value is provided for maps and a [NoSuchElementException] is thrown.\n * To create a map with implicit default value use [withDefault] method.\n * @throws NoSuchElementException when the map doesn't contain a value for the specified key and no implicit default was provided for that map.\n */\n@kotlin.jvm.JvmName("getOrDefaultNullable")\n@PublishedApi\ninternal fun <K, V> Map<K, V>.getOrDefault(key: K): V {\n    if (this is MapWithDefault)\n        return this.getOrDefault(key)\n    return getOrElseNullable(key, { throw NoSuchElementException("Key $key is missing in the map.") })\n}\n\n/**\n * Returns a wrapper of this read-only map, having the implicit default value provided with the specified function [defaultValue].\n * This implicit default value is used when the original map doesn't contain a value for the key specified\n * and a value is obtained with [Map.getValue] function, for example when properties are delegated to the map.\n * When this map already has an implicit default value provided with a former call to [withDefault], it is being replaced by this call.\n */\n@public fun <K, V> Map<K, V>.withDefault(defaultValue: (key: K) -> V): Map<K, V> =\n    when (this) {\n        is MapWithDefault -> this.map.withDefault(defaultValue)\n        else -> MapWithDefaultImpl(this, defaultValue)\n    }\n\n/**\n * Returns a wrapper of this mutable map, having the implicit default value provided with the specified function [defaultValue].\n * This implicit default value is used when the original map doesn't contain a value for the key specified\n * and a value is obtained with [Map.getValue] function,

```

for example when properties are delegated to the map.\n \* When this map already has an implicit default value provided with a former call to [withDefault], it is being replaced by this call.\n

```
*\n@kotlin.jvm.JvmName("\nwithDefaultMutable")\npublic fun <K, V> MutableMap<K, V>.withDefault(defaultValue: (key: K) -> V): MutableMap<K, V> =\n    when (this) {\n        is\n        MutableMapWithDefault -> this.map.withDefault(defaultValue)\n        else -> MutableMapWithDefaultImpl(this,\n        defaultValue)\n    }\n\nprivate interface MapWithDefault<K, out V> : Map<K, V> {\n    public val map: Map<K, V>\n    public fun getOrImplicitDefault(key: K): V\n}\n\nprivate interface MutableMapWithDefault<K, V> : MutableMap<K, V>, MapWithDefault<K, V> {\n    public override val map: MutableMap<K, V>\n}\n\nprivate class MapWithDefaultImpl<K, out V>(public override val map: Map<K, V>, private val default: (key: K) -> V) : MapWithDefault<K, V> {\n    override fun equals(other: Any?): Boolean = map.equals(other)\n\n    override fun hashCode(): Int = map.hashCode()\n    override fun toString(): String = map.toString()\n    override val size: Int get() = map.size\n    override fun isEmpty(): Boolean = map.isEmpty()\n    override fun\n    containsKey(key: K): Boolean = map.containsKey(key)\n    override fun containsValue(value: @UnsafeVariance V): Boolean = map.containsValue(value)\n    override fun get(key: K): V? = map.get(key)\n    override val keys: Set<K> get() = map.keys\n    override val values: Collection<V> get() = map.values\n    override val entries: Set<Map.Entry<K, V>> get() = map.entries\n\n    override fun getOrImplicitDefault(key: K): V =\n    map.getOrNull(key, { default(key) })\n}\n\nprivate class MutableMapWithDefaultImpl<K, V>(public\n    override val map: MutableMap<K, V>, private val default: (key: K) -> V) : MutableMapWithDefault<K, V> {\n    override fun equals(other: Any?): Boolean = map.equals(other)\n    override fun hashCode(): Int =\n    map.hashCode()\n    override fun toString():\n    String = map.toString()\n    override val size: Int get() = map.size\n    override fun isEmpty(): Boolean =\n    map.isEmpty()\n    override fun\n    containsKey(key: K): Boolean = map.containsKey(key)\n    override fun\n    containsValue(value: @UnsafeVariance V): Boolean = map.containsValue(value)\n    override fun get(key: K): V? =\n    map.get(key)\n    override val keys: MutableSet<K> get() = map.keys\n    override val values:\n    MutableCollection<V> get() = map.values\n    override val entries: MutableSet<MutableMap.MutableEntry<K,\n    V>> get() = map.entries\n    override fun put(key: K, value: V): V? = map.put(key, value)\n    override fun\n    remove(key: K): V? = map.remove(key)\n    override fun putAll(from: Map<out K, V>) = map.putAll(from)\n    override fun clear() = map.clear()\n    override fun getOrImplicitDefault(key: K): V = map.getOrNull(key,\n    { default(key) })\n}\n\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language\n    contributors.\n * Use of this source code
```

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```
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("CollectionsKt")\n\npackage\n    kotlin.collections\n\n/**\n * Removes a single instance of the specified element from this\n * collection, if it is\n    present.\n * Allows to overcome type-safety restriction of `remove` that requires to pass an element of type\n    `E`.\n * @return `true` if the element has been successfully removed; `false` if it was not present in the\n    collection.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T>\n    MutableCollection<out T>.remove(element: T): Boolean =\n    @Suppress("\n    UNCHECKED_CAST") (this as\n    MutableCollection<T>).remove(element)\n\n/**\n * Removes all of this collection's elements that are also\n    contained in the specified collection.\n * Allows to overcome type-safety restriction of `removeAll` that requires\n    to pass a collection of type `Collection<E>`.\n */\n\n * @return `true` if any of the specified elements was removed from the collection, `false` if the collection was not\n    modified.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T>\n    MutableCollection<out T>.removeAll(elements: Collection<T>): Boolean =\n    @Suppress("\n    UNCHECKED_CAST") (this as\n    MutableCollection<T>).removeAll(elements)\n\n/**\n * Retains\n    only the elements in this collection that are contained in the specified collection.\n * Allows to overcome type-safety\n    restriction of `retainAll` that requires to pass a collection of type `Collection<E>`.\n * @return `true` if\n    any element was removed from the collection, `false` if the collection was not modified.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T> MutableCollection<out
```

```

T>.retainAll(elements: Collection<T>): Boolean =\n  @Suppress("UNCHECKED_CAST") (this as
MutableCollection<T>).retainAll(elements)\n\n/**\n * Adds the specified [element]
to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in
T>.plusAssign(element: T) {\n  this.add(element)\n}\n\n/**\n * Adds all elements of the given [elements]
collection to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T>
MutableCollection<in T>.plusAssign(elements: Iterable<T>) {\n  this.addAll(elements)\n}\n\n/**\n * Adds all
elements of the given [elements] array to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline
operator fun <T> MutableCollection<in T>.plusAssign(elements: Array<T>) {\n
this.addAll(elements)\n}\n\n/**\n * Adds all elements of the given [elements] sequence to this mutable collection.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(elements:
Sequence<T>) {\n  this.addAll(elements)\n}\n\n/**\n * Removes a single instance of the specified [element] from
this mutable collection.\n\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(element:
T) {\n  this.remove(element)\n}\n\n/**\n * Removes all elements contained in the given [elements] collection from
this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in
T>.minusAssign(elements: Iterable<T>) {\n  this.removeAll(elements)\n}\n\n/**\n * Removes all elements
contained in the given [elements] array from this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun <T> MutableCollection<in T>.minusAssign(elements: Array<T>) {\n
this.removeAll(elements)\n}\n\n/**\n * Removes all elements contained in the given [elements] sequence from this
mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in
T>.minusAssign(elements: Sequence<T>) {\n  this.removeAll(elements)\n}\n\n/**\n * Adds all elements of the
given [elements] collection
to this [MutableCollection].\n */\npublic fun <T> MutableCollection<in T>.addAll(elements: Iterable<T>):
Boolean {\n  when (elements) {\n    is Collection -> return addAll(elements)\n    else -> {\n      var result:
Boolean = false\n      for (item in elements)\n        if (add(item)) result = true\n      return result\n    }\n  }\n}\n\n/**\n * Adds all elements of the given [elements] sequence to this [MutableCollection].\n */\npublic fun
<T> MutableCollection<in T>.addAll(elements: Sequence<T>): Boolean {\n  var result: Boolean = false\n  for
(item in elements) {\n    if (add(item)) result = true\n  }\n  return result\n}\n\n/**\n * Adds all elements of the
given [elements] array to this [MutableCollection].\n */\npublic fun <T> MutableCollection<in T>.addAll(elements:
Array<out T>): Boolean {\n  return addAll(elements.asList())\n}\n\n/**\n * Converts this [Iterable] to a list if it is
not a [Collection].\n */\n * Otherwise, returns
this.\n */\ninternal fun <T> Iterable<T>.convertToListIfNotCollection(): Collection<T> =\n  if (this is Collection)
this else toList()\n\n/**\n * Removes all elements from this [MutableCollection] that are also contained in the given
[elements] collection.\n */\npublic fun <T> MutableCollection<in T>.removeAll(elements: Iterable<T>): Boolean
{\n  return removeAll(elements.convertToListIfNotCollection())\n}\n\n/**\n * Removes all elements from this
[MutableCollection] that are also contained in the given [elements] sequence.\n */\npublic fun <T>
MutableCollection<in T>.removeAll(elements: Sequence<T>): Boolean {\n  val list = elements.toList()\n  return
list.isNotEmpty() && removeAll(list)\n}\n\n/**\n * Removes all elements from this [MutableCollection] that are
also contained in the given [elements] array.\n */\npublic fun <T> MutableCollection<in T>.removeAll(elements:
Array<out T>): Boolean {\n  return elements.isNotEmpty() && removeAll(elements.asList())\n}\n\n/**\n *
Retains
only elements of this [MutableCollection] that are contained in the given [elements] collection.\n */\npublic fun
<T> MutableCollection<in T>.retainAll(elements: Iterable<T>): Boolean {\n  return
retainAll(elements.convertToListIfNotCollection())\n}\n\n/**\n * Retains only elements of this [MutableCollection]
that are contained in the given [elements] array.\n */\npublic fun <T> MutableCollection<in T>.retainAll(elements:
Array<out T>): Boolean {\n  if (elements.isNotEmpty())\n    return retainAll(elements.asList())\n  else\n
return retainNothing()\n}\n\n/**\n * Retains only elements of this [MutableCollection] that are contained in the
given [elements] sequence.\n */\npublic fun <T> MutableCollection<in T>.retainAll(elements: Sequence<T>):

```

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Boolean {
    val list = elements.toList()
    if (list.isNotEmpty()) return retainAll(list)
    else return retainNothing()
}

private fun MutableCollection<*>.retainNothing(): Boolean {
    val result = isEmpty()
    clear()
    return result
}

/** Removes all elements from this [MutableIterable] that match the given [predicate].
 * @return `true` if any element was removed from this collection, or `false` when no elements were removed and collection was not modified.
 */
public fun <T> MutableIterable<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, true)

/** Retains only elements of this [MutableIterable] that match the given [predicate].
 * @return `true` if any element was removed from this collection, or `false` when all elements were retained and collection was not modified.
 */
public fun <T> MutableIterable<T>.retainAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, false)

private fun <T> MutableIterable<T>.filterInPlace(predicate: (T) -> Boolean, predicateResultToRemove: Boolean): Boolean {
    var result = false
    with(iterator()) {
        while (hasNext()) {
            if (predicate(next()) == predicateResultToRemove) {
                remove()
                result = true
            }
        }
    }
    return result
}

/** Removes the element at the specified [index] from this list.
 * In Kotlin one should use the [MutableList.removeAt] function instead.
 * @Deprecated("Use removeAt(index) instead.")
 */
@ReplaceWith("removeAt(index)", level = DeprecationLevel.ERROR)
@kotlin.internal.InlineOnly
public inline fun <T> MutableList<T>.remove(index: Int): T = removeAt(index)

/** Removes the first element from this mutable list and returns that removed element, or throws [NoSuchElementException] if this list is empty.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeFirst(): T = if (isEmpty()) throw NoSuchElementException("List is empty.") else removeAt(0)

/** Removes the first element from this mutable list and returns that removed element, or returns `null` if this list is empty.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeFirstOrNull(): T? = if (isEmpty()) null else removeAt(0)

/** Removes the last element from this mutable list and returns that removed element, or throws [NoSuchElementException] if this list is empty.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeLast(): T = if (isEmpty()) throw NoSuchElementException("List is empty.") else removeAt(lastIndex)

/** Removes the last element from this mutable list and returns that removed element, or returns `null` if this list is empty.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeLastOrNull(): T? = if (isEmpty()) null else removeAt(lastIndex)

/** Removes all elements from this [MutableList] that match the given [predicate].
 * @return `true` if any element was removed from this collection, or `false` when no elements were removed and collection was not modified.
 */
public fun <T> MutableList<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, true)

/** Retains only elements of this [MutableList] that match the given [predicate].
 * @return `true` if any element was removed from this collection, or `false` when all elements were retained and collection was not modified.
 */
public fun <T> MutableList<T>.retainAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, false)

private fun <T> MutableList<T>.filterInPlace(predicate: (T) -> Boolean, predicateResultToRemove: Boolean): Boolean {
    if (this !is RandomAccess) return (this as MutableIterable<T>).filterInPlace(predicate, predicateResultToRemove)
    var writeIndex: Int = 0
    for (readIndex in 0..lastIndex) {
        val element = this[readIndex]
        if (predicate(element) == predicateResultToRemove) continue
        if (writeIndex != readIndex) this[writeIndex] = element
        writeIndex++
    }
    if (writeIndex < size) {
        for (removeIndex in lastIndex downTo writeIndex) removeAt(removeIndex)
        return true
    } else {
        return false
    }
}

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 */
// Auto-generated file. DO NOT EDIT!
package kotlin.collections
}

```

```

iterator over a sequence of values of type `Byte`. */
public abstract class ByteIterator : Iterator<Byte> {
    override final fun next() = nextByte()
    /** Returns the next value in the sequence without boxing. */
    public abstract fun nextByte(): Byte
}
/** An iterator over a sequence of values of type `Char`. */
public abstract class CharIterator : Iterator<Char> {
    override final
    fun next() = nextChar()
    /** Returns the next value in the sequence without boxing. */
    public abstract fun
    nextChar(): Char
}
/** An iterator over a sequence of values of type `Short`. */
public abstract class
ShortIterator : Iterator<Short> {
    override final fun next() = nextShort()
    /** Returns the next value in the
    sequence without boxing. */
    public abstract fun nextShort(): Short
}
/** An iterator over a sequence of
    values of type `Int`. */
public abstract class IntIterator : Iterator<Int> {
    override final fun next() = nextInt()
    /** Returns the next value in the
    sequence without boxing. */
    public abstract fun nextInt(): Int
}
/** An
    iterator over a sequence of values of type `Long`. */
public abstract class LongIterator : Iterator<Long> {
    override final fun next() = nextLong()
    /** Returns the next value in the
    sequence without boxing. */
    public abstract fun
    nextLong(): Long
}
/** An iterator over a sequence
    of values of type `Float`. */
public abstract class FloatIterator : Iterator<Float> {
    override final fun next() =
    nextFloat()
    /** Returns the next value in the
    sequence without boxing. */
    public abstract fun nextFloat():
    Float
}
/** An iterator over a sequence of values of type `Double`. */
public abstract class DoubleIterator :
    Iterator<Double> {
    override final fun next() = nextDouble()
    /** Returns the next value in the
    sequence
    without boxing. */
    public abstract fun nextDouble(): Double
}
/** An iterator over a sequence of values of
    type `Boolean`. */
public abstract class BooleanIterator : Iterator<Boolean> {
    override final fun next() =
    nextBoolean()
    /** Returns the next value in the
    sequence without boxing. */
    public abstract fun
    nextBoolean(): Boolean
}
"/**
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    can be found in the license/LICENSE.txt file.
 */
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("CollectionsKt")
package
kotlin.collections
private open class ReversedListReadOnly<out T>(private val delegate: List<T>) :
    AbstractList<T>() {
    override val size: Int get() = delegate.size
    override fun get(index: Int): T =
    delegate[reverseElementIndex(index)]
}
private class ReversedList<T>(private val delegate: MutableList<T>) :
    AbstractMutableList<T>() {
    override val size: Int get() = delegate.size
    override fun get(index: Int): T =
    delegate[reverseElementIndex(index)]
    override fun clear() = delegate.clear()
    override fun removeAt(index:
    Int): T = delegate.removeAt(reverseElementIndex(index))
    override fun set(index: Int, element: T): T =
    delegate.set(reverseElementIndex(index), element)
    override fun add(index: Int, element: T) {
        delegate.add(reversePositionIndex(index), element)
    }
}
private fun List<*>.reverseElementIndex(index:
    Int) =
    if (index in 0..lastIndex) lastIndex - index else throw IndexOutOfBoundsException("Element index
    $index must be in range [0..lastIndex].")
private fun List<*>.reversePositionIndex(index: Int) =
    if (index
    in 0..size) size - index else throw IndexOutOfBoundsException("Position index $index must be in range
    [0..size].")
/**
 * Returns a reversed read-only view of the original List.
 * All changes made in the
    original list will be reflected in the reversed one.
 * @sample samples.collections.ReversedViews.asReversedList
 */
public fun <T> List<T>.asReversed(): List<T> = ReversedListReadOnly(this)
/**
 * Returns a reversed
    mutable view of the original mutable List.
 * All changes made in the original list will be reflected in the reversed
    one and vice versa.
 * @sample samples.collections.ReversedViews.asReversedMutableList
 */
@kotlin.jvm.JvmName("asReversedMutable")
public fun <T> MutableList<T>.asReversed():
    MutableList<T> = ReversedList(this)
"/**
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    license/LICENSE.txt file.
 */
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("SequencesKt")
@file:OptIn(ExperimentalTypeInference::class)
package
kotlin.sequences
import kotlin.coroutines.*
import
kotlin.coroutines.intrinsics.*
import kotlin.experimental.ExperimentalTypeInference
/**
 * Builds a
    [Sequence] lazily yielding values one by one.
 * @see kotlin.sequences.generateSequence
 * @sample

```

```

samples.collections.Sequences.Building.buildSequenceYieldAll\n * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n
*\n@SinceKotlin("1.3")\n@Suppress("DEPRECATION")\npublic fun <T> sequence(@BuilderInference block:
suspend SequenceScope<T>().-> Unit): Sequence<T> = Sequence { iterator(block) }\n\n/**\n * Builds
an [Iterator] lazily yielding values one by one.\n *\n * @sample
samples.collections.Sequences.Building.buildIterator\n * @sample samples.collections.Iterables.Building.iterable\n
*\n@SinceKotlin("1.3")\n@Suppress("DEPRECATION")\npublic fun <T> iterator(@BuilderInference block:
suspend SequenceScope<T>().-> Unit): Iterator<T> {\n    val iterator = SequenceBuilderIterator<T>()\n
iterator.nextStep = block.createCoroutineUnintercepted(receiver = iterator, completion = iterator)\n    return
iterator}\n\n/**\n * The scope for yielding values of a [Sequence] or an [Iterator], provides [yield] and [yieldAll]
suspension functions.\n *\n * @see sequence\n * @see iterator\n *\n * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n
*\n@RestrictsSuspension\n@SinceKotlin("1.3")\npublic abstract class SequenceScope<in T> internal
constructor() {\n    /**\n     * Yields a value to the [Iterator]
being built and suspends\n     * until the next value is requested.\n     *\n     * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n     * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n     */\n    public abstract suspend fun yield(value:
T)\n\n    /**\n     * Yields all values from the `iterator` to the [Iterator] being built\n     * and suspends until all these
values are iterated and the next one is requested.\n     *\n     * The sequence of values returned by the given iterator
can be potentially infinite.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n
*/\n    public abstract suspend fun yieldAll(iterator: Iterator<T>)\n\n    /**\n     * Yields a collections of values to
the [Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n
     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     */\n    public
suspend fun yieldAll(elements: Iterable<T>) {\n        if (elements is Collection && elements.isEmpty()) return\n
return yieldAll(elements.iterator())\n    }\n\n    /**\n     * Yields potentially infinite sequence of values to the
[Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n
     * The sequence can be potentially infinite.\n     *\n     * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n     */\n    public suspend fun yieldAll(sequence:
Sequence<T>) = yieldAll(sequence.iterator())\n}\n\nprivate typealias State = Int\nprivate const val
State_NotReady: State = 0\nprivate const val State_ManyNotReady: State = 1\nprivate const val State_ManyReady:
State = 2\nprivate const val State_Ready: State = 3\nprivate const val State_Done: State = 4\nprivate const val
State_Failed: State = 5\nprivate class SequenceBuilderIterator<T> : SequenceScope<T>(), Iterator<T>,
Continuation<Unit> {\n
    private var state = State_NotReady\n    private var nextValue: T? = null\n    private var nextIterator: Iterator<T>?
= null\n    var nextStep: Continuation<Unit>? = null\n\n    override fun hasNext(): Boolean {\n        while (true) {\n
            when (state) {\n                State_NotReady -> {}\n                State_ManyNotReady ->\n                    if
(nextIterator!!.hasNext()) {\n                        state = State_ManyReady\n                        return true\n                    }
else {\n                        nextIterator = null\n                    }\n                State_Done -> return false\n
                State_Ready, State_ManyReady -> return true\n                else -> throw exceptionalState()\n            }\n\n            state
= State_Failed\n            val step = nextStep!!\n            nextStep = null\n            step.resume(Unit)\n        }\n    }\n\n
    override fun next(): T {\n        when (state) {\n            State_NotReady, State_ManyNotReady
-> return nextNotReady()\n            State_ManyReady -> {\n                state = State_ManyNotReady\n
return nextIterator!!.next()\n            }\n            State_Ready -> {\n                state = State_NotReady\n
@Suppress("UNCHECKED_CAST")\n                val result = nextValue as T\n                nextValue = null\n
return result\n            }\n            else -> throw exceptionalState()\n        }\n    }\n\n    private fun nextNotReady(): T
{\n        if (!hasNext()) throw NoSuchElementException() else return next()\n    }\n\n    private fun
exceptionalState(): Throwable = when (state) {\n        State_Done -> NoSuchElementException()\n        State_Failed

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-> IllegalStateException("Iterator has failed.")\n    else -> IllegalStateException("Unexpected state of the
iterator: $state")\n    }\n\n\n    override suspend fun yield(value: T) {\n        nextValue = value\n        state =
State_Ready\n        return suspendCoroutineUninterceptedOrReturn
{ c ->\n            nextStep = c\n            COROUTINE_SUSPENDED\n        }\n    }\n\n    override suspend fun
yieldAll(iterator: Iterator<T>) {\n        if (!iterator.hasNext()) return\n        nextIterator = iterator\n        state =
State_ManyReady\n        return suspendCoroutineUninterceptedOrReturn { c ->\n            nextStep = c\n            COROUTINE_SUSPENDED\n        }\n    }\n\n    // Completion continuation implementation\n    override fun
resumeWith(result: Result<Unit>) {\n        result.getOrThrow() // just rethrow exception if it is there\n        state =
State_Done\n    }\n\n    override val context: CoroutineContext\n        get() = EmptyCoroutineContext\n    }\n\n    /*\n    Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n    * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n    */\n\npackage
kotlin.collections\n\ninternal fun checkWindowSizeStep(size:
Int, step: Int) {\n    require(size > 0 && step > 0) {\n        if (size != step)\n            \"Both size $size and step $step
must be greater than zero.\"\n        else\n            \"size $size must be greater than zero.\"\n    }\n}\n\ninternal fun <T>
Sequence<T>.windowedSequence(size: Int, step: Int, partialWindows: Boolean, reuseBuffer: Boolean):
Sequence<List<T>> {\n    checkWindowSizeStep(size, step)\n    return Sequence { windowedIterator(iterator(),
size, step, partialWindows, reuseBuffer) }\n}\n\ninternal fun <T> windowedIterator(iterator: Iterator<T>, size: Int,
step: Int, partialWindows: Boolean, reuseBuffer: Boolean): Iterator<List<T>> {\n    if (!iterator.hasNext()) return
EmptyIterator\n    return iterator<List<T>> {\n        val bufferInitialCapacity = size.coerceAtMost(1024)\n        val
gap = step - size\n        if (gap >= 0) {\n            var buffer = ArrayList<T>(bufferInitialCapacity)\n            var skip =
0\n            for (e in iterator) {\n                if (skip > 0) { skip -= 1; continue }\n                buffer.add(e)\n                if (buffer.size == size) {\n                    yield(buffer)\n                    if (reuseBuffer) buffer.clear() else buffer = ArrayList(size)\n                    skip = gap\n                }\n                if (buffer.isNotEmpty()) {\n                    if (partialWindows || buffer.size == size)\n                        yield(buffer)\n                } else {\n                    var buffer = RingBuffer<T>(bufferInitialCapacity)\n                    for (e in
iterator) {\n                        buffer.add(e)\n                        if (buffer.isFull()) {\n                            if (buffer.size < size) { buffer =
buffer.expanded(maxCapacity = size); continue }\n                            yield(if (reuseBuffer) buffer else
ArrayList(buffer))\n                            buffer.removeFirst(step)\n                        }\n                    }\n                    if (partialWindows) {\n                        while (buffer.size > step) {\n                            yield(if (reuseBuffer)
buffer else ArrayList(buffer))\n                            buffer.removeFirst(step)\n                        }\n                    }\n                    if
(buffer.isNotEmpty()) yield(buffer)\n                }\n            }\n        }\n    }\n}\n\ninternal class MovingSubList<out E>(private val
list: List<E>) : AbstractList<E>(), RandomAccess {\n    private var fromIndex: Int = 0\n    private var _size: Int =
0\n\n    fun move(fromIndex: Int, toIndex: Int) {\n        checkRangeIndexes(fromIndex, toIndex, list.size)\n        this.fromIndex = fromIndex\n        this._size = toIndex - fromIndex\n    }\n\n    override fun get(index: Int): E {\n        checkElementIndex(index, _size)\n        return list[fromIndex + index]\n    }\n\n    override val size: Int get() =
_size\n}\n\n/*\n * Provides ring buffer implementation.\n * Buffer overflow is not allowed so [add] doesn't
overwrite tail but raises an exception.\n */\nprivate class RingBuffer<T>(private val buffer: Array<Any?>,
filledSize: Int) : AbstractList<T>(), RandomAccess {\n    init {\n        require(filledSize >= 0) { \"ring buffer filled size should not be negative but it is $filledSize\" }\n        require(filledSize <= buffer.size) { \"ring buffer filled size: $filledSize cannot be larger than the buffer size:
${buffer.size}\" }\n    }\n\n    constructor(capacity: Int) : this(arrayOfNulls<Any?>(capacity), 0)\n\n    private val
capacity = buffer.size\n    private var startIndex: Int = 0\n\n    override var size: Int = filledSize\n    private set\n\n    override fun get(index: Int): T {\n        checkElementIndex(index, size)\n        @Suppress(\"UNCHECKED_CAST\")\n        return buffer[startIndex.forward(index)] as T\n    }\n\n    fun isFull() =
size == capacity\n\n    override fun iterator(): Iterator<T> = object : AbstractIterator<T>() {\n        private var count
= size\n        private var index = startIndex\n        override fun computeNext() {\n            if (count == 0) {\n                done()\n            } else {\n                @Suppress(\"UNCHECKED_CAST\")\n            }\n        }\n    }\n}

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    setNext(buffer[index] as T)\n        index = index.forward(1)\n        count--\n    }\n }\n
}\n\n @Suppress("UNCHECKED_CAST")\n override fun <T> toArray(array: Array<T>): Array<T> {\n
val result: Array<T?> =\n    if (array.size < this.size) array.copyOf(this.size) else array as Array<T?>\n\n
val size = this.size\n    var widx = 0\n    var idx = startIndex\n    while (widx < size && idx < capacity)\n
{\n    result[widx] = buffer[idx] as T\n        widx++\n        idx++\n    }\n    idx = 0\n    while
(widx < size) {\n        result[widx] = buffer[idx] as T\n            widx++\n            idx++\n    }\n    if (result.size
> this.size) result[this.size] = null\n    return result as Array<T>\n }\n\n override fun toArray():
Array<Any?> {\n    return toArray(arrayOfNulls(size))\n }\n\n /**\n * Creates a new
ring buffer with the capacity equal to the minimum of [maxCapacity] and 1.5 * [capacity].\n * The returned ring
buffer contains the same elements as this ring buffer.\n */\n fun expanded(maxCapacity: Int): RingBuffer<T>
{\n    val newCapacity = (capacity + (capacity shr 1) + 1).coerceAtMost(maxCapacity)\n    val newBuffer = if
(startIndex == 0) buffer.copyOf(newCapacity) else toArray(arrayOfNulls(newCapacity))\n    return
RingBuffer(newBuffer, size)\n }\n\n /**\n * Add [element] to the buffer or fail with [IllegalStateException] if
no free space available in the buffer\n */\n fun add(element: T) {\n    if (isFull()) {\n        throw
IllegalStateException("ring buffer is full")\n    }\n    buffer[startIndex.forward(size)] = element\n
size++\n }\n\n /**\n * Removes [n] first elements from the buffer or fails with [IllegalArgumentException] if
not enough elements in the buffer to remove\n */\n fun removeFirst(n:
Int) {\n    require(n >= 0) { "n shouldn't be negative but it is $n" }\n    require(n <= size) { "n shouldn't be
greater than the buffer size: n = $n, size = $size" }\n    if (n > 0) {\n        val start = startIndex\n        val
end = start.forward(n)\n        if (start > end) {\n            buffer.fill(null, start, capacity)\n
buffer.fill(null, 0, end)\n        } else {\n            buffer.fill(null, start, end)\n        }\n        startIndex =
end\n        size -= n\n    }\n }\n\n @Suppress("NOTHING_TO_INLINE")\n private inline fun
Int.forward(n: Int): Int = (this + n) % capacity\n}\n}\n\n @Suppress("NOTHING_TO_INLINE")\n private inline fun
Int.forward(n: Int): Int = (this + n) % capacity\n}\n}\n\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n// UByteArray
=====\n@Exp
erimentalUnsignedTypes\nprivate
fun partition(\n    array: UByteArray, left: Int, right: Int): Int {\n    var i = left\n    var j = right\n    val pivot =
array[(left + right) / 2]\n    while (i <= j) {\n        while (array[i] < pivot)\n            i++\n        while (array[j] >
pivot)\n            j--\n        if (i <= j) {\n            val tmp = array[i]\n            array[i] = array[j]\n            array[j] = tmp\n
i++\n            j--\n        }\n    }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n
array: UByteArray, left: Int, right: Int) {\n    val index = partition(array, left, right)\n    if (left < index - 1)\n
quickSort(array, left, index - 1)\n    if (index < right)\n        quickSort(array, index, right)\n}\n\n// UShortArray
=====\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: UShortArray, left: Int,
right: Int): Int {\n    var i = left\n    var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j) {\n
while (array[i] < pivot)\n        i++\n        while (array[j] > pivot)\n            j--\n        if (i <= j) {\n            val tmp =
array[i]\n            array[i] = array[j]\n            array[j] = tmp\n            i++\n            j--\n        }\n    }\n    return
i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: UShortArray, left: Int, right: Int) {\n    val
index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index - 1)\n    if (index <
right)\n        quickSort(array, index, right)\n}\n\n// UIntArray
=====\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: UIntArray, left: Int, right: Int): Int {\n    var i = left\n
var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j)\n    {\n        while (array[i] < pivot)\n
            i++\n        while (array[j] > pivot)\n            j--\n        if (i <= j) {\n            val tmp = array[i]\n
array[i] = array[j]\n            array[j] = tmp\n            i++\n            j--\n        }\n    }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: UIntArray, left: Int, right: Int) {\n    val
index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index - 1)\n    if (index <
right)\n        quickSort(array, index, right)\n}\n\n//

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right)\n    quickSort(array, index, right)\n}\n\n// ULongArray
=====
\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: ULongArray, left: Int, right: Int): Int {\n    var i = left\n    var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j) {\n        while (array[i] < pivot)\n            i++\n        while (array[j] > pivot)\n            j--\n        if (i <=
j) {\n            val tmp = array[i]\n            array[i] = array[j]\n            array[j] = tmp\n            i++\n            j--\n        }\n    }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: ULongArray, left: Int, right:
Int) {\n    val index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index - 1)\n    if
(index < right)\n        quickSort(array, index, right)\n}\n\n\n// Interfaces
=====
\n/**\n
* Sorts the given array using qsort algorithm.\n
*\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
UByteArray, fromIndex: Int, toIndex: Int) = quickSort(array, fromIndex, toIndex -
1)\n\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array: UShortArray, fromIndex: Int, toIndex: Int) =
quickSort(array, fromIndex, toIndex - 1)\n\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array: UIntArray,
fromIndex: Int, toIndex:
Int) = quickSort(array, fromIndex, toIndex - 1)\n\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
ULongArray, fromIndex: Int, toIndex: Int) = quickSort(array, fromIndex, toIndex - 1)", "/*\n
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* Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin\n\nimport
kotlin.internal.InlineOnly\n\n/**\n
* Compares this object with the specified object for order. Returns zero if this
object is equal\n
* to the specified [other] object, a negative number if it's less than [other], or a positive number\n
* if it's greater than [other].\n
*\n
* This function delegates to [Comparable.compareTo] and allows to call it in infix
form.\n
*\n@InlineOnly\n@SinceKotlin("1.6")\npublic inline infix fun <T> Comparable<T>.compareTo(other:
T): Int =\n    this.compareTo(other)\n", "/*\n
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Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n
*\n\npackage kotlin.contracts\n\nimport
kotlin.internal.ContractsDsl\nimport kotlin.internal.InlineOnly\n\n/**\n
* This marker distinguishes the
experimental contract declaration API and is used to opt-in for that feature\n
* when declaring contracts of user
functions.\n
*\n
* Any usage of a declaration annotated with `@ExperimentalContracts` must be accepted either
by\n
* annotating that usage with the [OptIn] annotation, e.g. `@OptIn(ExperimentalContracts::class)`,\n
* or by
using the compiler argument `-opt-in=kotlin.contracts.ExperimentalContracts`.\n
*\n\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.3")\n@RequiresOptIn\n@MustBeDocumente
d\npublic annotation class ExperimentalContracts\n\n/**\n
* Provides a scope, where the functions of the contract
DSL, such as [returns], [callsInPlace], etc.,\n
* can be used to
describe the contract of a function.\n
*\n
* This type is used as a receiver type of the lambda function passed to the
[contract] function.\n
*\n
* @see contract\n
*\n\n@ContractsDsl\n@ExperimentalContracts\n@SinceKotlin("1.3")\npublic interface ContractBuilder {\n    /**\n
* Describes a situation when a function returns normally, without any exceptions thrown.\n
*\n
* Use
[SimpleEffect.implies] function to describe a conditional effect that happens in such case.\n
*\n
* //
@sample samples.contracts.returnsContract\n
*\n\n@ContractsDsl public fun returns(): Returns\n\n    /**\n
* Describes a situation when a function returns normally with the specified return [value].\n
*\n
* The possible
values of [value] are limited to `true`, `false` or `null`.\n
*\n
* Use [SimpleEffect.implies] function to describe a
conditional effect that happens in such case.\n
*\n
* // @sample samples.contracts.returnsTrueContract\n
*\n
* // @sample samples.contracts.returnsFalseContract\n
*\n
* // @sample samples.contracts.returnsNullContract\n
*\n\n@ContractsDsl public fun returns(value: Any?):
Returns\n\n    /**\n
* Describes a situation when a function returns normally with any value that is not `null`.\n
*\n
* Use
[SimpleEffect.implies] function to describe a conditional effect that happens in such case.\n
*\n
*\n
* // @sample samples.contracts.returnsNotNullContract\n
*\n\n@ContractsDsl public fun returnsNotNull():

```

ReturnsNotNull\n\n /\*\*\n \* Specifies that the function parameter [lambda] is invoked in place.\n \*\n \* This contract specifies that:\n \* 1. the function [lambda] can only be invoked during the call of the owner function,\n \* and it won't be invoked after that owner function call is completed;\n \* 2. \_(optionally)\_ the function [lambda] is invoked the amount of times specified by the [kind] parameter,\n \* see the [InvocationKind] enum for possible values.\n \*\n \* A function declaring the `callsInPlace` effect must be `_inline_`\n \*\n \*/\n @sample\n samples.contracts.callsInPlaceAtMostOnceContract\n \* @sample\n samples.contracts.callsInPlaceAtLeastOnceContract\n \* @sample\n samples.contracts.callsInPlaceExactlyOnceContract\n \* @sample\n samples.contracts.callsInPlaceUnknownContract\n \*/\n @ContractsDsl public fun <R> callsInPlace(lambda: Function<R>, kind: InvocationKind = InvocationKind.UNKNOWN): CallsInPlace\n}\n\n/\*\*\n \* Specifies how many times a function invokes its function parameter in place.\n \*\n \* See [ContractBuilder.callsInPlace] for the details of the call-in-place function contract.\n \*\n \*/\n @ContractsDsl\n @ExperimentalContracts\n @SinceKotlin("1.3")\n public enum class InvocationKind {\n /\*\*\n \* A function parameter will be invoked one time or not invoked at all.\n \*\n // @sample\n samples.contracts.callsInPlaceAtMostOnceContract\n @ContractsDsl AT\_MOST\_ONCE,\n\n /\*\*\n \* A function parameter will be invoked one or more times.\n \*\n // @sample\n samples.contracts.callsInPlaceAtLeastOnceContract\n @ContractsDsl AT\_LEAST\_ONCE,\n\n /\*\*\n \* A function parameter will be invoked exactly one time.\n \*\n // @sample\n samples.contracts.callsInPlaceExactlyOnceContract\n @ContractsDsl EXACTLY\_ONCE,\n\n /\*\*\n \* A function parameter is called in place, but it's unknown how many times it can be called.\n \*\n // @sample\n samples.contracts.callsInPlaceUnknownContract\n @ContractsDsl UNKNOWN\n}\n\n/\*\*\n \* Specifies the contract of a function.\n \*\n \* The contract description must be at the beginning of a function and have at least one effect.\n \*\n \* Only the top-level functions can have a contract for now.\n \*\n \* @param builder the lambda where the contract of a function is described with the help of the [ContractBuilder] members.\n \*\n \*/\n @sample\n samples.contracts.returnsContract\n \* @sample\n samples.contracts.returnsTrueContract\n \*\n @sample\n samples.contracts.returnsFalseContract\n \*\n @sample\n samples.contracts.returnsNullContract\n \*\n @sample\n samples.contracts.returnsNotNullContract\n \*\n @sample\n samples.contracts.callsInPlaceAtMostOnceContract\n \*\n @sample\n samples.contracts.callsInPlaceAtLeastOnceContract\n \*\n @sample\n samples.contracts.callsInPlaceExactlyOnceContract\n \*\n @sample\n samples.contracts.callsInPlaceUnknownContract\n \*/\n @ContractsDsl\n @ExperimentalContracts\n @InlineOnly\n @SinceKotlin("1.3")\n @Suppress("UNUSED\_PARAMETER")\n public inline fun contract(builder: ContractBuilder.() -> Unit) { }\n\n /\*\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*/\n package kotlin.coroutines\n\n /\*\*\n \* Marks coroutine context element that intercepts coroutine continuations.\n \* The coroutines framework uses [ContinuationInterceptor.Key] to retrieve the interceptor and\n \* intercepts all coroutine continuations with [interceptContinuation] invocations.\n \*\n \* [ContinuationInterceptor] behaves like a [polymorphic element][AbstractCoroutineContextKey], meaning that\n \* its implementation delegates [get][CoroutineContext.Element.get] and [minusKey][CoroutineContext.Element.minusKey]\n \* to [getPolymorphicElement] and [minusPolymorphicKey] respectively.\n \* [ContinuationInterceptor] subtypes can be extracted from the coroutine context using either [ContinuationInterceptor.Key]\n \* or subtype key if it extends [AbstractCoroutineContextKey].\n \*\n \*/\n @SinceKotlin("1.3")\n public interface ContinuationInterceptor : CoroutineContext.Element {\n /\*\*\n \* The key that defines \*the\* context interceptor.\n \*\n companion object Key : CoroutineContext.Key<ContinuationInterceptor>\n\n /\*\*\n \* Returns continuation that wraps the original [continuation], thus intercepting all resumptions.\n \*\n \* This function is invoked by coroutines framework

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when needed and the resulting continuations are\n    * cached internally per each instance of the original
[continuation].\n    *\n    * This function may simply return original [continuation] if it does not want to intercept
this particular continuation.\n    *\n    * When the original [continuation] completes, coroutine framework invokes
[releaseInterceptedContinuation]\n    * with the resulting continuation if it was intercepted, that is if
`interceptContinuation` had previously\n    * returned a different continuation instance.\n    */\n    public fun <T>
interceptContinuation(continuation: Continuation<T>): Continuation<T>\n\n    /**\n    * Invoked for the
continuation instance returned by [interceptContinuation] when the original\n    * continuation completes and will
not be used anymore. This function is invoked only if [interceptContinuation]\n    * had returned a different
continuation instance from the one it was invoked with.\n    *\n    * Default implementation
does nothing.\n    *\n    * @param continuation Continuation instance returned by this interceptor's
[interceptContinuation] invocation.\n    */\n    public fun releaseInterceptedContinuation(continuation:
Continuation<*>) {\n        /* do nothing by default */\n    }\n\n    public override operator fun <E :
CoroutineContext.Element> get(key: CoroutineContext.Key<E>): E? {\n        // getPolymorphicKey specialized for
ContinuationInterceptor key\n        @OptIn(ExperimentalStdlibApi::class)\n        if (key is
AbstractCoroutineContextKey<*, *>) {\n            @Suppress("UNCHECKED_CAST")\n            return if
(key.isSubKey(this.key)) key.tryCast(this) as? E else null\n        }\n        @Suppress("UNCHECKED_CAST")\n        return if (ContinuationInterceptor === key) this as E else null\n    }\n\n    public override fun minusKey(key:
CoroutineContext.Key<*>): CoroutineContext {\n        // minusPolymorphicKey specialized for
ContinuationInterceptor key\n        @OptIn(ExperimentalStdlibApi::class)\n        if (key is AbstractCoroutineContextKey<*, *>) {\n            return if (key.isSubKey(this.key) &&
key.tryCast(this) != null) EmptyCoroutineContext else this\n        }\n        return if (ContinuationInterceptor ===
key) EmptyCoroutineContext else this\n    }\n}\n\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\n/**\n * Persistent context for the
coroutine. It is an indexed set of [Element] instances.\n * An indexed set is a mix between a set and a map.\n *
Every element in this set has a unique [Key].\n */\n\n@SinceKotlin("1.3")\npublic interface CoroutineContext {\n\n    /**\n    * Returns the element with the given [key] from this context or `null`.\n    */\n    public operator fun <E :
Element> get(key: Key<E>): E?\n\n    /**\n    * Accumulates entries
of this context starting with [initial] value and applying [operation]\n    * from left to right to current accumulator
value and each element of this context.\n    */\n    public fun <R> fold(initial: R, operation: (R, Element) -> R):
R\n\n    /**\n    * Returns a context containing elements from this context and elements from other [context].\n    *
The elements from this context with the same key as in the other one are dropped.\n    */\n    public operator fun
plus(context: CoroutineContext): CoroutineContext =\n        if (context === EmptyCoroutineContext) this else // fast
path -- avoid lambda creation\n        context.fold(this) { acc, element ->\n            val removed =
acc.minusKey(element.key)\n            if (removed === EmptyCoroutineContext) element else {\n                //
make sure interceptor is always last in the context (and thus is fast to get when present)\n                val interceptor
= removed[ContinuationInterceptor]\n                if (interceptor == null) CombinedContext(removed, element) else {\n                    val left =
removed.minusKey(ContinuationInterceptor)\n                    if (left === EmptyCoroutineContext)\n                        CombinedContext(element, interceptor) else\n                            CombinedContext(CombinedContext(left, element),
interceptor)\n                }\n            }\n        }\n\n    /**\n    * Returns a context containing elements from this
context, but without an element with\n    * the specified [key].\n    */\n    public fun minusKey(key: Key<*>):
CoroutineContext\n\n    /**\n    * Key for the elements of [CoroutineContext]. [E] is a type of element with this
key.\n    */\n    public interface Key<E : Element>\n\n    /**\n    * An element of the [CoroutineContext]. An
element of the coroutine context is a singleton context by itself.\n    */\n    public interface Element {\n\n        CoroutineContext {\n            /**\n            * A key of this coroutine context element.\n            */\n            public val key: Key<*>\n\n            public override operator fun <E : Element> get(key: Key<E>): E?
= \n                @Suppress("UNCHECKED_CAST")\n                if (this.key == key) this as E else null\n        }\n        public

```

```

override fun <R> fold(initial: R, operation: (R, Element) -> R): R =\n        operation(initial, this)\n\n    public
override fun minusKey(key: Key<*>): CoroutineContext =\n        if (this.key == key) EmptyCoroutineContext
else this\n    }\n}\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.CoroutineContext.Element\n\nimport
kotlin.coroutines.CoroutineContext.Key\n\n/**\n * Base class for [CoroutineContext.Element] implementations.\n
*\n * @SinceKotlin("1.3")\n */\npublic abstract class AbstractCoroutineContextElement(public
override val key: Key<*>) : Element\n\n/**\n * Base class for [CoroutineContext.Key] associated with
polymorphic [CoroutineContext.Element] implementation.\n * Polymorphic element implementation implies
delegating its [get][Element.get] and [minusKey][Element.minusKey]\n * to [getPolymorphicElement] and
[minusPolymorphicKey] respectively.\n * \n * Polymorphic elements can be extracted from the coroutine context
using both element key and its supertype key.\n * Example of polymorphic elements:\n * ```\n * open class
BaseElement : CoroutineContext.Element {\n *     companion object Key : CoroutineContext.Key<BaseElement>\n
*\n *     override val key: CoroutineContext.Key<*> get() = Key\n *     // It is important to use getPolymorphicKey and
minusPolymorphicKey\n *     override fun <E : CoroutineContext.Element> get(key: CoroutineContext.Key<E>):
E? = getPolymorphicElement(key)\n *     override fun minusKey(key: CoroutineContext.Key<*>):
CoroutineContext = minusPolymorphicKey(key)\n * }\n
*\n * class DerivedElement : BaseElement() {\n *     companion object Key :
AbstractCoroutineContextKey<BaseElement, DerivedElement>(BaseElement, { it as? DerivedElement })\n * }\n
*\n * // Now it is possible to query both `BaseElement` and `DerivedElement`\n * someContext[BaseElement] // Returns
BaseElement?, non-null both for BaseElement and DerivedElement instances\n * someContext[DerivedElement] //
Returns DerivedElement?, non-null only for DerivedElement instance\n * ```\n * @param B base class of a
polymorphic element\n * @param baseKey an instance of base key\n * @param E element type associated with the
current key\n * @param safeCast a function that can safely cast abstract [CoroutineContext.Element] to the concrete
[E] type\n * and return the element if it is a subtype of [E] or `null` otherwise.\n
*\n * @SinceKotlin("1.3")\n */\n@ExperimentalStdlibApi\npublic abstract class AbstractCoroutineContextKey<B :
Element, E : B>(\n    baseKey: Key<B>,\n    private val safeCast:
(element: Element) -> E?) : Key<E> {\n    private val topmostKey: Key<*> = if (baseKey is
AbstractCoroutineContextKey<*, *>) baseKey.topmostKey else baseKey\n\n    internal fun tryCast(element:
Element): E? = safeCast(element)\n\n    internal fun isSubKey(key: Key<*>): Boolean = key === this || topmostKey
=== key\n}\n\n/**\n * Returns the current element if it is associated with the given [key] in a polymorphic manner
or `null` otherwise.\n * This method returns non-null value if either [Element.key] is equal to the given [key] or if
the [key] is associated\n * with [Element.key] via [AbstractCoroutineContextKey].\n * See
[AbstractCoroutineContextKey] for the example of usage.\n
*\n * @SinceKotlin("1.3")\n */\n@ExperimentalStdlibApi\npublic fun <E : Element>
Element.getPolymorphicElement(key: Key<E>): E? {\n    if (key is AbstractCoroutineContextKey<*, *>) {\n
@Suppress("UNCHECKED_CAST")\n        return if (key.isSubKey(this.key)) key.tryCast(this) as? E else null\n
}\n    @Suppress("UNCHECKED_CAST")\n        return if (this.key === key) this as E else null\n}\n\n/**\n * Returns empty coroutine context if the element is
associated with the given [key] in a polymorphic manner\n * or `null` otherwise.\n * This method returns empty
context if either [Element.key] is equal to the given [key] or if the [key] is associated\n * with [Element.key] via
[AbstractCoroutineContextKey].\n * See [AbstractCoroutineContextKey] for the example of usage.\n
*\n * @SinceKotlin("1.3")\n */\n@ExperimentalStdlibApi\npublic fun Element.minusPolymorphicKey(key: Key<*>):
CoroutineContext {\n    if (key is AbstractCoroutineContextKey<*, *>) {\n        return if (key.isSubKey(this.key)
&& key.tryCast(this) != null) EmptyCoroutineContext else this\n    }\n    return if (this.key === key)
EmptyCoroutineContext else this\n}\n\n/**\n * An empty coroutine context.\n */\n@SinceKotlin("1.3")\npublic
object EmptyCoroutineContext : CoroutineContext, Serializable {\n    private const val serialVersionUID:

```

```

Long = 0\n private fun readResolve(): Any = EmptyCoroutineContext\n\n public override fun <E : Element>
get(key: Key<E>): E? = null\n public override fun <R> fold(initial: R, operation: (R, Element) -> R): R = initial\n
public override fun plus(context: CoroutineContext): CoroutineContext = context\n public override fun
minusKey(key: Key<*>): CoroutineContext = this\n public override fun hashCode(): Int = 0\n public override
fun toString(): String = \"EmptyCoroutineContext\"\n\n//----- internal impl ----- \n\n//
this class is not exposed, but is hidden inside implementations\n// this is a left-biased list, so that `plus` works
naturally\n@SinceKotlin(\"1.3\")\ninternal class CombinedContext(\n private val left: CoroutineContext,\n private val element: Element\n) : CoroutineContext, Serializable {\n\n override fun <E : Element> get(key:
Key<E>): E? {\n var cur = this\n while (true) {\n cur.element[key]?.let
{ return it }\n val next = cur.left\n if (next is CombinedContext) {\n cur = next\n }
else {\n return next[key]\n }\n }\n\n public override fun <R> fold(initial: R, operation:
(R, Element) -> R): R =\n operation(left.fold(initial, operation), element)\n\n public override fun
minusKey(key: Key<*>): CoroutineContext {\n element[key]?.let { return left }\n val newLeft =
left.minusKey(key)\n return when {\n newLeft === left -> this\n newLeft ===
EmptyCoroutineContext -> element\n else -> CombinedContext(newLeft, element)\n }\n }\n\n private fun size(): Int {\n var cur = this\n var size = 2\n while (true) {\n cur = cur.left as?
CombinedContext ?: return size\n size++\n }\n }\n\n private fun contains(element: Element): Boolean
= \n get(element.key)
== element\n\n private fun containsAll(context: CombinedContext): Boolean {\n var cur = context\n
while (true) {\n if (!contains(cur.element)) return false\n val next = cur.left\n if (next is
CombinedContext) {\n cur = next\n } else {\n return contains(next as Element)\n
}\n }\n }\n\n override fun equals(other: Any?): Boolean = \n this === other || other is CombinedContext
&& other.size() == size() && other.containsAll(this)\n\n override fun hashCode(): Int = left.hashCode() +
element.hashCode()\n\n override fun toString(): String = \n \"[\" + fold(\"\") { acc, element ->\n if
(acc.isEmpty()) element.toString() else \"$acc, $element\"\n } + \"]\"\n\n private fun writeReplace(): Any {\n
val n = size()\n val elements = arrayOfNulls<CoroutineContext>(n)\n var index = 0\n fold(Unit) { _,
element -> elements[index++]
= element }\n check(index == n)\n @Suppress(\"UNCHECKED_CAST\")\n return
Serialized(elements as Array<CoroutineContext>)\n }\n\n private class Serialized(val elements:
Array<CoroutineContext>) : Serializable {\n companion object {\n private const val serialVersionUID:
Long = 0L\n }\n\n private fun readResolve(): Any = elements.fold(EmptyCoroutineContext,
CoroutineContext::plus)\n }\n\n\", \"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmName(\"IntrinsicsKt\")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
kotlin.coroutines.intrinsics\n\nimport kotlin.contracts.*\nimport kotlin.coroutines.*\nimport
kotlin.internal.InlineOnly\n\n/**\n * Obtains the current continuation instance inside suspend functions and either
suspends\n * currently running
coroutine or returns result immediately without suspension.\n * \n * If the [block] returns the special
[CoroutineContext.SUSPENDED] value, it means that suspend function did suspend the execution and will\n * not
return any result immediately. In this case, the [Continuation] provided to the [block] shall be\n * resumed by
invoking [Continuation.resumeWith] at some moment in the\n * future when the result becomes available to resume
the computation.\n * \n * Otherwise, the return value of the [block] must have a type assignable to [T] and represents
the result of this suspend function.\n * It means that the execution was not suspended and the [Continuation]
provided to the [block] shall not be invoked.\n * As the result type of the [block] is declared as `Any?` and cannot be
correctly type-checked,\n * its proper return type remains on the conscience of the suspend function's author.\n * \n * Invocation of [Continuation.resumeWith] resumes coroutine directly in the invoker's thread without

```

going through the `[ContinuationInterceptor]` that might be present in the coroutine's `[CoroutineContext]`. It is the invoker's responsibility to ensure that a proper invocation context is established. `[Continuation.intercepted]` can be used to acquire the intercepted continuation. Note that it is not recommended to call either `[Continuation.resume]` nor `[Continuation.resumeWithException]` functions synchronously in the same stackframe where suspension function is run. Use `[suspendCoroutine]` as a safer way to obtain current continuation instance.

```

@SinceKotlin("1.3")@InlineOnly@Suppress("UNUSED_PARAMETER",
"RedundantSuspendModifier")
public suspend inline fun <T>
suspendCoroutineUninterceptedOrReturn(crossinline block: (Continuation<T> -> Any?): T {
    contract {
        callsInPlace(block, InvocationKind.EXACTLY_ONCE)
    }
    throw NotImplementedError("Implementation of
suspendCoroutineUninterceptedOrReturn is intrinsic")
}

```

This value is used as a return value of `[suspendCoroutineUninterceptedOrReturn]` `block` argument to state that the execution was suspended and will not return any result immediately. Note: this value should not be used in general code. Using it outside of the context of `[suspendCoroutineUninterceptedOrReturn]` function return value (including, but not limited to, storing this value in other properties, returning it from other functions, etc) can lead to unspecified behavior of the code.

It is implemented as property with getter to avoid ProGuard `<clinit>` problem with multifile `IntrinsicsKt` class.

```

@SinceKotlin("1.3")
public val COROUTINE_SUSPENDED:
Any get() = CoroutineSingletons.COROUTINE_SUSPENDED

```

Using enum here ensures two important properties:

1. It makes `SafeContinuation` serializable with all kinds of serialization frameworks (since all of them natively support enums).
2. It improves debugging experience, since you clearly see `toString()` value of those objects and what package they come from.

```

@SinceKotlin("1.3")@PublishedApi // This class is
Published API via serialized representation of SafeContinuation, don't rename/move
internal enum class
CoroutineSingletons { COROUTINE_SUSPENDED, UNDECIDED, RESUMED }

```

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```

package kotlin.enums
import
kotlin.jvm.Volatile

```

A specialized immutable implementation of `[List]` interface that contains all enum entries of the specified enum type `[E]`. `[EnumEntries]` contains all enum entries in the order they are declared in the source code, consistently with the corresponding `[Enum.ordinal]` values. An instance of this interface can only be obtained from `EnumClass.entries` property.

```

@ExperimentalStdlibApi@SinceKotlin("1.8")
public sealed
interface EnumEntries<E : Enum<E>> :
List<E>
@PublishedApi@ExperimentalStdlibApi@SinceKotlin("1.8") // Used by JVM compiler
internal
fun <E : Enum<E>> enumEntries(entriesProvider: () -> Array<E>): EnumEntries<E> =
EnumEntriesList(entriesProvider)
@PublishedApi@ExperimentalStdlibApi@SinceKotlin("1.8") // Used by
Native/JS compilers and Java serialization
internal
fun <E : Enum<E>> enumEntries(entries: Array<E>):
EnumEntries<E> = EnumEntriesList { entries }.also {
    /* Here we are enforcing initialization of _entries
property. It is required because of two reasons.
1. In old Native mm the object will be frozen after
creation, so it must be immutable
2. Native doesn't support @Volatile for now, so this initialization is not
generally safe, if done after object is published.
This is very implementation-dependent hack,
and it should be removed when/if both reasons above are gone.
it.size
*/
}

```

For enum class `E`, this class is instantiated in the following manner (NB it's pseudocode that does not reflect code generation strategy precisely):

```

class E extends Enum<E> {
    private static final E[] $VALUES
    private static final EnumEntries[] $ENTRIES
    static {
        $VALUES = $values();
        val
supplier = #invokedynamic ..args.. values;
        $ENTRIES = new EnumEntriesList(supplier);
    }
    public static EnumEntries<MyEnum> getEntries() {
        return $ENTRIES;
    }
    private synthetic
static E[] $values() {
        return new E[] { ... };
    }
}

```

This machinery is required as a workaround for a long-standing issue when people do reflectively change `$VALUES` of enums in order to workaround project-specific issues. We allow racy initialization (e.g. `entriesProvider` can be invoked multiple times), but the resulting array is safely published, preventing

```

any read races after the initialization.\n *\n@SinceKotlin("1.8")\n@ExperimentalStdlibApi\nprivate class
EnumEntriesList<T : Enum<T>>(private val entriesProvider: () -> Array<T>) : EnumEntries<T>,
AbstractList<T>(), Serializable {\n// WA for JS IR bug:\n// class type parameter MUST be different form E
(AbstractList<E> type parameter),\n// otherwise the bridge names for contains() and indexOf() will be clashed with
the original method names,\n// and produced JS code will not contain type checks and will not work correctly.\n\n
@Volatile // Volatile is required for safe publication of the array. It doesn't incur any real-world penalties\n private
var _entries: Array<T>? = null\n private val entries: Array<T>\n get() {\n var e = _entries\n if (e
!= null) return e\n e = entriesProvider()\n _entries = e\n return e\n }\n\n override val size:
Int\n get() = entries.size\n\n override fun get(index:
Int): T {\n val entries = entries\n checkElementIndex(index, entries.size)\n return entries[index]\n
}\n\n // By definition, EnumEntries contains **all** enums in declaration order,\n // thus we are able to short-
circuit the implementation here\n\n override fun contains(element: T): Boolean {\n
@Suppress("SENSELESS_COMPARISON")\n if (element === null) return false // WA for JS IR bug\n //
Check identity due to UnsafeVariance\n val target = entries.getOrNull(element.ordinal)\n return target ===
element\n }\n\n override fun indexOf(element: T): Int {\n @Suppress("SENSELESS_COMPARISON")\n
if (element === null) return -1 // WA for JS IR bug\n // Check identity due to UnsafeVariance\n val
ordinal = element.ordinal\n val target = entries.getOrNull(ordinal)\n return if (target === element) ordinal
else -1\n }\n\n override fun lastIndexOf(element: T): Int = indexOf(element)\n\n
@Suppress("unused") // Used for Java serialization\n private fun writeReplace(): Any {\n return
EnumEntriesSerializationProxy(entries)\n }\n\n\ninternal expect class EnumEntriesSerializationProxy<E :
Enum<E>>(entries: Array<E>)\n", /*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\npackage kotlin.experimental\n\n/**\n * This annotation marks the experimental
[ObjCName][kotlin.native.ObjCName] annotation.\n
*\n@RequiresOptIn\n@Target(AnnotationTarget.ANNOTATION_CLASS)\n@Retention(AnnotationRetention.BI
NARY)\n@MustBeDocumented\npublic annotation class ExperimentalObjCName\n", /*\n * Copyright 2010-2022
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\npackage
kotlin.experimental\n\n/**\n * This annotation marks the experimental Objective-C export refinement
annotations.\n
*\n@RequiresOptIn\n@Target(AnnotationTarget.ANNOTATION_CLASS)\n@Retention(AnnotationRetention.BI
NARY)\n@MustBeDocumented\npublic annotation class ExperimentalObjCRefinement\n", /*\n * Copyright 2010-
2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\npackage kotlin.experimental\n\n/**
Performs a bitwise AND operation between the two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Byte.and(other: Byte): Byte =
(this.toInt() and other.toInt()).toByte()\n\n/** Performs a bitwise OR operation between the two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Byte.or(other: Byte): Byte =
(this.toInt() or other.toInt()).toByte()\n\n/** Performs a bitwise XOR operation
between the two values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun
Byte.xor(other: Byte): Byte = (this.toInt() xor other.toInt()).toByte()\n\n/** Inverts the bits in this value.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.inv(): Byte =
(this.toInt().inv()).toByte()\n\n/** Performs a bitwise AND operation between the two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.and(other: Short): Short =
(this.toInt() and other.toInt()).toShort()\n\n/** Performs a bitwise OR operation between the two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.or(other: Short): Short =
(this.toInt() or other.toInt()).toShort()\n\n/** Performs a bitwise XOR operation between the two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.xor(other: Short): Short =

```



`(this.toInt() xor other.toInt()).toShort()`

Inverts the bits in this value. `@SinceKotlin("1.1")@kotlin.internal.InlineOnly` public inline fun Short.inv(): Short = (this.toInt().inv()).toShort()

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package kotlin.experimental

The experimental marker for type inference augmenting annotations. Any usage of a declaration annotated with `@ExperimentalTypeInference` must be accepted either by annotating that usage with the `[OptIn]` annotation, e.g. `@OptIn(ExperimentalTypeInference::class)` or by using the compiler argument `-opt-in=kotlin.experimental.ExperimentalTypeInference`.

`@RequiresOptIn(level = RequiresOptIn.Level.ERROR)` `@MustBeDocumented` `@Retention(AnnotationRetention.BINARY)` `@Target(AnnotationTarget.ANNOTATION_CLASS)` `@SinceKotlin("1.3")` public annotation class ExperimentalTypeInference

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package kotlin.internal

Specifies that the corresponding type should be ignored during type inference.

`@Target(AnnotationTarget.TYPE)` `@Retention(AnnotationRetention.BINARY)` internal annotation class NoInfer

Specifies that the constraint built for the type during type inference should be an equality one.

`@Target(AnnotationTarget.TYPE)` `@Retention(AnnotationRetention.BINARY)` internal annotation class Exact

Specifies that a corresponding member has the lowest priority in overload resolution.

`@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY, AnnotationTarget.CONSTRUCTOR)` `@Retention(AnnotationRetention.BINARY)` internal annotation class LowPriorityInOverloadResolution

Specifies that the corresponding member has the highest priority in overload resolution. Effectively this means that an extension annotated with this annotation will win in overload resolution over a member with the same signature.

`@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY)` `@Retention(AnnotationRetention.BINARY)` internal annotation class HidesMembers

The value of this type parameter should be mentioned in input types (argument types, receiver type or expected type).

`@Target(AnnotationTarget.TYPE_PARAMETER)` `@Retention(AnnotationRetention.BINARY)` internal annotation class OnlyInputTypes

Specifies that this function should not be called directly without inlining.

`@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY, AnnotationTarget.PROPERTY_GETTER, AnnotationTarget.PROPERTY_SETTER)` `@Retention(AnnotationRetention.BINARY)` internal annotation class InlineOnly

Specifies that this declaration can have dynamic receiver type.

`@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY)` `@Retention(AnnotationRetention.BINARY)` internal annotation class DynamicExtension

The value of this parameter should be a property reference expression (`this::foo`), referencing a `lateinit` property, the backing field of which is accessible at the point where the corresponding argument is passed.

`@Target(AnnotationTarget.VALUE_PARAMETER)` `@Retention(AnnotationRetention.BINARY)` `@SinceKotlin("1.2")` internal annotation class AccessibleLateinitPropertyLiteral

Specifies that this declaration is only completely supported since the specified version.

The Kotlin compiler of an earlier version is going to report a diagnostic on usages of this declaration.

The diagnostic message can be specified with [message], or via [errorCode] (takes less space, but might not be immediately clear to the user). The diagnostic severity can be specified with [level]: WARNING/ERROR

mean that either a warning or an error is going to be reported, HIDDEN means that the declaration is going to be removed from resolution completely.

[versionKind] specifies which version should be compared with the [version] value, when compiling the usage of the annotated declaration.

Note that prior to 1.2, only

[RequireKotlinVersionKind.LANGUAGE\_VERSION] was supported, so the Kotlin compiler before 1.2 is going to treat any [RequireKotlin] as if it requires the language version. Since 1.2, the Kotlin compiler supports [RequireKotlinVersionKind.LANGUAGE\_VERSION], [RequireKotlinVersionKind.COMPILER\_VERSION] and [RequireKotlinVersionKind.API\_VERSION]. If the actual value of [versionKind] is something different (e.g. a new version kind, added in future versions of Kotlin), Kotlin 1.2 is going to ignore this [RequireKotlin] altogether, whereas Kotlin before 1.2 is going to treat this as a requirement on the language version.

This

```
annotation is erased at compile time; its arguments are stored in a more compact form in the Kotlin metadata.
@Target(AnnotationTarget.CLASS, AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY,
AnnotationTarget.CONSTRUCTOR,
AnnotationTarget.TYPEALIAS)\n@Retention(AnnotationRetention.SOURCE)\n@Repeatable\n@SinceKotlin("1.2")\ninternal annotation class RequireKotlin(\n    val version: String,\n    val message: String = "",\n    val level: DeprecationLevel = DeprecationLevel.ERROR,\n    val versionKind: RequireKotlinVersionKind = RequireKotlinVersionKind.LANGUAGE_VERSION,\n    val errorCode: Int = -1)\n\n/**\n * The kind of the version that is required by [RequireKotlin].\n */\n@SinceKotlin("1.2")\ninternal enum class RequireKotlinVersionKind {\n    LANGUAGE_VERSION,\n    COMPILER_VERSION,\n    API_VERSION,\n}\n\n/**\n * Specifies that this declaration is a part of special DSL, used for constructing function's contract.\n */\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.2")\ninternal annotation class ContractsDsl\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.internal\n\n// a mod b (in arithmetical sense)\nprivate fun mod(a: Int, b: Int): Int {\n    val mod = a % b\n    return if (mod >= 0) mod else mod + b\n}\n\nprivate fun mod(a: Long, b: Long): Long {\n    val mod = a % b\n    return if (mod >= 0) mod else mod + b\n}\n\n// (a - b) mod c\nprivate fun differenceModulo(a: Int, b: Int, c: Int): Int {\n    return mod(mod(a, c) - mod(b, c), c)\n}\n\nprivate fun differenceModulo(a: Long, b: Long, c: Long): Long {\n    return mod(mod(a, c) - mod(b, c), c)\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n * No validation on passed parameters is performed. The given parameters should satisfy the condition:\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\ninternal fun getProgressionLastElement(start: Int, end: Int, step: Int): Int = when {\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n    step < 0 -> if (start <= end) end else end + differenceModulo(start, end, -step)\n    else -> throw\n    kotlin.IllegalArgumentException("Step is zero.")\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n * No validation on passed parameters is performed. The given parameters should satisfy the condition:\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\ninternal fun getProgressionLastElement(start: Long, end: Long, step: Long): Long = when {\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n    step < 0 -> if (start <= end) end else end + differenceModulo(start, end, -step)\n    else -> throw\n    kotlin.IllegalArgumentException("Step is zero.")\n}\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.properties\n\nimport kotlin.reflect.KProperty\n\n/**\n * Standard property delegates.\n */\npublic object Delegates {\n    /**\n     * Returns a property delegate for a read/write property with a non-`null`
```

```

value that is initialized not during\n    * object construction time but at a later time. Trying to read the property
before the initial value has been\n    * assigned results in an exception.\n    *\n    * @sample
samples.properties.Delegates.notNullDelegate\n    */\n    public fun <T : Any> notNull():\nReadWriteProperty<Any?, T> = NotNullVar()\n\n    /**\n    * Returns a property delegate for a read/write property
that calls a specified callback function when changed.\n    * @param initialValue the initial value of the property.\n    * @param onChange the callback which is called after the change of the property is made. The value of the
property\n
    * has already been changed when this callback is invoked.\n    *\n    * @sample
samples.properties.Delegates.observableDelegate\n    */\n    public inline fun <T> observable(initialValue: T,\ncrossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Unit):\nReadWriteProperty<Any?, T> =\n    object : ObservableProperty<T>(initialValue) {\n        override fun
afterChange(property: KProperty<*>, oldValue: T, newValue: T) = onChange(property, oldValue, newValue)\n
    }\n\n    /**\n    * Returns a property delegate for a read/write property that calls a specified callback function when
changed,\n    * allowing the callback to veto the modification.\n    * @param initialValue the initial value of the
property.\n    * @param onChange the callback which is called before a change to the property value is attempted.\n
    * The value of the property hasn't been changed yet, when this callback is invoked.\n    * If the callback returns
`true` the value of the property is being set to the new value,\n    * and if the callback returns `false` the new value
is discarded and the property remains its old value.\n    *\n    * @sample
samples.properties.Delegates.vetoableDelegate\n    * @sample
samples.properties.Delegates.throwVetoableDelegate\n    */\n    public inline fun <T> vetoable(initialValue: T,\ncrossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Boolean):\nReadWriteProperty<Any?, T> =\n    object : ObservableProperty<T>(initialValue) {\n        override fun
beforeChange(property: KProperty<*>, oldValue: T, newValue: T): Boolean = onChange(property, oldValue,\nnewValue)\n    }\n\nprivate class NotNullVar<T : Any>(): ReadWriteProperty<Any?, T> {\n    private var
value: T? = null\n    public override fun getValue(thisRef: Any?, property: KProperty<*>): T {\n        return value
?: throw IllegalStateException("Property ${property.name} should be initialized
before get.")\n    }\n    public override fun setValue(thisRef: Any?, property: KProperty<*>, value: T) {\n
this.value = value\n    }\n}\n\n"/**\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\npackage kotlin.properties\n\nimport kotlin.reflect.KProperty\n\n/**\n * Base
interface that can be used for implementing property delegates of read-only properties.\n *\n * This is provided only
for convenience; you don't have to extend this interface\n * as long as your property delegate has methods with the
same signatures.\n *\n * @param T the type of object which owns the delegated property.\n * @param V the type of
the property value.\n */\npublic fun interface ReadOnlyProperty<in T, out V> {\n    /**\n    * Returns the value of
the property for the given object.\n    * @param thisRef the object for which the value
is requested.\n    * @param property the metadata for the property.\n    * @return the property value.\n    */\n    public operator fun getValue(thisRef: T, property: KProperty<*>): V\n}\n\n/**\n * Base interface that can be used
for implementing property delegates of read-write properties.\n *\n * This is provided only for convenience; you
don't have to extend this interface\n * as long as your property delegate has methods with the same signatures.\n *\n
* @param T the type of object which owns the delegated property.\n * @param V the type of the property value.\n
*/\npublic interface ReadWriteProperty<in T, V> : ReadOnlyProperty<T, V> {\n    /**\n    * Returns the value of
the property for the given object.\n    * @param thisRef the object for which the value is requested.\n    * @param
property the metadata for the property.\n    * @return the property value.\n    */\n    public override operator fun
getValue(thisRef: T, property: KProperty<*>): V\n\n    /**\n    * Sets
the value of the property for the given object.\n    * @param thisRef the object for which the value is requested.\n
    * @param property the metadata for the property.\n    * @param value the value to set.\n    */\n    public operator
fun setValue(thisRef: T, property: KProperty<*>, value: V)\n}\n\n/**\n * Base interface that can be used for
implementing property delegate providers.\n *\n * This is provided only for convenience; you don't have to extend

```

```

this interface
 * as long as your delegate provider has a method with the same signature.
 * @param T the type of object which owns the delegated property.
 * @param D the type of property delegates this provider provides.
 */
@SinceKotlin("1.4")
public fun interface PropertyDelegateProvider<in T, out D> {
    /**
     * Returns the delegate of the property for the given object.
     * This function can be used to extend the logic of creating the object (e.g. perform validation checks)
     * to which the property implementation is delegated.
     * @param thisRef the object for which property delegate is requested.
     * @param property the metadata for the property.
     * @return the property delegate.
     */
    public operator fun provideDelegate(thisRef: T, property: KProperty<*>): D
}

/**
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 */
package kotlin.properties
import kotlin.reflect.KProperty

/**
 * Implements the core logic of a property delegate for a read/write property that calls callback functions when changed.
 * @param initialValue the initial value of the property.
 */
public abstract class ObservableProperty<V>(initialValue: V) : ReadWriteProperty<Any?, V> {
    private var value = initialValue
    /**
     * The callback which is called before a change to the property value is attempted.
     * The value of the property hasn't been changed yet, when this callback is invoked.
     * If the callback returns `true` the value of the property is being set to the new value,
     * and if the callback returns `false` the new value is discarded and the property remains its old value.
     */
    protected open fun beforeChange(property: KProperty<*>, oldValue: V, newValue: V): Boolean = true
    /**
     * The callback which is called after the change of the property is made. The value of the property
     * has already been changed when this callback is invoked.
     */
    protected open fun afterChange(property: KProperty<*>, oldValue: V, newValue: V): Unit {}
    public override fun getValue(thisRef: Any?, property: KProperty<*>): V {
        return value
    }
    public override fun setValue(thisRef: Any?, property: KProperty<*>, value: V) {
        val oldValue = this.value
        if (!beforeChange(property, oldValue, value)) {
            return
        }
        this.value = value
        afterChange(property, oldValue, value)
    }
}

/**
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 */
@file:Suppress("PackageDirectoryMismatch")
package kotlin
import kotlin.reflect.*

/**
 * An extension operator that allows delegating a read-only property of type [V]
 * to a property reference to a property of type [V] or its subtype.
 * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.
 * The reference is without a receiver, i.e. it either references a top-level property or
 * has the receiver bound to it.
 * Example:
 * ```
 * class Login(val username: String) {
 *     val defaultLogin = Login("Admin")
 *     val defaultUsername by defaultLogin::username
 * // equivalent to
 * val defaultUserName get() = defaultLogin.username
 * ```
 */
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline operator fun <V> KProperty0<V>.getValue(thisRef: Any?, property: KProperty<*>): V {
    return get()
}

/**
 * An extension operator that allows delegating a mutable property of type [V]
 * to a property reference to a mutable property of the same type [V].
 * @receiver A property reference to a mutable property of type [V].
 * The reference is without a receiver, i.e. it either references a top-level property or
 * has the receiver bound to it.
 * Example:
 * ```
 * class Login(val username: String, var incorrectAttemptCounter: Int = 0) {
 *     val defaultLogin = Login("Admin")
 *     var defaultLoginAttempts by defaultLogin::incorrectAttemptCounter
 * // equivalent to
 * var defaultLoginAttempts: Int
 * get() = defaultLogin.incorrectAttemptCounter
 * set(value) { defaultLogin.incorrectAttemptCounter = value }
 * ```
 */
@SinceKotlin("1.4")
@kotlin.internal.InlineOnly
public inline operator fun <V> KMutableProperty0<V>.setValue(thisRef: Any?, property: KProperty<*>, value: V) {
    set(value)
}

/**
 * An extension operator that allows delegating a read-only member or extension property of type [V]
 * to a property reference to a member or extension property of type [V] or its subtype.
 * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.
 * The reference has an unbound receiver of type [T].
 * Example:
 * ```
 * class Login(val username: String) {
 *     val Login.user by Login::username
 * // equivalent to
 * val Login.user get() = this.username
 * ```
 */

```

```

*  

@SinceKotlin("1.4")  

@kotlin.internal.InlineOnly  

public inline operator fun <T, V> KProperty1<T, V>.getValue(thisRef: T, property: KProperty<*>): V {  

    return get(thisRef)  

}  

/**  

 * An extension operator that allows delegating a mutable member or extension property of type [V] to a property reference to a member or extension mutable property of the same type [V].  

 * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.  

 * The reference has an unbound receiver of type [T].  

 * Example:  

 * ```  

 * class Login(val username: String, var incorrectAttemptCounter: Int)  

 * var Login.attempts by Login::incorrectAttemptCounter // equivalent to  

 * Login.attempts: Int  

 * get() = this.incorrectAttemptCounter  

 * set(value) { this.incorrectAttemptCounter = value }  

 * ```  

 */  

@SinceKotlin("1.4")  

@kotlin.internal.InlineOnly  

public inline operator fun <T, V> KMutableProperty1<T, V>.setValue(thisRef: T, property: KProperty<*>, value: V) {  

    set(thisRef, value)  

}  

/**  

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 */  

package kotlin.random  

import  

kotlin.math.nextDown  

/**  

 * An abstract class that is implemented by random number generator algorithms.  

 * The companion object [Random.Default] is the default instance of [Random].  

 * To get a seeded instance of random generator use [Random] function.  

 * @sample samples.random.Randoms.defaultRandom  

 */  

@SinceKotlin("1.3")  

public abstract class Random {  

    /**  

     * Gets the next random [bitCount] number of bits.  

     * Generates an `Int` whose lower [bitCount] bits are filled with random values and the remaining upper bits are zero.  

     * @param bitCount number of bits to generate, must be in range 0..32, otherwise the behavior is unspecified.  

     * @sample samples.random.Randoms.nextBits  

     */  

    public abstract fun nextBits(bitCount: Int): Int  

    /**  

     * Gets the next random `Int` from the random number generator.  

     * Generates an `Int` random value uniformly distributed between `Int.MIN_VALUE` and `Int.MAX_VALUE` (inclusive).  

     * @sample samples.random.Randoms.nextInt  

     */  

    public open fun nextInt(): Int = nextBits(32)  

    /**  

     * Gets the next random non-negative `Int` from the random number generator less than the specified [until] bound.  

     * Generates an `Int` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).  

     * @param until must be positive.  

     * @throws IllegalArgumentException if [until] is negative or zero.  

     * @sample samples.random.Randoms.nextIntFromUntil  

     */  

    public open fun nextInt(until: Int): Int = nextInt(0, until)  

    /**  

     * Gets the next random `Int` from the random number generator in the specified range.  

     * Generates an `Int` random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.  

     * @throws IllegalArgumentException if [from] is greater than or equal to [until].  

     * @sample samples.random.Randoms.nextIntFromUntil  

     */  

    public open fun nextInt(from: Int, until: Int): Int {  

        checkRangeBounds(from, until)  

        val n = until - from  

        if (n > 0 || n == Int.MIN_VALUE) {  

            val rnd = if (n and -n == n) {  

                val bitCount = fastLog2(n)  

                nextBits(bitCount)  

            } else {  

                var v: Int  

                do {  

                    val bits = nextInt().ushr(1)  

                    v = bits % n  

                } while (bits - v + (n - 1) < 0)  

                v  

            }  

            return from + rnd  

        } else {  

            while (true) {  

                val rnd = nextInt()  

                if (rnd in from until until) return rnd  

            }  

        }  

    }  

    /**  

     * Gets the next random `Long` from the random number generator.  

     * Generates a `Long` random value uniformly distributed between `Long.MIN_VALUE` and `Long.MAX_VALUE` (inclusive).  

     * @sample samples.random.Randoms.nextLong  

     */  

    public open fun nextLong(): Long = nextInt().toLong().shl(32) + nextInt()  

    /**  

     * Gets the next random non-negative `Long` from the random number generator less than the specified [until] bound.  

     * Generates a `Long` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).  

     * @param until must be positive.  

     * @throws IllegalArgumentException if [until] is negative or zero.  

     * @sample samples.random.Randoms.nextLongFromUntil  

     */  

    public open fun nextLong(until: Long): Long = nextLong(0, until)  

    /**  

     * Gets the next random `Long` from the random number generator in the specified range.  

     * Generates a `Long` random value uniformly distributed between the specified [from] (inclusive)

```

and [until] (exclusive) bounds.\n

```
*\n * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n *\n * @sample\n samples.random.Randoms.nextLongFromUntil\n *\n public open fun nextLong(from: Long, until: Long): Long\n {\n checkRangeBounds(from, until)\n val n = until - from\n if (n > 0) {\n val rnd: Long\n if (n and -n == n) {\n val nLow = n.toInt()\n val nHigh = (n ushr 32).toInt()\n rnd =\n when {\n nLow != 0 -> {\n val bitCount = fastLog2(nLow)\n //\n toUInt().toLong()\n nextBits(bitCount).toLong() and 0xFFFF_FFFF\n }\n nHigh == 1 ->\n // toUInt().toLong()\n nextInt().toLong() and 0xFFFF_FFFF\n else -> {\n val bitCount = fastLog2(nHigh)\n nextBits(bitCount).toLong().shl(32)\n + (nextInt().toLong() and 0xFFFF_FFFF)\n }\n }\n } else {\n var v: Long\n do {\n val bits = nextLong().ushr(1)\n v = bits % n\n } while (bits - v + (n - 1)\n < 0)\n rnd = v\n }\n return from + rnd\n } else {\n while (true) {\n val\n rnd = nextLong()\n if (rnd in from until until) return rnd\n }\n }\n }\n /**\n * Gets the\n next random [Boolean] value.\n *\n * @sample samples.random.Randoms.nextBoolean\n *\n public open\n fun nextBoolean(): Boolean = nextBits(1) != 0\n /**\n * Gets the next random [Double] value uniformly\n distributed between 0 (inclusive) and 1 (exclusive).\n *\n * @sample samples.random.Randoms.nextDouble\n *\n public open fun nextDouble(): Double = doubleFromParts(nextBits(26), nextBits(27))\n /**\n * Gets the next random non-negative `Double` from the random number generator less than the specified\n [until] bound.\n *\n * Generates a `Double` random value uniformly distributed between 0 (inclusive) and\n [until] (exclusive).\n *\n * @throws IllegalArgumentException if [until] is negative or zero.\n *\n *\n @sample samples.random.Randoms.nextDoubleFromUntil\n *\n public open fun nextDouble(until: Double):\n Double = nextDouble(0.0, until)\n /**\n * Gets the next random `Double` from the random number generator\n in the specified range.\n *\n * Generates a `Double` random value uniformly distributed between the specified\n [from] (inclusive) and [until] (exclusive) bounds.\n *\n * [from] and [until] must be finite otherwise the\n behavior is unspecified.\n *\n * @throws IllegalArgumentException if [from] is greater than or equal to\n [until].\n *\n * @sample samples.random.Randoms.nextDoubleFromUntil\n *\n public open fun nextDouble(from: Double, until: Double): Double {\n checkRangeBounds(from,\n until)\n val size = until - from\n val r = if (size.isInfinite() && from.isFinite() && until.isFinite()) {\n val r1 = nextDouble() * (until / 2 - from / 2)\n from + r1 + r1\n } else {\n from + nextDouble() * size\n }\n return if (r >= until) until.nextDown() else r\n }\n /**\n * Gets the next random [Float]\n value uniformly distributed between 0 (inclusive) and 1 (exclusive).\n *\n * @sample\n samples.random.Randoms.nextFloat\n *\n public open fun nextFloat(): Float = nextBits(24) / (1 shl\n 24).toFloat()\n /**\n * Fills a subrange of the specified byte [array] starting from [fromIndex] inclusive and\n ending [toIndex] exclusive\n * with random bytes.\n *\n * @return [array] with the subrange filled with\n random bytes.\n *\n * @sample samples.random.Randoms.nextBytes\n *\n public open fun nextBytes(array: ByteArray, fromIndex: Int = 0, toIndex: Int = array.size): ByteArray {\n require(fromIndex in 0..array.size && toIndex in 0..array.size) { \"fromIndex ($fromIndex) or toIndex ($toIndex)\n are out of range: 0..${array.size}.\" }\n require(fromIndex <= toIndex) { \"fromIndex ($fromIndex) must be not\n greater than toIndex ($toIndex).\" }\n val steps = (toIndex - fromIndex) / 4\n var position = fromIndex\n repeat(steps) {\n val v = nextInt()\n array[position] = v.toByte()\n array[position + 1] =\n v.ushr(8).toByte()\n array[position + 2] = v.ushr(16).toByte()\n array[position + 3] =\n v.ushr(24).toByte()\n position += 4\n }\n val remainder = toIndex - position\n val vr =\n nextBits(remainder * 8)\n for (i in 0 until remainder) {\n array[position + i] = vr.ushr(i * 8).toByte()\n }\n return\n array\n }\n /**\n * Fills the specified byte [array] with random bytes and returns it.\n *\n * @return\n [array] filled with random bytes.\n *\n * @sample samples.random.Randoms.nextBytes\n *\n public open\n fun nextBytes(array: ByteArray): ByteArray = nextBytes(array, 0, array.size)\n /**\n * Creates a byte array of\n the specified [size], filled with random bytes.\n *\n * @sample samples.random.Randoms.nextBytes\n *\n
```

```

public open fun nextBytes(size: Int): ByteArray = nextBytes(ByteArray(size))\n\n /**\n * The default random
number generator.\n *\n * On JVM this generator is thread-safe, its methods can be invoked from multiple
threads.\n *\n * @sample samples.random.Randoms.defaultRandom\n */\n companion object Default :
Random(), Serializable {\n     private val defaultRandom: Random = defaultPlatformRandom()\n     private
object Serialized : Serializable {\n         private const
val serialVersionUID = 0L\n         private fun readResolve(): Any = Random\n     }\n     private fun
writeReplace(): Any = Serialized\n     override fun nextBits(bitCount: Int): Int =
defaultRandom.nextBits(bitCount)\n     override fun nextInt(): Int = defaultRandom.nextInt()\n     override fun
nextInt(until: Int): Int = defaultRandom.nextInt(until)\n     override fun nextInt(from: Int, until: Int): Int =
defaultRandom.nextInt(from, until)\n     override fun nextLong(): Long = defaultRandom.nextLong()\n     override fun
nextLong(until: Long): Long = defaultRandom.nextLong(until)\n     override fun nextLong(from:
Long, until: Long): Long = defaultRandom.nextLong(from, until)\n     override fun nextBoolean(): Boolean =
defaultRandom.nextBoolean()\n     override fun nextDouble(): Double = defaultRandom.nextDouble()\n     override fun
nextDouble(until: Double): Double = defaultRandom.nextDouble(until)\n     override fun
nextDouble(from:
Double, until: Double): Double = defaultRandom.nextDouble(from, until)\n     override fun nextFloat(): Float =
defaultRandom.nextFloat()\n     override fun nextBytes(array: ByteArray): ByteArray =
defaultRandom.nextBytes(array)\n     override fun nextBytes(size: Int): ByteArray =
defaultRandom.nextBytes(size)\n     override fun nextBytes(array: ByteArray, fromIndex: Int, toIndex: Int):
ByteArray =\n         defaultRandom.nextBytes(array, fromIndex, toIndex)\n     }\n}\n\n/**\n * Returns a repeatable
random number generator seeded with the given [seed] `Int` value.\n *\n * Two generators with the same seed
produce the same sequence of values within the same version of Kotlin runtime.\n *\n * *Note:* Future versions of
Kotlin may change the algorithm of this seeded number generator so that it will return\n * a sequence of values
different from the current one for a given seed.\n *\n * On JVM the returned generator is NOT thread-safe. Do not
invoke it from multiple threads
without proper synchronization.\n *\n * @sample samples.random.Randoms.seededRandom\n
*/\n\n@SinceKotlin("1.3")\npublic fun Random(seed: Int): Random = XorWowRandom(seed, seed.shr(31))\n\n/**\n
* Returns a repeatable random number generator seeded with the given [seed] `Long` value.\n *\n * Two generators
with the same seed produce the same sequence of values within the same version of Kotlin runtime.\n *\n * *Note:*
Future versions of Kotlin may change the algorithm of this seeded number generator so that it will return\n * a
sequence of values different from the current one for a given seed.\n *\n * On JVM the returned generator is NOT
thread-safe. Do not invoke it from multiple threads without proper synchronization.\n *\n * @sample
samples.random.Randoms.seededRandom\n
*/\n\n@SinceKotlin("1.3")\npublic fun Random(seed: Long): Random =
XorWowRandom(seed.toInt(), seed.shr(32).toInt())\n\n\n/**\n * Gets the next random `Int` from the random
number generator in the specified [range].\n
*\n * Generates an `Int` random value uniformly distributed in the specified [range]:\n * from `range.start` inclusive
to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n
*/\n\n@SinceKotlin("1.3")\npublic fun Random.nextInt(range: IntRange): Int = when {\n     range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n     range.last < Int.MAX_VALUE ->
nextInt(range.first, range.last + 1)\n     range.first > Int.MIN_VALUE -> nextInt(range.first - 1, range.last) + 1\n
else -> nextInt()\n}\n\n\n/**\n * Gets the next random `Long` from the random number generator in the specified
[range].\n *\n * Generates a `Long` random value uniformly distributed in the specified [range]:\n * from
`range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is
empty.\n
*/\n\n@SinceKotlin("1.3")\npublic fun Random.nextLong(range: LongRange): Long = when {\n     range.isEmpty()
-> throw IllegalArgumentException("Cannot get random in empty range: $range")\n     range.last <
Long.MAX_VALUE -> nextLong(range.first, range.last + 1)\n     range.first > Long.MIN_VALUE ->
nextLong(range.first - 1, range.last) + 1\n     else -> nextLong()\n}\n\n\ninternal expect fun

```

```

defaultPlatformRandom(): Random\n\ninternal expect fun doubleFromParts(hi26: Int, low27: Int): Double\n\n\ninternal
fun fastLog2(value: Int): Int = 31 - value.countLeadingZeroBits()\n\n/** Takes upper [bitCount] bits (0..32) from
this number. */\n\ninternal fun Int.takeUpperBits(bitCount: Int): Int =\n    this.ushr(32 - bitCount) and (-
bitCount).shr(31)\n\n\ninternal fun checkRangeBounds(from: Int, until: Int) = require(until > from) {
boundsErrorMessage(from, until) }\n\ninternal fun checkRangeBounds(from: Long, until: Long) = require(until >
from) { boundsErrorMessage(from, until) }\n\ninternal fun checkRangeBounds(from: Double, until: Double) =
require(until > from) { boundsErrorMessage(from, until) }\n\n\ninternal
fun boundsErrorMessage(from: Any, until: Any) = "Random range is empty: [$from, $until].\n", "/" * \n *
Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n * \n * \n\npackage
kotlin.random\n\n\n/** \n * Gets the next random [UInt] from the random number generator.\n * \n * Generates a
[UInt] random value uniformly distributed between [UInt.MIN_VALUE] and [UInt.MAX_VALUE] (inclusive).\n
* \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextUInt(): UInt = nextInt().toUInt()\n\n\n/** \n * Gets the next random [UInt] from the random number
generator less than the specified [until] bound.\n * \n * Generates a [UInt] random value uniformly distributed
between `0` (inclusive) and the specified [until] bound (exclusive).\n * \n * @throws IllegalArgumentException if
[until] is zero.\n * \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic
fun Random.nextUInt(until: UInt): UInt = nextUInt(0u, until)\n\n\n/** \n * Gets the next random [UInt] from the
random number generator in the specified range.\n * \n * Generates a [UInt] random value uniformly distributed
between the specified [from] (inclusive) and [until] (exclusive) bounds.\n * \n * @throws IllegalArgumentException
if [from] is greater than or equal to [until].\n
* \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextUInt(from: UInt, until: UInt): UInt {\n    checkUIntRangeBounds(from, until)\n\n    val signedFrom =
from.toInt() xor Int.MIN_VALUE\n    val signedUntil = until.toInt() xor Int.MIN_VALUE\n\n    val signedResult =
nextInt(signedFrom, signedUntil) xor Int.MIN_VALUE\n    return signedResult.toUInt()\n}\n\n\n/** \n * Gets the next
random [UInt] from the random number generator in the specified [range].\n * \n * Generates a [UInt] random value
uniformly distributed
in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n * \n * @throws
IllegalArgumentException if [range] is empty.\n
* \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextUInt(range: UIntRange): UInt = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last < UInt.MAX_VALUE ->
nextUInt(range.first, range.last + 1u)\n    range.first > UInt.MIN_VALUE -> nextUInt(range.first - 1u, range.last) +
1u\n    else -> nextUInt()\n}\n\n\n/** \n * Gets the next random [ULong] from the random number generator.\n * \n *
Generates a [ULong] random value uniformly distributed between [ULong.MIN_VALUE] and
[ULong.MAX_VALUE] (inclusive).\n
* \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextULong(): ULong = nextLong().toULong()\n\n\n/** \n * Gets the next random [ULong] from the random
number generator
less than the specified [until] bound.\n * \n * Generates a [ULong] random value uniformly distributed between `0`
(inclusive) and the specified [until] bound (exclusive).\n * \n * @throws IllegalArgumentException if [until] is
zero.\n * \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextULong(until: ULong): ULong = nextULong(0uL, until)\n\n\n/** \n * Gets the next random [ULong] from
the random number generator in the specified range.\n * \n * Generates a [ULong] random value uniformly
distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n * \n * @throws
IllegalArgumentException if [from] is greater than or equal to [until].\n
* \n * \n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
Random.nextULong(from: ULong, until: ULong): ULong {\n    checkULongRangeBounds(from, until)\n\n    val

```



```

signedFrom = from.toLong() xor Long.MIN_VALUE\n    val signedUntil = until.toLong() xor
Long.MIN_VALUE\n\n
    val signedResult = nextLong(signedFrom, signedUntil) xor Long.MIN_VALUE\n    return
signedResult.toULong()\n}\n\n/**\n * Gets the next random [ULong] from the random number generator in the
specified [range].\n *\n * Generates a [ULong] random value uniformly distributed in the specified [range]:\n * from
`range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is
empty.\n *\n * @SinceKotlin("1.5")\n * @WasExperimental(ExperimentalUnsignedTypes::class)\n * public fun
Random.nextULong(range: ULongRange): ULong = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last < ULong.MAX_VALUE -
> nextULong(range.first, range.last + 1u)\n    range.first > ULong.MIN_VALUE -> nextULong(range.first - 1u,
range.last) + 1u\n    else -> nextULong()\n}\n\n/**\n * Fills the specified unsigned byte [array] with random bytes
and returns it.\n *\n * @return [array] filled with
random bytes.\n *\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun
Random.nextUBytes(array: UByteArray): UByteArray {\n    nextBytes(array.asByteArray())\n    return
array\n}\n\n/**\n * Creates an unsigned byte array of the specified [size], filled with random bytes.\n *\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun Random.nextUBytes(size: Int): UByteArray
= nextBytes(size).asUByteArray()\n\n/**\n * Fills a subrange of the specified `UByte` [array] starting from
[fromIndex] inclusive and ending [toIndex] exclusive with random UBytes.\n *\n * @return [array] with the
subrange filled with random bytes.\n *\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun
Random.nextUBytes(array: UByteArray, fromIndex: Int = 0, toIndex: Int = array.size): UByteArray {\n
nextBytes(array.asByteArray(), fromIndex, toIndex)\n    return array\n}\n\n\ninternal fun
checkUIntRangeBounds(from: UInt, until: UInt) = require(until > from) { boundsErrorMessage(from,
until) }\n\ninternal fun checkULongRangeBounds(from: ULong, until: ULong) = require(until > from) {
boundsErrorMessage(from, until) }\n\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n * @package kotlin.random\n\n/**\n * Random number generator, using Marsaglia's
`xorwow` algorithm\n *\n * Cycles after 2192 - 232 repetitions.\n *\n * For more details, see Marsaglia, George
(July 2003). "Xorshift RNGs". Journal of Statistical Software. 8 (14). doi:10.18637/jss.v008.i14\n *\n * Available
at https://www.jstatsoft.org/v08/i14/paper\n *\n * @internal class XorWowRandom internal constructor(\n    private
var x: Int,\n    private var y: Int,\n    private var z: Int,\n    private var w: Int,\n    private var v: Int,\n    private var
addend: Int\n) : Random(), Serializable {\n\n    internal constructor(seed1: Int, seed2: Int) : \n
this(seed1, seed2, 0, 0, seed1.inv(), (seed1 shl 10) xor (seed2 ushr 4))\n\n    init {\n        require((x or y or z
or w or v) != 0) { "Initial state must have at least one non-zero element." }\n\n        // some trivial seeds can
produce several values with zeroes in upper bits, so we discard first 64\n        repeat(64) { nextInt() }\n    }\n\n
override fun nextInt(): Int {\n        // Equivalent to the xorwow algorithm\n        // From Marsaglia, G. 2003. Xorshift
RNGs. J. Statis. Soft. 8, 14, p. 5\n        var t = x\n        t = t xor (t ushr 2)\n        x = y\n        y = z\n        z = w\n
val v0 = v\n        w = v0\n        t = (t xor (t shl 1)) xor v0 xor (v0 shl 4)\n        v = t\n        addend += 362437\n
return t + addend\n    }\n\n    override fun nextBits(bitCount: Int): Int =\n        nextInt().takeUpperBits(bitCount)\n\n
private companion object {\n        private const val serialVersionUID: Long = 0L\n    }\n\n", "/*\n * Copyright
2010-2023
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n * @package kotlin.ranges\n\n/**\n * An iterator over a progression of values of type `Char`.\n *\n * @property
step the number by which the value is incremented on each step.\n *\n * @internal class CharProgressionIterator(first:
Char, last: Char, val step: Int) : CharIterator() {\n    private val finalElement: Int = last.code\n    private var hasNext:
Boolean = if (step > 0) first <= last else first >= last\n    private var next: Int = if (hasNext) first.code else
finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n    override fun nextChar(): Char {\n        val value
= next\n        if (value == finalElement) {\n            if (!hasNext) throw kotlin.NoSuchElementException()\n

```

```

hasNext = false\n    }\n    else {\n        next
+= step\n    }\n    return value.toChar()\n    }\n}\n\n/**\n * An iterator over a progression of values of type
`Int`. \n * @property step the number by which the value is incremented on each step. \n */\ninternal class
IntProgressionIterator(first: Int, last: Int, val step: Int) : IntIterator() {\n    private val finalElement: Int = last\n    private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n    private var next: Int = if (hasNext) first
else finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n    override fun nextInt(): Int {\n        val
value = next\n        if (value == finalElement) {\n            if (!hasNext) throw kotlin.NoSuchElementException()\n
            hasNext = false\n        }\n        else {\n            next += step\n        }\n        return value\n    }\n}\n\n/**\n * An
iterator over a progression of values of type `Long`. \n * @property step the number by which the value is
incremented on each step. \n */\ninternal class
LongProgressionIterator(first: Long, last: Long, val step: Long) : LongIterator() {\n    private val finalElement:
Long = last\n    private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n    private var next: Long
= if (hasNext) first else finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n    override fun
nextLong(): Long {\n        val value = next\n        if (value == finalElement) {\n            if (!hasNext) throw
kotlin.NoSuchElementException()\n            hasNext = false\n        }\n        else {\n            next += step\n        }\n
return value\n    }\n}\n\n"/\n * Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language
contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file. \n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\nimport
kotlin.internal.getProgressionLastElement\n\n/**\n * A progression of values of type
`Char`. \n */\npublic open class CharProgression\n    internal constructor\n        (\n            start: Char,\n
endInclusive: Char,\n            step: Int\n        ) : Iterable<Char> {\n    init {\n        if (step == 0) throw
kotlin.IllegalArgumentException("Step must be non-zero.")\n        if (step == Int.MIN_VALUE) throw
kotlin.IllegalArgumentException("Step must be greater than Int.MIN_VALUE to avoid overflow on negation.")\n
    }\n\n    /**\n     * The first element in the progression. \n     */\n    public val first: Char = start\n\n    /**\n     * The
last element in the progression. \n     */\n    public val last: Char = getProgressionLastElement(start.code,
endInclusive.code, step).toChar()\n\n    /**\n     * The step of the progression. \n     */\n    public val step: Int =
step\n\n    override fun iterator(): CharIterator = CharProgressionIterator(first, last, step)\n\n    /**\n     * Checks if
the progression is empty. \n     */\n    * Progression with a positive step
is empty if its first element is greater than the last element. \n     * Progression with a negative step is empty if its
first element is less than the last element. \n     */\n    public open fun isEmpty(): Boolean = if (step > 0) first > last
else first < last\n\n    override fun equals(other: Any?): Boolean =\n        other is CharProgression && (isEmpty()
&& other.isEmpty()) ||\n        first == other.first && last == other.last && step == other.step)\n\n    override fun
hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (31 * first.code + last.code) + step)\n\n    override fun toString():
String = if (step > 0) "$first..$last step $step" else "$first downTo $last step $(-step)"\n\n    companion object {\n
        /**\n         * Creates CharProgression within the specified bounds of a closed range. \n         */\n        * The
progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the
specified [step]. \n         */\n        * In order
to go backwards the [step] must be negative. \n         */\n        * [step] must be greater than `Int.MIN_VALUE` and
not equal to zero. \n         */\n        public fun fromClosedRange(rangeStart: Char, rangeEnd: Char, step: Int):
CharProgression = CharProgression(rangeStart, rangeEnd, step)\n    }\n}\n\n/**\n * A progression of values of type
`Int`. \n */\npublic open class IntProgression\n    internal constructor\n        (\n            start: Int,\n
endInclusive:
Int,\n            step: Int\n        ) : Iterable<Int> {\n    init {\n        if (step == 0) throw
kotlin.IllegalArgumentException("Step must be non-zero.")\n        if (step == Int.MIN_VALUE) throw
kotlin.IllegalArgumentException("Step must be greater than Int.MIN_VALUE to avoid overflow on negation.")\n
    }\n\n    /**\n     * The first element in the progression. \n     */\n    public val first: Int = start\n\n    /**\n     * The last
element in the progression. \n     */\n    public val last: Int = getProgressionLastElement(start,
endInclusive, step)\n\n    /**\n     * The step of the progression. \n     */\n    public val step: Int = step\n\n    override
fun iterator(): IntIterator = IntProgressionIterator(first, last, step)\n\n    /**\n     * Checks if the progression is

```

```

empty.\n * Progression with a positive step is empty if its first element is greater than the last element.\n
* Progression with a negative step is empty if its first element is less than the last element.\n */\n public open
fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n override fun equals(other: Any?): Boolean =\n
    other is IntProgression && (isEmpty() && other.isEmpty()) ||\n        first == other.first && last == other.last &&
step == other.step)\n\n override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (31 * first + last) +
step)\n\n override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step $-
step}\"\n\n
companion object {\n    /**\n        * Creates IntProgression within the specified bounds of a closed range.\n
*\n        * The progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it,
with the specified [step].\n        * In order to go backwards the [step] must be negative.\n        * [step] must
be greater than `Int.MIN_VALUE` and not equal to zero.\n        */\n        public fun fromClosedRange(rangeStart:
Int, rangeEnd: Int, step: Int): IntProgression = IntProgression(rangeStart, rangeEnd, step)\n    }\n\n    /**\n        * A
progression of values of type `Long`.\n        */\n    public open class LongProgression\n        internal constructor(\n
            start: Long,\n            endInclusive: Long,\n            step: Long\n        ): Iterable<Long> {\n        init {\n
            if (step ==
0L) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n            if (step == Long.MIN_VALUE)
throw kotlin.IllegalArgumentException(\"Step
must be greater than Long.MIN_VALUE to avoid overflow on negation.\")\n        }\n\n        /**\n            * The first element
in the progression.\n        */\n        public val first: Long = start\n\n        /**\n            * The last element in the progression.\n
        */\n        public val last: Long = getProgressionLastElement(start, endInclusive, step)\n\n        /**\n            * The step of the
progression.\n        */\n        public val step: Long = step\n\n        override fun iterator(): LongIterator =
LongProgressionIterator(first, last, step)\n\n        /**\n            * Checks if the progression is empty.\n            *
Progression with a positive step is empty if its first element is greater than the last element.\n            * Progression with a
negative step is empty if its first element is less than the last element.\n        */\n        public open fun isEmpty(): Boolean
= if (step > 0) first > last else first < last\n\n        override fun equals(other: Any?): Boolean =\n            other is
LongProgression && (isEmpty() && other.isEmpty())
||\n            first == other.first && last == other.last && step == other.step)\n\n        override fun hashCode(): Int =\n
            if (isEmpty()) -1 else (31 * (31 * (first xor (first ushr 32)) + (last xor (last ushr 32))) + (step xor (step ushr
32))).toInt()\n\n        override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last
step $-step}\"\n\n        companion object {\n            /**\n                * Creates LongProgression within the specified bounds of
a closed range.\n                *\n                * The progression starts with the [rangeStart] value and goes toward the [rangeEnd]
value not excluding it, with the specified [step].\n                * In order to go backwards the [step] must be negative.\n
                *\n                * [step] must be greater than `Long.MIN_VALUE` and not equal to zero.\n                */\n                public fun
fromClosedRange(rangeStart: Long, rangeEnd: Long, step: Long): LongProgression = LongProgression(rangeStart,
rangeEnd, step)\n            }\n        }\n\n        /**\n            * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
            * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
            */\n        }\n    }\n\n    /**\n        * Represents a range of values (for example, numbers or characters) where both the lower and
upper bounds are included in the range.\n        * See the [Kotlin language
documentation](https://kotlinlang.org/docs/reference/ranges.html) for more information.\n        */\n    public interface
ClosedRange<T : Comparable<T>> {\n        /**\n            * The minimum value in the range.\n            */\n        public val start:
T\n\n        /**\n            * The maximum value in the range (inclusive).\n            */\n        public val endInclusive: T\n\n        /**\n
            * Checks whether the specified [value] belongs to the range.\n            * A value belongs to the closed range if it is
greater than or equal to the [start] bound and less than or equal to the [endInclusive] bound.\n            */\n        public
operator
fun contains(value: T): Boolean = value >= start && value <= endInclusive\n\n        /**\n            * Checks whether the
range is empty.\n            * The range is empty if its start value is greater than the end value.\n            */\n        public fun
isEmpty(): Boolean = start > endInclusive\n    }\n\n    /**\n        * Represents a range of values (for example, numbers or
characters) where the upper bound is not included in the range.\n        * See the [Kotlin language

```

documentation](https://kotlinlang.org/docs/reference/ranges.html) for more information.\n

```

*^@SinceKotlin("1.7")^@ExperimentalStdlibApi^public interface OpenEndRange<T : Comparable<T>> {\n
/**\n
 * The minimum value in the range.\n
 *^ public val start: T\n
 /**\n
 * The maximum value in the range (exclusive).\n
 *^ \n
 * @throws IllegalStateException can be thrown if the exclusive end bound cannot be
represented\n
 * with a value of type [T].\n
 *^ public val endExclusive: T\n
 /**\n
 * Checks whether
the specified [value] belongs to the range.\n
 *^ \n
 * A value belongs to the open-ended range if it is greater than
or equal to the [start] bound and strictly less than the [endExclusive] bound.\n
 *^ public operator fun
contains(value: T): Boolean = value >= start && value < endExclusive\n
 /**\n
 * Checks whether the range is
empty.\n
 *^ \n
 * The open-ended range is empty if its start value is greater than or equal to the end value.\n
*^ public fun isEmpty(): Boolean = start >= endExclusive\n
}"/*\n
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Kotlin Programming Language contributors.\n
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can be found in the license/LICENSE.txt file.\n
*^ \n
^@file:kotlin.jvm.JvmMultifileClass^@file:kotlin.jvm.JvmName("RangesKt")^package
kotlin.ranges\n
/**\n
 * Represents a range of [Comparable] values.\n
 *^ private open class ComparableRange<T :
Comparable<T>>(\n
override val start: T,\n
override val endInclusive: T) : ClosedRange<T> {\n
override fun equals(other: Any?): Boolean {\n
return other is ComparableRange<*> && (isEmpty() && other.isEmpty() ||\n
start == other.start &&
endInclusive == other.endInclusive)\n
}\n
override fun hashCode(): Int {\n
return if (isEmpty()) -1 else 31
* start.hashCode() + endInclusive.hashCode()\n
}\n
override fun toString(): String =
"$start..$endInclusive"\n
}"/*\n
 * Creates a range from this [Comparable] value to the specified [that] value.\n
*^ \n
 * This value needs to be smaller than or equal to [that] value, otherwise the returned range will be empty.\n
 *
@sample samples.ranges.Ranges.rangeFromComparable\n
*^ public operator fun <T : Comparable<T>>
T.rangeTo(that: T): ClosedRange<T> = ComparableRange(this, that)\n
/**\n
 * Represents a range of [Comparable]
values.\n
 *^ @OptIn(ExperimentalStdlibApi::class)^ private open class ComparableOpenEndRange<T :
Comparable<T>>(\n
override val start: T,\n
override val endExclusive: T) : OpenEndRange<T> {\n
override fun equals(other:
Any?): Boolean {\n
return other is ComparableOpenEndRange<*> && (isEmpty() && other.isEmpty() ||\n
start == other.start && endExclusive == other.endExclusive)\n
}\n
override fun hashCode(): Int {\n
return if (isEmpty()) -1 else 31 * start.hashCode() + endExclusive.hashCode()\n
}\n
override fun toString():
String = "$start.<$endExclusive"\n
}"/*\n
 * Creates an open-ended range from this [Comparable] value to the
specified [that] value.\n
*^ \n
 * This value needs to be smaller than [that] value, otherwise the returned range will be
empty.\n
 *
@sample samples.ranges.Ranges.rangeFromComparable\n
*^ \n
^@SinceKotlin("1.7")^@ExperimentalStdlibApi^ public operator fun <T : Comparable<T>>
T.rangeUntil(that: T): OpenEndRange<T> = ComparableOpenEndRange(this, that)\n
/**\n
 * Represents a range
of floating point numbers.\n
 *
Extends
[ClosedRange] interface providing custom operation [lessThanOrEquals] for comparing values of range domain
type.\n
*^ \n
 * This interface is implemented by floating point ranges returned by [Float.rangeTo] and
[Double.rangeTo] operators to\n
 * achieve IEEE-754 comparison order instead of total order of floating point
numbers.\n
 *^ \n
^@SinceKotlin("1.1")^ public interface ClosedFloatingPointRange<T : Comparable<T>> :
ClosedRange<T> {\n
override fun contains(value: T): Boolean = lessThanOrEquals(start, value) &&
lessThanOrEquals(value, endInclusive)\n
override fun isEmpty(): Boolean = !lessThanOrEquals(start,
endInclusive)\n
 /**\n
 * Compares two values of range domain type and returns true if first is less than or
equal to second.\n
 *^ fun lessThanOrEquals(a: T, b: T): Boolean\n
}"/*\n
 * A closed range of values of
type `Double`.\n
*^ \n
 * Numbers are compared with the ends of this range according to IEEE-754.\n
 *^ private class
ClosedDoubleRange(\n
start:
Double,\n
endInclusive: Double) : ClosedFloatingPointRange<Double> {\n
private val _start = start\n
private val _endInclusive = endInclusive\n
override val start: Double get() = _start\n
override val endInclusive:
Double get() = _endInclusive\n
override fun lessThanOrEquals(a: Double, b: Double): Boolean = a <= b\n
}

```

```

override fun contains(value: Double): Boolean = value >= _start && value <= _endInclusive\n  override fun
isEmpty(): Boolean = !(_start <= _endInclusive)\n\n  override fun equals(other: Any?): Boolean {\n    return
other is ClosedDoubleRange && (isEmpty() && other.isEmpty()) ||\n      _start == other._start &&
_endInclusive == other._endInclusive)\n  }\n\n  override fun hashCode(): Int {\n    return if (isEmpty()) -1 else
31 * _start.hashCode() + _endInclusive.hashCode()\n  }\n\n  override fun toString(): String =
\"$_start..$_endInclusive\"\n}\n\n/**\n * Creates a range from this [Double] value to the specified [that]
value.\n * Numbers are compared with the ends of this range according to IEEE-754.\n * @sample
samples.ranges.Ranges.rangeFromDouble\n * \n @SinceKotlin("1.1")\n\npublic operator fun Double.rangeTo(that:
Double): ClosedFloatingPointRange<Double> = ClosedDoubleRange(this, that)\n\n/**\n * An open-ended range of
values of type `Double`.\n * Numbers are compared with the ends of this range according to IEEE-754.\n
* \n @OptIn(ExperimentalStdlibApi::class)\n\nprivate class OpenEndDoubleRange(\n  start: Double,\n  endExclusive: Double\n) : OpenEndRange<Double> {\n  private val _start = start\n  private val _endExclusive =
endExclusive\n  override val start: Double get() = _start\n  override val endExclusive: Double get() =
_endExclusive\n\n  private fun lessThanOrEquals(a: Double, b: Double): Boolean = a <= b\n\n  override fun
contains(value: Double): Boolean = value >= _start && value < _endExclusive\n  override fun isEmpty(): Boolean
= !(_start < _endExclusive)\n\n  override fun equals(other: Any?): Boolean {\n    return other is OpenEndDoubleRange && (isEmpty() &&
other.isEmpty()) ||\n      _start == other._start && _endExclusive == other._endExclusive)\n  }\n\n  override
fun hashCode(): Int {\n    return if (isEmpty()) -1 else 31 * _start.hashCode() + _endExclusive.hashCode()\n  }\n\n  override fun toString(): String = \"$_start..$_endExclusive\"\n}\n\n/**\n * Creates an open-ended range
from this [Double] value to the specified [that] value.\n * Numbers are compared with the ends of this range
according to IEEE-754.\n * \n @SinceKotlin("1.7")\n\n @ExperimentalStdlibApi\n\npublic operator fun
Double.rangeUntil(that: Double): OpenEndRange<Double> = OpenEndDoubleRange(this, that)\n\n\n/**\n * A
closed range of values of type `Float`.\n * Numbers are compared with the ends of this range according to IEEE-
754.\n * \n\nprivate class ClosedFloatRange(\n  start: Float,\n  endInclusive: Float\n) :
ClosedFloatingPointRange<Float> {\n  private val _start = start\n  private val _endInclusive = endInclusive\n  override val start: Float get() =
_start\n  override val endInclusive: Float get() = _endInclusive\n\n  override fun lessThanOrEquals(a: Float, b:
Float): Boolean = a <= b\n\n  override fun contains(value: Float): Boolean = value >= _start && value <=
_endInclusive\n  override fun isEmpty(): Boolean = !(_start <= _endInclusive)\n\n  override fun equals(other:
Any?): Boolean {\n    return other is ClosedFloatRange && (isEmpty() && other.isEmpty()) ||\n      _start
== other._start && _endInclusive == other._endInclusive)\n  }\n\n  override fun hashCode(): Int {\n    return if
(isEmpty()) -1 else 31 * _start.hashCode() + _endInclusive.hashCode()\n  }\n\n  override fun toString(): String =
\"$_start..$_endInclusive\"\n}\n\n/**\n * Creates a range from this [Float] value to the specified [that] value.\n * Numbers are compared with the ends of this range according
to IEEE-754.\n * @sample samples.ranges.Ranges.rangeFromFloat\n * \n @SinceKotlin("1.1")\n\npublic operator
fun Float.rangeTo(that: Float): ClosedFloatingPointRange<Float> = ClosedFloatRange(this, that)\n\n\n/**\n * An
open-ended range of values of type `Float`.\n * Numbers are compared with the ends of this range according to
IEEE-754.\n * \n @OptIn(ExperimentalStdlibApi::class)\n\nprivate class OpenEndFloatRange(\n  start: Float,\n  endExclusive: Float\n) : OpenEndRange<Float> {\n  private val _start = start\n  private val _endExclusive =
endExclusive\n  override val start: Float get() = _start\n  override val endExclusive: Float get() =
_endExclusive\n\n  private fun lessThanOrEquals(a: Float, b: Float): Boolean = a <= b\n\n  override fun
contains(value: Float): Boolean = value >= _start && value < _endExclusive\n  override fun isEmpty(): Boolean =
!(_start < _endExclusive)\n\n  override fun equals(other: Any?): Boolean {\n    return other is
OpenEndFloatRange
&& (isEmpty() && other.isEmpty()) ||\n      _start == other._start && _endExclusive ==
other._endExclusive)\n  }\n\n  override fun hashCode(): Int {\n    return if (isEmpty()) -1 else 31 *
_start.hashCode() + _endExclusive.hashCode()\n  }\n\n  override fun toString(): String =

```

```

\ "$_start..<$_endExclusive\`\n}\n\n/**\n * Creates an open-ended range from this [Float] value to the specified
[that] value.\n *\n * Numbers are compared with the ends of this range according to IEEE-754.\n
*\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\npublic operator fun Float.rangeUntil(that: Float):
OpenEndRange<Float> = OpenEndFloatRange(this, that)\n\n/**\n * Returns `true` if this iterable range contains
the specified [element].\n *\n * Always returns `false` if the [element] is `null`.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline operator fun <T, R> R.contains(element: T?):
Boolean where T : Any, R : ClosedRange<T>, R : Iterable<T> =\n element
!= null && contains(element)\n\n/**\n * Returns `true` if this iterable range contains the specified [element].\n *\n
* Always returns `false` if the [element] is `null`.\n
*\n@SinceKotlin("1.7")\n@ExperimentalStdlibApi\n@kotlin.internal.InlineOnly\npublic inline operator fun <T,
R> R.contains(element: T?): Boolean where T : Any, R : OpenEndRange<T>, R : Iterable<T> =\n element != null
&& contains(element)\n\ninternal fun checkStepIsPositive(isPositive: Boolean, step: Number) {\n if (!isPositive)
throw IllegalArgumentException("Step must be positive, was: $step.")\n}\n\n/*\n * Copyright 2010-2019
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmName("KClasses")\n@file:Suppress("UNCHECKED_CAST")\n\npackage
kotlin.reflect\n\nimport kotlin.internal.LowPriorityInOverloadResolution\n\n/**\n * Casts the given [value]
to the class represented by this [KClass] object.\n * Throws an exception if the value is `null` or if it is not an
instance of this class.\n *\n * This is an experimental function that behaves as a similar function from
kotlin.reflect.full on JVM.\n *\n * @see [KClass.isInstance]\n * @see [KClass.safeCast]\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@LowPriorityInOverloadResoluti
on\nfun <T : Any> KClass<T>.cast(value: Any?): T {\n if (!isInstance(value)) throw ClassCastException("Value
cannot be cast to $qualifiedOrSimpleName")\n return value as T\n}\n\n// TODO: replace with qualifiedName
when it is fully supported in K/JS\n\ninternal expect val KClass<*>.qualifiedOrSimpleName: String?\n\n/**\n * Casts
the given [value] to the class represented by this [KClass] object.\n * Returns `null` if the value is `null` or if it is not
an instance of this class.\n *\n * This is an experimental function that behaves as a similar function from
kotlin.reflect.full
on JVM.\n *\n * @see [KClass.isInstance]\n * @see [KClass.cast]\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@LowPriorityInOverloadResoluti
on\nfun <T : Any> KClass<T>.safeCast(value: Any?): T? {\n return if (isInstance(value)) value as T else
null\n}\n\n/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin.reflect\n\nimport kotlin.jvm.JvmField\nimport kotlin.jvm.JvmStatic\n\n/**\n * Represents
a type projection. Type projection is usually the argument to another type in a type usage.\n * For example, in the
type `Array<out Number>`, `out Number` is the covariant projection of the type represented by the class
`Number`.\n *\n * Type projection is either the star projection, or an entity consisting of a specific type plus optional
variance.\n *\n * See the [Kotlin
language documentation](https://kotlinlang.org/docs/reference/generics.html#type-projections)\n * for more
information.\n *\n@SinceKotlin("1.1")\npublic data class KTypeProjection constructor(\n /**\n * The use-
site variance specified in the projection, or `null` if this is a star projection.\n *
*\n public val variance:
KVariance?,\n /**\n * The type specified in the projection, or `null` if this is a star projection.\n *
*\n public
val type: KType? ) {\n\n init {\n require((variance == null) == (type == null)) {\n if (variance ==
null)\n "\n * Star projection must have no type specified.\n"
else\n "\n * The projection variance
$variance requires type to be specified.\n"
}\n }\n\n override fun toString(): String = when (variance) {\n
null -> "\n * KTypeProjection\n"
KVariance.INVARIANT -> type.toString()\n KVariance.IN -> "in $type"\n
KVariance.OUT -> "out $type"\n }\n\n
public companion object {\n // provided for compiler access\n @JvmField\n @PublishedApi\n
internal val star: KTypeProjection = KTypeProjection(null, null)\n\n /**\n * Star projection, denoted by the

```

```

`*` character.\n      * For example, in the type `KClass<*>`, `*` is the star projection.\n      * See the [Kotlin
language documentation](https://kotlinlang.org/docs/reference/generics.html#star-projections)\n      * for more
information.\n      */\n      public val STAR: KTypeProjection get() = star\n\n      /**\n      * Creates an
invariant projection of a given type. Invariant projection is just the type itself,\n      * without any use-site variance
modifiers applied to it.\n      * For example, in the type `Set<String>`, `String` is an invariant projection of the type
represented by the class `String`.\n      */\n      @JvmStatic\n      public fun invariant(type: KType):
KTypeProjection =\n      KTypeProjection(KVariance.INVARIANT,
type)\n\n      /**\n      * Creates a contravariant projection of a given type, denoted by the `in` modifier applied to
a type.\n      * For example, in the type `MutableList<in Number>`, `in Number` is a contravariant projection of
the type of class `Number`.\n      */\n      @JvmStatic\n      public fun contravariant(type: KType):
KTypeProjection =\n      KTypeProjection(KVariance.IN, type)\n\n      /**\n      * Creates a covariant
projection of a given type, denoted by the `out` modifier applied to a type.\n      * For example, in the type
`Array<out Number>`, `out Number` is a covariant projection of the type of class `Number`.\n      */\n      @JvmStatic\n      public fun covariant(type: KType): KTypeProjection =\n      KTypeProjection(KVariance.OUT, type)\n  }\n}"/\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache
2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.reflect\n\n/**\n * Represents
variance applied to a type parameter on the declaration site (*declaration-site variance*),\n * or to a type in a
projection (*use-site variance*).\n */\n * See the [Kotlin language
documentation](https://kotlinlang.org/docs/reference/generics.html#variance)\n * for more information.\n */\n *
@see [KTypeParameter.variance]\n * @see [KTypeProjection]\n */\n@SinceKotlin("1.1")\nenum class KVariance
{\n  /**\n  * The affected type parameter or type is *invariant*, which means it has no variance applied to it.\n
*/\n  INVARIANT,\n\n  /**\n  * The affected type parameter or type is *contravariant*. Denoted by the `in`
modifier in the source code.\n  */\n  IN,\n\n  /**\n  * The affected type parameter or type is *covariant*.
Denoted by the `out` modifier in the source code.\n  */\n  OUT,\n}"/\n * Copyright 2010-2019 JetBrains s.r.o.
and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin.reflect\n\n/**\n * Returns a runtime representation of
the given reified type [T] as an instance of [KType].\n */\n * Note that on JVM, the created type has no annotations
([KType.annotations] returns an empty list)\n * even if the type in the source code is annotated. Support for type
annotations might be added in a future version.\n */\n\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <reified T>
typeOf(): KType =\n  throw UnsupportedOperationException("This function is implemented as an intrinsic on all
supported platforms.")\n"/\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
kotlin.text\n\n/**\n * An object to which char sequences and values can be appended.\n */\n\nexpect interface
Appendable {\n  /**\n  * Appends the specified character [value] to this Appendable and returns this instance.\n
*/\n  * @param value the character to append.\n  */\n  fun append(value: Char): Appendable\n\n  /**\n  *
Appends the specified character sequence [value] to this Appendable and returns this instance.\n  */\n  * @param
value the character sequence to append. If [value] is `null`, then the four characters `\\null` are appended to this
Appendable.\n  */\n  fun append(value: CharSequence?): Appendable\n\n  /**\n  * Appends a subsequence of
the specified character sequence [value] to this Appendable and returns this instance.\n  */\n  * @param value the
character sequence from which a subsequence is appended. If [value] is `null`,\n  * then characters are appended
as
if [value] contained the four characters `\\null`.\n  * @param startIndex the beginning (inclusive) of the
subsequence to append.\n  * @param endIndex the end (exclusive) of the subsequence to append.\n  */\n  *

```

@throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.  
fun append(value: CharSequence?, startIndex: Int, endIndex: Int): Appendable  
Appends a subsequence of the specified character sequence [value] to this Appendable and returns this instance.  
@param value the character sequence from which a subsequence is appended.  
@param startIndex the beginning (inclusive) of the subsequence to append.  
@param endIndex the end (exclusive) of the subsequence to append.  
@throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character

sequence indices or when `startIndex > endIndex`.

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <T : Appendable>
```

```
T.appendRange(value: CharSequence, startIndex: Int, endIndex: Int): T {\n
```

```
@Suppress("UNCHECKED_CAST")\n    return append(value, startIndex, endIndex) as T\n}\n/**\n * Appends all arguments to the given [Appendable].\n */\npublic fun <T : Appendable> T.append(vararg value:
```

```
CharSequence?): T {\n    for (item in value)\n        append(item)\n    return this\n}\n/**\n * Appends a line feed
```

```
character (`\n`) to this Appendable. *\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
Appendable.appendLine(): Appendable = append("\n")\n/**\n * Appends value to the given Appendable and a line
```

```
feed character (`\n`) after it. *\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
Appendable.appendLine(value: CharSequence?): Appendable = append(value).appendLine()\n/**\n * Appends value
```

```
to the given Appendable and a line feed character (`\n`) after it. *\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun Appendable.appendLine(value: Char):
```

```
Appendable = append(value).appendLine()\n\ninternal fun <T> Appendable.appendElement(element: T,
```

```
transform: ((T) -> CharSequence)?) {\n    when {\n        transform != null -> append(transform(element))\n        element is CharSequence -> append(element)\n        element is Char -> append(element)\n        else ->
```

```
append(element.toString())\n    }\n}\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
```

```
license/LICENSE.txt file.\n\n*\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
```

```
kotlin.text\n/**\n * Trims leading whitespace characters followed by [marginPrefix] from every line of a source
```

```
string and removes the first and the last lines if they are blank (notice difference blank vs empty).  
*\n * Doesn't affect a line if it doesn't contain [marginPrefix] except
```

```
the first and the last blank lines.  
*\n * Doesn't preserve the original line endings.  
*\n * @param marginPrefix non-blank string, which is used as a margin delimiter. Default is `|` (pipe character).  
*\n * @sample
```

```
samples.text.Strings.trimMargin\n * @see trimIndent\n * @see kotlin.text.isWhitespace\n\n*\n@kotlin.internal.IntrinsicConstEvaluation\npublic fun String.trimMargin(marginPrefix: String = "|"): String
```

```
=\n    replaceIndentByMargin("|", marginPrefix)\n\n/**\n * Detects indent by [marginPrefix] as it does [trimMargin] and replace it with [newIndent].  
*\n * @param marginPrefix non-blank string, which is used as a
```

```
margin delimiter. Default is `|` (pipe character).  
*\npublic fun String.replaceIndentByMargin(newIndent: String = "|", marginPrefix: String = "|"): String {\n    require(marginPrefix.isNotBlank()) { "marginPrefix must be non-
```

```
blank string.\n\n    }\n    val lines = lines()\n    return lines.reindent(length + newIndent.length * lines.size,
```

```
getIndentFunction(newIndent), { line ->\n        val firstNonWhitespaceIndex = line.indexOfFirst { !it.isWhitespace() }\n    }\n    when {\n        firstNonWhitespaceIndex == -1 -> null\n        line.startsWith(marginPrefix,
```

```
firstNonWhitespaceIndex) -> line.substring(firstNonWhitespaceIndex + marginPrefix.length)\n        else -> null\n    }\n})\n}\n/**\n * Detects a common minimal indent of all the input lines, removes it from every line and
```

```
also removes the first and the last lines if they are blank (notice difference blank vs empty).  
*\n * Note that blank lines do not affect the detected indent level.  
*\n * In case if there are non-blank lines with no leading whitespace characters (no indent at all) then the common indent is 0, and therefore this function doesn't change
```



```

the indentation.\n *\n * Doesn't preserve the original line endings.\n *\n * @sample
samples.text.Strings.trimIndent\n * @see trimMargin\n * @see kotlin.text.isBlank\n
*\n@kotlin.internal.IntrinsicConstEvaluation\npublic fun String.trimIndent(): String = replaceIndent("\\n")\n\n**\n
* Detects a common minimal indent like it does [trimIndent] and replaces it with the specified [newIndent].\n
*\npublic fun String.replaceIndent(newIndent: String = "\\n"): String {\n    val lines = lines()\n    val
minCommonIndent = lines\n        .filter(String::isNotBlank)\n        .map(String::indentWidth)\n        .minOrNull() ?:
0\n    return lines.reindent(length + newIndent.length * lines.size, getIndentFunction(newIndent), { line ->
line.drop(minCommonIndent) })\n}\n\n**\n
* Prepends [indent] to every line of the original string.\n *\n * Doesn't
preserve the original line endings.\n *\npublic fun String.prependIndent(indent: String = "  "): String =\nlineSequence()\n    .map {\n        when {\n            it.isBlank() -> {\n                when {\n
                    it.length < indent.length -> indent\n                        else -> it\n                }\n            }\n        }\n    }.joinToString("\\n")\n\nprivate fun String.indentWidth(): Int =
indexOfFirst { !it.isWhitespace() }.let { if (it == -1) length else it }\n\nprivate fun getIndentFunction(indent: String)
= when {\n    indent.isEmpty() -> { line: String -> line }\n    else -> { line: String -> indent + line }\n}\n\nprivate
inline fun List<String>.reindent(\n    resultSizeEstimate: Int,\n    indentAddFunction: (String) -> String,\n    indentCutFunction: (String) -> String?): String {\n    val lastIndex = lastIndex\n    return mapIndexedNotNull {
index, value ->\n        if ((index == 0 || index == lastIndex) && value.isBlank())\n            null\n        else\n            indentCutFunction(value)?.let(indentAddFunction) ?: value\n    }\n    .joinTo(StringBuilder(resultSizeEstimate),
"\\n")\n}

```

```

.toString()\n}\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n**\n
* Defines names for Unicode symbols used in proper
Typography.\n *\npublic object Typography {\n    /** The character &#x22; \u2013 quotation mark *\n    public
const val quote: Char = "\u0022\n    /** The character &#x24; \u2013 dollar sign *\n    public const val dollar:
Char = "\u0024\n    /** The character &#x26; \u2013 ampersand *\n    public const val amp: Char = "\u0026\n
/** The character &#x3C; \u2013 less-than sign *\n    public const val less: Char = "\u003C\n    /** The character
&#x3E; \u2013 greater-than sign *\n    public const val greater: Char = "\u003E\n    /** The non-breaking space
character *\n    public const val nbsp: Char = "\u00A0\n    /** The character &#xD7; *\n    public
const val times: Char = "\u00D7\n    /** The character &#xA2; *\n    public const val cent: Char = "\u00A2\n
/** The character &#xA3; *\n    public const val pound: Char = "\u00A3\n    /** The character &#xA7; *\n
public const val section: Char = "\u00A7\n    /** The character &#xA9; *\n    public const val copyright: Char =
"\u00A9\n    /** The character &#xAB; *\n    @SinceKotlin("1.6")\n    public const val leftGuillemet: Char =
"\u00AB\n    /** The character &#xBB; *\n    @SinceKotlin("1.6")\n    public const val rightGuillemet: Char =
"\u00BB\n    /** The character &#xAE; *\n    public const val registered: Char = "\u00AE\n    /** The character
&#xB0; *\n    public const val degree: Char = "\u00B0\n    /** The character &#xB1; *\n    public const val
plusMinus: Char = "\u00B1\n    /** The character &#xB6; *\n    public const val paragraph: Char = "\u00B6\n
/** The character &#xB7; *\n    public const val middleDot: Char = "\u00B7\n
/** The character &#xBD; *\n    public const val half: Char = "\u00BD\n    /** The character &#x2013; *\n
public const val ndash: Char = "\u2013\n    /** The character &#x2014; *\n    public const val mdash: Char =
"\u2014\n    /** The character &#x2018; *\n    public const val leftSingleQuote: Char = "\u2018\n    /** The
character &#x2019; *\n    public const val rightSingleQuote: Char = "\u2019\n    /** The character &#x201A; *\n
public const val lowSingleQuote: Char = "\u201A\n    /** The character &#x201C; *\n    public const val
leftDoubleQuote: Char = "\u201C\n    /** The character &#x201D; *\n    public const val rightDoubleQuote: Char
= "\u201D\n    /** The character &#x201E; *\n    public const val lowDoubleQuote: Char = "\u201E\n    /** The
character &#x2020; *\n    public const val dagger: Char = "\u2020\n    /** The character &#x2021; *\n    public
const val doubleDagger: Char = "\u2021\n    /** The character &#x2022; *\n    public
const val bullet: Char = "\u2022\n    /** The character &#x2026; *\n    public const val ellipsis: Char = "\u2026\n
/** The character &#x2032; *\n    public const val prime: Char = "\u2032\n    /** The character &#x2033; *\n

```

```

public const val doublePrime: Char = "\u2033" /** The character &#x20AC; */ public const val euro: Char =
"\u20AC" /** The character &#x2122; */ public const val tm: Char = "\u2122" /** The character
&#x2248; */ public const val almostEqual: Char = "\u2248" /** The character &#x2260; */ public const
val notEqual: Char = "\u2260" /** The character &#x2264; */ public const val lessOrEqual: Char =
"\u2264" /** The character &#x2265; */ public const val greaterOrEqual: Char = "\u2265" /** The
character &#xAB; */ @Deprecated("This constant has a typo in the name. Use leftGuillemet instead.",
ReplaceWith("Typography.leftGuillemet")) @DeprecatedSinceKotlin("1.6")
    public const val leftGuillemete: Char = "\u00AB" /** The character &#xBB; */ @Deprecated("This
constant has a typo in the name. Use rightGuillemet instead.", ReplaceWith("Typography.rightGuillemet"))
@DeprecatedSinceKotlin("1.6") public const val rightGuillemete: Char = "\u00BB" /** */
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by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
*/
* Represents a collection of captured groups in a single match of a regular expression.
* This collection has size
of `groupCount + 1` where `groupCount` is the count of groups in the regular expression.
* Groups are indexed
from 1 to `groupCount` and group with the index 0 corresponds to the entire match.
* An element of the
collection at the particular index can be `null` if the corresponding group in the regular
expression is optional and there was no match captured by that group.
public interface
MatchGroupCollection : Collection<MatchGroup?> {
    /** Returns a group with the specified [index].
    * @return An instance of [MatchGroup] if the group with the specified [index] was matched or `null` otherwise.
    * Groups are indexed from 1 to the count of groups in the regular expression. A group with the index 0
    corresponds to the entire match.
    */
    public operator fun get(index: Int): MatchGroup?
}
* Extends
[MatchGroupCollection] by introducing a way to get matched groups by name, when regex supports it.
@SinceKotlin("1.1")
public interface MatchNamedGroupCollection : MatchGroupCollection {
    /**
    Returns a named group with the specified [name].
    * @return An instance of [MatchGroup] if the group with the
    specified [name] was matched or `null` otherwise.
    * @throws IllegalArgumentException if there is
    no group with the specified [name] defined in the regex pattern.
    * @throws UnsupportedOperationException if
    this match group collection doesn't support getting match groups by name,
    for example, when it's not
    supported by the current platform.
    */
    public operator fun get(name: String): MatchGroup?
}
* Represents the results from a single regular expression match.
public interface MatchResult {
    /** The
    range of indices in the original string where match was captured.
    */
    public val range: IntRange
    /** The
    substring from the input string captured by this match.
    */
    public val value: String
}
* A collection of
groups matched by the regular expression.
* This collection has size of `groupCount + 1` where
`groupCount` is the count of groups in the regular expression.
* Groups are indexed from 1 to `groupCount` and
group with the index 0 corresponds to the entire match.
public val groups:
MatchGroupCollection
/** A list of matched indexed group values.
* This list has size of
`groupCount + 1` where `groupCount` is the count of groups in the regular expression.
* Groups are indexed
from 1 to `groupCount` and group with the index 0 corresponds to the entire match.
* If the group in the
regular expression is optional and there were no match captured by that group,
corresponding item in
[groupValues] is an empty string.
* @sample
samples.text.Regexps.matchDestructuringToGroupValues
*/
public val groupValues: List<String>
/** An instance of [MatchResult.Destructured] wrapper providing components for destructuring assignment
of group values.
* component1 corresponds to the value of the first group, component2 of the
second, and so on.
* @sample samples.text.Regexps.matchDestructuringToGroupValues
*/
public val destructured: Destructured
get() = Destructured(this)
/** Returns a new [MatchResult] with the results for the next match, starting at the
position
* at which the last match ended (at the character after the last matched character).
*/
public fun
next(): MatchResult
/** Provides components for destructuring assignment of group values.
* [component1] corresponds to the value of the first group, [component2] of the second, and so on.
*/

```

```

* If the group in the regular expression is optional and there were no match captured by that group,
corresponding component value is an empty string.
 *
 * @sample
samples.text.Regexps.matchDestructuringToGroupValues
 *
 public class Destructured internal
constructor(public val match: MatchResult) {
 @kotlin.internal.InlineOnly
 public operator inline fun
component1(): String = match.groupValues[1]
 @kotlin.internal.InlineOnly
 public operator inline
fun component2(): String = match.groupValues[2]
 @kotlin.internal.InlineOnly
 public operator inline
fun component3(): String = match.groupValues[3]
 @kotlin.internal.InlineOnly
 public operator inline
fun component4(): String = match.groupValues[4]
 @kotlin.internal.InlineOnly
 public operator inline
fun component5(): String = match.groupValues[5]
 @kotlin.internal.InlineOnly
 public operator inline
fun component6(): String = match.groupValues[6]
 @kotlin.internal.InlineOnly
 public operator inline
fun component7(): String = match.groupValues[7]
 @kotlin.internal.InlineOnly
 public operator inline
fun component8(): String = match.groupValues[8]
 @kotlin.internal.InlineOnly
 public operator inline
fun component9(): String = match.groupValues[9]
 @kotlin.internal.InlineOnly
 public operator inline
fun component10(): String = match.groupValues[10]
}

/**
 * Returns destructured group values as a list of strings.
 * First value in the returned list
corresponds to the value of the first group, and so on.
 *
 * @sample
samples.text.Regexps.matchDestructuringToGroupValues
 *
 public fun toList(): List<String> =
match.groupValues.subList(1, match.groupValues.size)
}
}
*/
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Kotlin Programming Language contributors.
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can be found in the license/LICENSE.txt file.
}

@file:kotlin.jvm.JvmMultifileClass()
@file:kotlin.jvm.JvmName("DurationUnitKt")
package
kotlin.time
 *
 * The list of possible time measurement units, in which a duration can be expressed.
 *
 * The smallest time unit is [NANOSECONDS] and the largest is [DAYS], which corresponds to exactly 24
[HOURLS].
 *
 * @SinceKotlin("1.6")
 * @WasExperimental(ExperimentalTime::class)
public
expect enum class DurationUnit {
 /**
 * Time unit representing one nanosecond, which is 1/1000 of a
microsecond.
 */
 NANOSECONDS,
 /**
 * Time unit representing one microsecond, which is 1/1000
of a millisecond.
 */
 MICROSECONDS,
 /**
 * Time unit representing one millisecond, which is
1/1000 of a second.
 */
 MILLISECONDS,
 /**
 * Time unit representing one second.
 */
 SECONDS,
 /**
 * Time unit representing one minute.
 */
 MINUTES,
 /**
 * Time unit
representing one hour.
 */
 HOURS,
 /**
 * Time unit representing one day, which is always equal to
24 hours.
 */
 DAYS;
}
}
}
/** Converts the given time duration [value] expressed in the specified
[sourceUnit] into the specified [targetUnit].
 *
 * @SinceKotlin("1.3")
 */
internal expect fun
convertDurationUnit(value: Double, sourceUnit: DurationUnit, targetUnit: DurationUnit): Double
// overflown
result
is unspecified
 *
 * @SinceKotlin("1.5")
 */
internal expect fun convertDurationUnitOverflow(value: Long, sourceUnit:
DurationUnit, targetUnit: DurationUnit): Long
// overflown result is coerced in the Long range
boundaries
 *
 * @SinceKotlin("1.5")
 */
internal expect fun convertDurationUnit(value: Long, sourceUnit:
DurationUnit, targetUnit: DurationUnit):
Long
}
}
 *
 * @SinceKotlin("1.3")
 * @Suppress("REDUNDANT_ELSE_IN_WHEN")
 */
internal fun
DurationUnit.shortName(): String = when (this) {
 DurationUnit.NANOSECONDS -> "ns"
 DurationUnit.MICROSECONDS -> "us"
 DurationUnit.MILLISECONDS -> "ms"
 DurationUnit.SECONDS -> "s"
 DurationUnit.MINUTES -> "m"
 DurationUnit.HOURS -> "h"
 DurationUnit.DAYS -> "d"
 else -> error("Unknown unit: $this")
}
}
 *
 * @SinceKotlin("1.5")
 */
internal fun
durationUnitByShortName(shortName: String): DurationUnit = when (shortName) {
 "ns" ->
DurationUnit.NANOSECONDS
 "us" -> DurationUnit.MICROSECONDS
 "ms" -> DurationUnit.MILLISECONDS
 "s" -> DurationUnit.SECONDS
 "m" -> DurationUnit.MINUTES
 "h" -> DurationUnit.HOURS
 "d" -> DurationUnit.DAYS
 else -> throw
IllegalArgumentExcepion("Unknown duration unit short name:

```

```

$shortName`)
}
}
@SinceKotlin("1.5")
internal fun durationUnitByIsoChar(isoChar: Char,
isTimeComponent: Boolean): DurationUnit =
    when {
        !isTimeComponent -> {
            when (isoChar) {
                'D' -> DurationUnit.DAYS
                else -> throw IllegalArgumentException("Invalid or
unsupported duration ISO non-time unit: $isoChar")
            }
        }
        else -> {
            when (isoChar) {
                'H' -> DurationUnit.HOURS
                'M' -> DurationUnit.MINUTES
                'S' ->
DurationUnit.SECONDS
                else -> throw IllegalArgumentException("Invalid duration ISO time unit:
$isoChar")
            }
        }
    }, "/*
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and Kotlin Programming Language contributors.
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that can be found in the license/LICENSE.txt file.
 */
package kotlin.time
import
kotlin.annotation.AnnotationTarget./*
 */
 * This annotation marks the experimental preview of the standard
library API for measuring time and working with durations.
 *
 * > Note that this API is in a preview state and has
a very high chance of being changed in the future.
 * Do not use it if you develop a library since your library will
become binary incompatible
 * with the future versions of the standard library.
 *
 * Any usage of a declaration
annotated with `@ExperimentalTime` must be accepted either by
 * annotating that usage with the [OptIn]
annotation, e.g. `@OptIn(ExperimentalTime::class)`,
 * or by using the compiler argument `-opt-
in=kotlin.time.ExperimentalTime`.
 */
@RequiresOptIn(level =
RequiresOptIn.Level.ERROR)
@MustBeDocumented
@Retention(AnnotationRetention.BINARY)
@Target(
    CLASS,
    ANNOTATION_CLASS,
    PROPERTY,
    FIELD,
    LOCAL_VARIABLE,
    VALUE_PARAMETER,
    CONSTRUCTOR,
    FUNCTION,
    PROPERTY_GETTER,
    PROPERTY_SETTER,
    TYPEALIAS)
@SinceKotlin("1.3")
public annotation class
ExperimentalTime
/*
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license/LICENSE.txt file.
 */
package kotlin.time
import kotlin.jvm.JvmInline
/*
 */
 * A source of time
for measuring time intervals.
 *
 * The only operation provided by the time source is [markNow]. It returns a
[TimeMark], which can be used to query the elapsed time later.
 *
 * @see [measureTime]
 * @see
[measureTimedValue]
 */
@SinceKotlin("1.3")
@ExperimentalTime
public interface TimeSource {
    /*
 */
 * Marks a point in time on this time source.
 *
 * The returned [TimeMark]
instance encapsulates the captured time point and allows querying
 * the duration of time interval
[elapsed][TimeMark.elapsedNow] from that point.
 *
 */
    public fun markNow(): TimeMark
/*
 */
 * A
[TimeSource] that returns [time marks][ComparableTimeMark] that can be compared for difference with each
other.
 *
 */
    @SinceKotlin("1.8")
    @ExperimentalTime
    public interface WithComparableMarks :
TimeSource {
        override fun markNow(): ComparableTimeMark
    }
/*
 */
 * The most precise time
source available in the platform.
 *
 * This time source returns its readings from a source of monotonic time
when it is available in a target platform,
 * and resorts to a non-monotonic time source otherwise.
 *
 *
The function [markNow] of this time source returns the specialized [ValueTimeMark] that is an inline value class
 * wrapping a platform-dependent time reading value.
 *
 */
    public object Monotonic :
TimeSource.WithComparableMarks
{
    override fun markNow(): ValueTimeMark = MonotonicTimeSource.markNow()
    override fun
toString(): String = MonotonicTimeSource.toString()
/*
 */
 * A specialized [kotlin.time.TimeMark]
returned by [TimeSource.Monotonic] time source.
 *
 * This time mark is implemented as an inline
value class wrapping a platform-dependent
 * time reading value of the default monotonic time source, thus
allowing to avoid additional boxing
 * of that value.
 *
 * The operations [plus] and [minus] are
also specialized to return [ValueTimeMark] type.
 *
 * This time mark implements
[ComparableTimeMark] and therefore is comparable with other time marks
 * obtained from the same
[TimeSource.Monotonic] time source.
 */
    @ExperimentalTime
    @SinceKotlin("1.7")
    @JvmInline
    public value class ValueTimeMark internal constructor(internal
val reading: ValueTimeMarkReading) : ComparableTimeMark {
        override fun elapsedNow(): Duration =
MonotonicTimeSource.elapsedFrom(this)
        override fun plus(duration: Duration): ValueTimeMark =

```

```

MonotonicTimeSource.adjustReading(this, duration)\n        override fun minus(duration: Duration):
ValueTimeMark = MonotonicTimeSource.adjustReading(this, -duration)\n        override fun hasPassedNow():
Boolean = !elapsedNow().isNegative()\n        override fun hasNotPassedNow(): Boolean =
elapsedNow().isNegative()\n        override fun minus(other: ComparableTimeMark): Duration {\n            if
(other !is ValueTimeMark)\n                throw IllegalArgumentException("\Subtracting or comparing time marks
from different time sources is not possible: $this and $other")\n            return this.minus(other)\n        }\n
/**\n     * Returns the duration elapsed between the [other] time mark obtained from the same
[TimeSource.Monotonic] time source and `this` time mark.\n     *\n     * The returned duration can be
infinite if the time marks are far away from each other and\n     * the result doesn't fit into [Duration] type,\n     * or if one time mark is infinitely distant, or if both `this` and [other] time marks\n     * lie infinitely distant
on the opposite sides of the time scale.\n     *\n     * Two infinitely distant time marks on the same side of
the time scale are considered equal and\n     * the duration between them is [Duration.ZERO].\n     */\n
    public operator fun minus(other: ValueTimeMark): Duration = MonotonicTimeSource.differenceBetween(this,
other)\n
    /**\n     * Compares this time mark with the [other] time mark for order.\n     *\n     * - Returns zero if this time mark represents *the same moment* of time as the [other] time mark.\n     * -
Returns
    a negative number if this time mark is *earlier* than the [other] time mark.\n     * - Returns a positive number
if this time mark is *later* than the [other] time mark.\n     */\n
    public operator fun compareTo(other:
ValueTimeMark): Int =\n        (this - other).compareTo(Duration.ZERO)\n
}\n
}\n
}\n
public companion
object {\n
}\n
}\n
/** A platform-specific reading type that is wrapped by
[TimeSource.Monotonic.ValueTimeMark] inline class. *\n
internal expect class ValueTimeMarkReading\n
\n
/**\n
 * Represents a time point notched on a particular [TimeSource]. Remains bound to the time source it was taken
from\n
 * and allows querying for the duration of time elapsed from that point (see the function [elapsedNow]).\n
*\n
 * @SinceKotlin("1.3")\n
 * @ExperimentalTime\n
 * public interface TimeMark {\n
    /**\n     * Returns the amount of
time passed from this mark measured with the time source from which this mark was taken.\n     *\n     * Note
that the value returned by this function can change on subsequent invocations.\n     */\n     * @throws
IllegalArgumentException an implementation may throw if calculating the elapsed time involves\n     * adding a
positive infinite duration to an infinitely distant past time mark or\n     * a negative infinite duration to an infinitely
distant future time mark.\n     */\n     * public abstract fun elapsedNow(): Duration\n
\n     /**\n     * Returns a time mark
on the same time source that is ahead of this time mark by the specified [duration].\n     *\n     * The returned time
mark is more _late_ when the [duration] is positive, and more _early_ when the [duration] is negative.\n     *\n     *
If the time mark is adjusted too far in the past or in the future, it may saturate to an infinitely distant time mark.\n
     *\n     * In that case, [elapsedNow] will return an infinite duration elapsed from such infinitely distant mark.\n
     *\n     * @throws
IllegalArgumentException an implementation may
throw if a positive infinite duration is added to an infinitely distant past time mark or\n     * a negative infinite
duration is added to an infinitely distant future time mark.\n     */\n     * public operator fun plus(duration: Duration):
TimeMark = AdjustedTimeMark(this, duration)\n
\n     /**\n     * Returns a time mark on the same time source that is
behind this time mark by the specified [duration].\n     *\n     * The returned time mark is more _early_ when the
[duration] is positive, and more _late_ when the [duration] is negative.\n     *\n     * If the time mark is adjusted too
far in the past or in the future, it may saturate to an infinitely distant time mark.\n     * In that case, [elapsedNow]
will return an infinite duration elapsed from such infinitely distant mark.\n     *\n     * @throws
IllegalArgumentException an implementation may throw if a positive infinite duration is subtracted from an
infinitely distant future time mark or\n     * a negative infinite duration is subtracted
from an infinitely distant past time mark.\n     */\n     * public open operator fun minus(duration: Duration): TimeMark
= plus(-duration)\n
\n     /**\n     * Returns true if this time mark has passed according to the time source from
which this mark was taken.\n     *\n     * Note that the value returned by this function can change on subsequent
invocations.\n     * If the time source is monotonic, it can change only from `false` to `true`, namely, when the time
mark becomes behind the current point of the time source.\n     */\n     * public fun hasPassedNow(): Boolean =

```

```

!elapsedNow().isNegative()\n\n /**\n * Returns false if this time mark has not passed according to the time
source from which this mark was taken.\n * \n * Note that the value returned by this function can change on
subsequent invocations.\n * If the time source is monotonic, it can change only from `true` to `false`, namely,
when the time mark becomes behind the current point of the time source.\n
*\n public fun hasNotPassedNow(): Boolean = elapsedNow().isNegative()\n\n/**\n * A [TimeMark] that
can be compared for difference with other time marks obtained from the same [TimeSource.WithComparableMarks]
time source.\n *\n@SinceKotlin("1.8")\n@ExperimentalTime\npublic interface ComparableTimeMark :
TimeMark, Comparable<ComparableTimeMark> {\n public abstract override operator fun plus(duration:
Duration): ComparableTimeMark\n public open override operator fun minus(duration: Duration):
ComparableTimeMark = plus(-duration)\n\n /**\n * Returns the duration elapsed between the [other] time mark
and `this` time mark.\n * \n * The returned duration can be infinite if the time marks are far away from each
other and\n * the result doesn't fit into [Duration] type,\n * or if one time mark is infinitely distant, or if both
`this` and [other] time marks\n * lie infinitely distant on the opposite sides of the time scale.\n * \n * Two
infinitely
distant time marks on the same side of the time scale are considered equal and\n * the duration between them is
[Duration.ZERO].\n * \n * Note that the other time mark must be obtained from the same time source as this
one.\n * \n * @throws IllegalArgumentException if time marks were obtained from different time sources.\n
*\n public operator fun minus(other: ComparableTimeMark): Duration\n\n /**\n * Compares this time mark
with the [other] time mark for order.\n * \n * - Returns zero if this time mark represents *the same moment* of
time as the [other] time mark.\n * - Returns a negative number if this time mark is *earlier* than the [other]
time mark.\n * - Returns a positive number if this time mark is *later* than the [other] time mark.\n * \n * Note
that the other time mark must be obtained from the same time source as this one.\n * \n * @throws
IllegalArgumentException if time marks were obtained from different
time sources.\n *\n public override operator fun compareTo(other: ComparableTimeMark): Int =\n (this -
other).compareTo(Duration.ZERO)\n\n /**\n * Returns `true` if two time marks from the same time source
represent the same moment of time, and `false` otherwise,\n * including the situation when the time marks were
obtained from different time sources.\n *\n override fun equals(other: Any?): Boolean\n override fun
hashCode(): Int\n}\n\n@ExperimentalTime\nprivate class AdjustedTimeMark(val mark: TimeMark, val
adjustment: Duration) : TimeMark {\n override fun elapsedNow(): Duration = mark.elapsedNow() -
adjustment\n\n override fun plus(duration: Duration): TimeMark = AdjustedTimeMark(mark, adjustment +
duration)\n}\n"/\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin.time\n\nimport
kotlin.time.Duration.Companion.milliseconds\nimport kotlin.time.Duration.Companion.nanoseconds\nimport
kotlin.time.Duration.Companion.seconds\n\n@SinceKotlin("1.3")\n@ExperimentalTime\ninternal expect object
MonotonicTimeSource : TimeSource.WithComparableMarks {\n override fun markNow():
TimeSource.Monotonic.ValueTimeMark\n fun elapsedFrom(timeMark:
TimeSource.Monotonic.ValueTimeMark): Duration\n fun differenceBetween(one:
TimeSource.Monotonic.ValueTimeMark, another: TimeSource.Monotonic.ValueTimeMark): Duration\n fun
adjustReading(timeMark: TimeSource.Monotonic.ValueTimeMark, duration: Duration):
TimeSource.Monotonic.ValueTimeMark\n}\n\n/**\n * An abstract class used to implement time sources that return
their readings as [Long] values in the specified [unit].\n * \n * @property unit The unit in which this time source's
readings are expressed.\n *\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic abstract class
AbstractLongTimeSource(protected val unit:
DurationUnit) : TimeSource.WithComparableMarks {\n /**\n * This protected method should be overridden to
return the current reading of the time source expressed as a [Long] number\n * in the unit specified by the [unit]
property.\n *\n protected abstract fun read(): Long\n\n private class LongTimeMark(private val startedAt:
Long, private val timeSource: AbstractLongTimeSource, private val offset: Duration) : ComparableTimeMark {\n

```

```

    override fun elapsedNow(): Duration = if (offset.isInfinite()) -offset else (timeSource.read() -
startedAt).toDuration(timeSource.unit) - offset\n    override fun plus(duration: Duration): ComparableTimeMark
= LongTimeMark(startedAt, timeSource, offset + duration)\n    override fun minus(other:
ComparableTimeMark): Duration {\n        if (other !is LongTimeMark || this.timeSource != other.timeSource)\n
        throw IllegalArgumentException("\nSubtracting or comparing time marks from different time sources is
not possible: $this and $other")\n\n//        val thisValue = this.effectiveDuration()\n//        val otherValue =
other.effectiveDuration()\n//        if (thisValue == otherValue && thisValue.isInfinite()) return
Duration.ZERO\n//        return thisValue - otherValue\n        if (this.offset == other.offset &&
this.offset.isInfinite()) return Duration.ZERO\n        val offsetDiff = this.offset - other.offset\n        val
startedAtDiff = (this.startedAt - other.startedAt).toDuration(timeSource.unit)\n//        println("\n$startAtDiff,
$offsetDiff")\n        return if (startedAtDiff == -offsetDiff) Duration.ZERO else startedAtDiff + offsetDiff\n
}\n\n    override fun equals(other: Any?): Boolean =\n        other is LongTimeMark && this.timeSource ==
other.timeSource && (this - other) == Duration.ZERO\n\n    internal fun effectiveDuration(): Duration {\n
if (offset.isInfinite()) return offset\n        val unit = timeSource.unit\n
        if (unit >= DurationUnit.MILLISECONDS) {\n            return startedAt.toDuration(unit) + offset\n
}\n        val scale = convertDurationUnit(1L, DurationUnit.MILLISECONDS, unit)\n        val startedAtMillis =
startedAt / scale\n        val startedAtRem = startedAt % scale\n\n        return offset.toComponents {
offsetSeconds, offsetNanoseconds ->\n            val offsetMillis = offsetNanoseconds / NANOS_IN_MILLIS\n
            val offsetRemNanos = offsetNanoseconds % NANOS_IN_MILLIS\n\n            // add component-wise\n
(startedAtRem.toDuration(unit) + offsetRemNanos.nanoseconds) +\n            (startedAtMillis +
offsetMillis).milliseconds +\n            offsetSeconds.seconds\n        }\n\n    }\n\n    override fun
hashCode(): Int = effectiveDuration().hashCode()\n\n    override fun toString(): String =
"\nLongTimeMark($startedAt${timeSource.unit.shortName()}) + $offset
(=${effectiveDuration()})", $timeSource)\n\n    }\n\n    override fun markNow(): ComparableTimeMark =
LongTimeMark(read(), this, Duration.ZERO)\n}\n\n/**\n * An abstract class used to implement time sources that
return their readings as [Double] values in the specified [unit].\n * @property unit The unit in which this time
source's readings are expressed.\n * @since Kotlin("1.3")\n * @experimentalTime\n * @deprecated("Using
AbstractDoubleTimeSource is no longer recommended, use AbstractLongTimeSource instead.")\n * public abstract
class AbstractDoubleTimeSource(protected val unit: DurationUnit) : TimeSource.WithComparableMarks {\n
/**\n * This protected method should be overridden to return the current reading of the time source expressed as a
[Double] number\n * in the unit specified by the [unit] property.\n * @protected abstract fun read():
Double\n\n * @suppress("DEPRECATION")\n * private class DoubleTimeMark(private val startedAt: Double,
private val timeSource:
AbstractDoubleTimeSource, private val offset: Duration) : ComparableTimeMark {\n    override fun
elapsedNow(): Duration = (timeSource.read() - startedAt).toDuration(timeSource.unit) - offset\n    override fun
plus(duration: Duration): ComparableTimeMark = DoubleTimeMark(startedAt, timeSource, offset + duration)\n\n
    override fun minus(other: ComparableTimeMark): Duration {\n        if (other !is DoubleTimeMark ||
this.timeSource != other.timeSource)\n            throw IllegalArgumentException("\nSubtracting or comparing time
marks from different time sources is not possible: $this and $other")\n        if (this.offset == other.offset &&
this.offset.isInfinite()) return Duration.ZERO\n        val offsetDiff = this.offset - other.offset\n        val
startedAtDiff = (this.startedAt - other.startedAt).toDuration(timeSource.unit)\n        return if (startedAtDiff == -
offsetDiff) Duration.ZERO else startedAtDiff + offsetDiff\n    }\n\n    override fun equals(other: Any?): Boolean {\n
return other is DoubleTimeMark && this.timeSource ==
other.timeSource && (this - other) == Duration.ZERO\n    }\n\n    override fun hashCode(): Int {\n
return (startedAt.toDuration(timeSource.unit) + offset).hashCode()\n    }\n\n    override fun toString(): String =
"\nDoubleTimeMark($startedAt${timeSource.unit.shortName()}) + $offset, $timeSource)\n\n    }\n\n    override fun
markNow(): ComparableTimeMark = DoubleTimeMark(read(), this, Duration.ZERO)\n}\n\n/**\n * A time source
that has programmatically updatable readings. It is useful as a predictable source of time in tests.\n * @property
current The current

```

reading value can be advanced by the specified duration amount with the operator [plusAssign]:\n \* \n \* val timeSource = TestTimeSource()\n \* timeSource += 10.seconds\n \* \n \* Implementation note: the current reading value is stored as a [Long] number of nanoseconds,\n \* thus it's capable to represent a time range of approximately \u00b1292 years.\n \* Should the reading value overflow as the result of [plusAssign] operation, an [IllegalStateException] is thrown.\n

```

*\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic class TestTimeSource : AbstractLongTimeSource(unit = DurationUnit.NANOSECONDS) {\n    private var reading: Long = 0L\n\n    override fun read(): Long = reading\n\n    /**\n     * Advances the current reading value of this time source by the specified [duration].\n     * \n     * [duration] value is rounded down towards zero when converting it to a [Long] number of nanoseconds.\n     * For example, if the duration being added is `0.6.nanoseconds`, the reading doesn't advance because\n     * the duration value is rounded to zero nanoseconds.\n     * \n     * @throws IllegalStateException when the reading value overflows as the result of this operation.\n     */\n    public operator fun plusAssign(duration: Duration) {\n        val longDelta = duration.toLong(unit)\n\n        reading = if (longDelta != Long.MIN_VALUE && longDelta != Long.MAX_VALUE) {\n            // when delta fits in long, add it as long\n            val newReading = reading + longDelta\n            if (reading xor longDelta >= 0 && reading xor newReading < 0) overflow(duration)\n                newReading\n            } else {\n                val delta = duration.toDouble(unit)\n                // when delta is greater than long, add it as double\n                val newReading = reading + delta\n                if (newReading > Long.MAX_VALUE || newReading < Long.MIN_VALUE) overflow(duration)\n                    newReading.toLong()\n            }\n\n            private fun overflow(duration: Duration) {\n                throw IllegalStateException("TestTimeSource will overflow if its reading ${reading}${unit.shortName()} is advanced by $duration.")\n            }\n\n            /*\n             * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n             * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n             */\n\n            \npackage kotlin.time\n\nimport kotlin.time.Duration.Companion.milliseconds\nimport kotlin.time.Duration.Companion.nanoseconds\n\n// Long time reading saturation math, shared between JVM and Native\n\ninternal fun saturatingAdd(longNs: Long, duration: Duration): Long {\n    val durationNs = duration.inWholeNanoseconds\n    if (longNs.isSaturated()) { // MIN_VALUE or MAX_VALUE - the reading is infinite\n        return checkInfiniteSumDefined(longNs, duration, durationNs)\n    }\n    if (durationNs.isSaturated()) { // duration doesn't fit in Long nanos\n        return saturatingAddInHalves(longNs, duration)\n    }\n    val result = longNs + durationNs\n    if (((longNs xor result) and (durationNs xor result)) < 0) {\n        return if (longNs < 0) Long.MIN_VALUE else Long.MAX_VALUE\n    }\n    return result\n}\n\nprivate fun checkInfiniteSumDefined(longNs: Long, duration: Duration, durationNs: Long): Long {\n    if (duration.isInfinite() && (longNs xor durationNs < 0)) throw IllegalArgumentException("Summing infinities of different signs")\n    return longNs\n}\n\nprivate fun saturatingAddInHalves(longNs: Long, duration: Duration): Long {\n    val half = duration / 2\n    if (half.inWholeNanoseconds.isSaturated()) {\n        // this will definitely saturate\n        return (longNs + duration.toDouble(DurationUnit.NANOSECONDS)).toLong()\n    } else {\n        return saturatingAdd(saturatingAdd(longNs, half), duration - half)\n    }\n}\n\ninternal fun saturatingDiff(valueNs: Long, originNs: Long): Duration {\n    if (originNs.isSaturated()) { // MIN_VALUE or MAX_VALUE\n        return -(originNs.toDuration(DurationUnit.DAYS)) // saturate to infinity\n    }\n    return saturatingFiniteDiff(valueNs, originNs)\n}\n\ninternal fun saturatingOriginsDiff(origin1Ns: Long, origin2Ns: Long): Duration {\n    if (origin2Ns.isSaturated()) { // MIN_VALUE or MAX_VALUE\n        if (origin1Ns == origin2Ns) return Duration.ZERO // saturated values of the same sign are considered equal\n        return -(origin2Ns.toDuration(DurationUnit.DAYS)) // saturate to infinity\n    }\n    if (origin1Ns.isSaturated()) {\n        return origin1Ns.toDuration(DurationUnit.DAYS)\n    }\n    return saturatingFiniteDiff(origin1Ns, origin2Ns)\n}\n\nprivate fun saturatingFiniteDiff(value1Ns: Long, value2Ns: Long): Duration {\n    val result = value1Ns - value2Ns\n    if ((result xor value1Ns) and (result xor value2Ns).inv() < 0) {\n        val resultMs = value1Ns / NANOS_IN_MILLIS - value2Ns / NANOS_IN_MILLIS\n        val resultNs = value1Ns % NANOS_IN_MILLIS - value2Ns % NANOS_IN_MILLIS\n        return

```



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resultMs.milliseconds + resultNs.nanoseconds\n }\n return
result.nanoseconds\n}\n\n@Suppress("NOTHING_TO_INLINE")\nprivate inline fun Long.isSaturated(): Boolean
=\n (this - 1) or 1 == Long.MAX_VALUE // == either MAX_VALUE or MIN_VALUE\n", /*\n * Copyright
2010-2022 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.time\n\nimport kotlin.contracts.*\n\n/**\n * Executes the given function [block] and returns the
duration of elapsed time interval.\n * The elapsed time is measured with [TimeSource.Monotonic].\n
*/\n\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic inline fun measureTime(block: () -> Unit): Duration {\n
contract {\n    callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return
TimeSource.Monotonic.measureTime(block)\n}\n\n/**\n * Executes the given function [block] and returns the
duration of elapsed time interval.\n * The elapsed time is measured with the specified `this` [TimeSource]
instance.\n * \n@SinceKotlin("1.3")\n@ExperimentalTime\npublic inline fun TimeSource.measureTime(block: ()
-> Unit): Duration {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    val
mark = markNow()\n
    block()\n    return mark.elapsedNow()\n}\n\n/**\n * Executes the given function [block] and returns the duration
of elapsed time interval.\n * The elapsed time is measured with the specified `this` [TimeSource.Monotonic]
instance.\n * \n@SinceKotlin("1.7")\n@ExperimentalTime\npublic inline fun
TimeSource.Monotonic.measureTime(block: () -> Unit): Duration {\n    contract {\n        callsInPlace(block,
InvocationKind.EXACTLY_ONCE)\n    }\n    val mark = markNow()\n    block()\n    return
mark.elapsedNow()\n}\n\n/**\n * Data class representing a result of executing an action, along with the duration
of elapsed time interval.\n * @property value the result of the action.\n * @property duration the time elapsed to
execute the action.\n * \n@SinceKotlin("1.3")\n@ExperimentalTime\npublic data class TimedValue<T>(val
value: T, val duration: Duration)\n\n/**\n * Executes the given function [block] and returns an instance of
[TimedValue] class, containing both\n * the result
of the function execution and the duration of elapsed time interval.\n * The elapsed time is measured with
[TimeSource.Monotonic].\n * \n@SinceKotlin("1.3")\n@ExperimentalTime\npublic inline fun <T>
measureTimedValue(block: () -> T): TimedValue<T> {\n    contract {\n        callsInPlace(block,
InvocationKind.EXACTLY_ONCE)\n    }\n    return
TimeSource.Monotonic.measureTimedValue(block)\n}\n\n/**\n * Executes the given [block] and returns an
instance of [TimedValue] class, containing both\n * the result of function execution and the duration of elapsed time
interval.\n * The elapsed time is measured with the specified `this` [TimeSource] instance.\n
*/\n\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic inline fun <T> TimeSource.measureTimedValue(block: ()
-> T): TimedValue<T> {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    val
mark = markNow()\n    val result = block()\n    return TimedValue(result, mark.elapsedNow())\n}\n\n/**\n * Executes the given [block] and returns an instance of [TimedValue] class, containing both\n * the result of
function execution and the duration of elapsed time interval.\n * The elapsed time is measured with the specified
`this` [TimeSource.Monotonic] instance.\n * \n@SinceKotlin("1.7")\n@ExperimentalTime\npublic inline fun <T>
TimeSource.Monotonic.measureTimedValue(block: () -> T): TimedValue<T> {\n    contract {\n
callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    val mark = markNow()\n    val result =
block()\n    return TimedValue(result, mark.elapsedNow())\n}\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin\n\nimport kotlin.coroutines.*\nimport
kotlin.coroutines.intrinsics.*\nimport kotlin.native.concurrent.SharedImmutable\n\n/**\n * Defines deep recursive
function that
keeps its stack on the heap,\n * which allows very deep recursive computations that do not use the actual call
stack.\n * To initiate a call to this deep recursive function use its [invoke] function.\n * As a rule of thumb, it should
be used if recursion goes deeper than a thousand calls.\n * The [DeepRecursiveFunction] takes one parameter of
type [T] and returns a result of type [R].\n * The [block] of code defines the body of a recursive function. In this

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DeepRecursiveScopeImpl<T, R>(\n  block: suspend DeepRecursiveScope<T, R>.(T) -> R,\n  value: T)\n) :
DeepRecursiveScope<T, R>(), Continuation<R> {\n  // Active function block\n  private var function:
DeepRecursiveFunctionBlock = block as DeepRecursiveFunctionBlock\n\n  // Value to call function with\n
private var value: Any? = value\n\n  // Continuation of the current call\n  private var cont: Continuation<Any?>?
= this as Continuation<Any?>\n\n  // Completion result (completion of the whole call stack)\n  private var result:
Result<Any?> = UNDEFINED_RESULT\n\n  override val context: CoroutineContext\n  get() =
EmptyCoroutineContext\n\n  override fun resumeWith(result: Result<R>) {\n    this.cont =
null\n    this.result = result\n  }\n\n  override suspend fun callRecursive(value: T): R =
suspendCoroutineUninterceptedOrReturn { cont ->\n    // calling the same function that is currently active\n
this.cont = cont as Continuation<Any?>\n    this.value = value\n    COROUTINE_SUSPENDED\n  }\n\n  override suspend fun <U, S> DeepRecursiveFunction<U, S>.callRecursive(value: U): S =
suspendCoroutineUninterceptedOrReturn { cont ->\n    // calling another recursive function\n    val function =
block as DeepRecursiveFunctionBlock\n    with(this@DeepRecursiveScopeImpl) {\n      val currentFunction
= this.function\n      if (function !== currentFunction) {\n        // calling a different function -- create a
trampoline to restore function ref\n        this.function = function\n        this.cont =
crossFunctionCompletion(currentFunction, cont as Continuation<Any?>)\n      } else {\n        // calling the
same function -- direct\n        this.cont = cont as Continuation<Any?>\n      }\n      this.value = value\n
}\n    COROUTINE_SUSPENDED\n  }\n\n  private fun crossFunctionCompletion(\n    currentFunction:
DeepRecursiveFunctionBlock,\n    cont: Continuation<Any?>\n  ): Continuation<Any?> =
Continuation(EmptyCoroutineContext) {\n    this.function = currentFunction\n    // When going back from a
trampoline we cannot just call cont.resume (stack usage!)\n    // We delegate the cont.resumeWith(it) call to
runCallLoop\n    this.cont = cont\n    this.result = it\n  }\n\n  @Suppress("\UNCHECKED_CAST")\n  fun
runCallLoop(): R {\n    while (true) {\n      // Note: cont is set to null in DeepRecursiveScopeImpl.resumeWith
when the whole computation completes\n      val result = this.result\n      val cont = this.cont\n      ?:
return (result as Result<R>).getOrThrow() // done -- final result\n
      // The order of comparison is important here for that case of rogue class with broken equals\n      if
(UNDEFINED_RESULT == result) {\n        // call "function" with "value" using "cont" as completion\n
        val r = try {\n          // This is block.startCoroutine(this, value, cont)\n
function.startCoroutineUninterceptedOrReturn(this, value, cont)\n        } catch (e: Throwable) {\n
cont.resumeWithException(e)\n          continue\n        }\n        // If the function returns without
suspension -- calls its continuation immediately\n        if (r !== COROUTINE_SUSPENDED)\n          cont.resume(r as R)\n        } else {\n          // we returned from a crossFunctionCompletion trampoline -- call
resume here\n          this.result = UNDEFINED_RESULT // reset result back\n
cont.resumeWith(result)\n        }\n      }\n    }\n  }\n\n  }\n  }\n}\n\n", /*\n * Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n// Auto-generated file. DO NOT
EDIT!\n\n@file:kotlin.jvm.JvmName("\NumbersKt")\n@file:kotlin.jvm.JvmMultifileClass\npackage
kotlin\n\nimport kotlin.math.sign\n\n/** Divides this value by the other value, flooring the result to an integer that is
closer to negative infinity.
*\n\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Byte.floorDiv(other: Byte): Int = \n  this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic
inline fun Byte.mod(other: Byte): Byte = \n  this.toInt().mod(other.toInt()).toByte()\n\n/** Divides this value by
the other value, flooring the result to an integer that is closer to negative infinity.
*\n\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline

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fun Byte.floorDiv(other: Short): Int = \n  this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Byte.mod(other: Short): Short = \n  this.toInt().mod(other.toInt()).toShort()\n\n/** Divides this value by the
other value, flooring the result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic
inline fun Byte.floorDiv(other: Int): Int = \n  this.toInt().floorDiv(other)\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Byte.mod(other: Int): Int = \n  this.toInt().mod(other)\n\n/** Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Byte.floorDiv(other: Long): Long = \n  this.toLong().floorDiv(other)\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n
* The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the absolute
value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Byte.mod(other: Long): Long = \n  this.toLong().mod(other)\n\n/** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.floorDiv(other: Byte): Int = \n  this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.mod(other:
Byte): Byte = \n  this.toInt().mod(other.toInt()).toByte()\n\n/** Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.floorDiv(other: Short): Int = \n  this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.mod(other: Short): Short = \n  this.toInt().mod(other.toInt()).toShort()\n\n/** Divides this value by the
other value, flooring the result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic
inline fun Short.floorDiv(other: Int): Int = \n  this.toInt().floorDiv(other)\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.mod(other: Int): Int = \n  this.toInt().mod(other)\n\n/** Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.floorDiv(other: Long): Long = \n  this.toLong().floorDiv(other)\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and

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has the absolute value less than the absolute value of the divisor.\n

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Short.mod(other: Long): Long = \n    this.toLong().mod(other)\n\n/** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.floorDiv(other: Byte): Int = \n    this.floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of flooring
division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and
has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.mod(other: Byte): Byte = \n    this.mod(other.toInt()).toByte()\n\n/** Divides this value
by the other value, flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.floorDiv(other: Short): Int = \n    this.floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of flooring
division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and
has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.mod(other: Short): Short = \n    this.mod(other.toInt()).toShort()\n\n/** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.floorDiv(other: Int): Int {\n    var q = this / other\n
    if (this xor other < 0 && q * other != this) q--\n    return q\n}\n\n/**\n * Calculates the remainder of flooring
division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and
has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.mod(other: Int): Int {\n    val r = this % other\n    return r + (other and (((r xor other) and (r or -r)) shr
31))\n}\n\n/** Divides this value by the other value, flooring the result to an integer that is closer to negative
infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic
inline fun Int.floorDiv(other: Long): Long = \n    this.toLong().floorDiv(other)\n\n/**\n * Calculates the remainder
of flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as
the _divisor_ and has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Int.mod(other: Long): Long = \n    this.toLong().mod(other)\n\n/** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.floorDiv(other: Byte): Long = \n    this.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.mod(other: Byte): Byte = \n    this.mod(other.toLong()).toByte()\n\n/**
Divides this value by the other value, flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.floorDiv(other: Short): Long = \n    this.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.mod(other: Short): Short = \n    this.mod(other.toLong()).toShort()\n\n/** Divides this value by the other
value, flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
```

```

fun Long.floorDiv(other: Int): Long = \n
    this.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of flooring division of this value by the other
value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.mod(other: Int): Int = \n    this.mod(other.toLong()).toInt()\n\n/** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.floorDiv(other: Long): Long {\n    var q = this / other\n    if (this xor other < 0 && q * other != this) q--\n    return q\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The
result is either zero or has the same sign as the _divisor_ and has the
absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Long.mod(other: Long): Long {\n    val r = this % other\n    return r + (other and (((r xor other) and (r or -r)) shr
63))\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result
is either zero or has the same sign as the _divisor_ and has the absolute value less than the absolute value of the
divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest representable number. In this
case the absolute value of the result can be less than or _equal to_ the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Float.mod(other: Float): Float {\n    val r = this % other\n    return if (r != 0.0.toFloat() && r.sign != other.sign) r
+
    other else r\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The
result is either zero or has the same sign as the _divisor_ and has the absolute value less than the absolute value of
the divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest representable number. In
this case the absolute value of the result can be less than or _equal to_ the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Float.mod(other: Double): Double = \n    this.toDouble().mod(other)\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n * \n * If the result cannot be
represented exactly, it is rounded to the nearest representable number. In
this case the absolute value of the result can be less than or _equal to_ the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Double.mod(other: Float): Double = \n    this.mod(other.toDouble())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n * \n * If the result cannot be
represented exactly, it is rounded to the nearest representable number. In this case the absolute value of the result
can be less than or _equal to_ the absolute value of the divisor.\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\n@kotlin.internal.IntrinsicConstEvaluation\npublic inline
fun Double.mod(other: Double): Double {\n    val r = this % other\n    return if (r != 0.0 && r.sign != other.sign) r +
other else r\n}\n\n"/*\n
* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin\n\nimport kotlin.internal.InlineOnly\n\n/**\n * Returns a hash code value for the object or zero if the object
is `null`.\n * \n * @see Any.hashCode\n */\n@SinceKotlin("1.3")\n@InlineOnly\npublic inline fun
Any?.hashCode(): Int = this?.hashCode() ?: 0\n"/*\n
* Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Represents a version of the Kotlin standard
library.\n * \n * [major], [minor] and [patch] are integer components of a version,\n * they must be non-negative and

```

```

not greater than 255 ([MAX_COMPONENT_VALUE]).\n *\n * @constructor Creates a version from all three
components.\n
*\n@SinceKotlin("1.1")\npublic class KotlinVersion(val major: Int, val minor: Int, val patch: Int) :
Comparable<KotlinVersion> {\n /**\n * Creates a version from [major] and [minor] components, leaving
[patch] component zero.\n *\n public constructor(major: Int, minor: Int) : this(major, minor, 0)\n\n private val
version = versionOf(major, minor, patch)\n\n private fun versionOf(major: Int, minor: Int, patch: Int): Int {\n
require(major in 0..MAX_COMPONENT_VALUE && minor in 0..MAX_COMPONENT_VALUE && patch in
0..MAX_COMPONENT_VALUE) {\n \n "Version components are out of range: $major.$minor.$patch"\n
}\n return major.shl(16) + minor.shl(8) + patch\n }\n /**\n * Returns the string representation of this
version.\n *\n override fun toString(): String = "$major.$minor.$patch"\n\n override fun equals(other:
Any?): Boolean {\n if (this === other) return true\n val otherVersion = (other as?
KotlinVersion) ?: return false\n return this.version == otherVersion.version\n }\n\n override fun
hashCode(): Int = version\n\n override fun compareTo(other: KotlinVersion): Int = version - other.version\n\n
/**\n * Returns `true` if this version is not less than the version specified\n * with the provided [major] and
[minor] components.\n *\n public fun isAtLeast(major: Int, minor: Int): Boolean = // this.version >=
versionOf(major, minor, 0)\n this.major > major || (this.major == major &&\n this.minor >=
minor)\n\n /**\n * Returns `true` if this version is not less than the version specified\n * with the provided
[major], [minor] and [patch] components.\n *\n public fun isAtLeast(major: Int, minor: Int, patch: Int): Boolean
= // this.version >= versionOf(major, minor, patch)\n this.major > major || (this.major == major &&\n
(this.minor > minor || this.minor == minor &&\n
this.patch >= patch))\n\n companion object {\n /**\n * Maximum value a version component can
have, a constant value 255.\n *\n // NOTE: Must be placed before CURRENT because its initialization
requires this field being initialized in JS\n public const val MAX_COMPONENT_VALUE = 255\n\n /**\n
* Returns the current version of the Kotlin standard library.\n *\n @kotlin.jvm.JvmField\n public
val CURRENT: KotlinVersion = KotlinVersionCurrentValue.get()\n }\n\n// this class is ignored during
classpath normalization when considering whether to recompile dependencies in Kotlin build\nprivate object
KotlinVersionCurrentValue {\n @kotlin.jvm.JvmStatic\n fun get(): KotlinVersion = KotlinVersion(1, 8, 10) //
value is written here automatically during build\n},"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache
2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmName("LateinitKt")\n@file:Suppress("unused")\n\npackage kotlin\n\nimport
kotlin.internal.InlineOnly\nimport kotlin.internal.AccessibleLateinitPropertyLiteral\nimport
kotlin.reflect.KProperty0\n\n/**\n * Returns `true` if this lateinit property has been assigned a value, and `false`
otherwise.\n *\n * Cannot be used in an inline function, to avoid binary compatibility issues.\n
*\n*\n@SinceKotlin("1.2")\n@InlineOnly\ninline val @receiver:AccessibleLateinitPropertyLiteral
KProperty0<*>.isInitialized: Boolean\n get() = throw NotImplementedError("Implementation is
intrinsic")\n},"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmName("LazyKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage kotlin\n\nimport
kotlin.reflect.KProperty\n\n/**\n * Represents a value with lazy initialization.\n *\n * To create an instance of
[Lazy] use the [lazy] function.\n *\npublic interface Lazy<out T> {\n /**\n * Gets the lazily initialized value of
the current Lazy instance.\n * Once the value was initialized it must not change during the rest of lifetime of this
Lazy instance.\n *\n public val value: T\n\n /**\n * Returns `true` if a value for this Lazy instance has been
already initialized, and `false` otherwise.\n * Once this function has returned `true` it stays `true` for the rest of
lifetime of this Lazy instance.\n *\n public fun isInitialized(): Boolean\n}\n\n/**\n * Creates a new instance of
the [Lazy] that is already initialized with the specified [value].\n *\npublic fun <T> lazyOf(value: T): Lazy<T> =
InitializedLazyImpl(value)\n\n/**\n * An extension to delegate a read-only property of type [T] to an instance of
[Lazy].\n *\n * This extension allows to

```

```

use instances of Lazy for property delegation:\n * `val property: String by lazy { initializer }`\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Lazy<T>.getValue(thisRef: Any?, property:
KProperty<*>): T = value\n\n**\n * Specifies how a [Lazy] instance synchronizes initialization among multiple
threads.\n *\npublic enum class LazyThreadSafetyMode {\n\n /**\n * Locks are used to ensure that only a
single thread can initialize the [Lazy] instance.\n *\n SYNCHRONIZED,\n\n /**\n * Initializer function
can be called several times on concurrent access to uninitialized [Lazy] instance value,\n * but only the first
returned value will be used as the value of [Lazy] instance.\n *\n PUBLICATION,\n\n /**\n * No locks are
used to synchronize an access to the [Lazy] instance value; if the instance is accessed from multiple threads, its
behavior is undefined.\n *\n * This mode should not be used unless the [Lazy] instance is guaranteed
never to be initialized from more than one thread.\n *\n NONE,\n}\n\n\ninternal object
UNINITIALIZED_VALUE\n\n// internal to be called from lazy in JS\ninternal class UnsafeLazyImpl<out
T>(initializer: () -> T) : Lazy<T>, Serializable {\n private var initializer: (() -> T)? = initializer\n private var
_value: Any? = UNINITIALIZED_VALUE\n\n override val value: T\n get() {\n if (_value ===
UNINITIALIZED_VALUE) {\n _value = initializer!!()\n initializer = null\n }\n
@Suppress("UNCHECKED_CAST")\n return _value as T\n }\n\n override fun isInitialized():
Boolean = _value != UNINITIALIZED_VALUE\n\n override fun toString(): String = if (isInitialized())
value.toString() else "Lazy value not initialized yet."\n\n private fun writeReplace(): Any =
InitializedLazyImpl(value)\n}\n\ninternal class InitializedLazyImpl<out T>(override val value: T) : Lazy<T>,
Serializable {\n\n
override fun isInitialized(): Boolean = true\n\n override fun toString(): String = value.toString()\n}\n"}\n *
Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("NumbersKt")\npackage kotlin\n\n**\n *
Counts the number of set bits in the binary representation of this [Int] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Int.countOneBits(): Int\n\n**\n * Counts the number of consecutive most significant bits that are zero in the binary
representation of this [Int] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Int.countLeadingZeroBits(): Int\n\n**\n * Counts the number of consecutive least significant bits that are zero in
the binary representation
of this [Int] number.\n *\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic
expect fun Int.countTrailingZeroBits(): Int\n\n**\n * Returns a number having a single bit set in the position of the
most significant set bit of this [Int] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Int.takeHighestOneBit(): Int\n\n**\n * Returns a number having a single bit set in the position of the least
significant set bit of this [Int] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Int.takeLowestOneBit(): Int\n\n**\n * Rotates the binary representation of this [Int] number left by the specified
[bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the number as the least
significant bits on the right side.\n *\n * Rotating the number left by a
negative bit count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) ==
number.rotateRight(n)`\n *\n * Rotating by a multiple of [Int.SIZE_BITS] (32) returns the same number, or more
generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 32)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Int.rotateLeft(bitCount: Int): Int\n\n**\n * Rotates the binary representation of this [Int] number right by the
specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side reenter the number
as the most significant bits on the left side.\n *\n * Rotating the number right by a negative bit count is the same as
rotating it left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n *\n * Rotating by a

```



multiple of [Int.SIZE\_BITS] (32) returns the same number, or more generally  
`number.rotateRight(n) == number.rotateRight(n % 32)`

`@SinceKotlin("1.6")@WasExperimental(ExperimentalStdlibApi::class)public`  
expect fun Int.rotateRight(bitCount: Int): Int  
\* Counts the number of set bits in the binary representation of this [Long] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public`  
expect fun Long.countOneBits(): Int  
\* Counts the number of consecutive most significant bits that are zero in the binary representation of this [Long] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public` expect fun  
Long.countLeadingZeroBits(): Int  
\* Counts the number of consecutive least significant bits that are zero in the binary representation of this [Long] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public` expect fun  
Long.countTrailingZeroBits(): Int  
\* Returns a number having a single bit set in the position of the most significant set bit of this [Long] number, or zero, if this number is zero.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public` expect fun  
Long.takeHighestOneBit(): Long  
\* Returns a number having a single bit set in the position of the least significant set bit of this [Long] number, or zero, if this number is zero.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)public` expect fun  
Long.takeLowestOneBit(): Long  
\* Rotates the binary representation of this [Long] number left by the specified [bitCount] number of bits. The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side. Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:  
`number.rotateLeft(-n) == number.rotateRight(n)`  
Rotating by a multiple of [Long.SIZE\_BITS] (64) returns the same number, or more generally  
`number.rotateLeft(n) == number.rotateLeft(n % 64)`

`@SinceKotlin("1.6")@WasExperimental(ExperimentalStdlibApi::class)public`  
expect fun Long.rotateLeft(bitCount: Int): Long  
\* Rotates the binary representation of this [Long] number right by the specified [bitCount] number of bits. The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side. Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:  
`number.rotateRight(-n) == number.rotateLeft(n)`  
Rotating by a multiple of [Long.SIZE\_BITS] (64) returns the same number, or more generally  
`number.rotateRight(n) == number.rotateRight(n % 64)`

`@SinceKotlin("1.6")@WasExperimental(ExperimentalStdlibApi::class)public` expect fun  
Long.rotateRight(bitCount: Int): Long  
\* Counts the number of set bits in the binary representation of this [Byte] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)@kotlin.internal.InlineOnly`  
public inline fun Byte.countOneBits(): Int = (toInt() and 0xFF).countOneBits()  
\* Counts the number of consecutive most significant bits that are zero in the binary representation of this [Byte] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)@kotlin.internal.InlineOnly`  
public inline fun Byte.countLeadingZeroBits(): Int = (toInt() and 0xFF).countLeadingZeroBits() - (Int.SIZE\_BITS - Byte.SIZE\_BITS)  
\* Counts the number of consecutive least significant bits that are zero in the binary representation of this [Byte] number.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)@kotlin.internal.InlineOnly`  
public inline fun Byte.countTrailingZeroBits(): Int = (toInt() or 0x100).countTrailingZeroBits()  
\* Returns a number having a single bit set in the position of the most significant set bit of this [Byte] number, or zero, if this number is zero.

`@SinceKotlin("1.4")@WasExperimental(ExperimentalStdlibApi::class)@kotlin.internal.InlineOnly`  
public inline fun Byte.takeHighestOneBit(): Byte = (toInt() and 0x100).takeHighestOneBit()  
\* Returns a number having a single bit set in the position of the least significant set bit of this [Byte] number, or zero, if this number is zero.

```

inline fun Byte.takeHighestOneBit(): Byte = (toInt() and 0xFF).takeHighestOneBit().toByte()\n\n/**\n * Returns a
number having a single bit set in the position of the least significant set bit of this [Byte] number,\n * or zero, if this
number is zero.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun Byte.takeLowestOneBit(): Byte = toInt().takeLowestOneBit().toByte()\n\n/**\n * Rotates the binary
representation of this [Byte] number left by the specified [bitCount] number of bits.\n * The most significant bits
pushed out from the left side reenter the number as the least significant bits on the right side.\n * Rotating the
number left by a negative bit count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-
n) == number.rotateRight(n)`\n * Rotating by a multiple of [Byte.SIZE_BITS] (8)
returns the same number, or more generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 8)`\n
*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
Byte.rotateLeft(bitCount: Int): Byte =\n    (toInt().shl(bitCount and 7) or (toInt() and 0xFF).ushr(8 - (bitCount and
7))).toByte()\n\n/**\n * Rotates the binary representation of this [Byte] number right by the specified [bitCount]
number of bits.\n * The least significant bits pushed out from the right side reenter the number as the most
significant bits on the left side.\n * Rotating the number right by a negative bit count is the same as rotating it
left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of
[Byte.SIZE_BITS] (8) returns the same number, or more generally\n * `number.rotateRight(n) ==
number.rotateRight(n % 8)`\n
*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
Byte.rotateRight(bitCount:
Int): Byte =\n    (toInt().shl(8 - (bitCount and 7)) or (toInt() and 0xFF).ushr(bitCount and 7)).toByte()\n\n/**\n * Counts the number of set bits in the binary representation of this [Short] number.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun Short.countOneBits(): Int = (toInt() and 0xFFFF).countOneBits()\n\n/**\n * Counts the number of
consecutive most significant bits that are zero in the binary representation of this [Short] number.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun Short.countLeadingZeroBits(): Int =\n    (toInt() and 0xFFFF).countLeadingZeroBits() - (Int.SIZE_BITS
- Short.SIZE_BITS)\n\n/**\n * Counts the number of consecutive least significant bits that are zero in the binary
representation of this [Short] number.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c
inline fun Short.countTrailingZeroBits(): Int = (toInt() or 0x10000).countTrailingZeroBits()\n\n/**\n * Returns a
number having a single bit set in the position of the most significant set bit of this [Short] number,\n * or zero, if this
number is zero.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun Short.takeHighestOneBit(): Short = (toInt() and 0xFFFF).takeHighestOneBit().toShort()\n\n/**\n * Returns a number having a single bit set in the position of the least significant set bit of this [Short] number,\n * or
zero, if this number is zero.\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
c inline fun Short.takeLowestOneBit(): Short = toInt().takeLowestOneBit().toShort()\n\n/**\n * Rotates the binary
representation of this [Short] number left by the specified [bitCount] number of bits.\n * The most significant bits
pushed out from
the left side reenter the number as the least significant bits on the right side.\n * Rotating the number left by a
negative bit count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) ==
number.rotateRight(n)`\n * Rotating by a multiple of [Short.SIZE_BITS] (16) returns the same number, or more
generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 16)`\n
*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
Short.rotateLeft(bitCount: Int): Short =\n    (toInt().shl(bitCount and 15) or (toInt() and 0xFFFF).ushr(16 - (bitCount
and 15))).toShort()\n\n/**\n * Rotates the binary representation of this [Short] number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n * Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of [Short.SIZE_BITS] (16) returns the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 16)`\n
*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
Short.rotateRight(bitCount: Int): Short =\n    (toInt().shl(16 - (bitCount and 15)) or (toInt() and 0xFFFF).ushr(bitCount and 15)).toShort()\n

```

and 15)).toShort()\n\n\*\*\n \* Rotates the binary representation of this [Short] number right by the specified [bitCount] number of bits.\n \* The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n \*\n \* Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n

```
* `number.rotateRight(-n) == number.rotateLeft(n)`\n *\n * Rotating by a multiple of [Short.SIZE_BITS] (16) returns the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 16)`\n
```

```
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
```

```
Short.rotateRight(bitCount: Int): Short =\n (toInt().shl(16 - (bitCount and 15)) or (toInt() and
```

```
0xFFFF).ushr(bitCount and 15)).toShort()\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\npackage kotlin\nimport kotlin.internal.RequireKotlin\nimport
```

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kotlin.internal.RequireKotlinVersionKind\n\n@kotlin.internal.InlineOnly\n@SinceKotlin("1.2")\n@Suppress("INVISIBLE_MEMBER", "INVISIBLE_REFERENCE")\npublic inline fun <R> suspend(noinline block: suspend () -> R): suspend () -> R = block\n","/*\n * Copyright 2010-2018 JetBrains
```

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s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
```

```
*\n\n@file:kotlin.jvm.JvmName("TuplesKt")\n\npackage kotlin\n\n\n**\n * Represents a generic pair of two values.\n *\n * There is no meaning attached to values in this class, it can be used for any purpose.\n * Pair exhibits value semantics, i.e. two pairs are equal if both components are equal.\n *\n * An example of decomposing it into values:\n * @sample samples.misc.Tuples.pairDestructuring\n *\n * @param A type of the first value.\n * @param B type of the second value.\n * @property first First value.\n * @property second Second value.\n * @constructor Creates a new instance of Pair.\n */\npublic data class Pair<out A, out B>(\n public val first: A,\n public val second: B)\n : Serializable {\n\n /**\n * Returns string representation of the [Pair] including its [first] and [second] values.\n
```

```
*\n public override fun toString(): String = "($first, $second)" }\n\n**\n * Creates a tuple of type [Pair] from this and [that].\n *\n * This can be useful for creating [Map] literals with less noise, for example:\n * @sample samples.collections.maps.instantiation.mapFromPairs\n */\npublic infix fun <A, B> A.to(that: B): Pair<A, B> = Pair(this, that)\n\n**\n * Converts this pair into a list.\n * @sample samples.misc.Tuples.pairToList\n */\npublic fun <T> Pair<T, T>.toList(): List<T> = listOf(first, second)\n\n**\n * Represents a triad of values\n *\n * There is no meaning attached to values in this class, it can be used for any purpose.\n * Triple exhibits value semantics, i.e. two triples are equal if all three components are equal.\n *\n * An example of decomposing it into values:\n * @sample samples.misc.Tuples.tripleDestructuring\n *\n * @param A type of the first value.\n * @param B type of the second value.\n * @param C type of the third value.\n * @property first First value.\n
```

```
* @property second Second value.\n * @property third Third value.\n */\npublic data class Triple<out A, out B, out C>(\n public val first: A,\n public val second: B,\n public val third: C)\n : Serializable {\n\n /**\n * Returns string representation of the [Triple] including its [first], [second] and [third] values.\n */\n public override fun toString(): String = "($first, $second, $third)" }\n\n**\n * Converts this triple into a list.\n * @sample samples.misc.Tuples.tripleToList\n */\npublic fun <T> Triple<T, T, T>.toList(): List<T> = listOf(first, second, third)\n","/*\n * Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\npackage kotlin.ranges\n\n\nimport kotlin.internal.*\n\n**\n * A range of values of type `UInt`.\n
```

```
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@OptIn(ExperimentalStdlibApi::class)\npublic
```

```
class UIntRange(start: UInt, endInclusive: UInt) : UIntProgression(start, endInclusive, 1), ClosedRange<UInt>, OpenEndRange<UInt> {\n override val start: UInt get() = first\n override val endInclusive: UInt get() = last\n
```

```
\n @SinceKotlin("1.7")\n @ExperimentalStdlibApi\n @Deprecated("Can throw an exception when it's impossible to represent the value with UInt type, for example, when the range includes MAX_VALUE. It's
```

```

recommended to use 'endInclusive' property that doesn't throw.
    override val endExclusive: UInt get() {
        if (last == UInt.MAX_VALUE) error("Cannot return the exclusive upper bound of a range that includes
        MAX_VALUE.")
        return last + 1
    }
    override fun contains(value: UInt): Boolean = first <= value
    && value <= last
    /** Checks if the range is empty.
     * The range is empty if its start value is
    greater than
    the end value.
     */
    override fun isEmpty(): Boolean = first > last
    override fun equals(other: Any?):
    Boolean =
        other is UIntRange && (isEmpty() && other.isEmpty()) ||
        first == other.first && last ==
        other.last
    override fun hashCode(): Int =
        if (isEmpty()) -1 else (31 * first.toInt() + last.toInt())
    override fun toString(): String = "$first..$last"
    companion object {
        /** An empty range of values of
        type UInt.
         */
        public val EMPTY: UIntRange = UIntRange(UInt.MAX_VALUE, UInt.MIN_VALUE)
    }
}
/** A progression of values of type `UInt`.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
public open class
UIntProgression(
    internal constructor(
        start: UInt,
        endInclusive: UInt,
        step: Int
    ) : Iterable<UInt> {
    init {
        if (step == 0.toInt()) throw kotlin.IllegalArgumentException("Step must be non-zero.")
        if (step
        == Int.MIN_VALUE)
            throw kotlin.IllegalArgumentException("Step must be greater than Int.MIN_VALUE to avoid overflow on
            negation.")
    }
    /** The first element in the progression.
     */
    public val first: UInt = start
    /** The last element in the progression.
     */
    public val last: UInt = getProgressionLastElement(start,
    endInclusive, step)
    /** The step of the progression.
     */
    public val step: Int = step
    final
    override fun iterator(): Iterator<UInt> = UIntProgressionIterator(first, last, step)
    /** Checks if the
    progression is empty.
     * Progression with a positive step is empty if its first element is greater than the last
    element.
     * Progression with a negative step is empty if its first element is less than the last element.
     */
    public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last
    override fun equals(other: Any?):
    Boolean =
        other is
        UIntProgression && (isEmpty() && other.isEmpty()) ||
        first == other.first && last == other.last && step
        == other.step
    override fun hashCode(): Int =
        if (isEmpty()) -1 else (31 * (31 * first.toInt() + last.toInt())
        + step.toInt())
    override fun toString(): String = if (step > 0) "$first..$last step $step" else "$first downTo
    $last step ${-step}"
    companion object {
        /** Creates UIntProgression within the specified
        bounds of a closed range.
         * The progression starts with the [rangeStart] value and goes toward the
        [rangeEnd] value not excluding it, with the specified [step].
         * In order to go backwards the [step] must be
        negative.
         * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.
         */
        public fun fromClosedRange(rangeStart: UInt, rangeEnd: UInt, step: Int): UIntProgression =
        UIntProgression(rangeStart, rangeEnd, step)
    }
}
/** An
iterator over a progression of values of type `UInt`.
 */
@property step the number by which the value is
incremented on each step.
 */
@SinceKotlin("1.3")
private class UIntProgressionIterator(first: UInt, last: UInt,
step: Int) : Iterator<UInt> {
    private val finalElement = last
    private var hasNext: Boolean = if (step > 0) first
    <= last else first >= last
    private val step = step.toInt() // use 2-complement math for negative steps
    private
    var next = if (hasNext) first else finalElement
    override fun hasNext(): Boolean = hasNext
    override fun
    next(): UInt {
        val value = next
        if (value == finalElement) {
            if (!hasNext) throw
            kotlin.NoSuchElementException()
            hasNext = false
        } else {
            next += step
        }
        return value
    }
}
/** Copyright 2010-2023 JetBrains s.r.o. and Kotlin Programming Language
contributors.
 * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.
 */
// Auto-generated file. DO NOT
EDIT!
package kotlin.ranges
import kotlin.internal.*
/** A range of values of type `ULong`.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@OptIn(ExperimentalStdlib
Api::class)
public class ULongRange(start: ULong, endInclusive: ULong) : ULongProgression(start, endInclusive,
1), ClosedRange<ULong>, OpenEndRange<ULong> {
    override val start: ULong get() = first
    override val
    endInclusive: ULong get() = last
}
@SinceKotlin("1.7")
@ExperimentalStdlibApi

```

```

@Deprecated("Can throw an exception when it's impossible to represent the value with ULong type, for example,
when the range includes MAX_VALUE. It's recommended to use 'endInclusive' property that doesn't throw.")
override val endExclusive: ULong get() {
    if (last == ULong.MAX_VALUE) error("Cannot return the
exclusive upper bound of a range that includes
MAX_VALUE.")
    return last + 1u
}
override fun contains(value: ULong): Boolean = first <= value
&& value <= last
/**
 * Checks if the range is empty.
 * The range is empty if its start value is
greater than the end value.
 */
override fun isEmpty(): Boolean = first > last
override fun equals(other:
Any?): Boolean =
    other is ULongRange && (isEmpty() && other.isEmpty() ||
        first == other.first
&& last == other.last)
override fun hashCode(): Int =
    if (isEmpty()) -1 else (31 * (first xor (first shr
32)).toInt() + (last xor (last shr 32)).toInt())
override fun toString(): String = "$first..$last"
companion
object {
    /** An empty range of values of type ULong.
    */
    public val EMPTY: ULongRange =
    ULongRange(ULong.MAX_VALUE, ULong.MIN_VALUE)
}
/**
 * A progression of values of type
`ULong`.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
public
open class ULongProgression(
    internal constructor(
        start: ULong,
        endInclusive: ULong,
        step: Long
    ) :
    Iterable<ULong> {
    init {
        if (step == 0.toLong()) throw kotlin.IllegalArgumentException("Step must be
non-zero.")
        if (step == Long.MIN_VALUE) throw kotlin.IllegalArgumentException("Step must be greater
than Long.MIN_VALUE to avoid overflow on negation.")
    }
    /**
     * The first element in the
progression.
     */
    public val first: ULong = start
    /**
     * The last element in the progression.
     */
    public val last: ULong = getProgressionLastElement(start, endInclusive, step)
    /**
     * The step of the
progression.
     */
    public val step: Long = step
    final override fun iterator(): Iterator<ULong> =
    ULongProgressionIterator(first, last, step)
    /**
     * Checks if the progression is empty.
     *
     * Progression with a positive step is empty if its
first element is greater than the last element.
     * Progression with a negative step is empty if its first element is
less than the last element.
     */
    public open fun isEmpty(): Boolean = if (step > 0) first > last else first <
last
    override fun equals(other: Any?): Boolean =
        other is ULongProgression && (isEmpty() &&
other.isEmpty() ||
            first == other.first && last == other.last && step == other.step)
    override fun
hashCode(): Int =
        if (isEmpty()) -1 else (31 * (31 * (first xor (first shr 32)).toInt() + (last xor (last shr
32)).toInt()) + (step xor (step ushr 32)).toInt())
    override fun toString(): String = if (step > 0) "$first..$last step
$step" else "$first downTo $last step ${-step}"
    companion object {
        /**
         * Creates
    ULongProgression within the specified bounds of a closed range.
         * The progression starts with the
[rangeStart] value and goes toward the [rangeEnd] value not excluding
it, with the specified [step].
         * In order to go backwards the [step] must be negative.
         * [step]
must be greater than `Long.MIN_VALUE` and not equal to zero.
         */
        public fun
fromClosedRange(rangeStart: ULong, rangeEnd: ULong, step: Long): ULongProgression =
    ULongProgression(rangeStart, rangeEnd, step)
    }
}
/**
 * An iterator over a progression of values of type
`ULong`.
 * @property step the number by which the value is incremented on each step.
 */
@SinceKotlin("1.3")
private class ULongProgressionIterator(first: ULong, last: ULong, step: Long) :
    Iterator<ULong> {
    private val finalElement = last
    private var hasNext: Boolean = if (step > 0) first <= last
else first >= last
    private val step = step.toULong() // use 2-complement math for negative steps
    private var
next = if (hasNext) first else finalElement
    override fun hasNext(): Boolean = hasNext
    override fun
next(): ULong {
        val value = next
        if (value == finalElement) {
            if (!hasNext) throw
kotlin.NoSuchElementException()
            hasNext = false
        } else {
            next += step
        }
        return value
    }
}
}
/**
 * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.
 */
@package kotlin.math
/**
 * Returns the smaller of two values.
 */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun min(a: UInt, b: UInt): UInt {
    return minOf(a, b)
}
/**
 * Returns the smaller of two

```

```

values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun min(a: ULong, b: ULong): ULong {\n    return minOf(a, b)\n}\n\n/**\n * Returns the greater of two values.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun max(a: UInt, b: UInt): UInt {\n        return maxOf(a, b)\n    }\n\n/**\n * Returns the greater of two values.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun max(a: ULong, b: ULong): ULong {\n    return maxOf(a, b)\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n*\n@file:kotlin.jvm.JvmName("UNumbersKt")\n\npackage kotlin\n\n/**\n * Counts the number of set bits in the binary representation of this [UInt] number.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,\n    ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countOneBits(): Int =\n    toInt().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the binary representation of this [UInt] number.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,\n    ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countLeadingZeroBits(): Int =\n    toInt().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero in the binary representation of this [UInt] number.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,\n    ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countTrailingZeroBits(): Int =\n    toInt().countTrailingZeroBits()\n\n/**\n * Returns a number having a single bit set in the position of the most significant set bit of this [UInt] number,\n * or zero, if this number is zero.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,\n    ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic\n    inline fun UInt.takeHighestOneBit(): UInt = toInt().takeHighestOneBit().toUInt()\n\n/**\n * Returns a number having a single bit set in the position of the least significant set bit of this [UInt] number,\n * or zero, if this number is zero.\n */\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,\n    ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.takeLowestOneBit(): UInt =\n    toInt().takeLowestOneBit().toUInt()\n\n/**\n * Rotates the binary representation of this [UInt] number left by the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple of [UInt.SIZE_BITS] (32) returns the same number, or more generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 32)`\n */\n*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,\n    ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.rotateLeft(bitCount: Int): UInt =\n    toInt().rotateLeft(bitCount).toUInt()\n\n/**\n * Rotates the binary representation of this [UInt] number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n * Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of [UInt.SIZE_BITS] (32) returns the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 32)`\n */\n*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,\n    ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline\n    fun UInt.rotateRight(bitCount: Int): UInt = toInt().rotateRight(bitCount).toUInt()\n\n/**\n * Counts the number of set bits in the binary representation of this [ULong] number.\n */

```

```

*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.countOneBits(): Int =
toLong().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the
binary representation of this [ULong] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.countLeadingZeroBits(): Int
= toLong().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero
in the binary representation of this [ULong] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun ULong.countTrailingZeroBits(): Int = toLong().countTrailingZeroBits()\n\n/**\n * Returns a number
having a single bit set in the position of the most significant set bit of this [ULong] number,\n * or zero, if this
number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.takeHighestOneBit(): ULong
= toLong().takeHighestOneBit().toULong()\n\n/**\n * Returns a number having a single bit set in the position of the
least significant set bit of this [ULong] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.takeLowestOneBit(): ULong
= toLong().takeLowestOneBit().toULong()\n\n/**\n * Rotates the binary representation of this [ULong] number left
by the specified [bitCount]
number of bits.\n * The most significant bits pushed out from the left side reenter the number as the least significant
bits on the right side.\n * Rotating the number left by a negative bit count is the same as rotating it right by the
negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple of
[ULong.SIZE_BITS] (64) returns the same number, or more generally\n * `number.rotateLeft(n) ==
number.rotateLeft(n % 64)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.rotateLeft(bitCount:
Int): ULong = toLong().rotateLeft(bitCount).toULong()\n\n/**\n * Rotates the binary representation of this [ULong]
number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side
reenter the number as the most significant bits on the left side.\n * Rotating the number right by a negative
bit count is the same as rotating it left by the negated bit count:\n * `number.rotateRight(-n) ==
number.rotateLeft(n)`\n * Rotating by a multiple of [ULong.SIZE_BITS] (64) returns the same number, or more
generally\n * `number.rotateRight(n) == number.rotateRight(n % 64)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULong.rotateRight(bitCount:
Int): ULong = toLong().rotateRight(bitCount).toULong()\n\n/**\n * Counts the number of set bits in the binary
representation of this [UByte] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.countOneBits(): Int =
toUInt().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the
binary representation of this [UByte] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.countLeadingZeroBits(): Int
= toByte().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero
in the binary representation of this [UByte] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.countTrailingZeroBits(): Int =
toByte().countTrailingZeroBits()\n\n/**\n * Returns a number having a single bit set in the position of the most
significant set bit of this [UByte] number,\n * or zero, if this number is zero.\n

```

```

*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.takeHighestOneBit(): UByte
= toInt().takeHighestOneBit().toUByte()\n\n/**\n * Returns a number having a single bit set in the
position of the least significant set bit of this [UByte] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.takeLowestOneBit(): UByte =
toInt().takeLowestOneBit().toUByte()\n\n/**\n * Rotates the binary representation of this [UByte] number left by
the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the
number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the
same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n *
Rotating by a multiple of [UByte.SIZE_BITS] (8) returns the same number, or more generally\n *
`number.rotateLeft(n) == number.rotateLeft(n % 8)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic
inline fun UByte.rotateLeft(bitCount: Int): UByte = toByte().rotateLeft(bitCount).toUByte()\n\n/**\n * Rotates the
binary representation of this [UByte] number right by the specified [bitCount] number of bits.\n * The least
significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n *
Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n *
`number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of [UByte.SIZE_BITS] (8) returns
the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 8)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.rotateRight(bitCount:
Int): UByte = toByte().rotateRight(bitCount).toUByte()\n\n/**\n * Counts the number of set bits in the
binary representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countOneBits(): Int =
toUInt().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the
binary representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countLeadingZeroBits(): Int
= toShort().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero
in the binary representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countTrailingZeroBits(): Int
= toShort().countTrailingZeroBits()\n\n/**\n * Returns
a number having a single bit set in the position of the most significant set bit of this [UShort] number,\n * or zero, if
this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.takeHighestOneBit(): UShort
= toInt().takeHighestOneBit().toUShort()\n\n/**\n * Returns a number having a single bit set in the position of the
least significant set bit of this [UShort] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.takeLowestOneBit(): UShort
= toInt().takeLowestOneBit().toUShort()\n\n/**\n * Rotates the binary representation of this [UShort] number left
by the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the
number as the least significant
bits on the right side.\n * Rotating the number left by a negative bit count is the same as rotating it right by the
negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple of
[UShort.SIZE_BITS] (16) returns the same number, or more generally\n * `number.rotateLeft(n) ==

```



```

number.rotateLeft(n % 16)`n *^n@SinceKotlin("1.6")`n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)`n@kotlin.internal.InlineOnly`npublic inline fun UShort.rotateLeft(bitCount:
Int): UShort = toShort().rotateLeft(bitCount).toUShort()`n/n/**`n * Rotates the binary representation of this
[UShort] number right by the specified [bitCount] number of bits.`n * The least significant bits pushed out from the
right side reenter the number as the most significant bits on the left side.`n *`n * Rotating the number right by a
negative bit count is the same as rotating it left by the negated bit count:`n * `number.rotateRight(-n) ==
number.rotateLeft(n)`n
*`n * Rotating by a multiple of [UShort.SIZE_BITS] (16) returns the same number, or more generally`n *
`number.rotateRight(n) == number.rotateRight(n % 16)`n
*^n@SinceKotlin("1.6")`n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)`n@kotlin.internal.InlineOnly`npublic inline fun UShort.rotateRight(bitCount:
Int): UShort = toShort().rotateRight(bitCount).toUShort()`n/n/**`n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.`n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.`n *^n@npackage kotlin.internal`n// (a - b) mod c`nprivate fun
differenceModulo(a: UInt, b: UInt, c: UInt): UInt {`n    val ac = a % c`n    val bc = b % c`n    return if (ac >= bc) ac -
bc else ac - bc + c`n}`n`nprivate fun differenceModulo(a: ULong, b: ULong, c: ULong): ULong {`n    val ac = a %
c`n    val bc = b % c`n    return if (ac >= bc) ac - bc else ac - bc + c`n}`n/n/**`n
* Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is
in the range`n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative`n *
[step].`n *`n * No validation on passed parameters is performed. The given parameters should satisfy the
condition:`n *`n * - either `step > 0` and `start <= end`,`n * - or `step < 0` and `start >= end`.`n *`n * @param start
first element of the progression`n * @param end ending bound for the progression`n * @param step increment, or
difference of successive elements in the progression`n * @return the final element of the progression`n *
@suppress`n *^n@PublishedApi`n@SinceKotlin("1.3")`ninternal fun getProgressionLastElement(start: UInt, end:
UInt, step: Int): UInt = when {`n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start,
step.toUInt())`n    step < 0 -> if (start <= end) end else end + differenceModulo(start,
end, (-step).toUInt())`n    else -> throw kotlin.IllegalArgumentException("Step is zero.")`n}`n/n/**`n * Calculates
the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range`n
* from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative`n * [step].`n *`n
* No validation on passed parameters is performed. The given parameters should satisfy the condition:`n *`n * - either
`step > 0` and `start <= end`,`n * - or `step < 0` and `start >= end`.`n *`n * @param start first element of the
progression`n * @param end ending bound for the progression`n * @param step increment, or difference of
successive elements in the progression`n * @return the final element of the progression`n * @suppress`n
*^n@PublishedApi`n@SinceKotlin("1.3")`ninternal fun getProgressionLastElement(start: ULong, end: ULong,
step: Long): ULong = when {`n    step > 0 -> if (start >= end) end else end - differenceModulo(end,
start, step.toULong())`n    step < 0 -> if (start <= end) end else end + differenceModulo(start, end, (-
step).toULong())`n    else -> throw kotlin.IllegalArgumentException("Step is zero.")`n}`n/n/**`n * Copyright 2010-
2021 JetBrains s.r.o. and Kotlin Programming Language contributors.`n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.`n
*^n@file:kotlin.jvm.JvmName("UStringsKt") // string representation of unsigned numbers`n`npackage
kotlin.text`n/n/**`n * Returns a string representation of this [Byte] value in the specified [radix].`n *`n * @throws
IllegalArgumentException when [radix] is not a valid radix for number to string conversion.`n
*^n@SinceKotlin("1.5")`n@WasExperimental(ExperimentalUnsignedTypes::class)`n//@kotlin.internal.InlineOnly
`npublic /*inline*/ fun UByte.toString(radix: Int): String = this.toInt().toString(radix)`n/n/**`n * Returns a string
representation of this [Short] value in the specified
[radix].`n *`n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string
conversion.`n
*^n@SinceKotlin("1.5")`n@WasExperimental(ExperimentalUnsignedTypes::class)`n//@kotlin.internal.InlineOnly

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\npublic /*inline*/ fun UShort.toString(radix: Int): String = this.toInt().toString(radix)\n\n\n/**\n * Returns a string
representation of this [Int] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is
not a valid radix for number to string conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n//@kotlin.internal.InlineOnly
\npublic /*inline*/ fun UInt.toString(radix: Int): String = this.toLong().toString(radix)\n\n\n/**\n * Returns a string
representation of this [Long] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix]
is not a valid radix for number to string conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic
fun ULong.toString(radix: Int): String = ulongToString(this.toLong(), checkRadix(radix))\n\n\n/**\n * Parses the
string as a signed [UByte] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a
valid representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUByte():
UByte = toUByteOrNull() ?: numberFormatException(this)\n\n\n/**\n * Parses the string as a signed [UByte] number and
returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n
*\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
String.toUByte(radix: Int): UByte = toUByteOrNull(radix) ?: numberFormatException(this)\n\n\n/**\n * Parses the
string as a [UShort] number and returns the result.\n *\n * @throws NumberFormatException if the
string is not a valid representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUShort():
UShort = toUShortOrNull() ?: numberFormatException(this)\n\n\n/**\n * Parses the string as a [UShort] number and
returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n
*\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
String.toUShort(radix: Int): UShort = toUShortOrNull(radix) ?: numberFormatException(this)\n\n\n/**\n * Parses the
string as an [UInt] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid
representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUInt():
UInt = toUIntOrNull() ?: numberFormatException(this)\n\n\n/**\n * Parses
the string as an [UInt] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a
valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string
to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
String.toUInt(radix: Int): UInt = toUIntOrNull(radix) ?: numberFormatException(this)\n\n\n/**\n * Parses the string as a
[ULong] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid
representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toULong():
ULong = toULongOrNull() ?: numberFormatException(this)\n\n\n/**\n * Parses the string as a [ULong] number and
returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n
*\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to
number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic
fun String.toULong(radix: Int): ULong = toULongOrNull(radix) ?: numberFormatException(this)\n\n\n/**\n * Parses the
string as an [UByte] number and returns the result\n *\n * or `null` if the string is not a valid representation of
a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun
String.toUByteOrNull(): UByte? = toUByteOrNull(radix = 10)\n\n\n/**\n * Parses the string as an [UByte] number
and returns the result\n *\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun

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String.toUByteOrNull(radix: Int): UByte? { \n    val int = this.toUIntOrNull(radix) ?: return null\n    if (int >
UByte.MAX_VALUE) return null\n    return int.toUByte()\n}\n\n/**\n * Parses the string as an [UShort] number and returns the result\n * or `null` if the string is not a valid
representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUShortOrNull(): UShort? = toUShortOrNull(radix = 10)\n\n/**\n * Parses the string as an [UShort] number
and returns the result\n * or `null` if the string is not a valid representation of a number.\n * \n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUShortOrNull(radix: Int): UShort? { \n    val int = this.toUIntOrNull(radix) ?: return null\n    if (int >
UShort.MAX_VALUE) return null\n    return int.toUShort()\n}\n\n/**\n * Parses the string as an [UInt] number and
returns the result\n * or `null` if the string is not a valid representation of a number.\n * \n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun String.toUIntOrNull(): UInt? = toUIntOrNull(radix = 10)\n\n/**\n * Parses the string as an [UInt] number and
returns the result\n * or `null` if the string is not a valid representation of a number.\n * \n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUIntOrNull(radix: Int): UInt? { \n    checkRadix(radix)\n\n    val length = this.length\n    if (length == 0)
return null\n\n    val limit: UInt = UInt.MAX_VALUE\n    val start: Int\n    val firstChar = this[0]\n    if (firstChar
< '0') { \n        if (length == 1 || firstChar != '+') return null\n        start = 1\n    } else { \n        start = 0\n    }\n\n    val
limitForMaxRadix = 119304647u // limit / 36\n    var limitBeforeMul = limitForMaxRadix\n    val uradix =
radix.toUInt()\n    var result = 0u\n    for (i
in start until length) { \n        val digit = digitOf(this[i], radix)\n\n        if (digit < 0) return null\n        if (result >
limitBeforeMul) { \n            if (limitBeforeMul == limitForMaxRadix) { \n                limitBeforeMul = limit /
uradix\n\n                if (result > limitBeforeMul) { \n                    return null\n                }\n            } else { \n
return null\n            }\n        }\n        result *= uradix\n        val beforeAdding = result\n        result +=
digit.toUInt()\n        if (result < beforeAdding) return null // overflow has happened\n    }\n\n    return
result\n}\n\n/**\n * Parses the string as an [ULong] number and returns the result\n * or `null` if the string is not a
valid representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toULongOrNull(): ULong? = toULongOrNull(radix = 10)\n\n/**\n * Parses the string as an [ULong] number
and returns the result\n
* or `null` if the string is not a valid representation of a number.\n * \n * @throws IllegalArgumentException when
[radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toULongOrNull(radix: Int): ULong? { \n    checkRadix(radix)\n\n    val length = this.length\n    if (length ==
0) return null\n\n    val limit: ULong = ULong.MAX_VALUE\n    val start: Int\n    val firstChar = this[0]\n    if
(firstChar < '0') { \n        if (length == 1 || firstChar != '+') return null\n        start = 1\n    } else { \n
start = 0\n    }\n\n    val limitForMaxRadix = 512409557603043100uL // limit / 36\n    var limitBeforeMul =
limitForMaxRadix\n    val uradix = radix.toULong()\n    var result = 0uL\n    for (i in start until length) { \n        val
digit = digitOf(this[i], radix)\n\n        if (digit < 0) return null\n        if (result > limitBeforeMul) { \n            if
(limitBeforeMul
== limitForMaxRadix) { \n                limitBeforeMul = limit / uradix\n\n                if (result > limitBeforeMul) { \n
return null\n                }\n            } else { \n                return null\n            }\n        }\n\n        result *=
uradix\n        val beforeAdding = result\n        result += digit.toUInt()\n        if (result < beforeAdding) return null
// overflow has happened\n    }\n\n    return result\n}\n\n"/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n@file:Suppress("INVISIBLE_REFERENCE",

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\ "INVISIBLE_MEMBER")\npackage kotlin\n\nimport kotlin.annotation.AnnotationTarget.*\nimport
kotlin.internal.RequireKotlin\nimport kotlin.internal.RequireKotlinVersionKind\n\n/**\n * Marks the API that is
dependent on the experimental unsigned types, including those types themselves.\n
*\n * Usages of such API will be reported as warnings unless an explicit opt-in with\n * the [OptIn] annotation, e.g.
`@OptIn(ExperimentalUnsignedTypes::class)`,\n * or with the `opt-in=kotlin.ExperimentalUnsignedTypes`
compiler option is given.\n *\n * It's recommended to propagate the experimental status to the API that depends on
unsigned types by annotating it with this annotation.\n */\n @RequiresOptIn(level =
RequiresOptIn.Level.WARNING)\n @MustBeDocumented\n @Target(CLASS, ANNOTATION_CLASS,
PROPERTY, FIELD, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION,
PROPERTY_GETTER, PROPERTY_SETTER,
TYPEALIAS)\n @Retention(AnnotationRetention.BINARY)\n public annotation class
ExperimentalUnsignedTypes\n", "/*\n * Copyright 2010-2022 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*/\n\n @file:kotlin.jvm.JvmMultifileClass\n @file:kotlin.jvm.JvmName("MathKt")\n\npackage
kotlin.math\n\n\n// constants, can't use them from nativeMath as they are not constants there\n\n/** Ratio of the
circumference of a circle to its diameter, approximately 3.14159. */\n @SinceKotlin("1.2")\n public const val PI:
Double = 3.141592653589793\n\n/** Base of the natural logarithms, approximately 2.71828.
*/\n @SinceKotlin("1.2")\n public const val E: Double = 2.718281828459045\n\n// region =====
Double Math =====\n\n/** Computes the sine of the angle [x]
given in radians.\n *\n * Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n @SinceKotlin("1.2")\n public
expect fun sin(x: Double): Double\n\n/** Computes the cosine of the angle [x] given in radians.\n *\n * Special
cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n @SinceKotlin("1.2")\n public expect fun cos(x: Double):
Double\n\n/** Computes the tangent of the angle [x] given in radians.\n *\n * Special cases:\n * - `tan(NaN|+Inf|-
Inf)` is
`NaN`\n */\n @SinceKotlin("1.2")\n public expect fun tan(x: Double): Double\n\n/**\n * Computes the arc sine of
the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n
* - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n @SinceKotlin("1.2")\n public expect fun asin(x:
Double): Double\n\n/**\n * Computes the arc cosine of the value [x];\n * the returned value is an angle in the range
from `0.0` to `PI` radians.\n *\n * Special cases:\n * - `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n
*/\n @SinceKotlin("1.2")\n public expect fun acos(x: Double): Double\n\n/**\n * Computes the arc tangent of the
value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n
* - `atan(NaN)` is `NaN`\n */\n @SinceKotlin("1.2")\n public expect fun atan(x: Double): Double\n\n/**\n * Returns
the angle `theta` of the polar coordinates `(r, theta)` that correspond\n * to
the rectangular coordinates `(x, y)` by computing the arc tangent of the value [y] / [x];\n * the returned value is an
angle in the range from `-PI` to `PI` radians.\n *\n * Special cases:\n * - `atan2(0.0, 0.0)` is `0.0`\n * - `atan2(0.0,
x)` is `0.0` for `x > 0` and `PI` for `x < 0`\n * - `atan2(-0.0, x)` is `-0.0` for `x > 0` and `-PI` for `x < 0`\n * -
`atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for `-Inf < y < 0`\n * - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf`
and `-PI` for `-Inf < y < 0`\n * - `atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`\n * - `atan2(+Inf, x)` is
`PI/2` for finite `x`\n * - `atan2(-Inf, x)` is `-PI/2` for finite `x`\n * - `atan2(NaN, x)` and `atan2(y, NaN)` is
`NaN`\n */\n @SinceKotlin("1.2")\n public expect fun atan2(y: Double, x: Double): Double\n\n/**\n * Computes
the hyperbolic sine of the value [x].\n *\n * Special cases:\n * - `sinh(NaN)` is `NaN`\n * - `sinh(+Inf)` is `+Inf`\n
*\n * - `sinh(-Inf)` is `-Inf`\n
*/\n @SinceKotlin("1.2")\n public expect fun sinh(x: Double): Double\n\n/**\n * Computes the hyperbolic cosine
of the value [x].\n *\n * Special cases:\n * - `cosh(NaN)` is `NaN`\n * - `cosh(+Inf|-Inf)` is `+Inf`\n
*/\n @SinceKotlin("1.2")\n public expect fun cosh(x: Double): Double\n\n/**\n * Computes the hyperbolic tangent
of the value [x].\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(+Inf)` is `1.0`\n * - `tanh(-Inf)` is
`-1.0`\n */\n @SinceKotlin("1.2")\n public expect fun tanh(x: Double): Double\n\n/**\n * Computes the inverse

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hyperbolic sine of the value [x].  
 The returned value is  $y$  such that  $\sinh(y) == x$ .  
 Special cases:  
 $\sinh(\text{NaN})$  is  $\text{NaN}$   
 $\sinh(+\text{Inf})$  is  $+\text{Inf}$   
 $\sinh(-\text{Inf})$  is  $-\text{Inf}$

```

*\/n@SinceKotlin("1.2")\npublic expect fun asinh(x: Double): Double\n/n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n * The returned value is positive `y` such that `cosh(y) == x`.\n * Special cases:\n * - `acosh(NaN)` is `NaN`\n * - `acosh(x)` is `NaN` when `x < 1`\n * - `acosh(+Inf)` is `+Inf`\n * - `acosh(-Inf)` is `-Inf`\n */\n@SinceKotlin("1.2")\npublic expect fun acosh(x: Double): Double\n/n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n * The returned value is `y` such that `tanh(y) == x`.\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(x)` is `NaN` when `x > 1` or `x < -1`\n * - `tanh(1.0)` is `+Inf`\n * - `tanh(-1.0)` is `-Inf`\n */\n@SinceKotlin("1.2")\npublic expect fun atanh(x: Double): Double\n/n/**\n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.\n * Special cases:\n * - returns `+Inf` if any of arguments is infinite\n * - returns `NaN` if any of arguments is `NaN` and the other is not infinite\n */\n@SinceKotlin("1.2")\npublic expect fun hypot(x: Double, y: Double): Double\n/n/**\n * Computes the positive square root of the value [x].\n * Special cases:\n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n */\n@SinceKotlin("1.2")\npublic expect fun sqrt(x: Double): Double\n/n/**\n * Computes Euler's number `e` raised to the power of the value [x].\n * Special cases:\n * - `exp(NaN)` is `NaN`\n * - `exp(+Inf)` is `+Inf`\n * - `exp(-Inf)` is `0.0`\n */\n@SinceKotlin("1.2")\npublic expect fun exp(x: Double): Double\n/n/**\n * Computes `exp(x) - 1`.\n * This function can be implemented to produce more precise result for [x] near zero.\n * Special cases:\n * - `expm1(NaN)` is `NaN`\n * - `expm1(+Inf)` is `+Inf`\n * - `expm1(-Inf)` is `-1.0`\n * @see [exp] function.\n */\n@SinceKotlin("1.2")\npublic expect fun expm1(x: Double): Double\n/n/**\n * Computes the logarithm of the value [x] to the given [base].\n * Special cases:\n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n * - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`\n * - `log(+Inf, +Inf)` is `NaN`\n * - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b < 1`\n * - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b > 1`\n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n */\n@SinceKotlin("1.2")\npublic expect fun log(x: Double, base: Double): Double\n/n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n * Special cases:\n * - `ln(NaN)` is `NaN`\n * - `ln(x)` is `NaN` when `x < 0.0`\n * - `ln(+Inf)` is `+Inf`\n * - `ln(0.0)` is `-Inf`\n */\n@SinceKotlin("1.2")\npublic expect fun ln(x: Double): Double\n/n/**\n * Computes the common logarithm (base 10) of the value [x].\n * @see [ln] function for special cases.\n */\n@SinceKotlin("1.2")\npublic expect fun log10(x: Double): Double\n/n/**\n * Computes the binary logarithm (base 2) of the value [x].\n * @see [ln] function for special cases.\n */\n@SinceKotlin("1.2")\npublic expect fun log2(x: Double): Double\n/n/**\n * Computes `ln(x + 1)`.\n * This function can be implemented to produce more precise result for [x] near zero.\n * Special cases:\n * - `ln1p(NaN)` is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)` is `+Inf`\n * @see [ln] function\n * @see [expm1] function\n */\n@SinceKotlin("1.2")\npublic expect fun ln1p(x: Double): Double\n/n/**\n * Rounds the given value [x] to an integer towards positive infinity.\n * @return the smallest double value that is greater than or equal to the given value [x] and is a mathematical integer.\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin("1.2")\npublic expect fun ceil(x: Double): Double\n/n/**\n * Rounds the given value [x] to an integer towards negative infinity.\n * @return the largest double value that is smaller than or equal to the given value [x] and is a mathematical integer.\n * Special cases:\n * - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin("1.2")\npublic expect fun floor(x: Double): Double\n/n/**\n * Rounds the given value [x] to an integer towards zero.\n * @return the value [x] having its fractional part truncated.\n * Special cases:\n * - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin("1.2")\npublic expect fun truncate(x: Double): Double\n/n/**\n * Rounds the given value [x] towards the closest integer with ties rounded towards even integer.\n * Special cases:\n * - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin("1.2")\npublic expect fun round(x: Double): Double\n/n/**\n * Returns the absolute value of the given value [x].\n * Special cases:\n * - `abs(NaN)` is `NaN`\n * @see absoluteValue

```

extension property for [Double]

```

    * Returns the sign of the given value [x]:
    * - -1.0 if the value is negative,
    * - zero if the value is zero,
    * - 1.0 if the value is positive
    * Special case:
    * - `sign(NaN)` is `NaN`
  
```

```

    * Returns the smaller of two values.
    * If either value is `NaN`,
    then the result is `NaN`.
  
```

```

    * Returns the greater of two values.
    * If either value is `NaN`,
    then the result is `NaN`.
  
```

```

    * Returns the cube root
    of [x]. For any `x`, `cbrt(-x) == -cbrt(x)`;
    that is, the cube root of a negative value is the negative of the cube
    root of that value's magnitude.
    Special cases:
    * - If the argument is `NaN`, then the
    result is `NaN`.
    * - If the argument is infinite, then the result
    is an infinity with the same sign as the argument.
    * - If the argument is zero, then the result is a zero with the
    same sign as the argument.
  
```

```

    * Raises this value to the power [x].
    * Special cases:
    * - `b.pow(0.0)` is
    `1.0`
    * - `b.pow(1.0) == b`
    * - `b.pow(NaN)` is `NaN`
    * - `NaN.pow(x)` is `NaN` for `x != 0.0`
    * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`
    * - `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer
  
```

```

    * Raises this value to the
    integer power [n].
    * See the other overload of [pow] for details.
  
```

```

    * Returns the absolute value of this value.
    * Special cases:
    * - `NaN.absoluteValue` is `NaN`
    * @see abs
  
```

```

    * Returns the sign
    of this value:
    * - -1.0 if the value is negative,
    * - zero if the value is zero,
    * - 1.0 if the value is
    positive
    * Special case:
    * - `NaN.sign` is `NaN`
  
```

```

    * Returns this value with the sign bit same as of the [sign] value.
    * If [sign] is
    `NaN` the sign of the result is undefined.
  
```

```

    * Returns this value with the sign bit same as of the [sign] value.
  
```

```

    * Returns the ulp (unit in
    the last place) of this value.
    * An ulp is a positive distance between this value and the next nearest [Double]
    value larger in magnitude.
    * Special Cases:
    * - `NaN.ulp` is `NaN`
    * - `x.ulp` is `+Inf`
    when `x` is `+Inf` or `-Inf`
    * - `0.0.ulp` is `Double.MIN_VALUE`
  
```

```

    * Returns the [Double] value nearest to this value in direction of positive infinity.
  
```

```

    * Returns the [Double] value
    nearest to this value in direction of negative infinity.
  
```

```

    * Returns the [Double] value nearest to this value in direction from this value
    towards the value [to].
    * Special cases:
    * - `x.nextTowards(y)` is `NaN` if either `x` or `y` are `NaN`
    * - `x.nextTowards(x) == x`
  
```

```

    * Rounds this [Double] value to the nearest integer and converts the result to [Int].
    * Ties are
    rounded towards positive infinity.
    * Special cases:
    * - `x.roundToInt() == Int.MAX_VALUE`
    when `x > Int.MAX_VALUE`
    * - `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`
    * @throws IllegalArgumentException when this value is `NaN`
  
```

```

    * Rounds this [Double] value to the nearest integer and converts the result to
    [Long].
    * Ties are rounded towards positive infinity.
    * Special cases:
    * - `x.roundToLong() ==
    Long.MAX_VALUE` when `x > Long.MAX_VALUE`
    * - `x.roundToLong() == Long.MIN_VALUE` when `x
    < Long.MIN_VALUE`
    * @throws IllegalArgumentException when this value is `NaN`
  
```

```

    * Computes the
    sine of the angle [x] given in radians.
    * Special cases:
    * - `sin(NaN|+Inf|-Inf)` is `NaN`
  
```

```

    * Computes the cosine
  
```

of the angle [x] given in radians.  
`cos`: Special cases: `cos(NaN|+Inf|-Inf)` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `cos(x: Float): Float`: Computes the cosine of the angle [x] given in radians.  
`tan`: Special cases: `tan(NaN|+Inf|-Inf)` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `tan(x: Float): Float`: Computes the tangent of the angle [x] given in radians.  
`asin`: Special cases: `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`  
`@SinceKotlin("1.2")` public expect fun `asin(x: Float): Float`: Computes the arc sine of the value [x]; the returned value is an angle in the range from `-PI/2` to `PI/2` radians.  
`acos`: Special cases: `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`  
`@SinceKotlin("1.2")` public expect fun `acos(x: Float): Float`: Computes the arc cosine of the value [x]; the returned value is an angle in the range from `0.0` to `PI` radians.  
`atan`: Special cases: `atan(NaN)` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `atan(x: Float): Float`: Computes the arc tangent of the value [x]; the returned value is an angle in the range from `-PI/2` to `PI/2` radians.  
`atan2`: Special cases: `atan2(NaN)` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `atan2(y: Float, x: Float): Float`: Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond to the rectangular coordinates `(x, y)` by computing the arc tangent of the value `y / x`; the returned value is an angle in the range from `-PI` to `PI` radians.  
`atan2(0.0, 0.0)` is `0.0`  
`atan2(0.0, x)` is `0.0` for `x > 0` and `PI` for `x < 0`  
`atan2(-0.0, x)` is `-0.0` for `x > 0` and `-PI` for `x < 0`  
`atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for `-Inf < y < 0`  
`atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI` for `-Inf < y < 0`  
`atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`  
`atan2(+Inf, x)` is `PI/2` for finite `x`  
`atan2(-Inf, x)` is `-PI/2` for finite `x`  
`atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `atan2(y: Float, x: Float): Float`: Computes the hyperbolic sine of the value [x].  
`sinh`: Special cases: `sinh(NaN)` is `NaN`, `sinh(+Inf)` is `+Inf`, `sinh(-Inf)` is `-Inf`  
`@SinceKotlin("1.2")` public expect fun `sinh(x: Float): Float`: Computes the hyperbolic cosine of the value [x].  
`cosh`: Special cases: `cosh(NaN)` is `NaN`, `cosh(+Inf|-Inf)` is `+Inf|-Inf`  
`@SinceKotlin("1.2")` public expect fun `cosh(x: Float): Float`: Computes the hyperbolic tangent of the value [x].  
`tanh`: Special cases: `tanh(NaN)` is `NaN`, `tanh(+Inf)` is `1.0`, `tanh(-Inf)` is `-1.0`  
`@SinceKotlin("1.2")` public expect fun `tanh(x: Float): Float`: Computes the inverse hyperbolic sine of the value [x]. The returned value is `y` such that `sinh(y) == x`.  
`asinh`: Special cases: `asinh(NaN)` is `NaN`, `asinh(+Inf)` is `+Inf`, `asinh(-Inf)` is `-Inf`  
`@SinceKotlin("1.2")` public expect fun `asinh(x: Float): Float`: Computes the inverse hyperbolic cosine of the value [x]. The returned value is positive `y` such that `cosh(y) == x`.  
`acosh`: Special cases: `acosh(NaN)` is `NaN`, `acosh(x)` is `NaN` when `x < 1`, `acosh(+Inf)` is `+Inf`  
`@SinceKotlin("1.2")` public expect fun `acosh(x: Float): Float`: Computes the inverse hyperbolic tangent of the value [x]. The returned value is `y` such that `tanh(y) == x`.  
`atanh`: Special cases: `atanh(NaN)` is `NaN`, `atanh(x)` is `NaN` when `x > 1` or `x < -1`, `atanh(1.0)` is `+Inf`, `atanh(-1.0)` is `-Inf`  
`@SinceKotlin("1.2")` public expect fun `atanh(x: Float): Float`: Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.  
`hypot`: Special cases: returns `+Inf` if any of arguments is infinite, returns `NaN` if any of arguments is `NaN` and the other is not infinite  
`@SinceKotlin("1.2")` public expect fun `hypot(x: Float, y: Float): Float`: Computes the positive square root of the value [x].  
`sqrt`: Special cases: `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`  
`@SinceKotlin("1.2")` public expect fun `sqrt(x: Float): Float`: Computes Euler's number `e` raised to the power of the value [x].  
`exp`: Special cases: `exp(NaN)` is `NaN`, `exp(+Inf)` is `+Inf`, `exp(-Inf)` is `0.0`  
`@SinceKotlin("1.2")` public expect fun `exp(x: Float): Float`: Computes `exp(x) - 1`. This function can be implemented to produce more precise result for [x] near zero.  
`expm1`: Special cases: `expm1(NaN)` is `NaN`, `expm1(+Inf)` is `+Inf`, `expm1(-Inf)` is `-1.0`  
`@see [exp]` function.  
`@SinceKotlin("1.2")` public expect fun `expm1(x: Float): Float`: Computes the logarithm of the value [x] to the given [base].  
`log`: Special cases: `log(x, b)` is `NaN` if either `x` or `b` are `NaN`, `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`, `log(+Inf, +Inf)` is `NaN`, `log(+Inf, b)` is `+Inf` for `b >`

$1$  and  $-\infty$  for  $b < 1$  and  $-\log(0.0, b)$  is  $-\infty$  for  $b > 1$  and  $+\infty$  for  $b > 1$ . See also logarithm functions for common fixed bases: [ln], [log10] and [log2].

`SinceKotlin("1.2")\npublic expect fun log(x: Float, base: Float): Float` Computes the natural logarithm (base  $E$ ) of the value [x].

**Special cases:**  $-\ln(\text{NaN})$  is  $\text{NaN}$ ,  $-\ln(x)$  is  $\text{NaN}$  when  $x < 0.0$ ,  $-\ln(+\infty)$  is  $-\infty$ ,  $-\ln(0.0)$  is  $-\infty$ .

`SinceKotlin("1.2")\npublic expect fun ln(x: Float): Float` Computes the common logarithm (base 10) of the value [x]. @see [ln] function for special cases.

`SinceKotlin("1.2")\npublic expect fun log10(x: Float): Float` Computes the binary logarithm (base 2) of the value [x]. @see [ln] function for special cases.

`SinceKotlin("1.2")\npublic expect fun log2(x: Float): Float` Computes  $\ln(x + 1)$ . This function can be implemented to produce more precise result for [x] near zero.

**Special cases:**  $-\ln1p(\text{NaN})$  is  $\text{NaN}$ ,  $-\ln1p(x)$  is  $\text{NaN}$  where  $x < -1.0$ ,  $-\ln1p(-1.0)$  is  $-\infty$ ,  $-\ln1p(+\infty)$  is  $+\infty$ . @see [ln] function @see [expm1] function

`SinceKotlin("1.2")\npublic expect fun ln1p(x: Float): Float` Rounds the given value [x] to an integer towards positive infinity. @return the smallest Float value that is greater than or equal to the given value [x] and is a mathematical integer.

**Special cases:**  $-\text{ceil}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\infty$  or  $-\infty$  or already a mathematical integer.

`SinceKotlin("1.2")\npublic expect fun ceil(x: Float): Float` Rounds the given value [x] to an integer towards negative infinity. @return the largest Float value that is smaller than or equal to the given value [x] and is a mathematical integer.

**Special cases:**  $-\text{floor}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\infty$  or  $-\infty$  or already a mathematical integer.

`SinceKotlin("1.2")\npublic expect fun floor(x: Float): Float` Rounds the given value [x] to an integer towards zero. @return the value [x] having its fractional part truncated.

**Special cases:**  $-\text{truncate}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\infty$  or  $-\infty$  or already a mathematical integer.

`SinceKotlin("1.2")\npublic expect fun truncate(x: Float): Float` Rounds the given value [x] towards the closest integer with ties rounded towards even integer.

**Special cases:**  $-\text{round}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\infty$  or  $-\infty$  or already a mathematical integer.

`SinceKotlin("1.2")\npublic expect fun round(x: Float): Float` Returns the absolute value of the given value [x].

**Special cases:**  $-\text{abs}(\text{NaN})$  is  $\text{NaN}$ . @see absoluteValue extension property for [Float].

`SinceKotlin("1.2")\npublic expect fun abs(x: Float): Float` Returns the sign of the given value [x]:  $-1.0$  if the value is negative, zero if the value is zero,  $1.0$  if the value is positive.

**Special case:**  $-\text{sign}(\text{NaN})$  is  $\text{NaN}$ .

`SinceKotlin("1.2")\npublic expect fun sign(x: Float): Float` Returns the smaller of two values. If either value is  $\text{NaN}$ , then the result is  $\text{NaN}$ .

`SinceKotlin("1.2")\npublic expect fun min(a: Float, b: Float): Float` Returns the greater of two values. If either value is  $\text{NaN}$ , then the result is  $\text{NaN}$ .

`SinceKotlin("1.2")\npublic expect fun max(a: Float, b: Float): Float` Returns the cube root of [x]. For any  $x$ ,  $\text{cbrt}(-x) == -\text{cbrt}(x)$ ; that is, the cube root of a negative value is the negative of the cube root of that value's magnitude.

**Special cases:** If the argument is  $\text{NaN}$ , then the result is  $\text{NaN}$ . If the argument is infinite, then the result is an infinity with the same sign as the argument. If the argument is zero, then the result is a zero with the same sign as the argument.

`SinceKotlin("1.8")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun cbrt(x: Float): Float` Raises this value to the power [x].

**Special cases:**  $-\text{b.pow}(0.0)$  is  $1.0$ ,  $-\text{b.pow}(1.0) == b$ ,  $-\text{b.pow}(\text{NaN})$  is  $\text{NaN}$ ,  $-\text{NaN.pow}(x)$  is  $\text{NaN}$  for  $x != 0.0$ ,  $-\text{b.pow}(\text{Inf})$  is  $\text{NaN}$  for  $\text{abs}(b) == 1.0$ ,  $-\text{b.pow}(x)$  is  $\text{NaN}$  for  $b < 0$  and  $x$  is finite and not an integer.

`SinceKotlin("1.2")\npublic expect fun Float.pow(x: Float): Float` Raises this value to the integer power [n]. See the other overload of [pow] for details.

`SinceKotlin("1.2")\npublic expect fun Float.pow(n: Int): Float` Returns the absolute value of this value.

**Special cases:**  $-\text{NaN.absoluteValue}$  is  $\text{NaN}$ . @see abs function

`SinceKotlin("1.2")\npublic expect val Float.absoluteValue: Float` Returns the sign of this value:  $-1.0$  if the value is negative, zero if the value is zero,  $1.0$  if the value is positive.

**Special case:**  $-\text{NaN.sign}$  is  $\text{NaN}$ .

`SinceKotlin("1.2")\npublic expect val Float.sign: Float` Returns



this value with the sign bit same as of the [sign] value. If [sign] is NaN the sign of the result is undefined.

```

@SinceKotlin("1.2")
public expect fun Float.withSign(sign: Float): Float
Returns this value with the sign bit same as of the [sign] value.
@SinceKotlin("1.2")
public expect fun Float.withSign(sign: Int): Float
Rounds this [Float] value to the nearest integer and converts the result to [Int]. Ties are rounded towards positive infinity.
Special cases:
- x.roundToInt() == Int.MAX_VALUE when x > Int.MAX_VALUE
- x.roundToInt() == Int.MIN_VALUE when x < Int.MIN_VALUE
@throws IllegalArgumentException when this value is NaN
@SinceKotlin("1.2")
public expect fun Float.roundToInt(): Int
Rounds this [Float] value to the nearest integer and converts the result to [Long]. Ties are rounded towards positive infinity.
Special cases:
- x.roundToLong() == Long.MAX_VALUE when x > Long.MAX_VALUE
- x.roundToLong() == Long.MIN_VALUE when x < Long.MIN_VALUE
@throws IllegalArgumentException when this value is NaN
@SinceKotlin("1.2")
public expect fun Float.roundToLong(): Long
endregion
region ===== Integer Math
=====
Returns the absolute value of the given value [n].
Special cases:
- abs(Int.MIN_VALUE) is Int.MIN_VALUE due to an overflow
@see absoluteValue extension property for [Int]
@SinceKotlin("1.2")
public expect fun abs(n: Int): Int
Returns the smaller of two values.
@SinceKotlin("1.2")
public expect fun min(a: Int, b: Int): Int
Returns the greater of two values.
@SinceKotlin("1.2")
public expect fun max(a: Int, b: Int): Int
Returns the absolute value of this value.
Special cases:
- Int.MIN_VALUE.absoluteValue is Int.MIN_VALUE due to an overflow
@see abs function
@SinceKotlin("1.2")
public expect val Int.absoluteValue: Int
Returns the sign of this value:
- -1 if the value is negative,
- 0 if the value is zero,
- 1 if the value is positive
@SinceKotlin("1.2")
public expect val Int.sign: Int
Returns the absolute value of the given value [n].
Special cases:
- abs(Long.MIN_VALUE) is Long.MIN_VALUE due to an overflow
@see absoluteValue extension property for [Long]
@SinceKotlin("1.2")
public expect fun abs(n: Long): Long
Returns the smaller of two values.
@SinceKotlin("1.2")
public expect fun min(a: Long, b: Long): Long
Returns the greater of two values.
@SinceKotlin("1.2")
public expect fun max(a: Long, b: Long): Long
Returns the absolute value of this value.
Special cases:
- Long.MIN_VALUE.absoluteValue is Long.MIN_VALUE due to an overflow
@see abs function
@SinceKotlin("1.2")
public expect val Long.absoluteValue: Long
Returns the sign of this value:
- -1 if the value is negative,
- 0 if the value is zero,
- 1 if the value is positive
@SinceKotlin("1.2")
public expect val Long.sign: Int
endregion
"/
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package kotlin.js
Exposes the JavaScript [Math object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/Math) to Kotlin.
@PublishedApi
@JsName("Math")
internal external object JsMath {
    val LN2: Double
    fun abs(value: Double): Double
    fun acos(value: Double): Double
    fun asin(value: Double): Double
    fun atan(value: Double): Double
    fun atan2(y: Double, x: Double): Double
    fun cos(value: Double): Double
    fun sin(value: Double): Double
    fun exp(value: Double): Double
    fun max(vararg values: Int): Int
    fun max(vararg values: Float): Float
    fun max(vararg values: Double): Double
    fun min(vararg values: Int): Int
    fun min(vararg values: Float): Float
    fun min(vararg values: Double): Double
    fun sqrt(value: Double): Double
    fun tan(value: Double): Double
    fun log(value: Double): Double
    fun cbrt(value: Double): Double
    fun pow(base: Double, exp: Double): Double
    fun round(value: Number): Double
    fun floor(value: Number): Double
    fun ceil(value: Number): Double
}
internal const val defineTaylorNBound = ""
var epsilon = 2.220446049250313E-16
var taylor_2_bound = Math.sqrt(epsilon)
var taylor_n_bound = Math.sqrt(taylor_2_bound)
internal const val defineUpperTaylor2Bound = ""

```

```

$defineTaylorNBound\n  var upper_taylor_2_bound = 1/taylor_2_bound;\n\"\"\n\ninternal const val
defineUpperTaylorNBound = \"\"\n $defineUpperTaylor2Bound\n  var upper_taylor_n_bound =
1/taylor_n_bound;\n\"\"\n\n", "names": [], "mappings": "AAWC,CAXA,yB;EACG,IAAI,OAAO,MAAO,KAAI,UAA
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,IAAI,OAAO,OAAQ,KAAI,QAAvB,C;IACD,OAAO,CAAC,MAAM,QAAP,C;;IAGP,IAAI,OAAQ,GAAE,E;IAC
d,OAAO,CAAC,IAAI,OAAL,C;;CAEd,CAAC,IAAD,EAAO,kB;EACJ,IAAI,IAAI,M;ECPU;;;IAAtB,MAAM,eAA
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,OAAO,CAAE,YAAW,U;G;EAGxB,MAAM,aAAc,GAAE,a;IACiB,OAAO,CAAE,YAAW,Y;G;EAGxB,MAAM,c
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C;UAA+B,sBA+tBIB,OA/tBkB,C;UAA5C,akBjtpBO,W;UIBktpBP,kBA8tB0B,O;UA7tB1B,wD;YACI,cA4tB+B,S  
A5tBjB,CAAU,KAAV,EAAiB,WAAjB,EAA8B,UAAK,KAAL,CAA9B,C;YACd,MAAO,WAAI,WAAJ,C;;UAEX  
,4BAAO,M;;;QAytBP,gC;O;KAhBJ,C;8FamBA,yB;MAztBA,gD;MAAA,gE;MAAA,oC;MAytBA,gD;QAgBW,6  
B;;UA1tBP,IAthaO,qBAAQ,CAshaf,C;YAAe,4BAAO,OA0tBI,OA1tBJ,C;YAAP,8B;;UACqB,kBAAvB,eAAa,mB  
AAO,CAAP,IAAb,C;UAA+B,sBAytBIB,OAztBkB,C;UAA5C,akB1upBO,W;UIB2upBP,kBAwtB0B,O;UAvtB1B,  
wD;YACI,cAstB+B,SAttBjB,CAAU,KAAV,EAAiB,WAAjB,EAA8B,sBAAK,KAAL,EAA9B,C;YACd,MAAO,W  
AAI,WAAJ,C;;UAEX,4BAAO,M;;;QAMtBP,gC;O;KAhBJ,C;gFamBA,+B;MAOoB,Q;MADhB,UAAe,C;MACf,  
wBAAgB,SAAhB,gB;QAAGB,cAAA,SAAhB,M;QACI,YAAO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAG  
X,+B;MAOoB,Q;MADhB,UAAe,C;MACf,wBAAgB,SAAhB,gB;QAAGB,cAAA,SAAhB,M;QACI,YAAO,SAAS,  
OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAGX,+B;MAOoB,Q;MADhB,UAAe,C;MACf,wBAAgB,SAAhB,gB;QAAG  
B,cAAA,SAAhB,M;QACI,YAAO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAGX,+B;MAOoB,Q;MADhB,UA  
Ae,C;MACf,wBAAgB,SAAhB,gB;QAAGB,cAAA,SAAhB,M;QACI,YAAO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO  
,G;K;kFAGX,+B;MAOoB,Q;MADhB,UAAe,C;MACf,wBAAgB,SAAhB,gB;QAAGB,cAAA,SAAhB,M;QACI,YA  
AO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAGX,+B;MAOoB,Q;MADhB,UAAe,C;MACf,wBAAgB,SAAh  
B,gB;QAAGB,cAAA,SAAhB,M;QACI,YAAO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAGX,+B;MAOoB,Q;  
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B,M;QACI,YAAO,SAAS,OAAT,CAAP,I;;MAEJ,OAAO,G;K;kFAGX,yB;MAAA,oC;MAAA,gC;MAAA,sC;QAO  
oB,Q;QADhB,UAAe,C;QACf,wBAAgB,SAAhB,gB;UAAgB,cAAhB,UAAgB,SAAhB,O;UACI,YAAO,SAAS,oB  
AAT,CAAP,I;;QAEJ,OAAO,G;O;KAVX,C;4FAaA,+B;MAOoB,Q;MADhB,UAAkB,G;MACIB,wBAAgB,SAAhB  
,gB;QAAGB,cAAA,SAAhB,M;QACI,OAAO,SAAS,OAAT,C;;MAEX,OAAO,G;K;8FAGX,+B;MAOoB,Q;MADh



B,UAAkB,G;MACIB,wBAAGB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,OAAO,SAAS,OAAT,C;;MAEX,OA  
AO,G;K;8FAGX,+B;MAOoB,Q;MADhB,UAAkB,G;MACIB,wBAAGB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;Q  
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;MADhB,UAAkB,G;MACIB,wBAAGB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,OAAO,SAAS,OAAT,C;;MA  
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B,M;QACI,OAAO,SAAS,OAAT,C;;MAEX,OAAO,G;K;8FAGX,+B;MAOoB,Q;MADhB,UAAkB,G;MACIB,wB  
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C;gFAaA,+B;MAUoB,Q;MADhB,UAAoB,C;MACpB,wBAAGB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,OA  
AO,SAAS,OAAT,C;;MAEX,OAAO,G;K;kFAGX,+B;MAUoB,Q;MADhB,UAAoB,C;MACpB,wBAAGB,SAAhB,  
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B,UAAoB,C;MACpB,wBAAGB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,OAAO,SAAS,OAAT,C;;MAEX,O  
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C,SFzkG7C,CEykGH,C;QACX,QAAQ,C;QACQ,2B;QAAhB,OAAGB,cAAhB,C;UAAgB,yB;UACZ,IAAI,KAAC,  
SAAT,C;YAAoB,K;UACpB,IAAK,WAAI,UAAU,OAAV,EAAmB,MAAM,UAAAN,EAAM,kBAAN,SAAnB,CAA  
J,C;;QAET,OAAO,I;O;KafX,C;IAkBA,kC;MAkBI,YAAy,oB;MACZ,aAZW,KAYQ,W;MACnB,WAAW,iBFtm  
GJ,MAAO,KEsmGgB,mCAAwB,EAAxB,CFtmGhB,EEsmGmD,wBAbtD,KAAsD,EAAwB,EAAxB,CFtmGnD,CE  
smGH,C;MACX,OAAO,KAAM,UAAAN,IAAmB,MAAO,UAAjC,C;QACI,IAAK,WafqB,GAeP,KAAM,OAfC,EA  
eO,MAAO,OAfd,CAerB,C;;MAfT,OaiBO,I;K;+EAdX,yB;MAAA,kF;MAAA,gE;MFlmGA,iB;MEkmGA,8C;QA  
QI,YAAy,oB;QACZ,aAAa,KAAM,W;QACnB,WAAW,eFtmGJ,MAAO,KEsmGgB,mCAAwB,EAAxB,CFtmGhB  
,EEsmGmD,wBAAN,KAAM,EAAwB,EAAxB,CFtmGnD,CEsmGH,C;QACX,OAAO,KAAM,UAAAN,IAAmB,MA  
AO,UAAjC,C;UACI,IAAK,WAAI,UAAU,KAAM,OAAhB,EAAwB,MAAO,OAA/B,CAAJ,C;;QAET,OAAO,I;O;  
KAdX,C;IAiBA,gC;MASW,sB;;QAAp,eAAe,oB;QACf,IAAI,CAAC,QAAS,UAAAd,C;UAAyB,qBAAO,W;UAAP,u  
B;;QACzB,ahB9yGoD,gB;QgB+yGpD,cAAc,QAAS,O;QACvB,OAAO,QAAS,UAAhB,C;UACI,WAAW,QAAS,O  
;UACpB,MAAO,WAnBkB,GAmBJ,OAnBI,EAmBK,IANBL,CAmBIB,C;UACP,UAAU,I;;QAEd,qBAAO,M;;MA  
tBP,yB;K;8FAGJ,yB;MAAA,qD;MhBxyGA,+D;MgBwyGA,uC;QAUI,eAAe,oB;QACf,IAAI,CAAC,QAAS,UAA  
d,C;UAAyB,OAAO,W;QAChC,ahB9yGoD,gB;QgB+yGpD,cAAc,QAAS,O;QACvB,OAAO,QAAS,UAAhB,C;UA  
CI,WAAW,QAAS,O;UACpB,MAAO,WAAI,UAAU,OAAV,EAAmB,IAAnB,CAAJ,C;UACP,UAAU,I;;QAEd,OA  
AO,M;O;KAnBX,C;IAsBA,8F;MAQ6D,yB;QAAA,YAA0B,I;MAAM,sB;QAAA,SAAuB,E;MAAI,uB;QAAA,UA  
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AU,CAAd,C;UAAiB,MAAO,gBAAO,SAAP,C;QACxB,IAAI,QAAQ,CAAR,IAAa,SAAS,KAA1B,C;UACW,gBA  
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C,MAAO,gBAAO,SAAP,C;MACxC,MAAO,gBAAO,OAAP,C;MACP,OAAO,M;K;IAGX,4F;MAQwC,yB;QAA  
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AA,YAA0B,K;MAAO,yB;QAAA,YAAoC,I;MACjN,OAAO,oBAAO,sBAAP,EAAwB,SAAxB,EAAmC,MAAnC,  
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ASS,8C;MAAA,mB;QAAE,OAAA,eAAK,W;O;K;IAN3B,iC;MAMI,oCAAgB,8BAAhB,C;K;IAGJ,+B;MAOoB,Q  
;MAFhB,UAAkB,G;MACIB,YAAiB,C;MACD,2B;MAAhB,OAAGB,cAAhB,C;QAAGB,yB;QACZ,OAAO,O;QAC  
P,oBAAmB,qBAAnB,EAAmB,KAAnB,E;;MAEJ,OAAW,UAAAS,CAAb,GAAgB,wCAA,O,IAAvB,GAAgC,MAA  
M,K;K;IAGjD,+B;MAOoB,Q;MAFhB,UAAkB,G;MACIB,YAAiB,C;MACD,2B;MAAhB,OAAGB,cAAhB,C;QA  
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O,O;QACP,oBAAmB,qBAAnB,EAAmB,KAAnB,E;;MAEJ,OAAW,UAAAS,CAAb,GAAgB,wCAA,O,IAAvB,GAA  
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B,C;QAAGB,yB;QACZ,OAAO,O;QACP,oBAAmB,qBAAnB,EAAmB,KAAnB,E;;MAEJ,OAAW,UAAAS,CAAb,G  
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B;MAAhB,OAAGB,cAAhB,C;QAAGB,yB;QACZ,YAAO,O;;MAEX,OAAO,G;K;IAGX,2B;MAMoB,Q;MADhB,  
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AO,G;K;IAGX,2B;MAMoB,Q;MADhB,UAAiB,G;MACD,2B;MAAhB,OAAGB,cAAhB,C;QAAGB,yB;QACZ,OA  
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AO,M;;MAGf,OAAO,I;K;IAGX,6B;MAII,IAAI,mBAAQ,CAAZ,C;QACI,OAAO,W;MACX,eAAe,iBAAQ,W;M  
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Ad,C;QACI,OAAO,OnBgQiD,SmBhQ1C,KnBgQ+C,IAAL,EmBhQ1C,KnBgQoD,MAAV,CmBhQjD,C;;MACX,aA  
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rD,C;;QAEwB,kBAAhB,QAAS,O;QAAPB,MAAO,WnB4PiD,SAAK,eAAL,EAAU,iBAAV,CmB5PjD,C;;MACO,  
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O;K;6CAF7F,Y;MACI,kBAAc,KAAd,C;MACA,OAakB,SAAX,eAAW,EAAO,kEAAp,CAA8E,W;K;;IAT5G,qC;  
MAMI,kD;K;IAkBO,6D;MAAA,4B;MAAA,wC;K;IAE6B,iE;MAAA,qB;QAAE,gBAAM,gBAAN,K;O;K;+CADl  
C,Y;MACI,OAakB,YAAX,eAAW,EAAU,4DAAV,CAA6B,W;K;;IAZ3D,sC;MASI,IAAI,Q/B0qKG,YAAQ,C+B1  
qKf,C;QAAwB,OAAO,S;MAC/B,qD;K;IAGBO,6D;MAAA,wC;MAAA,4B;K;IAMiC,8D;MAAA,qB;QAAE,OAA  
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L,CEr2CoB,CqC6fT,CvCw2BzB,C;cACI,qBAAO,K;cAAP,uB;;;UAGR,qBAAO,E;;;QuC52BP,yB;O;KAPJ,C;+FA  
UA,yB;MAAA,sC;MvC42BA,0D;MAAA,+C;MIz2CA,iC;MmC6fA,yBAO+B,yB;QnCpgB/B,iC;emCogB+B,6B;U  
AAA,qB;YAAE,yBnC1fY,gBmC0fF,EnC1fE,CmC0fZ,C;W;S;OAAF,C;MAP/B,uC;QAOMb,kBAAR,iB;QAAQ,s  
B;;UvCy2BD,Q;UAAA,OAAQ,SAAR,wBAAQ,CAAR,W;UAAAd,OAAc,cAAAd,C;YAAc,uB;YACV,IuC12ByB,Un  
C1fY,gBj02CvB,YAAK,KAAL,CIp2CuB,CmC0fZ,CvC02BzB,C;cACI,qBAAO,K;cAAP,uB;;;UAGR,qBAAO,E;;;  
QuC92BP,yB;O;KAPJ,C;+FAUA,yB;MAAA,4C;MpCteA,6B;MoCseA,4B;QAWI,OpCvemC,coCuepB,KAAR,iBA  
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R,iBAAQ,CnBteuB,C;O;KmB2d1C,C;iFACa,yB;MAAA,4C;MrChjBA,+B;MqCgjBA,4B;QAWI,OrCjjBsC,eqCijB  
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U,QAAA,KAAV,M;QAAuB,UAAM,G;QAAZ,MA7IN,oBA6IuB,CA7IvB,MAAJ,GAAY,GAAZ,GA6I2B,C;;MA  
CIC,OAAO,G;K;IAGX,4B;MAQc,Q;MADV,UAAU,C;MACV,wBAAU,KAAV,gB;QAAU,QAAA,KAAV,M;QA  
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;MACV,wBAAU,KAAV,gB;QAAU,QAAA,KAAV,M;QAAiB,MA/IV,MAAO,KA+Ie,GA/If,EA+IoB,CA/IpB,C;;  
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SA,iB;MATA,uB;QAMI,OASO,MAAO,KATC,CASD,EATY,CASZ,C;O;KAlfB,C;mFASA,yB;MAAA,iB;MAAA  
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;MAAA,iB;MAAA,0B;QAMI,OAAO,MAAO,KAAM,CAAN,EAAiB,CAAjB,EAA4B,CAA5B,C;O;KANIB,C;mF  
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O;QAC1E,IAAI,4DAAC,SAAI,C;UACI,OAAO,C;;MAGf,IAAI,yDAAa,SAAK,QAAtB,C;QACI,oBAAe,2CAA  
W,UAAK,aAAL,CAAX,C;QACf,eAAU,iC;QACV,iBAAy,C;QACZ,OAAO,C;;QAEp,oBAAe,I;QACf,OAAO,C;;  
K;mEAI,f;Y;MACI,IAAI,eAAS,EAAb,C;QACI,aaAQ,oB;MACZ,OAAO,eAAS,C;K;gEAGpB,Y;MAEoB,Q;MAD  
hB,IAAI,CAAC,cAAL,C;QAAgB,MAAM,6B;MACN,IAAI,YAAJ,C;QACZ,yBAAqD,cAARd,C;;QAEa,OAAb,iB;  
;MAHJ,oB;MAKA,iBAAiB,S;MACjB,aaAQ,E;MACR,OAAO,S;K;KEAGX,Y;M3E/CR,I2EgDyB,c3EhDrB,QAA  
J,C;QACI,cAhByB,0B;QAIzB,MAAM,6BAAsB,OAAQ,WAA9B,C;;M2E+CE,6BAAYB,cAAO,6BAAy,IAAnB,  
C;MACzB,iBAAy,I;MAEZ,uC;K;;6CAtdZ,Y;MAEI,2D;K;4DAyDJ,oB;MACI,mBAAmB,kBAAW,QAAX,C;MA  
CnB,OAAW,iBAAiB,SAARB,GAAgC,IAAhC,GAA0C,Y;K;;;wCCtKrD,Y;MACI,aaAgB,MAAM,OAAT,CAAI,B  
,IAAjB,C;MAEb,OAAO,KAAP,IAAgB,C;M/BXpB,O+BYqB,M/BZR,C+BYgB,K/BZhB,C;M+BaT,OAAO,M;K;;  
ICNuB,qC;MAAC,kC;MAEnC,oBAAkC,kB;MACiC,sBAAYB,C;K;yEAHU,Y;MAAA,8B;K;yFAGnC,Y;MAAA,0  
B;K,OAAA,gB;MAAA,0B;K;iDAWA,e;MACI,IAAI,0BAAJ,C;QAAoB,OAAO,K;MAC3B,OAAO,kBAAW,GAA  
X,MAAoB,S;K;4CAG/B,e;MACI,IAAI,0BAAJ,C;QAAoB,OAAO,I;MAC3B,YAAy,kBAAW,GAAx,C;MACZ,O  
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Ada,qB;QAEb,MAAM,gCAAYB,OAAQ,WAAjC,C;;M6EUN,eAAe,kBAAW,GAAx,C;MACf,kBAAW,GAAx,IA  
AkB,K;MAEIB,IAAI,aAAa,SAAjB,C;QACI,6B;QAEA,OAAO,I;;QAGP,OAAO,Q;;K;+CAIf,e;MACI,IAAI,0BAA  
J,C;QAAoB,OAAO,I;MAC3B,YAAy,kBAAW,GAAx,C;MACZ,IAAI,UAAU,SAAd,C;QhCnDJ,OgCoDyB,iBhC  
pDZ,CgCoDwB,GhCpDxB,C;QgCqDL,6B;QAEA,OAAO,K;;QAGP,OAAO,I;;K;wCAKf,Y;MACI,oBAAa,kB;MA  
Cb,YAAO,C;K;IAKA,0E;MAAA,oD;MACH,cAAkC,MAAa,MAAK,mCAAL,C;MAC/C,kBAA4B,qBAAL,WAA  
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,c;M7EchD,uB;MAeP,IAfoB,KAehB,QAAJ,C;QACI,cAhByB,0B;QAIbZB,MAAM,6BAAsB,OAAQ,WAA9B,C;;  
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;kHAC9B,Y;MAAQ,uB;K;oHACN,Y;MAAQ,6CAAuB,gBAAvB,C;K;2EAE9B,oB;MAAwC,OAAA,2BAAuB,aA  
AI,gBAAJ,EAAS,QAAT,C;K;qEAE/D,Y;MAA+B,OAAA,mCAAY,uBAAC,IAAd,C;K;qEAC3C,Y;MAAkC,OAA  
A,mCAAY,uBAAC,IAAd,C;K;mEAC9C,iB;MAA4C,OAAA,mCAAY,qBAAY,IAAZ,EAaKB,KAAIB,C;K;;gDAR  
5D,e;MAAsD,iE;K;;;MCIiD,sBAOsC,I;MA6CtC,yB;MAOA,4BAaKc,K;;IArIE,sD;MAZpC,oB;MAYyD,0CAAq  
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B,OAAa,mEAAS,QAAT,C;K;;IAIrB,wC;MAAA,oB;MAA+B,8C;K;IAE3B,sD;MAAA,oB;MACI,cACsC,I;MAEt  
C,cACsC,I;MAGlC,cAAO,iC;K;6DAIX,Y;MACI,OAAO,gBAAS,I;K;0DAGpB,Y;MAEI,IAAI,CAAC,cAAL,C;Q  
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,CAAJ,C;QACI,cAdW,e;QAeX,MAAM,6BAAsB,OAAQ,WAA9B,C;;M8ExBE,WAAc,iB;MAGP,oCAAP,0BAA  
O,C;MACP,gCAAI,cAAO,0BAAO,IAAd,C;MAEJ,cAAO,I;K;;iDAIf,mB;MAAyD,MAAM,qCAA8B,iCAA9B,C;  
K;6CAC/D,Y;MACI,WAAmB,Q;K;6DAGvB,mB;MAAgE,OAAA,WAAmB,uBAAC,OAAd,C;K;gDAEnF,Y;MA  
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,0B;UAIbZB,MAAM,6BAAsB,SAAQ,WAA9B,C;;UAEN,sBAnBgB,K;;Q8EkBZ,+B;QAEA,yBAAO,K;QACP,yB  
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ACP,yBAAO,I;K;oCA8CX,Y;MAEI,qB;MACA,4BAaA,I;MACb,OAAO,I;K;oCAGX,Y;MACI,qB;MACA,kBAAI  
,Q;MACJ,sBAAO,I;K;gDASX,e;MAAmD,OAAA,kBAAI,mBAAY,GAAs,C;K;kDAEvD,iB;MACyC,IAAR,I;MA  
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,C;UACI,OAAO,I;;QAEX,OAAO,cAAA,IAAK,aAAL,C;;MACF,iBAAS,mBAAT,C;MACT,OAAO,K;K;6CAIX,  
Y;MAAoF,uC;K;wCAEPf,e;MAAmD,Q;MAAJ,QAAL,OAAJ,kBAAI,WAAI,GAAJ,CAAJ,6B;K;0CAE/C,sB;MA  
CI,qB;MAEA,UAAU,kBAAI,WAAI,GAAJ,C;MACd,IAAI,OAAO,IAAX,C;QACI,eAAe,mCAAW,GAAX,EAAG  
B,KAAhB,C;QACf,kBAAI,aAAI,GAAJ,EAAS,QAAT,C;QACK,wBAAT,QAAS,C;QACT,OAAO,I;;QAEP,OAA  
O,GAAI,gBAAS,KAAT,C;;K;2CAInB,e;MACI,qB;MAEA,YAAY,kBAAI,cAAO,GAAP,C;MACHB,IAAI,SAAS,I  
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yB;MA+JQ,sBAAM,gB;MAJV,Y;K;IAOA,iD;MAAA,uD;MAAoD,qB;MAIKxD,yB;MAoKc,Q;MAAN,sBAAM,+  
D;MAFV,Y;K;IAKA,kE;MAAA,uD;MAQ8D,eAAM,eAAN,EAaUB,UAAvB,Q;MA/KIE,yB;MAGLQ,sBAAM,gB  
;MATV,Y;K;IAYA,sD;MAAA,uD;MAA2C,qBAAK,eAAL,EAAsB,GAAtB,Q;MAA3C,Y;K;IAEA,+C;MAAA,uD  
;MAG2C,qB;MAxL/C,yB;MAyLQ,sBAAM,gB;MACN,KAAK,gBAAO,QAAP,C;MALT,Y;K;IA6EJ,kC;MAKwD  
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A8B,S;MAC/B,OAAO,I;K;6CAGX,Y;MAA+C,gBAAI,iB;K;;IAhCnD,wC;MAAA,uD;MAAmD,eAAM,GAAN,Q;  
MAPvD,yB;MAOI,Y;K;IAEA,qC;MAAA,uD;MAGuB,eAAM,oBAAN,Q;MAZ3B,yB;MASI,Y;K;IAKA,+C;MAA  
A,uD;MAG8C,eAAM,oBAAN,Q;MAjBID,yB;MAkBQ,qBAAO,QAAP,C;MAJJ,Y;K;IAOA,kE;MAAA,uD;MAQ8  
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mB;MACI,mBAAM,OAAN,C;MACA,c;K;;iCAKJ,Y;K;;IAKuB,oC;MAA8B,qB;MAA7B,gC;K;2CACxB,mB;MA  
EI,oBA+DyC,OA/Dd,OA+Dc,C;MA9DzC,iBAaA,OAAM,aAAN,C;K;;IAIrB,8B;MAEoC,qB;K;iDAChC,mB;MA  
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,C;K;;IAIhB,0B;MAEqC,qB;MACjC,cAAa,E;K;6CAEb,mB;MACI,eAoCyC,OApcxB,OAoCwB,C;K;qCAjC7C,Y  
;MACI,cAAS,E;K;;IAIjB,sC;MAE4C,yB;K;yDACxC,mB;MACI,QAwbYc,OAxB1B,OAwb0B,C;MAvBzC,QAA

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,C;;MoEjLzE,4BAAU,C;K;iDAGd,Y;MACI,OAAQ,KAAI,WAAJ,C;MACR,cAAS,E;K;;;IAWjB,yB;MACiD,cAA  
a,KAAb,C;K;IAEjD,mB;MAEI,MAAO,U;K;IAGX,4B;MAEI,MAAO,iBAAQ,OAAAR,C;K;IAGX,wB;MAEI,MAA  
O,eAAM,OAAN,C;K;IAGX,kB;MACqC,MAAM,qCAA8B,sCAA9B,C;K;IAE3C,wB;MAC4C,MAAM,qCAA8B,4  
CAA9B,C;K;ICIGID,mD;MACI,0B;MASA,gBAA2B,a;K;2FAFvB,Y;MAAQ,OAAA,eAAS,Q;K;oDAIrB,kB;MA  
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AAe,2CAAf,C;MADzD,Y;K;;;;ICRA,2C;MAAA,+D;MAAuB,iC;MAF3B,iC;MAEI,Y;K;IACA,sD;MAAA,+D;M  
AAuC,6BAAM,OAAN,Q;MAH3C,iC;MAGI,Y;K;IACA,6D;MAAA,+D;MAAmD,kCAAM,OAAN,EAAe,KAAf,  
C;MAJvD,iC;MAII,Y;K;IACA,oD;MAAA,+D;MAAiC,6BAAM,KAAAN,Q;MALrC,iC;MAKI,Y;K;I1C4CJ,yE;MA  
SI,sC;MAAA,4C;K;IATJ,iGAWY,Y;MAAQ,2B;KAXpB,E;IAAA,0DAaQ,kB;MACI,wBAAW,MAAX,C;K;IAdZ,  
sF;I2C5C2E,0C;M5CkKhE,Q;MADP,e4ChKA,M5CgKA,C;MACO,Q4CjKP,M5CiKO,+D;M4ChKX,W;K;;+FCuH  
A,gB;MACI,aAAa,IAAO,MAAP,E;MACb,KAAK,MAAL,C;MACA,OAAO,M;K;wFC3HX,yB;MAAA,uD;MAA  
A,wC;QAWqG,OAAK,cAAL,SAAK,EAAiB,IAAjB,EAAuB,IAAvB,C;O;KAX1G,C;wFAaA,yB;MAAA,uD;MAA  
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K;;ICCO,6C;MAAA,8B;MAAS,uB;K;8FACIC,Y;MAAQ,OAAA,gBAAY,O;K;mDAE3C,iB;MACI,IADoC,KACp  
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A,4B;QAOSc,MAAL,SAAK,C;O;KAPtC,C;kFASA,yB;MAAA,iD;MAAA,kC;QAWuD,OAAK,WAAL,SAAK,EA  
Ac,IAAd,C;O;KAX5D,C;+ECfA,qB;MAI8C,gB;K;iFAE9C,qB;MAIsE,OAAK,S;K;kFAE3E,qB;MAMyE,gB;K;IA  
EzE,6B;MAiBa,UAPF,M;MAFP,QAAC,S;MAGV,cAAK,UAAAL,U;QACI,mBAAK,UAAAL,G;;QACJ,IjDzBqC,MA  
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6D,gD;K;;ICDjE,2B;MAEI,MAAM,yBAAqB,OAArB,C;K;IAGV,sB;MAEI,MAAM,uBAAMb,cAANb,C;K;IAGV  
,2B;MAEI,MAAM,6BAAsB,OAAtB,C;K;IAGV,iC;MAEI,MAAM,4CAAqC,uBAAqB,YAArB,8BAArC,C;K;ICIB  
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B,Q;MADZ,WAA0B,MAAA,MAAK,KAAL,C;MACvC,wBAAY,IAAZ,gB;QAAY,UAAA,IAAZ,M;QACI,IAAU,  
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B;MAAA,iB;MAAA,oB;QAOKD,OAAA,MAAW,KAAI,CAAJ,C;O;KAP7D,C;qEASA,yB;MAAA,iB;MAAA,oB;  
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Ae,O;MACf,EAAE,QAAF,IAAc,M;MACd,EAAE,SAAF,IAAe,O;MACf,EAAE,YAAF,IAAkB,U;MACIB,EAAE,  
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AAF,IAAc,M;MACd,EAAE,aAAF,IAAmB,W;MACnB,EAAE,QAAF,IAAc,M;MACd,EAAE,OAAF,IAAa,K;MA  
Cb,EAAE,SAAF,IAAe,O;MACf,EAAE,YAAF,IAAkB,U;MACIB,EAAE,UAAF,IAAgB,Q;MACHb,OAAO,C;K;q  
GA+BX,6D;MAEoC,4B;QAAA,eAAyB,K;MAAO,4B;QAAA,eAAyB,K;MAAO,0B;QAAA,aAAuB,K;MAAO,yB  
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Q,E;MACR,EAAE,MAAF,IAAY,I;MACZ,EAAE,SAAF,IAAe,O;MACf,EAAE,UAAF,IAAgB,Q;MACHb,EAAE,  
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B;MAAQ,OAAa,Y;K;6FAEtB,qB;MAAQ,OAAY,W;K;6FAEpB,qB;MAAQ,OAAY,W;K;6FAStC,qB;MAAQ,OA

AY,W;K;6FAEpB,qB;MAAQ,OAAY,W;K;uFAEvB,qB;MAAQ,OAAS,Q;K;qFAEnB,qB;MAAQ,OAAO,M;K;uF  
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B,C;MAAG,uB;QAAA,UAAoB,K;MAAO,0B;QAAA,aAAuB,K;MAAO,wB;QAAA,WAAqB,K;MAC3L,QAAQ,  
E;MACR,EAAE,kBAAF,IAAwB,gB;MACxB,EAAE,QAAF,IAAc,M;MACd,EAAE,OAAF,IAAa,K;MACb,EAAE  
,SAAF,IAAe,O;MACf,EAAE,YAAF,IAAkB,U;MACIB,EAAE,UAAF,IAAgB,Q;MACHb,OAAO,C;K;mFAU8E,q  
B;MAAQ,OAAG,E;K;+FAEL,qB;MAAQ,OAAc,a;K;iFAE7B,qB;MAAQ,OAAO,M;K;yFAEX,qB;MAAQ,OAAW  
,U;K;+EAEvB,qB;MAAQ,OAAO,M;K;+EAEf,qB;MAAQ,OAAO,M;K;oEnIjIvG,yB;MAAA,kF;MAAA,0B;MAA  
A,uB;QAaI,IAAI,OAAO,CAAP,IAA8B,OAAO,KAAzC,C;UACI,MAAM,8BAAyB,wBAAqB,IAA9C,C;;QAEV,O  
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,gD;K;;IC5BA,qC;K;;IAyBA,+B;K;;IC6DqC,uC;MACjC,uB;QAAA,UAAsB,E;MACtB,qB;QAAA,+C;MADA,sB;  
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A,mD;MAAA,gC;MAAA,2C;K;;IAGA,iD;MAAA,gC;MAAA,yC;K;;IARJ,sC;MAAA,2F;K;;IAAA,2C;MAAA,a;  
AAA,S;UAAA,gD;aAAA,O;UAAA,8C;;UAAA,+D;K;;IA+ByB,4B;MACzB,8B;K;;IAGJ,qC;K;;IAyC6C,4C;MA  
CzC,8B;K;;ICpKqC,sC;MACrC,8B;K;;ICD4C,8B;K;kDAI5C,mB;MAA6D,c;;QIJisD7C,Q;QADhB,IAAI,mCAAs  
B,cAA1B,C;UAAqC,aAAO,K;UAAP,e;;QACrB,sB;QAAhB,OAAgB,cAAhB,C;UAAgB,2B;UAAM,IkJjsD6C,OIJi  
sD/B,SkJjsD+B,UJisD7C,C;YAAwB,aAAO,I;YAAP,e;;QAC9C,aAAO,K;;MkJIsDsD,iB;K;uDAE7D,oB;MACa,  
c;;QIJyqDG,Q;QADhB,IAAI,ckJxqDA,QIJwqDA,iBkIjxqDA,QIJwqDsB,UAA1B,C;UAAqC,aAAO,I;UAAP,e;;QA  
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,CIJyqDG,C;YAAyB,aAAO,K;YAAP,e;;QAC/C,aAAO,I;;MkJIqDH,iB;K;2CAEJ,Y;MAAkC,qBAAQ,C;K;IAEq  
B,qE;MAAA,qB;QAC3D,OAAI,OAAO,uBAAX,GAAiB,mBAAjB,GAA6C,SAAH,EAAG,C;O;K;4CADjD,Y;MA  
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hB,C;K;mDAE5C,iB;MAI4D,yBAAgB,IAAhB,EAAsB,KAAtB,C;K;;IC/BhE,8B;MAAA,e;MAAA,iB;MAAA,uB;  
K;IAAA,4B;MAAA,+B;O;MACI,4C;MACA,kD;MACA,0C;MACA,8C;K;;IAHA,mC;MAAA,kB;MAAA,2B;K;;I  
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kB;MACA,OAAO,kD;K;+CAeX,iB;MAIL,2BAAY,K;MACZ,gD;K;sCAGJ,Y;MAIL,+C;K;;ICjDkC,wB;MAoFtC,o  
C;MApFgE,6B;K;sCAIhE,Y;MAAuC,0C;K;2CAEvC,mB;MAAwD,uB;;QpJoU3C,Q;QADb,YAAY,C;QACC,sB;  
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ACJ,qB;;QAEJ,sBAAO,E;;MoJzUiD,0B;K;+CAExD,mB;MAA4D,sB;;QpJ6V5D,eAAoB,0BAAa,SAAb,C;QACp  
B,OAAO,QAAS,cAAhB,C;UACI,IoJ/VsE,OpJ+VxD,QAAS,WoJ/V+C,UpJ+VtE,C;YACI,qBAAO,QAAS,Y;YAA  
hB,uB;;QAGR,qBAAO,E;;MoJnWqD,yB;K;0CAE5D,Y;MAA+C,+CAAiB,CAAjB,C;K;kDAE/C,iB;MAAyD,+C  
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B;MAA/E,kB;MAAmC,4B;MAC5D,eAAyB,C;MAGrB,+DAAkB,gBAA1B,EAA6B,OAA7B,EAAc,WAAK,KA  
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,OAAO,I;MAC3B,IAAI,2BAAJ,C;QAAuB,OAAO,K;MAE9B,OAAO,2DAAc,IAAd,EAAoB,KAApB,C;K;sCAG  
X,Y;MAG+B,oEAAgB,IAAhB,C;K;IAE/B,2C;MAAA,oB;MACI,eACsB,C;K;kDAEtB,Y;MAAkC,sBAAQ,gB;K;  
+CAEiC,Y;MAEe,gB;MADX,IAAI,CAAC,cAAL,C;QAAgB,MAAM,6B;MACX,iE;MAAX,OAAO,+B;K;;IAO0  
B,sD;MAHzC,oB;MAGwD,iD;MAGhD,gEAAmB,KAAmB,EAA0B,WAAkB,KAA5C,C;MACA,eAAa,K;K;0DAG  
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M7HRG,+D;M6HSH,eAAQ,C;K;kGAIR,Y;MAAQ,0C;K;;ItK/KhB,oD;MAQuF,wC;K;IARvF,8CASI,Y;MAAuC,  
8B;K;IAT3C,gF;sFAAA,yB;MAAA,kC;MAAA,0C;MAAA,kD;QAQuF,wC;O;MARvF,4CASI,Y;QAAuC,8B;O;M  
AT3C,8E;MAAA,2B;QAQuF,2C;O;KARvF,C;IAiBgE,+C;MAAA,mB;QAAE,sB;O;K;IALIE,kC;MAKuD,OAak  
B,2CAAT,+BAAS,E;K;IAEzE,8B;MAK6D,OAAI,QdksPtD,YAAQ,CclsP0C,GAAwB,eAAxB,GAAsD,WAAT,Q  
AAS,C;K;IAEnH,yB;MAG8C,kC;K;IAE9C,yB;MAAA,6B;K;uCACI,Y;MAA6C,kC;K;2CAC7C,a;MAA4B,kC;K;  
2CAC5B,a;MAA4B,kC;K;;IAHhC,qC;MAAA,oC;QAAA,mB;;MAAA,6B;K;oFAMA,yB;MAAA,2D;MAAA,4B;  
QAM4D,uCAAQ,e;O;KANpE,C;IAGB4F,mH;MAAA,wC;MAAA,6B;MAAA,yB;MAAA,wC;MAAA,wD;MAAA,  
kC;K;;;kDAAA,Y;;;;cACxF,eAAe,uBAAa,W;cAC5B,IAAI,QAAS,UAAb,C;gBACI,gB;gCAAA,sCAAS,QAAT,  
O;oBAAA,2C;yBAAA,yB;gBAAA,Q;;gBAEA,gB;gCAAA,sCAAS,iCAAT,O;oBAAA,2C;yBAAA,yB;gBAAA,Q;  
;;;;cAJJ,W;;cAAA,W;;;;K;IADwF,gE;MAAA,yD;uBAAA,uG;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IAP5  
F,4C;MAOmF,gBAAS,uCAAT,C;K;IAGBb,4B;MAAE,OAAA,EAAG,W;K;IAP3E,8B;MAO8D,4BAAQ,cAAR,C;  
K;IAUQ,8B;MAAE,OAAA,EAAG,W;K;IAR3E,8B;MAQ8D,4BAAQ,gBAAR,C;K;IAM1B,8B;MAAE,S;K;IAJtC,  
wC;MAEgB,Q;MADZ,IAAI,8CAAJ,C;QACI,OAA4C,CAApC,2EAAoC,kBAAQ,QAAR,C;;MAEHd,OAAO,uBA  
AmB,SAAnB,EAAyB,gBAAzB,EAAiC,QAAjC,C;K;IAGX,4B;MAyiB,Q;MAFb,YAAY,gB;MACZ,YAAY,gB;M  
ACC,2B;MAAb,OAAa,cAAb,C;QAAa,sB;QACT,KAAM,WAAI,IAAK,MAAT,C;QACN,KAAM,WAAI,IAAK,O  
AAT,C;;MAEV,OAAO,UAA5,KAAT,C;K;IAGX,+B;MAQqD,6BAAS,4BAAT,C;K;IAW0B,+G;MAAA,wC;MA  
AA,6B;MAAA,yB;MAAA,0C;MAAA,4C;MAAA,0B;MAAA,kC;K;;;mDAAA,Y;;;;kCAC9D,0C;cACb,gB;;;;cA  
AA,IAAO,iBT2FkD,US3FzD,C;gBAAA,gB;;;;cACI,QAAQ,yBAAO,iBAAQ,iBAAO,KAAf,C;cACf,WAAkB,WA  
AP,iBAAO,C;cACIB,YAAgB,IAAI,iBAAO,KAAf,GAAqB,iBAAO,aAAI,CAAJ,EA AO,IAAP,CAA5B,GAA8C,I;  
cACID,gB;8BAAA,iCAAM,KAAN,O;kBAAA,2C;uBAAA,yB;cAAA,Q;;cAJJ,gB;;;cAMJ,W;;;;K;IAR+E,  
4D;MAAA,yD;uBAAA,mG;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IAT/E,uC;MASmE,gBAAY,kCAAZ,C;K;IAkB  
hC,0D;MAE/B,wB;QAAA,WAAgC,I;MADhC,0B;MACA,0B;MACA,4B;K;IAGuC,0E;MAAA,oD;MACnC,gBA  
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MAGR,iBAAy,C;K;8DAGhB,Y;MASW,Q;MARP,IAAI,mBAAa,EAAjB,C;QACI,iB;MACJ,IAAI,mBAAa,CAAJ

B,C;QACI,MAAM,6B;MACV,aAAa,a;MACb,gBAAW,I;MACX,iBAAY,E;MAEZ,OAAO,yE;K;iEAGX,Y;MACI,IAAI,mBAAa,EAjB,C;QACI,iB;MACJ,OAAO,mBAAa,C;K;;2CAhC5B,Y;MAAuC,yD;K;;IA2C3C,qD;MAAY,0B;MAAmC,gC;K;IACJ,gF;MAAA,0D;MACnC,gBA Ae,oCAAS,W;K;iEACxB,Y;MACI,OAAO,6CAAY,aAAS,OAArB,C;K;oEAGX,Y;MACI,OAAO,aAAS,U;K;;8CAPxB,Y;MAAuC,4D;K;qDAWvC,oB;MACI,OAAO,uBAA4B,eAA5B,EAAsC,kBAAtC,EAAMd,QAAAnD,C;K;;IAUf,4D;MAAY,0B;MAAmC,gC;K;IACJ,8F;MAAA,wE;MACnC,gBA Ae,2CAAS,W;MACxB,aAAY,C;K;wEACZ,Y;MAC0C,Q;MAAtC,OAAO,oDAAY,oBAAmB,iBAAnB,EAAMb,yBAAnB,QAAZ,EAAYC,aAAS,OAAID,C;K;2EAGX,Y;MACI,OAAO,aAAS,U;K;;qDARxB,Y;MAAuC,mE;K;;IAkB3C,oC;MAAY,0B;K;IAC6C,wE;MACjD,gBA Ae,gCAAS,W;MACxB,aAAY,C;K;6DACZ,Y;MAC2C,Q;MAAvC,OAAO,iBAAa,oBAAMb,iBAAnB,EAAMb,yBAAnB,QAAb,EAA0C,aAAS,OAAAnD,C;K;gEAGX,Y;MACI,OAAO,aAAS,U;K;;0CARxB,Y;MAAqD,wD;K;;IAMbZD,0D;MACI,4B;MACA,4B;MACA,4B;K;IAEuC,sE;MAAA,gD;MACnC,iBAAGb,gCAAU,W;MAC1B,iBAAGb,gCAAU,W;K;4DAC1B,Y;MACI,OAAO,sCAAU,cAAU,OAApB,EAA4B,cAAU,OAAAtC,C;K;+DAGX,Y;MACI,OAAO,cAAU,UAAV,IAAuB,cAAU,U;K;;yCARhD,Y;MAAuC,uD;K;;IAc3C,6D;MACI,0B;MACA,gC;MACA,0B;K;IAEuC,4E;MAAA,sD;MACnC,gBA Ae,kCAAS,W;MACxB,oBAAiC,I;K;+DAEjC,Y;MACI,IAAI,CAAC,2BAAL,C;QACI,MAAM,6B;MACV,OAAO,gCA Ae,O;K;kEAG1B,Y;MACI,OAAO,2B;K;+EAGX,Y;MACQ,Q;MAAJ,IAAI,iEAA2B,KAA/B,C;QACI,oBA Ae,I;MAEnB,OAAO,yBAAP,C;QACI,IAAI,CAAC,aAAS,UAAAd,C;UACI,OAAO,K;;UAEP,cAAc,aAAS,O;UACvB,uBAAuB,wCAAS,2CAAY,OAAZ,CAAT,C;UACvB,IAAI,gBAAiB,UAArB,C;YACI,oBA Ae,gB;YACf,OAAO,I;;;MAInB,OAAO,I;K;;4CA9Bf,Y;MAAuC,0D;K;;IAoC9B,6I;MAAA,wC;MAAA,6B;MAAA,yB;MAAA,4C;MAAA,kD;MAAA,gD;MAAA,wB;MAAA,yB;MAAA,kC;K;;;yDAAA,Y;;;kBAGyC,I;iCAFIC,C;cACI,sD;cAAhB,gB;;;cAAA,KAAgB,yBAAhB,C;gBAAA,gB;;;cAAGb,oC;cACZ,aAAa,6BAAU,oBAAMb,uBAAnB,EAAMb,+BAAnB,QAAV,EA AuC,OAAvC,C;cACb,gB;8BAAA,sCAAS,4BAAS,MAAT,CAAT,O;kBAAA,2C;uBAAA,yB;cAAA,Q;;cAFJ,gB;;;cAIJ,W;;;K;IANS,0F;MAAA,yD;uBAAA,iI;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IADb,wD;MACI,gBAAS,kDAAT,C;K;;;IAoByB,qD;MACzB,0B;MACA,8B;MACA,0B;MC3TA,IAAI,ED+TQ,qBAAc,CC/TtB,CAAJ,C;QACI,cD8T2B,+CAA4C,iB;QC7TvE,MAAM,gCAAYB,OAAQ,WAAjC,C;;MAFV,IAAI,EDgUQ,mBAAY,CChUpB,CAAJ,C;QACI,gBD+TyB,6CAA0C,e;QC9TnE,MAAM,gCAAYB,SAAQ,WAAjC,C;;MAFV,IAAI,EDiUQ,mBAAY,iBCjUpB,CAAJ,C;QACI,gBDgUkC,0DAAuD,eAAvD,WAAMe,iB;QC/TrG,MAAM,gCAAYB,SAAQ,WAAjC,C;;K;sFDkUa,Y;MAAQ,yBAAW,iBAAX,I;K;yCAE/B,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,eAAhB,GAAqC,gBAAY,eAAZ,EAAsB,oBAAa,CAAb,IAAtB,EAAsC,eAAtC,C;K;yCAC9E,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,IAAhB,GAA0B,gBAAY,eAAZ,EAAsB,iBAAtB,EAAkC,oBAAa,CAAb,IAAIC,C;K;IAEzC,8D;MAAA,wC;MAEtB,gBA Ae,2BAAS,W;MACxB,gBA Ae,C;K;0DAEf,Y;MAEI,OAAO,gBAAW,kCAAX,IAAYB,aAAS,UAAzC,C;QACI,aAAS,O;QACT,qC;;K;2DAIR,Y;MACI,a;MACA,OAAQ,gBAAW,gCAAZ,IAAYB,aAAS,U;K;wDAG7C,Y;MACI,a;MACA,IAAI,iBAAY,gCAAhB,C;QACI,MAAM,6B;MACV,qC;MACA,OAAO,aAAS,O;K;;qCAvBxB,Y;MAA0B,mD;K;;IAgCA,uC;MAC1B,0B;MACA,oB;MC3WA,IAAI,ED+WQ,gBAAS,CC/WjB,CAAJ,C;QACI,cD8WsB,yCAAsC,YAAtC,M;QC7WtB,MAAM,gCAAYB,OAAQ,WAAjC,C;;K;0CDgXV,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,eAAhB,GAAqC,gBAAY,eAAZ,EAAsB,CAAtB,EAAYB,YAAzB,C;K;0CAC9E,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,IAAhB,GAA0B,iBAAa,eAAb,EAAuB,CAAvB,C;K;IAE5B,gE;MACnC,YAAW,yB;MACX,gBA Ae,4BAAS,W;K;yDAExB,Y;MACI,IAAI,cAAQ,CAAZ,C;QACI,MAAM,6B;MACV,6B;MACA,OAAO,aAAS,O;K;4DAGpB,Y;MACI,OAAO,YAAO,CAAP,IAAY,aAAS,U;K;;sCAZpC,Y;MAAuC,oD;K;;IASB3C,gD;MACI,0B;MACA,4B;K;IAEuC,0E;MAAA,oD;MACnC,gBA Ae,iCAAS,W;MACxB,iBAAqB,E;MACrB,gBAAMb,I;K;oEAEnB,Y;MACI,IAAI,aAAS,UAAb,C;QACI,WAAW,aAAS,O;QACpB,IAAI,wCAAU,IAAV,CAAJ,C;UACI,iBAAY,C;UACZ,gBAAW,I;UACX,M;;;MAGR,iBAAY,C;K;8DAGhB,Y;MAMiB,Q;MALb,IAAI,mBAAa,EA AjB,C;QACI,iB;MACJ,IAAI,mBAAa,CAAJB,C;QACI,MAAM,6B;MACV,aACa,gF;MAGb,gBAAW,I;MACX,iBAAY,E;MACZ,OAAO,M;K;iEAGX,Y;MACI,IAAI,mBAAa,EA AjB,C;QACI,iB;MACJ,OAAO,mBAAa,C;K;;2CAIc5B,Y;MAAuC,yD;K;;IA2Cb,uC;MAC1B,0B;MACA,oB;MC5bA,IAAI,ED+bQ,gBAAS,CC/bjB,CAAJ,C;QACI,cD8bsB,yCAAsC,YAAtC,M;QC7btB,MAAM,gCAAYB,OAAQ,WAAjC,C;;K;0CDgcV,a;MItXO,SJsXmC,eAAQ,CAAR,I;MAAD,OAA4B,KAAK,CAAT,GAAY,yBAAZ,GAAuC,iBAAa,eAAb,EAAuB,EAAvB,C;K;0CACxG,a;MItXO,SJuXmC,eAAQ,CAAR,I;MAAD,OAA4B,KAAK,CAAT,GAAY,yBAAZ,GAAuC,gBAAY,eAAZ,EAAsB,YAAtB,EAA6B,EAA7B,C;K;IAEjE,gE;MACnC,gBA Ae,4BAAS,W;MACxB,YAAW,yB;K;2DAEX,Y;MAEI,OA

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qD,OAC5B,SAAK,W;WAC9B,WAF2D,SAE3D,wC;QAFqD,OAEe,4F;WACvD,WAH2D,SAG3D,wC;QAHqD,O  
AGE,gG;;QAHF,OAI7C,uBAAmB,SAAnB,C;K;IAIuB,wC;MAAC,4B;K;2CACHC,gB;MAAwC,OAAA,eAAW,S  
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iBAAF,CAAE,EAAU,CAAV,C;K;gDActE,Y;MAC8C,2C;K;;IAHID,8C;MAAA,6C;QAAA,4B;;MAAA,sC;K;IA  
MA,kC;MAAA,sC;K;+CACI,gB;MAAoE,OAAE,iBAAF,CAAE,EAAU,CAAV,C;K;gDActE,Y;MAC8C,2C;K;;I  
AHID,8C;MAAA,6C;QAAA,4B;;MAAA,sC;K;8EsKzTA,4B;MAUI,OAAK,iBAAL,SAAK,EAAU,KAAY,C;K;IC  
TT,iC;K;;;oDAyDI,0C;MAiB+D,oB;QAAA,2C;aAjB/D,kG;K;;IAoBJ,uC;MAAA,e;MAAA,iB;MAAA,uB;K;IAA  
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;;UAAA,oE;;K;;oFAqCA,mB;K;;;;;;;;;;;;;;;;lhImBiD,gD;MAAA,oB;QACzC,WAAW,sBAAmB,YAAF,CAAE,C  
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tD,CChDR,C;K;IAyEJ,2D;MAWuD,YAAnD,0CAA6B,QAA7B,EAAuC,UAAvC,CAAmD,CAPFnD,oBDgDQ,WC  
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MAGpE,OAAW,8CAA4B,GAAhC,GAAqC,8EAARc,GAAoD,I;K;yDAI/D,e;MAGI,IAAI,+CAAJ,C;QACI,OAA

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Q,IAAjB,C;MACIB,IAAI,YAAY,mCAAhB,C;QADA,OACuC,O;;QAEnc,kBAAkB,oBAAQ,yCAAR,C;QACIB,I  
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AhB,EAAsB,OAAtB,CAAhB,EAAGD,WAAhD,C;;K;8CAdxB,mB;MAKI,OAAI,YAAY,mCAAhB,GAAuC,IAAv  
C,GACI,OAAQ,cAAK,IAAL,EAAW,4BAAX,C;K;;;;qDAiCZ,e;MAEyB,Q;MADrB,OACI,OAAA,IAAK,IAAL,  
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,wB;K;kFAAA,Y;MAAA,yB;K;;IAiCe,wD;MAEjE,kC;MAEA,4BAAqC,mDAAJ,GAakD,OAAQ,qBAA1D,GAA  
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,+C;MAW2C,IAAI,IAAJ,EAGV,M;MAL7B,IAAI,+CAAJ,C;QAEI,OAAW,GAAl,kBAAS,SAAK,IAAd,CAAR,G  
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C,e;MAAyD,W;K;mDACzD,8B;MAA4E,c;K;mDAC5E,mB;MAAwE,c;K;uDACxE,e;MAA8D,W;K;+CAC9D,Y;  
MAAsC,Q;K;+CACtC,Y;MAAyC,8B;K;;;IAb7C,6C;MAAA,4C;QAAA,2B;;MAAA,qC;K;IAqB8B,wC;MAC1B,k  
B;MACA,wB;K;4CAGA,e;MAGQ,Q;MAFJ,UAAU,I;MACV,OAAO,IAAP,C;QACI,YAAA,GAAl,UAAJ,aAAY,  
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;UAGW,I;MAFP,+BAAQ,GAAR,U;QAAoB,OAAO,W;;MAC3B,cAAc,WAAK,kBAAS,GAAT,C;MAEf,gBAAy,  
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BAAI,OAAQ,IAAZ,GAAoB,OAAPB,C;K;8CAEJ,mB;MAQ4B,Q;MAPxB,UAAU,O;MACV,OAAO,IAAP,C;QA  
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,WAA3B,GAA6C,GAAF,UAAQ,O;K;yCAF3D,Y;MACI,aAAM,kBAAK,EAAL,EAAS,+BAAT,CAAN,GAEL,G;  
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Ab,C;;M2L9/YT,O3L+/Y9B,W;K;;;I4LjrZX,oE;MA4BI,MAAM,wBAAoB,sEAAPB,C;K;8GA5BV,yB;MAAA,2D  
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hB,C;M3KoEIE,S2K1DH,K;MAVqE,O3KqEjE,S;K;I2KzB+B,0C;MAAgE,uB;MAA/D,wC;MAMvC,kBACkC,I;K  
;4FAE9B,Y;MACI,QAAQ,e;MACR,IAAI,SAAJ,C;QAAe,OAAO,C;MACtB,IAAI,wB;MACJ,kBAAW,C;MACX,  
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Y;MAEI,OAAO,kCAA8B,cAA9B,C;K;;ICpHf,gC;K;;ICAA,sC;K;;6ECAA,yB;MAAA,0B;MAAA,mC;QAGsD,O  
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A,wB;K;;IAQA,0B;K;;IAOA,sB;K;;IAOA,4B;K;;IAOA,6C;K;;IA+BuC,wE;MAEnC,uB;QAAA,UAA sB,E;MACt  
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A,8F;K;;IAFA,iE;MAAA,qC;MAAA,yD;K;;IACA,iE;MAAA,qC;MAAA,yD;K;;IACA,4D;MAAA,qC;MAAA,oD;  
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DC9CjB,6B;;K;;;iEA+CA,6B;;K;;ICrDuC,0C;MACvC,uBAAoB,Y;K;wDAEpB,wC;MAM6F,W;K;uD AE7F,w  
C;K;oDAMA,6B;MACI,OAAO,oB;K;oDAGX,oC;MACI,eAAe,IAAK,gB;MACpB,IAAI,CAAC,OBAAa,QAAb,E  
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;;IAVA,2C;MAAA,sB;MAAA,mC;K;;IAKA,oC;MAAA,sB;MAAA,4B;K;;IAKA,qC;MAAA,sB;MAAA,6B;K;;Iat  
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D;;K;;6ECAa,yB;MAAA,4F;MAAA,2B;QASI,MAAM,mCAA8B,0EAA9B,C;O;KATV,C;ICkCA,+D;MAaW,Q;



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ES,C;MLg7CT,kBAAoB,gB;MAwSd,gB;MADb,YAAY,C;MACC,O+LnyDN,O/LmyDM,W;kBAAb,OAAa,cAAb  
,C;QAAA,sB;QA9RsB,U;QAAA,cA8RT,oBAAMB,cAAnB,EAAmB,sBAAnB,U;Q+LntDIB,kB;;YAHA,CAAC,Y  
AAS,CAAT,IAAc,qBAAf,KAA4C,Q/LstDG,I+LttDH,C;UAC5C,a;;UAEA,4B;UA/E+B,uB;;YnLgHzB,kC;YAAA,  
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qC,IYjrDrC,YAAK,OAAL,EmLjHqC,CAAG,CnLiHtD,C;gBACI,sBAAO,O;gBAAP,wB;;YAGR,sBAAO,E;;Um  
LrHH,iD;UAGI,gCAA2B,EAA3B,C;YAHJ,2BAGqC,I;iBACjC,IAAK,a/L8xD0C,I+L9xD1C,gBAAyB,uBAAZB,C  
AAL,C;YAJJ,2B/LkyDmD,IO9kDsB,WwLhNI,0BAAuC,mBAAvC,IxLgNJ,C;;YwLpNzE,2BAKY,I;;UA0ER,iEl  
MND,yBkMMC,4B/LmtD+C,I;;QA9RpB,8B;UAA6C,6B;;M+LrgDhF,OAKFK,S/Lo7CE,W+Lp7CF,EAAO,mBA  
Ac,kBAAd,CAAP,EAA0C,IAA1C,CACA,W;K;IAXET,+B;MAGByC,gCAAc,EAAAd,C;K;IAEzC,6C;MAGgC,yB;Q  
AAA,YAAoB,E;MAM3C,Q;MALL,cAAY,gB;M/LurBL,kBAAS,gB;MA2FA,U;MAAA,S+LhxBM,O/LgxBN,W;  
MAAhB,OAAgB,gBAAhB,C;QAAGB,2B;QAAM,IA7hB6B,CAAC,Qb6hBhB,Oa7hBgB,Cb6hB9B,C;UAAwB,WA  
AY,WAAL,OAAl,C;;M+L9wBrD,kB/L+wBE,W;MAMrBA,oBAAM,iBAAa,qCAAwB,EAAxB,CAAb,C;MAuEA,  
U;MAAA,+B;MAAb,OAAa,gBAAb,C;QAAA,wB;QACT,aAAY,uBAAc,IAAd,E;;M+L5gDhB,sBAAsB,CAGjB,o  
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c,qBAAf,KAA4C,Q/LstDG,M+LttDH,C/Lw7CjB,G+Lv7C3B,I/Lu7C2B,G+Lr7C3B,oBAxCmG,Q/L2vDpD,M+L3  
vDoD,kBAwCnG,YIMND,yBkMMC,4B/LmtD+C,MA9RpB,U;UAA6C,+B;;M+L79ChF,OA0CK,S/Lo7CE,a+Lp7  
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J,CAWA,EAAa,IAAb,C;K;IAET,gC;MAAwC,uB;;QnLkDtB,gC;QAAA,gC;QAAA,mB;QAAA,kB;QAAA,kB;QA  
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+C,I+LntD/C,alMND,yBkMMC,4B/LmtD+C,IA9RpB,U;YAA6C,6B;;;Q+Lz7ChF,OAMK,S/Lo7CE,W+Lp7CF,E  
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,SoHoUqC,W;O;KAPhD,C;uFAUA,yB;MAAA,iE;MAAA,0C;QAQmC,gBAAxB,mBAAC,QAAAd,C;QAA8B,apHh  
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AY,Y;MAER,uB;QA Ae,Y;WACf,8C;;WACA,+C;;QACQ,qBAAc,KAAd,C;MAJZ,W;K;2CAUR,Y;MAUuC,8B;  
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4C,OAIpB,G;acACxB,S;UAL4C,OAKpB,G;acACxB,O;UAN4C,OAMtB,G;acActB,M;UAP4C,OAovB,G;;UxMuEw  
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pE,I;UADoE,6C;aAepE,I;UAFoE,8C;aAGpE,I;UAHoE,8C;aAIpE,G;UAJoE,yC;aAKpE,G;UALoE,yC;aAMpE,G;  
UANoE,uC;aAOpE,G;UAPoE,sC;;UAQ5D,MAAM,gCAAyB,uCAAoC,SAA7D,C;;K;IAGIB,yD;MAGQ,KAAC,e  
AAD,C;QAEQ,IADE,OACF,Q;UAHZ,sC;;UAIoB,MAAM,gCAAyB,4EAAqD,OAARd,CAAzB,C;;QAIIB,QAAM,  
OAAO,C;eACI,E;YATZ,uC;eAUY,E;YAVZ,yC;eAWY,E;YAXZ,yC;;YAYoB,MAAM,gCAAyB,yDAAkC,OAAI  
C,CAAzB,C;;K;IC5F9B,4B;K;;;MC8FI,kC;;;IAIEA,gC;MAAA,oC;K;6CAUI,Y;MAAwC,OAAA,iCAAoB,U;K;  
8CAC5D,Y;MAAkC,OAAA,iCAAoB,W;K;IAiBrB,qD;MAAqB,8B;K;8DACID,Y;MAAsC,OAAA,iCAAoB,qBA  
AY,IAAZ,C;K;+DAC1D,oB;MAAuD,OAAA,iCAAoB,uBAAc,IAAd,EAAoB,QAApB,C;K;gEAC3E,oB;MAAwD,  
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MAA0C,OAAA,iBAAa,a;K;iEAEvD,iB;MACI,IAAI,yDAAJ,C;QACI,MAAM,gCAAyB,sFAAmF,IAAnF,aAA6F,  
KAAIH,C;MACV,OAAO,IAAK,eAAM,KAAN,C;K;iEAGhB,iB;MAW4D,OAAA,iCAAoB,2BAAkB,IAAIB,EA  
wB,KAAxB,C;K;qEAehF,iB;MAQI,OAAC,mBAAO,KAAP,CAAc,iBAAU,gCAAS,KAAnB,C;K;;;4DAjDvB,Y;  
MAAA,OAesD,gEafD,M;K;4DAAA,Y;MAAA,c;MAesD,gE;MAftD,a;K;0DAAA,iB;MAAA,2IAesD,0DAftD,G;  
K;;IABJ,4C;MAAA,2C;QAAA,0B;;MAAA,oC;K;IAKEA,gC;MAAA,oC;K;;IAAA,4C;MAAA,2C;QAAA,0B;;M  
AAA,oC;K;;;qCA2BA,oB;MAWyD,4BAAiB,IAAjB,EAuB,QAAvB,C;K;sCAEzD,oB;MAW+D,wBAAM,QAA  
D,aAAL,C;K;sCAG/D,Y;MAMqC,QAAC,iBAAa,a;K;yCAEnD,Y;MAMwC,OAAA,iBAAa,a;K;;;gDAUrD,oB;M

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C;K;;IAYO,4C;MAAC,gB;MAAoB,4B;K;4CAC/C,Y;MAAsC,OAAA,SAAK,aAAL,cAAoB,eAaPb,C;K;6CAEtC  
,oB;MAAkD,4BAAiB,SAAjB,EAAuB,4BAAa,QAAb,CAAvB,C;K;;ICxMV,sC;MAAC,gB;K;IAOf,4E;MAAC,4B;  
MAA6B,8B;MAAGd,sB;K;+DACpG,Y;MAAsC,OAAI,aAAO,aAAX,GAA0B,aAAD,aAAzB,GAAsE,aAA/B,iBA  
AW,OAAX,UAAoB,gBAAPb,CAA+B,EAAW,iBAAW,KAAtB,CAAhC,cAA8D,aAA9D,C;K;gEAC5E,oB;MAA4  
D,+CAAA,gBAAb,EAAwB,iBAAXB,EAAoC,0BAAS,QAAT,CAAP,C;K;kEAC5D,iB;MAQa,Q;MAPT,IAAI,8D  
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A3B,QAAhE,C;K;8EAEJ,Y;MACI,IAAI,aAAO,aAAX,C;QAAyB,OAAO,a;MACHC,WAAW,iBAAW,K;MACtB,I  
AAI,kEAAJ,C;QACI,OAAiB,aAAV,gBAAU,EAAW,IAAX,CAAV,aAA6B,aAA7B,C;;MAEX,YAAY,mEAAmD,  
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H,wC;MAAC,gB;K;IAQf,gF;MAAC,4B;MAA+B,8B;MAAkD,sB;K;mEAC1G,Y;MAAsC,OAAgC,aAA/B,iBAA  
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L,EAAmB,KAAM,aAAzB,CAA3B,KAAkE,CAAC,0BAAO,KAAP,CAAD,wBAAKB,gCAAS,KAA3B,QAAIE,C;  
K;iEAGX,Y;MACI,OAAkB,aAAV,gBAAU,EAAW,iBAAW,KAAtB,CAAV,aAAwC,aAAxC,CAAGD,W;K;iEAG  
5D,Y;MAAkC,2BAAiB,gBAAjB,GAA4C,UAAhB,iBAAW,KAAK,CAA5C,WAA4D,aAA5D,UAAqE,iBAArE,M;  
K;;iDAGtC,Y;MAA6C,mDAAe,WAAf,EAAuB,IAAvB,EAA6B,gCAAS,KAAtC,C;K;;IAGjD,0B;MAG8B,yE;M  
AC1B,mB;K;oCAEA,Y;MAA4B,qB;K;iDAE5B,oB;MAWc,Q;MADV,gBAAgB,QAAS,gBAAO,SAAP,C;MACf,I  
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,OAxDI,UAwDH,8BAAO,CAAP,EAAD,kCAxDA,C;QACI,OAAO,sBAAsB,MAAtB,EAA8B,QAA9B,C;;MAGX,  
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xD,C;QACI,OAAW,oBAAS,CAAb,sD;;MAEX,OAAO,M;K;IAGX,+D;MACI,IAAI,QAAS,aAAT,IAA0B,WAAW  
,UAAx,eAAwB,CAAtD,C;QAA0D,MAAM,gCAAYB,uCAAzB,C;MACHC,OAAO,M;K;IAGX,iD;MACI,WAAW,  
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;MAAC,kB;MAAc,wB;K;;sCAR9C,Y;MAQgC,iB;K;sCARhC,Y;MAQ8C,oB;K;wCAR9C,2B;MAAA,sBAQgC,q  
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A,yC;MAKCA,8C;MAICA,wB;QA+CI,WAAW,8B;QACX,aAnC8C,KAmCjC,E;QAnCb,OAoCO,oBAAW,MAAX  
,EAAmB,IAAK,aAAxB,C;O;KAjDX,C;mGAgBA,yB;MAAA,8C;MAAA,mC;QAaI,WAAW,mB;QACX,aAAa,O;  
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ASI,sC;MAAA,4C;K;IATJ,mGAWY,Y;MAAQ,2B;KAXpB,E;IAAA,4DAaQ,kB;MACI,wBAAW,MAAX,C;K;IA  
dZ,wF;IqKewC,sC;MACpC,0B;K;;IAGJ,kC;MAUI,OAA2C,CAA3C,2BAA6B,uBAA7B,EAAoC,KAApC,CAA2C  
,e;K;IAE/C,8B;K;kDAuBI,4B;MASI,MAAM,qCAA8B,8CAA9B,C;K;;IAW4B,8C;MAGtC,6B;MAEmD,UAMX,  
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,+B;;MAAA,yC;K;4FCxDI,yB;MAAA,2D;MAAA,4B;QAAQ,MAAM,6BAAoB,6BAAPB,C;O;KAAAd,C;;;ICSJ,u  
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B,C;O;KqO9F7C,C;ICtRA,qC;MAEL,SvOuIoD,cuOvI3C,CvOuI2C,EuOvIvC,CvOuIuC,C;MuOtIpD,SvOsIoD,cuO  
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U5C,SQvVY,URuVZ,CA5U4C,MAAX,IAAf,C;;;K;IQRzD,0B;MAEI,IAAE,QAAF,CAAe,CAAF,C;QAD2C,OA



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\* /opt/cola/permits/1719637930\_1686604657.212766/0/kotlin-1-8-10-2-tgz/package/kotlin.js

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```
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/timestamp.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/type.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/any.proto
*
/opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/struct.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/field_mask.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/empty.proto
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jar/google/protobuf/source_context.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/duration.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/descriptor.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/wrappers.proto
* /opt/cola/permits/1720055189_1686654514.924605/0/protobuf-java-3-22-5-jar/google/protobuf/api.proto
```

## 1.513 kotlin-script-runtime 1.8.10

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```
* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/utils/AvroRecordType.java
* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/common/AWSSchemaNamingStrategyDefaultImpl.java
*
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jar/com/amazonaws/services/schemaregistry/exception/AWSSchemaRegistryException.java
* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/common/AWSDeserializerInput.java
* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/common/GlueSchemaRegistryDefaultCompression.java
```

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* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/caching/GlueSchemaRegistryCache.java
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jar/com/amazonaws/services/schemaregistry/common/GlueSchemaRegistryCompressionFactory.java
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jar/com/amazonaws/services/schemaregistry/common/GlueSchemaRegistryDataFormatDeserializer.java
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jar/com/amazonaws/services/schemaregistry/common/GlueSchemaRegistryCompressionHandler.java
* /opt/cola/permits/1738534381_1688660452.5104973/0/schema-registry-common-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/common/GlueSchemaRegistryDataFormatSerializer.java
No license file was found, but licenses were detected in source scan.
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Found in path(s):

\* /opt/cola/permits/1738534381\_1688660452.5104973/0/schema-registry-common-1-1-14-sources-jar/META-INF/maven/software.amazon.glue/schema-registry-common/pom.xml

## 1.518 aws-java-sdk-kms 1.12.349

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jar/com/amazonaws/services/dynamodbv2/document/internal/IndexScanImpl.java
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAttribute.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/KeyPair.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/NUNmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/SSUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBMapperFieldModel.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/ReflectionUtils.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBMarshalling.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/JsonMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/BSUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/SUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBRangeKey.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBSaveExpression.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAutoGenerated.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBGeneratedUuid.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/PaginatedParallelScanList.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBIgnore.java

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- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/StandardAnnotationMaps.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/StandardModelFactories.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/StandardTypeConverters.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBMapperModelFactory.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConvertedTimestamp.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTableMapper.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/ConvertibleType.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAutoGeneratedDefault.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAutoGeneratedTimestamp.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBDelimited.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBNamed.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBScalarAttribute.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConverterFactory.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConvertedJson.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/StandardBeanProperties.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAutoGenerator.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConverter.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBConvertedBool.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTyped.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConvertedEnum.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBFlattened.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBKeyed.java  
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\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/UpdateExpressionGenerator.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/TransactionWriteRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTransactionLoadExpression.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/VersionAttributeConditionExpressionGenerator.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/TransactionLoadRequest.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/UUIDSetToStringSetMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ByteArrayUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/LUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/ByteBufferSetToBinarySetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/StringSetToStringSetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/IntegerSetUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/DoubleSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/ConversionSchemas.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/CustomUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/BigDecimalSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/CalendarUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/CalendarSetUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ByteBufferSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/ByteArraySetToBinarySetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/BooleanSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/CollectionToListMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/BooleanUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ListUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/ArgumentMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/ItemConverter.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/S3LinkUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBNativeBoolean.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/UUIDUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/ObjectSetToStringSetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/FloatUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/DateToStringMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBDocument.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/DateSetToStringSetMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/BooleanToNumberMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/StringUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ByteUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/StringToStringMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/MUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/MapUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshaller/ObjectToMapMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/IntegerUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/DoubleUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ShortUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/NumberToNumberMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/ConversionSchema.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/ByteBufferUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/UUIDSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/MapToMapMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/CustomMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/S3LinkToStringMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/BooleanToBooleanMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/BigIntegerSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/ByteSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/CalendarSetToStringSetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/CalendarToStringMarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/StringSetUnmarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshalls/ObjectUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/ByteBufferToBinaryMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-



jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/FloatSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/BooleanSetToNumberSetMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/ShortSetUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/unmarshallers/NullableUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/ByteArrayToBinaryMarshaller.java  
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- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/QuerySpec.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/PageIterable.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/BatchGetItemImpl.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/ScanOutcome.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/api/PutItemApi.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/api/QueryApi.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/AbstractImpl.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/QueryCollection.java
- \*
- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/RangeKeyCondition.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Expected.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Utils/ValueMap.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/ItemCollection.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/DeleteItemOutcome.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/IndexQueryImpl.java
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- /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/TableKeysAndAttributes.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Utils/NameMap.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/Filter.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/ScanFilter.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/InternalUtils.java
- \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/QueryPage.java
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/PageIterator.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/AbstractCollectionSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/api/DeleteItemApi.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/DeleteItemSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/UpdateTableSpec.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/GetItemOutcome.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Table.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/ItemValueConformer.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/KeyConditions.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/ScanCollection.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/KeyAttribute.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Item.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Utils/ValueList.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/GetItemImpl.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Page.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/IteratorSupport.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/api/GetItemApi.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Utils/FluentHashMap.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/ListTablesImpl.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/PutItemImpl.java  
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jar/com/amazonaws/services/dynamodbv2/document/Utils/FluentHashSet.java  
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jar/com/amazonaws/services/dynamodbv2/document/api/UpdateItemApi.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/spec/ListTablesSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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jar/com/amazonaws/services/dynamodbv2/document/internal/ScanPage.java  
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jar/com/amazonaws/services/dynamodbv2/document/internal/DeleteItemImpl.java  
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jar/com/amazonaws/services/dynamodbv2/document/QueryFilter.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/DynamoDB.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/IncompatibleTypeException.java  
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jar/com/amazonaws/services/dynamodbv2/document/spec/BatchWriteItemSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/internal/ListTablesCollection.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/Utils/FluentArrayList.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/api/BatchWriteItemApi.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/TableWriteItems.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/internal/QueryImpl.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/spec/AbstractSpecWithPrimaryKey.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/spec/UpdateItemSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/BatchGetItemOutcome.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/document/Index.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/UpdateItemOutcome.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/UpdateItemImpl.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/GetItemSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/PageBasedCollection.java  
\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/Attribute.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/LowLevelResultListener.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/BatchGetItemSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/QueryOutcome.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/api/BatchGetItemApi.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/ValueTransformer.java  
\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/BatchWriteItemOutcome.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/ScanSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/internal/ListTablesPage.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/document/spec/AbstractSpec.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/package-info.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/marshalls/ObjectToStringMarshaller.java

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Found in path(s):

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AbstractAmazonDynamoDBStreams.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateContinuousBackupsRequestMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ContinuousBackupsDescriptionJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UntagResourceRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReturnValuesOnConditionCheckFailure.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BackupDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeStreamRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListTagsOfResourceRequestProtocolMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/InputFormat.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AttributeValueMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaUpdateMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PutItemResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListImportsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ProvisionedThroughputExceededExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/StreamViewType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ProvisionedThroughputMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreTableToPointInTimeRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeGlobalTableResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SSEDescriptionMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/AttributeValueUpdate.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeBackupResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PutRequestJsonUnmarshaller.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableReplicaAutoScalingRequestMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteGlobalSecondaryIndexActionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactGetItemMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SourceTableFeatureDetailsMarshaller.java

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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/InputCompressionType.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexAutoScalingUpdateJson
Unmarshaller.java
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jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndexAutoScalingUpdate.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/Tag.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/IdempotentParameterMismatchExceptionUnmarshaller.
java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/StreamJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactGetItemsResultJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/AutoScalingTargetTrackingScalingPolicyConfigurationUpdate.jav
a
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/BillingMode.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ListExportsResultJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ContributorInsightsSummaryJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableRequestMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/TableStatus.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateBackupRequestMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/BackupNotFoundExceptionUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/AutoScalingPolicyDescription.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/BatchGetItemResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/Shard.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/CancellationReasonMarshaller.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingTargetTrackingScalingPolicyConfiguration
DescriptionMarshaller.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExportSummary.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BackupSummary.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableAlreadyExistsException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TrimmedDataAccessException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ItemCollectionMetrics.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteTableRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/WriteRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ImportSummary.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SSEDescriptionJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTimeToLiveRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/StreamMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementRequestJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/EndpointJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaAutoScalingDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/waiters/TableExists.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExecuteTransactionRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ContributorInsightsSummaryMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExpectedAttributeValue.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListBackupsRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ImportConflictException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ScanRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Delete.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

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jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeStreamRequestProtocolMarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/ExportFormat.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteReplicaActionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ListTagsOfResourceResultJsonUnmarshaller.java  
\*  
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jar/com/amazonaws/services/dynamodbv2/model/transform/EnableKinesisStreamingDestinationResultJsonUnmarsh  
aller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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er.java  
\*  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/FailureExceptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ProjectionType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListTablesRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteItemRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ComparisonOperator.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateTableResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ConsumedCapacityJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactWriteItemsResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBClientBuilder.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreamsAsyncClientBuilder.java  
\*  
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jar/com/amazonaws/services/dynamodbv2/model/transform/BackupSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/GetRecordsResult.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/ExportTableToPointInTimeRequestMarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/ImportNotFoundException.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/InputFormatOptionsJsonUnmarshaller.java  
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\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingPolicyUpdateJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ConditionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ReplicaNotFoundException.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReturnValue.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TimeToLiveDescription.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTableResult.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingTargetTrackingScalingPolicyConfigurationDescriptionJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Put.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateItemRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateGlobalSecondaryIndexAction.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ConditionCheckMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ImportTableDescription.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SourceTableDetails.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTimeToLiveRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PutRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexSettingsUpdateJsonUnmarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/FailureExceptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BillingModeSummary.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListExportsResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ScalarAttributeType.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateGlobalTableRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeLimitsRequestMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/LimitExceededExceptionUnmarshaller.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RecordJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexAutoScalingUpdateJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeImportRequestProtocolMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ConditionalOperator.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ImportTableDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ProjectionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PutItemResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexAutoScalingDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchExecuteStatementRequestProtocolMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/InvalidExportTimeExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableSettingsResultJsonUnmarshaller.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/InternalServerErrorException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AttributeValueUpdateMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeKinesisStreamingDestinationRequestMarshaller.java  
r.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ShardMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteReplicaActionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeLimitsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTableReplicaAutoScalingResult.java  
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jar/com/amazonaws/services/dynamodbv2/model/ProvisionedThroughputExceededException.java
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jar/com/amazonaws/services/dynamodbv2/model/DisableKinesisStreamingDestinationResult.java
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeEndpointsRequestMarshaller.java
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/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeKinesisStreamingDestinationRequestProtocol
Marshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/DescribeExportResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/RestoreTableToPointInTimeRequest.java
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jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingTargetTrackingScalingPolicyConfigurationUpdateJsonUnmarshaller.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/KinesisDataStreamDestination.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BatchGetItemRequest.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreTableFromBackupRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/InvalidRestoreTimeExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/InternalServerErrorExceptionUnmarshaller.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBAsyncClientBuilder.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicaStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListExportsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/waiters/TableNotExists.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeEndpointsRequest.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactWriteItemsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/StreamRecordMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaUpdateJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateBackupRequest.java  
\*



/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/AutoScalingSettingsDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ImportConflictExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExecuteTransactionRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetRecordsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicationGroupUpdateJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SSEStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ProvisionedThroughputOverrideMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/OperationType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TagResourceRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteTableResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TagJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ProvisionedThroughputOverride.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateContinuousBackupsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExpectedAttributeValueMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PointInTimeRecoveryUnavailableException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalSecondaryIndexUpdate.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SourceTableFeatureDetails.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/RestoreTableFromBackupResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListTablesRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreTableToPointInTimeResultJsonUnmarshaller.java  
va  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/InvalidRestoreTimeException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BatchStatementRequest.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TransactionCanceledException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementResponseMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AbstractAmazonDynamoDB.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableAutoScalingDescription.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactionCanceledExceptionUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchGetItemResultJsonUnmarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SequenceNumberRange.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingSettingsDescriptionJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetRecordsRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ScanRequestProtocolMarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateItemRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DisableKinesisStreamingDestinationRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreTableFromBackupResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTimeToLiveRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Endpoint.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExecuteStatementResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/KeysAndAttributes.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/LocalSecondaryIndexInfo.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/model/DisableKinesisStreamingDestinationRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactionConflictExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaAutoScalingDescriptionJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateContributorInsightsRequestProtocolMarshaller.j  
ava  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DeleteBackupRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/KinesisDataStreamDestinationMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DeleteItemRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExportConflictException.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ExportConflictExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ShardIteratorType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/UpdateContributorInsightsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListBackupsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ImportTableResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeLimitsResultJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExportTableToPointInTimeResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExportNotFoundException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/CancellationReason.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ListTagsOfResourceRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexDescriptionJsonUnmarshaller.jav  
a  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/PutItemRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/model/ContributorInsightsStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDB.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ConditionCheckJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListStreamsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/AttributeDefinitionMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/TransactGetItem.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ListImportsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/waiters/AmazonDynamoDBWaiters.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateBackupRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/KeySchemaElementMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListContributorInsightsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndexAutoScalingDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateItemRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/PointInTimeRecoveryDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/InputFormatOptions.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DeleteGlobalSecondaryIndexAction.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DestinationStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableSettingsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/KeysAndAttributesJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactGetItemJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ImportNotFoundExceptionUnmarshaller.java

\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalTableGlobalSecondaryIndexSettingsUpdateMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/QueryResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TimeToLiveDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/AttributeAction.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingPolicyDescriptionMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateReplicaActionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PutRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListExportsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ContinuousBackupsStatus.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/KeysAndAttributesMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TimeToLiveSpecification.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaNotFoundExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetShardIteratorRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableSettingsResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ItemResponseJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTableRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableReplicaAutoScalingResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeKinesisStreamingDestinationResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CsvOptions.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingPolicyUpdateMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalTableNotFoundException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreamsAsyncClient.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactGetItemsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalSecondaryIndexDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBAsync.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BackupDetailsMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BackupType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PutItemRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchGetItemRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateBackupResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SourceTableDetailsMarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableCreationParametersJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteBackupResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/AttributeDefinition.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreamsClientBuilder.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableAutoScalingDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TransactWriteItemsRequest.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetRecordsResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AttributeValueUpdateJsonUnmarshaller.java

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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexUpdateJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeContinuousBackupsRequestProtocolMarshaller
.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/PutJsonUnmarshaller.java
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/TableClassSummary.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/GetRecordsRequest.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ExecuteStatementRequestMarshaller.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexDescriptionMarshaller.ja
va
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/RequestLimitExceededExceptionUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/ReplicaUpdate.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeImportRequestMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/DescribeStreamResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/Update.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/TagResourceResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateGlobalTableRequestProtocolMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/IndexStatus.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ParameterizedStatementMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/waiters/DescribeTableFunction.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/GetItemRequest.java
*

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicaAutoScalingDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeBackupRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexSettingsDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeLimitsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalSecondaryIndexInfo.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ItemResponseMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTableReplicaAutoScalingResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactWriteItemMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicaDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTableReplicaAutoScalingRequest.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ItemCollectionMetricsJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ConditionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeContinuousBackupsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PointInTimeRecoverySpecificationMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetShardIteratorRequestMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexInfoJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TrimmedDataAccessExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DeleteTableRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListGlobalTablesResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-



jar/com/amazonaws/services/dynamodbv2/model/DescribeTimeToLiveRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateJsonUnmarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/ImportStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListBackupsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ProvisionedThroughput.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ImportTableResultJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/PointInTimeRecoverySpecification.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeBackupRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/QueryRequestProtocolMarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreams.java  
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jar/com/amazonaws/services/dynamodbv2/model/UpdateGlobalTableSettingsResult.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ExecuteTransactionResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementResponseJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactionInProgressExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ItemCollectionSizeLimitExceededException.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/SSESpecificationJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TableCreationParametersMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

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jar/com/amazonaws/services/dynamodbv2/model/TransactWriteItemsResult.java
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*
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/SSEType.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingSettingsUpdateMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/auth/policy/actions/DynamoDBv2Actions.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexSettingsUpdateMarshall
er.java
*
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexUpdateMarshaller.java
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jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaDescriptionJsonUnmarshaller.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/QueryRequest.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ResourceInUseExceptionUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactWriteItemJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalSecondaryIndexActionJsonUnmarshaller.j
ava
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateTableRequestMarshaller.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/Get.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableClassSummaryMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/IndexNotFoundException.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableCreationParameters.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BillingModeSummaryMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SourceTableDetailsJsonUnmarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GetShardIteratorResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateReplicaActionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportTableToPointInTimeResultJsonUnmarshaller.java

a

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableSettingsRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateContributorInsightsResult.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteItemResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TagResourceRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableInUseExceptionUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalSecondaryIndexActionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateItemResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CsvOptionsJsonUnmarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateGlobalTableResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PutItemRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeImportResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CapacityJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateItemResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/model/DescribeGlobalTableSettingsRequest.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ProvisionedThroughputDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/EnableKinesisStreamingDestinationRequestMarshaller.  
java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/endpointdiscovery/AmazonDynamoDBEndpointCacheLoader.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingPolicyDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndexDescription.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/PointInTimeRecoverySpecificationJsonUnmarshaller.  
java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExpiredIteratorException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ListGlobalTablesRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBAsyncClient.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteBackupRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/LocalSecondaryIndexDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexInfoMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ConditionalCheckFailedException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/StreamSpecificationMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeContinuousBackupsResultJsonUnmarshaller.  
java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/S3BucketSourceJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/BackupDetails.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalTableNotFoundExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexSettingsDescriptionJsonUnmarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DeleteItemResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/package-info.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateContinuousBackupsRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/SequenceNumberRangeMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicationGroupUpdate.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RecordMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexAutoScalingDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateGlobalTableResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TransactWriteItemsRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TimeToLiveSpecificationMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/RequestLimitExceededException.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportSummaryMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UntagResourceRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaSettingsUpdateJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/endpointdiscovery/AmazonDynamoDBEndpointCache.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Identity.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UntagResourceRequestProtocolMarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateTimeToLiveResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTableReplicaAutoScalingRequestProtocolMars

haller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicaAutoScalingUpdate.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableSettingsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBClient.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateGlobalTableRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeContinuousBackupsResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableClass.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/IndexNotFoundExceptionUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AttributeValueJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalTableDescription.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableSettingsRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeContinuousBackupsRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Replica.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ProjectionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTimeToLiveResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ImportTableRequest.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/IdentityJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/PutMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateContributorInsightsResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteReplicationGroupMemberActionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TimeToLiveStatus.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExecuteTransactionResult.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeEndpointsResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeTableReplicaAutoScalingRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TimeToLiveSpecificationJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeExportRequestProtocolMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TagResourceRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableNotFoundExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/KeySchemaElementJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BillingModeSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExecuteStatementRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BatchWriteItemRequest.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableAutoScalingDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/StreamSpecification.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CapacityMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalTableGlobalSecondaryIndexSettingsUpdateJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListStreamsRequestProtocolMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeTableRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeEndpointsResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SSEDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ArchivalSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteGlobalSecondaryIndexActionMarshaller.java

\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndexSettingsDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/AttributeValue.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/QueryRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeContributorInsightsRequestProtocolMarshaller  
.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/BackupDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DeleteReplicaAction.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/AutoScalingPolicyUpdate.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DescribeTimeToLiveResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTimeToLiveRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/CreateTableRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/GlobalSecondaryIndex.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/TransactGetItemsRequestProtocolMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaAlreadyExistsExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/BackupStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/PointInTimeRecoveryDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ImportTableRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExportDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DuplicateItemExceptionUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ListGlobalTablesRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/CreateReplicationGroupMemberAction.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/DescribeImportRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-



jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteReplicationGroupMemberActionJsonUnmarshall  
er.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/TransactionInProgressException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementErrorJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndexSettingsUpdate.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ExportTableToPointInTimeRequestProtocolMarshaller.  
java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/KeyType.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTableReplicaAutoScalingRequestProtocolMarsh  
aller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeContributorInsightsResultJsonUnmarshaller.ja  
va  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeStreamResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaGlobalSecondaryIndexDescriptionJsonUnmarsh  
aller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ListImportsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/GlobalTable.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ExpiredIteratorExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/GetItemRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/Condition.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/ImportTableDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/CreateReplicationGroupMemberActionJsonUnmarshall  
er.java  
\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ParameterizedStatement.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteRequestJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/EnableKinesisStreamingDestinationRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListBackupsRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeImportResultJsonUnmarshaller.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTableReplicaAutoScalingRequestMarshaller.java

va

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListTagsOfResourceResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListTagsOfResourceRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingSettingsDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CsvOptionsMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PointInTimeRecoveryDescription.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GetShardIteratorRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeGlobalTableRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListImportsResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/LocalSecondaryIndexDescriptionMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeExportResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TransactGetItemsResult.java

\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListStreamsRequest.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchExecuteStatementRequestMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BackupSummaryMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalTableGlobalSecondaryIndexSettingsUpdate.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteItemRequestMarshaller.java

\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportNotFoundExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreamsAsync.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/RestoreSummary.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Select.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/StreamRecord.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TableNotFoundException.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/WriteRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateReplicationGroupMemberActionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Capacity.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ListTablesResult.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ImportSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Record.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateGlobalTableRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateTimeToLiveRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BatchStatementError.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaAutoScalingUpdateJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ArchivalSummary.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ContinuousBackupsUnavailableExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeKinesisStreamingDestinationResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/PointInTimeRecoveryStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaSettingsDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DisableKinesisStreamingDestinationResultJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableClassSummaryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/EnableKinesisStreamingDestinationRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TimeToLiveDescriptionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BackupTypeFilter.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListContributorInsightsResultJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ScanRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ScanResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchStatementErrorMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateGlobalSecondaryIndexActionMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/S3BucketSource.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeStreamRequestMarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BatchWriteItemResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DeleteBackupRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ReplicaSettingsDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeExportRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DuplicateItemException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/Projection.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTableRequestMarshaller.java

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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ListTablesRequestProtocolMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicationGroupUpdateMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexAutoScalingUpdateMarshaller.ja
va
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/AutoScalingTargetTrackingScalingPolicyConfigurationDescriptio
n.java
*
/opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/EnableKinesisStreamingDestinationResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/BatchExecuteStatementResult.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/FailureException.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/DescribeExportRequest.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingTargetTrackingScalingPolicyConfiguration
UpdateMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/ReturnItemCollectionMetrics.java
*
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jar/com/amazonaws/services/dynamodbv2/model/transform/ImportTableRequestMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/InputFormatOptionsMarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/StreamSpecificationJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/TableAlreadyExistsExceptionUnmarshaller.java
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/AutoScalingSettingsUpdateJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/transform/StreamDescriptionJsonUnmarshaller.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/model/DescribeContributorInsightsRequest.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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jar/com/amazonaws/services/dynamodbv2/model/DeleteBackupResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/TransactionConflictException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/InvalidExportTimeException.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/DisableKinesisStreamingDestinationRequestMarshaller  
.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/GetItemResultJsonUnmarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableRequestMarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/GlobalSecondaryIndexAutoScalingUpdate.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/ExportStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalSecondaryIndexInfoJsonUnmarshaller.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/ItemCollectionMetricsMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/CreateTableResult.java  
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jar/com/amazonaws/services/dynamodbv2/model/ReplicaGlobalSecondaryIndex.java  
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jar/com/amazonaws/services/dynamodbv2/model/transform/ListContributorInsightsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/EndpointMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/BatchExecuteStatementResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/model/transform/BackupDetailsJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/S3SseAlgorithm.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableResultJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ContributorInsightsSummary.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ConsumedCapacityMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeLimitsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ContinuousBackupsDescription.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateReplicationGroupMemberAction.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeTableReplicaAutoScalingResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/RestoreSummaryMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ExportTableToPointInTimeRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBStreamsClient.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/StreamStatus.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ShardJsonUnmarshaller.java  
\*  
/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/TransactGetItemsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DeleteTableResult.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/ContributorInsightsAction.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/S3BucketSourceMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/TableDescriptionJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateGlobalTableResultJsonUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListStreamsRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListExportsRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ListTablesResultJsonUnmarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DeleteReplicationGroupMemberAction.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateBackupResultJsonUnmarshaller.java

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\*

/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/AbstractAmazonDynamoDBAsync.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeGlobalTableRequestMarshaller.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeTableRequestProtocolMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ResourceNotFoundExceptionUnmarshaller.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateContinuousBackupsRequestProtocolMarshaller.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/UpdateContributorInsightsRequestMarshaller.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/RestoreTableToPointInTimeResult.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/SSESpecification.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/DescribeEndpointsRequestProtocolMarshaller.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/GlobalTableStatus.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/CreateReplicationGroupMemberActionMarshaller.java



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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ReplicaMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/DescribeKinesisStreamingDestinationRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/QueryResultJsonUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/IdempotentParameterMismatchException.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/BackupInUseExceptionUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExecuteTransactionRequestMarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/UpdateGlobalTableSettingsRequest.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/ExportDescriptionJsonUnmarshaller.java  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/CreateReplicaAction.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/transform/GlobalTableJsonUnmarshaller.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/model/BatchStatementResponse.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/SS.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/N.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/PathElement.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/SetAction.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/ComparatorCondition.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/NULL.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/PutItemExpressionSpec.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/FunctionCondition.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/ExpressionSpec.java

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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/InCondition.java

\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-

jar/com/amazonaws/services/dynamodbv2/xspec/DeleteItemExpressionSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/xspec/SubstitutionContext.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/xspec/LiteralOperand.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/xspec/ScanExpressionSpec.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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/opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/xspec/ParenthesizedCondition.java  
\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
jar/com/amazonaws/services/dynamodbv2/xspec/BS.java  
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jar/com/amazonaws/services/dynamodbv2/xspec/Operand.java  
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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-  
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jar/com/amazonaws/services/dynamodbv2/xspec/NegationCondition.java

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\* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/xspec/BinaryOperation.java  
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jar/com/amazonaws/services/dynamodbv2/AmazonDynamoDBClientConfigurationFactory.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBAutoGenerateStrategy.java
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* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
jar/com/amazonaws/services/dynamodbv2/datamodeling/AbstractDynamoDBMapper.java
* /opt/cola/permits/1738534443_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-
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 \* /opt/cola/permits/1738534443\_1688660770.672255/0/aws-java-sdk-dynamodb-1-12-349-sources-jar/com/amazonaws/services/dynamodbv2/datamodeling/DynamoDBTypeConvertedEpochDate.java

# 1.527 utils 2.20.8

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\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/EnumDefinition.java

\*

/opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/FileDescriptorUtils.java

\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/MessageDefinition.java

\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/ProtobufMessage.java

\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/ProtobufSchema.java

\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/utils/apicurio/ProtobufSchemaLoader.java

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\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializationFacade.java

\*

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\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/json/JsonDeserializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializerFactory.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonSerializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/avro/AvroSerializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonValidator.java  
\*  
/opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializerFactory.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/SerializationDataEncoder.java  
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\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializerImpl.java  
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\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/avro/AvroDeserializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializationFacade.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/avro/AWSKafkaAvroSerializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/protobuf/ProtobufDeserializer.java  
\*  
/opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/json/JsonDataWithSchema.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializerImpl.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/protobuf/ProtobufSerializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/serializers/GlueSchemaRegistrySerializer.java  
\* /opt/cola/permits/1738534318\_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-jar/com/amazonaws/services/schemaregistry/deserializers/GlueSchemaRegistryDeserializer.java

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```

* This will be removed once Apicurio releases the latest version with the json_name fix
* https://github.com/Apicurio/apicurio-registry/blob/master/utis/protobuf-schema-
utilities/src/main/java/io/apicurio/registry/utis/protobuf/schema/ProtobufFile.java

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>>>>>>>
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kafka-connect-converter-protobuf
*/

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```

* /opt/cola/permits/1738534318_1688660739.9118478/0/schema-registry-serde-1-1-14-sources-
jar/com/amazonaws/services/schemaregistry/utis/apicurio/ProtobufFile.java

```

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## 1.533 protocol-core 2.20.8

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 */
/**
 * <p>
 * Creates a new secret. A secret in Secrets Manager consists of both the protected secret data and the important
 * information needed to manage the secret.
 * </p>
 * <p>
 * Secrets Manager stores the encrypted secret data in one of a collection of "versions" associated with the secret.
 * Each version contains
 * a copy of the encrypted secret data. Each version is associated with one or more
 * "staging labels" that identify where the version is in the rotation cycle. The
 * <code>SecretVersionsToStages</code> field of the secret contains the mapping of staging labels to the active
 * versions of the secret. Versions without a staging label are considered deprecated and are not included in the
 * list.
 * </p>
 * <p>
 * You provide the secret data to be encrypted by putting text in either the <code>SecretString</code> parameter
 * or
 * binary data in the <code>SecretBinary</code> parameter, but not both. If you include
 * <code>SecretString</code> or
 * <code>SecretBinary</code> then Secrets Manager also creates an initial secret version and automatically
 * attaches
 * the staging label <code>AWSCURRENT</code> to the new version.
 * </p>
 * <note>
```

- \* `<ul>`
- \* `<li>`
- \* `<p>`
- \* If you call an operation that needs to encrypt or decrypt the `<code>SecretString</code>` or `<code>SecretBinary</code>` for a secret in the same account as the calling user and that secret doesn't specify a
  - \* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer master key (CMK) with the
    - \* alias `<code>aws/secretsmanager</code>`. If this key doesn't already exist in your account then Secrets Manager
      - \* creates it for you automatically. All users in the same AWS account automatically have access to use the default
        - \* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed CMK, it
          - \* can result in a one-time significant delay in returning the result.
  - \* `</p>`
  - \* `</li>`
  - \* `<li>`
  - \* `<p>`
  - \* If the secret is in a different AWS account from the credentials calling an API that requires encryption or
    - \* decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access the
      - \* default CMK
        - for the account using credentials from a different AWS account. Store the ARN of the CMK in the
          - \* secret when you create the secret or when you update it by including it in the `<code>KMSKeyId</code>`. If you call
            - \* an API that must encrypt or decrypt `<code>SecretString</code>` or `<code>SecretBinary</code>` using credentials from
              - \* a different account then the AWS KMS key policy must grant cross-account access to that other account's user
                - or
                  - \* role for both the `kms:GenerateDataKey` and `kms:Decrypt` operations.
      - \* `</p>`
      - \* `</li>`
      - \* `</ul>`
      - \* `</note>`
      - \* `<p>`
      - \* `</p>`
      - \* `<p>`
      - \* **Minimum permissions**
      - \* `</p>`
      - \* `<p>`
      - \* To run this command, you must have the following permissions:
        - \* `</p>`
        - \* `<ul>`
        - \* `<li>`
        - \* `<p>`
        - \* `secretsmanager:CreateSecret`
        - \* `</p>`
        - \* `</li>`
        - \* `</ul>`

\* <p>

- \* kms:GenerateDataKey - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not

\* need

this permission to use the account's default AWS managed CMK for Secrets Manager.

\* </p>

- \* </li>
- \* <li>

\* <p>

- \* kms:Decrypt - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not

need this

- \* permission to use the account's default AWS managed CMK for Secrets Manager.

\* </p>

- \* </li>
- \* </ul>

\* <p>

\* <b>Related operations</b>

\* </p>

- \* <ul>
- \* <li>

\* <p>

- \* To delete a secret, use <a>DeleteSecret</a>.

\* </p>

- \* </li>
- \* <li>

\* <p>

- \* To modify an existing secret, use <a>UpdateSecret</a>.

\* </p>

- \* </li>
- \* <li>

\* <p>

- \* To create a new version of a secret, use <a>PutSecretValue</a>.

\* </p>

- \* </li>
- \* <li>

\* <p>

- \* To retrieve the encrypted secure string and secure binary values, use <a>GetSecretValue</a>.

\* </p>

- \* </li>
- \* <li>

\* <p>

- \* To retrieve all other details for a secret, use <a>DescribeSecret</a>.

This does not include the encrypted secure

- \* string and secure binary values.

\* </p>

- \* </li>
- \* <li>

\* <p>

```

* To retrieve the list of secret versions associated with the current secret, use DescribeSecret and examine
* the SecretVersionsToStages response value.
* </p>
* </li>
* </ul>
*
* @param createSecretRequest
* @return A Java Future containing the result of the CreateSecret operation returned by the service.
* @sample AWSSecretsManagerAsync.CreateSecret
* @see http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/CreateSecret
target="_top">AWS
*   API Documentation</a>
*/
/**
* <p>
* Stores a new encrypted secret value in the specified secret. To do this, the operation creates a new version and
* attaches it to the secret. The version can contain a new SecretString value or a new
* SecretBinary
value. You can also specify the staging labels that are initially attached to the new
* version.
* </p>
* <note>
* <p>
* The Secrets Manager console uses only the SecretString field. To add binary data to a secret
with
* the SecretBinary field you must use the AWS CLI or one of the AWS SDKs.
* </p>
* </note>
* <ul>
* <li>
* <p>
* If this operation creates the first version for the secret then Secrets Manager automatically attaches the
* staging label AWSCURRENT to the new version.
* </p>
* </li>
* <li>
* <p>
* If another version of this secret already exists, then this operation does not automatically move any staging
* labels other than those that you explicitly specify in the VersionStages parameter.
* </p>
* </li>
* <li>
* <p>
* If this operation moves the staging label AWSCURRENT from another version
to this version (because
* you included it in the StagingLabels parameter) then Secrets Manager also automatically moves
the
* staging label AWSPREVIOUS to the version that AWSCURRENT was

```

removed from.

\* </p>

\* </li>

\* <li>

\* <p>

\* This operation is idempotent. If a version with a <code>VersionId</code> with the same value as the

\* <code>ClientRequestToken</code> parameter already exists and you specify the same secret data, the

operation

\* succeeds but does nothing. However, if the secret data is different, then the operation fails because you cannot

\* modify an existing version; you can only create new ones.

\* </p>

\* </li>

\* </ul>

\* <note>

\* <ul>

\* <li>

\* <p>

\* If you call an operation that needs to encrypt or decrypt the <code>SecretString</code> or

\* <code>SecretBinary</code> for a secret in the same account as the calling user and that secret

doesn't specify a

\* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer master key

(CMK) with the

\* alias <code>aws/secretsmanager</code>. If this key doesn't already exist in your account then Secrets Manager

\* creates it for you automatically. All users in the same AWS account automatically have access to use the default

\* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed

CMK, it

\* can result in a one-time significant delay in returning the result.

\* </p>

\* </li>

\* <li>

\* <p>

\* If the secret is in a different AWS account from the credentials calling an API that requires encryption or

\* decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access

the

\* default CMK for the account using credentials from a different AWS account. Store the ARN of the CMK in the

\* secret when you create the

secret or when you update it by including it in the <code>KMSKeyId</code>. If you call

\* an API that must encrypt or decrypt <code>SecretString</code> or <code>SecretBinary</code> using

credentials from

\* a different account then the AWS KMS key policy must grant cross-account access to that other account's user

or

\* role for both the kms:GenerateDataKey and kms:Decrypt operations.

\* </p>

\* </li>

\* </ul>

\* </note>

\* <p>

\* <b>Minimum permissions</b>



\* </p>

\* <p>

\* To run this command, you must have the following permissions:

\* </p>

- \* <ul>
- \* <li>
- \* <p>
- \* secretsmanager:PutSecretValue
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* kms:GenerateDataKey - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not
- \* need this permission to use the account's default AWS managed CMK for Secrets Manager.
- \* </p>
- \* </li>
- \* </ul>
- \* <p>
- \* <b>Related

operations</b>

- \* </p>
- \* <ul>
- \* <li>
- \* <p>
- \* To retrieve the encrypted value you store in the version of a secret, use <a>GetSecretValue</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To create a secret, use <a>CreateSecret</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To get the details for a secret, use <a>DescribeSecret</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To list the versions attached to a secret, use <a>ListSecretVersionIds</a>.
- \* </p>
- \* </li>
- \* </ul>
- \* <p>
- \* @param putSecretValueRequest
- \* @return A Java Future containing the result of the PutSecretValue operation returned by the service.
- \* @sample AWSSecretsManagerAsync.PutSecretValue

```

* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/PutSecretValue"
target="_top">AWS
*   API Documentation</a>
*/
/**
* <p>
* Modifies many of the details of the specified secret. If you
include a <code>ClientRequestToken</code> and
* <i>either</i> <code>SecretString</code> or <code>SecretBinary</code> then it also creates a new version
attached
* to the secret.
* </p>
* <p>
* To modify the rotation configuration of a secret, use <a>RotateSecret</a> instead.
* </p>
* <note>
* <p>
* The Secrets Manager console uses only the <code>SecretString</code> parameter and therefore limits you to
* encrypting and storing only a text string. To encrypt and store binary data as part of the version of a secret,
* you must use either the AWS CLI or one of the AWS SDKs.
* </p>
* </note>
* <ul>
* <li>
* <p>
* If a version with a <code>VersionId</code> with the same value as the <code>ClientRequestToken</code>
parameter
* already exists, the operation results in an error. You cannot modify an existing version, you can only create a
* new version.
* </p>
* </li>
* <li>
* <p>
* If you include <code>SecretString</code> or <code>SecretBinary</code> to create a new secret version,
Secrets
* Manager automatically attaches the staging label <code>AWSCURRENT</code> to the new version.
* </p>
* </li>
* </ul>
* <note>
* <ul>
* <li>
* <p>
* If you call an operation that needs to encrypt or decrypt the <code>SecretString</code> or
* <code>SecretBinary</code> for a secret in the same account as the calling user and that secret doesn't specify a
* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer master key
(CMK) with the
* alias <code>aws/secretsmanager</code>. If this key doesn't already exist in your account then Secrets Manager

```

- \* creates it for you automatically. All users in the same AWS account automatically have access to use the default
- \* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed CMK, it
  - \* can result in a one-time significant delay in returning the result.

- 
- 
- 

- \* If the secret is in a different AWS account from the credentials calling an API that requires encryption or
- \* decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access the
  - \* default CMK for the account using credentials from a different AWS account. Store the ARN of the CMK in the
  - \* secret when you create the secret or when you update it by including it in the `KMSKeyId`. If you call
    - \* an API that must encrypt or decrypt `SecretString` or `SecretBinary` using credentials from
      - \* a different account then the AWS KMS key policy must grant cross-account access to that other account's user or
        - \* role for both the `kms:GenerateDataKey` and `kms:Decrypt` operations.

- 
- 
- 

- \* **Minimum permissions**

- 

- \* To run this command, you must have the following permissions:

- 
- 
- 

- \* `secretsmanager:UpdateSecret`

- 
- 
- 

- \* `kms:GenerateDataKey` - needed only if you use a custom AWS KMS key to encrypt the secret. You do not need this
  - \* permission to use the account's AWS managed CMK for Secrets Manager.
- \* `kms:Decrypt` - needed only if you use a custom AWS KMS key to encrypt the secret. You do not need this
  - \* permission to use the account's AWS managed CMK for Secrets Manager.

```

* </li>
* </ul>
* <p>
* <b>Related operations</b>
* </p>
* <ul>
* <li>
* <p>
* To create a new secret, use <a>CreateSecret</a>.
* </p>
* </li>
* <li>
* <p>
* To add only a new version to an existing secret, use <a>PutSecretValue</a>.
* </p>
* </li>
* <li>
* <p>
* To get the details for a secret, use <a>DescribeSecret</a>.
* </p>
* </li>
* <li>
* <p>
* To list the versions contained in a secret, use <a>ListSecretVersionIds</a>.
* </p>
* </li>
* </ul>
*
* @param updateSecretRequest
* @return A Java Future containing the result of the UpdateSecret operation returned by the service.
* @sample AWSSecretsManagerAsync.UpdateSecret
* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/UpdateSecret"
target="_top">AWS
* API Documentation</a>
*/

```

Found in path(s):

```

* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/AWSSecretsManagerAsync.java
No license file was found, but licenses were detected in source scan.

```

/\*

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\* <http://aws.amazon.com/apache2.0>  
\*  
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\* and limitations under the License.  
\*/

Found in path(s):

\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/CancelRotateSecretRequestProtocolMarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/UpdateSecretRequest.java  
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\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/CreateSecretRequestProtocolMarshaller.java  
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\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/MalformedPolicyDocumentException.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/InternalServiceErrorException.java  
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/opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/UntagResourceResult.java  
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\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/SecretListEntryJsonUnmarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/AWSSecretsManagerAsyncClientBuilder.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/CancelRotateSecretRequestMarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/UpdateSecretRequestProtocolMarshaller.java  
\*  
/opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/ListSecretsResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/ListSecretsRequest.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/UpdateSecretResultJsonUnmarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/GetRandomPasswordRequestMarshaller.java  
\* /opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/EncryptionFailureException.java  
\*  
/opt/cola/permits/1738534397\_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-jar/com/amazonaws/services/secretsmanager/model/transform/UpdateSecretVersionStageRequestProtocolMarshalle

```
r.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/CreateSecretRequest.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/SecretVersionsListEntry.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/RotateSecretResult.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/UpdateSecretRequestMarshaller.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/DeleteSecretRequestProtocolMarshaller.java
*
/opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/InvalidParameterException.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/TagResourceResult.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/package-info.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/UntagResourceRequestMarshaller.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/TagResourceResultJsonUnmarshaller.java
*
/opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/TagResourceRequest.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/ListSecretsRequestMarshaller.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/GetResourcePolicyResult.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/transform/SecretVersionsListEntryMarshaller.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/RotateSecretRequest.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/model/UntagResourceRequest.java
No license file was found, but licenses were detected in source scan.
```

```
/*
* Copyright 2013-2018 Amazon.com, Inc. or its affiliates. All Rights Reserved.
*
* Licensed under the Apache License, Version 2.0 (the "License"). You may not use this file except in compliance
with
* the License. A copy of the License is located at
*
* http://aws.amazon.com/apache2.0
*
* or in the "license" file accompanying this file. This file is distributed on an "AS IS" BASIS, WITHOUT
WARRANTIES OR
```

\* CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions

\* and limitations under the License.

\*/

/\*\*

\* <p>

\* Creates a new secret. A secret in Secrets Manager consists of both the protected secret data and the important

\* information needed to manage the secret.

\* </p>

\* <p>

\* Secrets Manager stores the encrypted secret data in one of a collection of "versions" associated with the secret.

\* Each version contains

a copy of the encrypted secret data. Each version is associated with one or more

\* "staging labels" that identify where the version is in the rotation cycle. The

\* <code>SecretVersionsToStages</code> field of the secret contains the mapping of staging labels to the active

\* versions of the secret. Versions without a staging label are considered deprecated and are not included in the

\* list.

\* </p>

\* <p>

\* You provide the secret data to be encrypted by putting text in either the <code>SecretString</code> parameter

or

\* binary data in the <code>SecretBinary</code> parameter, but not both. If you include

<code>SecretString</code> or

\* <code>SecretBinary</code> then Secrets Manager also creates an initial secret version and automatically

attaches

\* the staging label <code>AWSCURRENT</code> to the new version.

\* </p>

\* <note>

\* <ul>

\* <li>

\* <p>

\* If you call an operation that needs to encrypt or decrypt the

<code>SecretString</code> or

\* <code>SecretBinary</code> for a secret in the same account as the calling user and that secret doesn't specify a

\* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer master key

(CMK) with the

\* alias <code>aws/secretsmanager</code>. If this key doesn't already exist in your account then Secrets Manager

\* creates it for you automatically. All users in the same AWS account automatically have access to use the default

\* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed

CMK, it

\* can result in a one-time significant delay in returning the result.

\* </p>

\* </li>

\* <li>

\* <p>

\* If the secret is in a different AWS account from the credentials calling an API that requires encryption or

\* decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access

the

- \* default CMK

for the account using credentials from a different AWS account. Store the ARN of the CMK in the

- \* secret when you create the secret or when you update it by including it in the `KMSKeyId`. If you call
- \* an API that must encrypt or decrypt `SecretString` or `SecretBinary` using credentials from
- \* a different account then the AWS KMS key policy must grant cross-account access to that other account's user

or

- \* role for both the `kms:GenerateDataKey` and `kms:Decrypt` operations.

</p>

</li>

</ul>

</note>

<p>

</p>

<p>

<b>Minimum permissions</b>

</p>

<p>

To run this command, you must have the following permissions:

</p>

<ul>

<li>

<p>

secretsmanager:CreateSecret

</p>

</li>

<li>

<p>

kms:GenerateDataKey - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not

need

- \* need

this permission to use the account's default AWS managed CMK for Secrets Manager.

</p>

</li>

<li>

<p>

kms:Decrypt - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not

need this

- \* permission to use the account's default AWS managed CMK for Secrets Manager.

</p>

</li>

</ul>

<p>

<b>Related operations</b>

</p>

<ul>

<li>

- \* <p>
- \* To delete a secret, use <a>DeleteSecret</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To modify an existing secret, use <a>UpdateSecret</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To create a new version of a secret, use <a>PutSecretValue</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To retrieve the encrypted secure string and secure binary values, use <a>GetSecretValue</a>.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To retrieve all other details for a secret, use <a>DescribeSecret</a>.

This does not include the encrypted secure

- \* string and secure binary values.
- \* </p>
- \* </li>
- \* <li>
- \* <p>
- \* To retrieve the list of secret versions associated with the current secret, use <a>DescribeSecret</a> and examine
- \* the <code>SecretVersionsToStages</code> response value.
- \* </p>
- \* </li>
- \* </ul>
- \*

- \* @param createSecretRequest
- \* @return Result of the CreateSecret operation returned by the service.
- \* @throws InvalidParameterException
- \* You provided an invalid value for a parameter.
- \* @throws InvalidRequestException
- \* You provided a parameter value that is not valid for the current state of the resource.</p>
- \* <p>
- \* Possible causes:
- \* </p>
- \* <ul>
- \* <li>
- \* <p>
- \* You tried to perform the operation on a secret that's currently marked deleted.
- \* </p>

```

*
</li>
* <li>
* <p>
* You tried to enable rotation on a secret that doesn't already have a Lambda function ARN configured and
* you didn't include such an ARN as a parameter in this call.
* </p>
* </li>
* @throws LimitExceededException
* The request failed because it would exceed one of the Secrets Manager internal limits.
* @throws EncryptionFailureException
* Secrets Manager can't encrypt the protected secret text using the provided KMS key. Check that the
* customer master key (CMK) is available, enabled, and not in an invalid state. For more information, see
* <a href="http://docs.aws.amazon.com/kms/latest/developerguide/key-state.html">How Key State Affects
Use
* of a Customer Master Key</a>.
* @throws ResourceExistsException
* A resource with the ID you requested already exists.
* @throws ResourceNotFoundException
* We can't find the resource that you asked for.
* @throws MalformedPolicyDocumentException
* The policy document that you provided isn't valid.
* @throws InternalServiceErrorException
* An error occurred on the server side.
* @throws PreconditionNotMetException
* The request failed because you did not complete all the prerequisite steps.
* @sample AWSSecretsManager.CreateSecret
* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/CreateSecret"
target="_top">AWS
* API Documentation</a>
*/
/**
* <p>
* Stores a new encrypted secret value in the specified secret. To do this, the operation creates a new version and
* attaches it to the secret. The version can contain a new <code>SecretString</code> value or a new
* <code>SecretBinary</code> value. You can also specify the staging labels that are initially attached to the new
* version.
*
* </p>
* <note>
* <p>
* The Secrets Manager console uses only the <code>SecretString</code> field. To add binary data to a secret
with
* the <code>SecretBinary</code> field you must use the AWS CLI or one of the AWS SDKs.
* </p>
* </note>
* <ul>
* <li>

```

- \* `<p>`
- \* If this operation creates the first version for the secret then Secrets Manager automatically attaches the
- \* staging label `<code>AWSCURRENT</code>` to the new version.
- \* `</p>`
- \* `</li>`
- \* `<li>`
- \* `<p>`
- \* If another version of this secret already exists, then this operation does not automatically move any staging
- \* labels other than those that you explicitly specify in the `<code>VersionStages</code>` parameter.
- \* `</p>`
- \* `</li>`
- \* `<li>`
- \* `<p>`
- \* If this operation moves the staging label `<code>AWSCURRENT</code>` from another version to this version

(because

- \* you included it in the `<code>StagingLabels</code>` parameter) then Secrets

Manager also automatically moves the

- \* staging label `<code>AWSPREVIOUS</code>` to the version that `<code>AWSCURRENT</code>` was

removed from.

- \* `</p>`
- \* `</li>`
- \* `<li>`
- \* `<p>`
- \* This operation is idempotent. If a version with a `<code>VersionId</code>` with the same value as the
- \* `<code>ClientRequestToken</code>` parameter already exists and you specify the same secret data, the

operation

- \* succeeds but does nothing. However, if the secret data is different, then the operation fails because you cannot
- \* modify an existing version; you can only create new ones.
- \* `</p>`
- \* `</li>`
- \* `</ul>`
- \* `<note>`
- \* `<ul>`
- \* `<li>`
- \* `<p>`
- \* If you call an operation that needs to encrypt or decrypt the `<code>SecretString</code>` or
- \* `<code>SecretBinary</code>` for a secret in the same account as the calling user and that secret doesn't specify a
- \* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer

master key (CMK) with the

- \* alias `<code>aws/secretsmanager</code>`. If this key doesn't already exist in your account then Secrets Manager
- \* creates it for you automatically. All users in the same AWS account automatically have access to use the default
- \* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed

CMK, it

- \* can result in a one-time significant delay in returning the result.
- \* `</p>`
- \* `</li>`
- \* `<li>`
- \* `<p>`

- \* If the secret is in a different AWS account from the credentials calling an API that requires encryption or decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access the
- \* default CMK for the account using credentials from a different AWS account. Store the ARN of the CMK in the
- \* secret when you create the secret or when you update it by including it in the `KMSKeyId`. If you call
- \* an API that must

encrypt or decrypt `SecretString` or `SecretBinary` using credentials from

- \* a different account then the AWS KMS key policy must grant cross-account access to that other account's user

or

- \* role for both the `kms:GenerateDataKey` and `kms:Decrypt` operations.

</p>

- </li>

</ul>

</note>

<p>

<b>Minimum permissions</b>

</p>

<p>

\* To run this command, you must have the following permissions:

</p>

- <ul>
- <li>

<p>

- \* `secretsmanager:PutSecretValue`

</p>

- </li>
- <li>

<p>

- \* `kms:GenerateDataKey` - needed only if you use a customer-managed AWS KMS key to encrypt the secret. You do not
- \* need this permission to use the account's default AWS managed CMK for Secrets Manager.

</p>

- </li>

</ul>

<p>

<b>Related operations</b>

</p>

- <ul>
- <li>

<p>

- \* To retrieve the encrypted value you store

in the version of a secret, use `GetSecretValue`.

</p>

- </li>
- <li>

<p>

- \* To create a secret, use `CreateSecret`.



```

* </p>
* </li>
* <li>
* <p>
* To get the details for a secret, use <a>DescribeSecret</a>.
* </p>
* </li>
* <li>
* <p>
* To list the versions attached to a secret, use <a>ListSecretVersionIds</a>.
* </p>
* </li>
* </ul>
*
* @param putSecretValueRequest
* @return Result of the PutSecretValue operation returned by the service.
* @throws InvalidParameterException
*     You provided an invalid value for a parameter.
* @throws InvalidRequestException
*     You provided a parameter value that is not valid for the current state of the resource.</p>
*     <p>
*     Possible causes:
*     </p>
*     <ul>
*     <li>
*     <p>
*     You tried to perform the operation on a secret
that's currently marked deleted.
*     </p>
*     </li>
*     <li>
*     <p>
*     You tried to enable rotation on a secret that doesn't already have a Lambda function ARN configured and
*     you didn't include such an ARN as a parameter in this call.
*     </p>
*     </li>
* @throws LimitExceededException
*     The request failed because it would exceed one of the Secrets Manager internal limits.
* @throws EncryptionFailureException
*     Secrets Manager can't encrypt the protected secret text using the provided KMS key. Check that the
*     customer master key (CMK) is available, enabled, and not in an invalid state. For more information, see
*     <a href="http://docs.aws.amazon.com/kms/latest/developerguide/key-state.html">How Key State Affects
Use
*     of a Customer Master Key</a>.
* @throws ResourceExistsException
*     A resource with
the ID you requested already exists.
* @throws ResourceNotFoundException

```

```

* We can't find the resource that you asked for.
* @throws InternalServiceErrorException
* An error occurred on the server side.
* @sample AWSSecretsManager.PutSecretValue
* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/PutSecretValue"
target="_top">AWS
* API Documentation</a>
*/
/**
* <p>
* Modifies many of the details of the specified secret. If you include a <code>ClientRequestToken</code> and
* <i>either</i> <code>SecretString</code> or <code>SecretBinary</code> then it also creates a new version
attached
* to the secret.
* </p>
* <p>
* To modify the rotation configuration of a secret, use <a>RotateSecret</a> instead.
* </p>
* <note>
* <p>
* The Secrets Manager console uses only the <code>SecretString</code> parameter and therefore limits you to
* encrypting
and storing only a text string. To encrypt and store binary data as part of the version of a secret,
* you must use either the AWS CLI or one of the AWS SDKs.
* </p>
* </note>
* <ul>
* <li>
* <p>
* If a version with a <code>VersionId</code> with the same value as the <code>ClientRequestToken</code>
parameter
* already exists, the operation results in an error. You cannot modify an existing version, you can only create a
* new version.
* </p>
* </li>
* <li>
* <p>
* If you include <code>SecretString</code> or <code>SecretBinary</code> to create a new secret version,
Secrets
* Manager automatically attaches the staging label <code>AWSCURRENT</code> to the new version.
* </p>
* </li>
* </ul>
* <note>
* <ul>
* <li>
* <p>
* If you call an operation that needs to encrypt or decrypt the <code>SecretString</code> or

```

- \* `SecretBinary` for a secret in the same account as the calling user and that secret doesn't specify a
  - \* AWS KMS encryption key, Secrets Manager uses the account's default AWS managed customer master key (CMK) with the
    - \* alias `aws/secretsmanager`. If this key doesn't already exist in your account then Secrets Manager
      - \* creates it for you automatically. All users in the same AWS account automatically have access to use the default
        - \* CMK. Note that if an Secrets Manager API call results in AWS having to create the account's AWS-managed CMK, it
          - \* can result in a one-time significant delay in returning the result.
- \* If the secret is in a different AWS account from the credentials calling an API that requires encryption or decryption of the secret value then you must create and use a custom AWS KMS CMK because you can't access the
  - \* default CMK for the account using credentials from a different AWS account. Store the ARN of the CMK in the
    - \* secret when you create the secret or when you update it by including it in the `KMSKeyId`. If you call
      - \* an API that must encrypt or decrypt `SecretString` or `SecretBinary` using credentials from
        - \* a different account then the AWS KMS key policy must grant cross-account access to that other account's user or
          - \* role for both the `kms:GenerateDataKey` and `kms:Decrypt` operations.

**Minimum permissions**

To run this command, you must have the following permissions:

- \* `secretsmanager:UpdateSecret`
- \* `kms:GenerateDataKey` - needed only if you use a custom AWS KMS key to encrypt the secret. You do not need this
  - \* permission to use the account's AWS managed CMK for Secrets Manager.

\* <p>

\* kms:Decrypt - needed only if you use a custom AWS KMS key to encrypt the secret. You do not need this permission

\* to use the account's AWS managed CMK for Secrets Manager.

\* </p>

\* </li>

\* </ul>

\* <p>

\* <b>Related operations</b>

\* </p>

\* <ul>

\* <li>

\* <p>

\* To create a new secret, use <a>CreateSecret</a>.

\* </p>

\* </li>

\* <li>

\* <p>

\* To add only a new version to an existing secret, use <a>PutSecretValue</a>.

\* </p>

\* </li>

\* <li>

\* <p>

\* To get the details for a secret, use <a>DescribeSecret</a>.

\* </p>

\* </li>

\* <li>

\* <p>

\* To list the versions contained in a secret, use <a>ListSecretVersionIds</a>.

\* </p>

\* </li>

\* </ul>

\*

\* @param updateSecretRequest

\* @return Result of the UpdateSecret operation returned by the service.

\* @throws InvalidParameterException

\* You provided an invalid value for a parameter.

\* @throws InvalidRequestException

\* You provided a parameter value that is not valid for the current state of the resource.</p>

\* <p>

\* Possible causes:

\* </p>

\* <ul>

\* <li>

\* <p>

\* You tried to perform the operation on a secret that's currently marked deleted.

\* </p>

```

* </li>
* <li>
* <p>
* You tried to enable rotation on a secret that doesn't already have a Lambda function ARN configured and
* you didn't include such an ARN as a parameter in this call.
* </p>
* </li>
* @throws LimitExceededException
* The request failed because it would exceed one of the Secrets Manager internal limits.
* @throws EncryptionFailureException
* Secrets Manager can't encrypt the protected secret text using the provided KMS key. Check that the
*
customer master key (CMK) is available, enabled, and not in an invalid state. For more information, see
* <a href="http://docs.aws.amazon.com/kms/latest/developerguide/key-state.html">How Key State Affects
Use
* of a Customer Master Key</a>.
* @throws ResourceExistsException
* A resource with the ID you requested already exists.
* @throws ResourceNotFoundException
* We can't find the resource that you asked for.
* @throws MalformedPolicyDocumentException
* The policy document that you provided isn't valid.
* @throws InternalServiceErrorException
* An error occurred on the server side.
* @throws PreconditionNotMetException
* The request failed because you did not complete all the prerequisite steps.
* @sample AWSSecretsManager.UpdateSecret
* @see <a href="http://docs.aws.amazon.com/goto/WebAPI/secretsmanager-2017-10-17/UpdateSecret"
target="_top">AWS
*
API Documentation</a>
*/

```

Found in path(s):

```

* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/AWSSecretsManagerClient.java
* /opt/cola/permits/1738534397_1688660530.7474215/0/aws-java-sdk-secretsmanager-1-11-409-sources-1-
jar/com/amazonaws/services/secretsmanager/AWSSecretsManagerClient.java

```

## 1.535 kinesis 2.20.8

### 1.535.1 Available under license :

AWS SDK for Java 2.0

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\*\*\*\*\*

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- Netty Reactive Streams - <https://github.com/playframework/netty-reactive-streams>
- Jackson-core - <https://github.com/FasterXML/jackson-core>
- Jackson-dataformat-cbor - <https://github.com/FasterXML/jackson-dataformats-binary>

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# 1.549 pgv-java-grpc 0.6.1

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```
* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
```

```
jar/io/grpc/internal/testing/AbstractClientTransportFactoryTest.java
* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/internal/NoopServerCall.java
* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/internal/NoopClientCall.java
*
/opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/testing/GrpcServerRule.java
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jar/io/grpc/internal/testing/TestClientStreamTracer.java
* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/internal/testing/TestStreamTracer.java
* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/testing/TlsTesting.java
*
/opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/internal/testing/SingleMessageProducer.java
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jar/io/grpc/testing/TestMethodDescriptors.java
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 */

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Found in path(s):

```

* /opt/cola/permits/1751210921_1690219545.6467063/0/grpc-testing-1-39-0-sources-
jar/io/grpc/internal/testing/TestUtils.java

```

## 1.551 kotlin-scripting-compiler-embeddable

### 1.7.20

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## 1.552 third-party-jackson-dataformat-cbor

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# 1.557 [github.com/eko/gocache/v2](https://github.com/eko/gocache/v2) 2.2.0

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## 1.558 eko-gocache 2.2.0

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# 1.561 reporter (devel)

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```

Found in path(s):

```
* /opt/cola/permits/1777597190_1693150278.224841/0/golang-sdk-x64-linux-4-5-2-0-
```

tar/appdynamics/include/appdynamics.h

\* /opt/cola/permits/1777597190\_1693150278.224841/0/golang-sdk-x64-linux-4-5-2-0-

tar/appdynamics/include/appdynamics\_advanced.h

# 1.562 google-golang-org-genproto 0.0.0-20211221231510-d629cc9a93d5

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## 1.563 opentelemetry-proto 0.17.1

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## 1.564 json-cpp 1.7.4

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Also add information on how to contact you by electronic and paper mail.

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```
Gnomovision version 69, Copyright
(C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

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```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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## 1.567 perl-base 5.32.1-4+deb11u2

### 1.567.1 Available under license :

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?RCS: \$Id: usecbacktrace.U,v \$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?RCS: \$Log: usebacktrace.U,v \$  
?RCS:  
?MAKE:usebacktrace: Myread Oldconfig Setvar Getfile d\_backtrace  
?MAKE: -pick add \$@ %<

?Y:TOP

?S:usebacktrace:  
?S: This variable indicates whether we are compiling with backtrace  
?S: support.

?S:.

?C:USE\_C\_BACKTRACE:

?C: This symbol, if defined, indicates that Perl should  
?C: be built with support for backtrace.

?C:.

?H:#\$usebacktrace USE\_C\_BACKTRACE /\*\*/

?H:.

: Check if C backtrace is actually supported.

```
case "$usebacktrace" in
  "") usebacktrace=$undef ;;
  [yY]*|true|$define)
    case "$d_backtrace" in
      [yY]*|true|$define)
        ;;
      *)
        echo "This system does not support backtrace" >&4
        usebacktrace=$undef
    ;;
  esac
;;
esac
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/usebacktrace.U

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?RCS:

```

?MAKE:default_inc_excludes_dot: Myread cat
?MAKE: -pick add $@ %<
?S:default_inc_excludes_dot:
?S: When defined, remove the legacy '.' from @INC
?S:.
?C:DEFAULT_INC_EXCLUDES_DOT:
?C: This symbol, if defined, removes the legacy default behavior of
?C: including '.' at the end of @INC.
?C:.
?H:#$default_inc_excludes_dot DEFAULT_INC_EXCLUDES_DOT /**/
?H:.
: Include . in @INC
$cat <<EOM

```

Historically Perl has provided a final fallback of the current working directory '.' when searching for a library. This, however, can lead to problems when a Perl program which loads optional modules is called from a shared directory. This can lead to executing unexpected code.

EOM

```

# When changing to exclude by
default:
case "$default_inc_excludes_dot" in
  $undef|false|[nN]*) dflt="n" ;;
  *) dflt="y" ;;
esac
# To turn exclude off by default:
#case "$default_inc_excludes_dot" in
#  $define|true|[yY]*) dflt="y" ;;
#  *) dflt="n" ;;
#esac

rp='Exclude '.' from @INC by default? '
./myread
case "$ans" in
  [nN]|undef) default_inc_excludes_dot="$undef" ;;
  *) default_inc_excludes_dot="$define" ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/defaultincdot.U

```

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```

?RCS: $Id: d_endpwent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:

```

?RCS: You may distribute under the terms of either the GNU General Public  
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?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_endpwent\_r endpwent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_endpwent\_r:  
?S: This variable conditionally defines the HAS\_ENDPWENT\_R symbol,  
?S: which indicates to the C program that the endpwent\_r()  
?S: routine is available.  
?S:.  
?S:endpwent\_r\_proto:  
?S: This variable encodes the prototype of endpwent\_r.  
?S: It is zero if d\_endpwent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endpwent\_r  
?S: is defined.  
?S:.  
?C:HAS\_ENDPWENT\_R:  
?C: This symbol, if defined, indicates that the endpwent\_r routine  
?C: is available to  
endpwent re-entrantly.  
?C:.  
?C:ENDPWENT\_R\_PROTO:  
?C: This symbol encodes the prototype of endpwent\_r.  
?C: It is zero if d\_endpwent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endpwent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_endpwent\_r HAS\_ENDPWENT\_R /\*\*/  
?H:#define ENDPWENT\_R\_PROTO \$endpwent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_endpwent\_r\_proto  
: see if endpwent\_r exists  
set endpwent\_r d\_endpwent\_r  
eval \$inlibc  
case "\$d\_endpwent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_pwd pwd.h"  
case "\$d\_endpwent\_r\_proto:\$usethreads" in  
":define") d\_endpwent\_r\_proto=define  
set d\_endpwent\_r\_proto endpwent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_endpwent\_r\_proto" in  
define)

```

case "$endpwent_r_proto" in
"|0) try='int endpwent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && endpwent_r_proto=I_H ;;
esac
case "$endpwent_r_proto" in
"|0) try='void endpwent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && endpwent_r_proto=V_H ;;
esac
case "$endpwent_r_proto"
in
"|0) d_endpwent_r=undef
endpwent_r_proto=0
echo "Disabling endpwent_r, cannot determine prototype." >&4 ;;
*) case "$endpwent_r_proto" in
REENTRANT_PROTO*) ;;
*) endpwent_r_proto="REENTRANT_PROTO_$endpwent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endpwent_r has no prototype, not using it." >&4 ;;
esac
d_endpwent_r=undef
endpwent_r_proto=0
;;
esac
;;
*) endpwent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_endpwent\_r.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Tr.U,v \$

```

?RCS: Revision 3.0.1.2 1994/10/29 18:00:54 ram
?RCS: patch43: forgot to quote $@ to protect against "evil" characters
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 15:58:35 ram
?RCS: patch36: created
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to do a character translation. It catches translations to uppercase or
?X: to lowercase, and then invokes the real tr to perform the job.
?X:
?X: This unit is necessary on HP machines (HP strikes again!)
with non-ascii
?X: ROMAN8-charset, where normal letters are not arranged in a row, so a-z
?X: covers not the whole alphabet but lots of special chars. This was reported
?X: by Andreas Sahlbach <a.sahlbach@tu-bs.de>.
?X:
?X: Units performing a tr '[A-Z]' '[a-z]' or the other way round should include
?X: us in their dependency and use ./tr instead.
?X:
?MAKE:Tr: startsh tr eunicefix
?MAKE: -pick add $@ %<
?F: ./tr
?T: up low LC_ALL
: see whether [:lower:] and [:upper:] are supported character classes
echo " "
case "`echo AbyZ | LC_ALL=C $tr '[:lower:]' '[:upper:]' 2>/dev/null`" in
ABYZ)
echo "Good, your tr supports [:lower:] and [:upper:] to convert case." >&4
up='[:upper:]'
low='[:lower:]'
;;
*) # There is a discontinuity in EBCDIC between 'I' and 'J'
# (0xc9 and 0xd1), therefore that is a nice testing point.
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | LC_ALL=C $tr '[I-J]' '[i-j]' 2>/dev/null`" in
ij) up='A-Z'
low='a-z'
;;
esac
fi
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | LC_ALL=C $tr I-J i-j 2>/dev/null`" in
ij) up='A-Z'
low='a-z'
;;
esac

```

```

    fi
if test "X$up" = X -o "X$low" = X; then
    case "`echo IJ | od -x 2>/dev/null`" in
        *C9D1*|*c9d1*)
    echo "Hey, this might be EBCDIC." >&4
if test "X$up" = X -o "X$low" = X; then
    case "`echo IJ | \
LC_ALL=C $tr '[A-IJ-RS-Z]' '[a-ij-rs-z]' 2>/dev/null`" in
        ij) up='[A-IJ-RS-Z]'
            low='[a-ij-rs-z]'
        ;;
    esac
fi
if test "X$up" = X -o "X$low" = X; then
    case "`echo IJ | LC_ALL=C $tr A-IJ-RS-Z a-ij-rs-z 2>/dev/null`" in
        ij) up='A-IJ-RS-Z'
            low='a-ij-rs-z'
        ;;
    esac
fi
;;
esac
fi
;;
esac
fi
esac
case "`echo IJ | LC_ALL=C $tr \"\$up\" \"\$low\" 2>/dev/null`" in
    ij)
        echo "Using $up and $low to convert case." >&4
        ;;
    *)
        echo "I don't know how to translate letters from upper to lower case." >&4
        echo "Your tr is not acting any way I know of." >&4
        exit 1
        ;;
esac
: set up the translation script tr, must be called with ./tr of course
cat >tr <<EOESC
$startsh
case "\$1\$2" in
    '[A-Z][a-z]') LC_ALL=C exec $tr '$up' '$low';;
    '[a-z][A-Z]') LC_ALL=C exec $tr '$low' '$up';;
esac
LC_ALL=C exec $tr "\$@"
EOESC
chmod +x tr
$eunicefix tr

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-



### 5.32.1~rc1/dist/U/Tr.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_scorfl.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_scorfl.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_scorfl: cat Myread Oldconfig nametype Setvar
?MAKE: -pick add $@ %<
?S:d_scorfl:
?S: This variable conditionally defines the SCOREFULL symbol, which
?S: indicates to the C program that any scoreboard kept by the program
?S: should be kept on the basis of the user's full name as opposed to
?S: the user's login name.
?S:
?C:SCOREFULL:
?C: This
symbol, if defined, indicates that any scoreboard kept by the
?C: program should be kept on the basis of the user's full name as opposed
?C: to the user's login name. If the user can change his full name he
?C: can enter multiple scores if this is defined.
?C:
?H:#$d_scorfl SCOREFULL /**/
?H:
?LINT:set d_scorfl
: see how they want the scoreboard kept
case "$d_scorfl" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
case "$nametype" in
other) val="$undef" ;;
*)
$cat <<'EOM'
```

The scoreboard can be kept with one score per login name, or one score per full name. If users can change their full name, or if there is more than one person on your system with the same full name, you should keep the score by login name

(the full name is still printed).

EOM

```
rp='Do you want the scoreboard kept by full name?'
./myread
case "$ans" in
y*) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set d_scorfl
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_scorfl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_cuserid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_cuserid.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:07:25 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_cuserid: Inlibc
?MAKE: -pick add $@ %<
?S:d_cuserid:
?S: This variable conditionally defines the HAS_CUSERID symbol, which
?S: indicates to the C program that the cuserid() routine is available
?S: to get character login names.
?S:.
?C:HAS_CUSERID :
?C: This symbol,
if defined, indicates that the cuserid routine is
?C: available to get character login names.
?C:.
?H:#$d_cuserid HAS_CUSERID /**/
```

```
?H:
?LINT:set d_cuserid
: see if cuserid exists
set cuserid d_cuserid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_cuserid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_rusage.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_rusage.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:57 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X: We may need to include <sys/resource.h> and <sys/time.h> FIXME
```

```
?X:INC: i_sysresrc i_systime
```

```
?MAKE:d_rusage: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_rusage (d_getrusg):
```

```
?S: This variable conditionally defines the HAS_GETRUSAGE symbol, which
```

```
?S: indicates that the getrusage() routine exists. The getrusage() routine
```

```
?S: supports sub-second accuracy
```

```
for process cpu accounting. You may need
```

```
?S: to include <sys/resource.h> and <sys/time.h>.
```

```
?S:.
```

```
?C:HAS_GETRUSAGE (RUSAGE_GETRUSAGE):
```

```
?C: This symbol, if defined, indicates that the getrusage() routine is
```

```
?C: available to get process statistics with a sub-second accuracy.
```

```
?C: Inclusion of <sys/resource.h> and <sys/time.h> may be necessary.
```

```
?C:.
```

```
?H:#$d_rusage HAS_GETRUSAGE /**/
```

```
?H:.
```

```
?LINT:set d_rusage
```

```
: see if getrusage exists
```

```
set getrusage d_rusage
```

```
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_rusage.U

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_wcrtomb: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_wcrtomb:

?S: This variable conditionally defines the HAS\_WCRTOMB symbol if the

?S: wcrtomb() routine is available to be used to convert a wide character

?S: into a multi-byte character.

?S:.

?C:HAS\_WCRTOMB:

?C: This symbol, if defined, indicates that the wcrtomb routine is

?C: available to convert a wide character into a multi-byte character.

?C:.

?H:#\$d\_wcrtomb HAS\_WCRTOMB /\*\*/

?H:.

?LINT: set d\_wcrtomb

: see if wcrtomb exists

set wcrtomb d\_wcrtomb

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_wcrtomb.U

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?RCS:

?MAKE:dtraceobject dtracexnolibs: usedtrace dtrace cc cflags optimize \  
Compile cat rm\_try

?MAKE: -pick add \$@ %<

?MAKE: -pick add \$@ %<

?S:dtraceobject:

?S: Whether we need to build an object file with the dtrace tool.

?S:.

?S:dtracexnolibs:

```

?S: Whether dtrace accepts -xnolibs. If available we call dtrace -h
?S: and dtrace -G with -xnolibs to allow dtrace to run in a jail on
?S: FreeBSD.
?S:.
?F: !perldtrace.h
?T:xnolibs
: Probe whether dtrace builds an object, as newer Illumos requires an input
: object file that uses at least one of the probes defined in the .d file
case "$usedtrace" in
$define)
    case "$dtracexnolibs" in
    $define|true|[yY]*)
        dtracexnolibs=$define
$dtrace -h -xnolibs -s ../perldtrace.d -o perldtrace.h
;;
'')
    if $dtrace -h -xnolibs -s ../perldtrace.d -o perldtrace.h 2>&1 ; then
        dtracexnolibs=$define
        echo "Your dtrace accepts -xnolibs"
    elif $dtrace -h -s ../perldtrace.d -o perldtrace.h 2>&1 ; then
        dtracexnolibs=$undef
        echo "Your dtrace doesn't accept -xnolibs"
    else
        echo "Your dtrace doesn't work at all, try building without dtrace support" >&4
        exit 1
    fi
;;
*)
    dtracexnolibs=$undef
$dtrace -h -s ../perldtrace.d -o perldtrace.h
;;
esac
case $dtracexnolibs in
$define) xnolibs=-xnolibs ;;
*) xnolibs= ;;
esac

case "$dtraceobject" in
$define|true|[yY]*)
    dtraceobject=$define
;;
'')
    $cat >try.c <<EOM
#include "perldtrace.h"
int main(void) {
    PERL_LOADED_FILE("dummy");
    return 0;
}

```

EOM

```
dtraceobject=$undef
if $cc -c -o try.o $optimize $ccflags try.c \
    && $dtrace -G $xnolibs -s ../perldtrace.d try.o >/dev/null 2>&1; then

    dtraceobject=$define
    echo "Your dtrace builds an object file"
fi
;;
*) dtraceobject=$undef ;;
esac
$rm_try perldtrace.o perldtrace.h
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/dtraceobject.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_inetaton.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Spider Boardman

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?RCS:

?RCS: \$Log: d\_inetaton.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:36:35 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_inetaton: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_inetaton:

?S: This variable conditionally defines the HAS\_INET\_ATON symbol, which

?S: indicates to the C program that the inet\_aton() function is available

?S: to parse IP address "dotted-quad" strings.

?S:.

?C:HAS\_INET\_ATON:

?C: This symbol, if defined, indicates

to the C program that the

?C: inet\_aton() function is available to parse IP address "dotted-quad"

?C: strings.

?C:.

?H:#\$d\_inetaton HAS\_INET\_ATON /\*\*/

```
?H:
?LINT:set d_inetaton
: check whether inet_aton exists
set inet_aton d_inetaton
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_inetaton.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_regcmp.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_regcmp.U,v $
```

```
?RCS: Revision 3.0.1.1 1995/01/30 14:34:45 ram
```

```
?RCS: patch49: now looks for POSIX regcomp() routine
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:06:53 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_regcmp d_re_comp d_regcomp: Csym cat
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_regcomp:
```

```
?S: This variable conditionally defines the HAS_REGCOMP symbol, which
```

```
?S: indicates to the C program that the regcomp() routine is available
```

```
?S: for regular
```

```
pattern matching (usually on POSIX.2 conforming systems).
```

```
?S:.
```

```
?S:d_regcmp:
```

```
?S: This variable conditionally defines the HAS_REGCMP symbol, which
```

```
?S: indicates to the C program that the regcmp() routine is available
```

```
?S: for regular pattern matching (usually on System V).
```

```
?S:.
```

```
?S:d_re_comp:
```

```
?S: This variable conditionally defines the HAS_RECOMP symbol, which
```

```
?S: indicates to the C program that the re_comp() routine is available
```

```
?S: for regular pattern matching (usually on BSD). If so, it is likely that
```

```
?S: re_exec() exists.
```

```
?S:.
```

```
?C:HAS_REGCOMP (REGCOMP):
```

?C: This symbol, if defined, indicates that the regcomp() routine is  
?C: available to do some regular pattern matching (usually on POSIX.2  
?C: conforming systems).

?C:.

?C:HAS\_REGCMP (REGCMP):

?C: This symbol, if defined, indicates that the regcmp() routine is  
?C: available to do some regular pattern matching (usually on System V).

?C:.

?C:HAS\_RECOMP (RECOMP):

?C: This symbol, if defined, indicates that the re\_comp() routine is

?C: available

to do some regular pattern matching (usually on BSD). If so,

?C: it is likely that re\_exec() be available.

?C:.

?H:#\$d\_regcomp HAS\_REGCOMP /\* POSIX.2 \*/

?H:#\$d\_regcomp HAS\_REGCOMP /\* sysV \*/

?H:#\$d\_re\_comp HAS\_RECOMP /\* BSD \*/

?H:.

?T:val

: see if regcomp, regcmp, or re\_comp exist, for regular pattern matching

echo " "

if set regcomp val -f d\_regcomp; eval \$csym; \$val; then

echo 'regcomp() found.' >&4

d\_regcomp="\$define"

d\_regcmp="\$undef"

d\_re\_comp="\$undef"

elif set regcmp val -f d\_regcmp; eval \$csym; \$val; then

echo 'regcmp() found.' >&4

d\_regcomp="\$define"

d\_regcmp="\$undef"

d\_re\_comp="\$undef"

elif set re\_comp val -f d\_re\_comp; eval \$csym; \$val; then

echo 're\_comp() found, assuming re\_exec() also exists.' >&4

d\_re\_comp="\$define"

d\_regcomp="\$undef"

d\_regcmp="\$undef"

else

\$cat >&4 <<EOM

No regcomp(), regcmp() nor re\_comp() found !! No regular pattern matching.

EOM

d\_regcomp="\$undef"

d\_re\_comp="\$undef"

d\_regcomp="\$undef"

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/dist/U/d\_regcmp.U



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: nblock_io.U,v 3.0.1.2 1997/02/28 16:17:14 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: nblock_io.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 16:17:14 ram
?RCS: patch61: simplify here document for shells that can't handle them well
?RCS: patch61: force use of "startsh" at the head of the generated script
?RCS: patch61: added new files to the ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.1 1995/07/25 14:13:22 ram
?RCS: patch56: created
?RCS:
?X:
?X: Simplify here document for shells that can't handle them well.
?X: (Problem reported on FreeBSD;
?X: it's unclear if this helps.) --AD
?X:
?MAKE:o_nonblock eagain rd_nodata d_eofnblk: cat rm_try Compile run \
?MAKE: d_open3 h_sysfile h_fcntl signal_t hint Oldconfig Setvar \
?MAKE: startsh i_unistd i_fcntl i_stdlib d_fork d_pipe d_alarm
?MAKE: -pick add $@ %<
?S:o_nonblock:
?S: This variable bears the symbol value to be used during open() or fcntl()
?S: to turn on non-blocking I/O for a file descriptor. If you wish to switch
?S: between blocking and non-blocking, you may try ioctl(FIOSNBIO) instead,
?S: but that is only supported by some devices.
?S:.
?S:eagain:
?S: This variable bears the symbolic errno code set by read() when no
?S: data is present on the file and non-blocking I/O was enabled (otherwise,
?S: read() blocks naturally).
?S:.
?S:rd_nodata:
?S: This variable holds the return code from read() when no data is
?S: present. It should be -1, but some systems return 0 when O_NDELAY is
?S: used, which is a shame because you cannot make the difference between
?S: no data and an EOF.. Sigh!
?S:.
?S:d_eofnblk:
```

?S: This variable conditionally defines EOF\_NONBLOCK if EOF can be seen when reading from a non-blocking I/O source.

?S:.

?C:VAL\_O\_NONBLOCK:

?C: This symbol is to be used during open() or fcntl(F\_SETFL) to turn on non-blocking I/O for the file descriptor. Note that there is no way back, i.e. you cannot turn it blocking again this way. If you wish to alternatively switch between blocking and non-blocking, use the ioctl(FIOCNBIO) call instead, but that is not supported by all devices.

?C:.

?C:VAL\_EAGAIN:

?C: This symbol holds the errno error code set by read() when no data was present on the non-blocking file descriptor.

?C:.

?C:RD\_NODATA:

?C: This symbol holds the return code from read() when no data is present on the non-blocking file descriptor. Be careful! If EOF\_NONBLOCK is not defined, then you can't distinguish between no data and EOF by issuing a read(). You'll have to find another way to tell for sure!

?C:.

?C:EOF\_NONBLOCK:

?C: This symbol, if defined, indicates to the C program that a read() on a non-blocking file descriptor will return 0 on EOF, and not the value held in RD\_NODATA (-1 usually, in that case!).

?C:.

```
?H:#define VAL_O_NONBLOCK $o_nonblock
?H:#define VAL_EAGAIN $eagain
?H:#define RD_NODATA $rd_nodata
?H:#$d_eofnblk EOF_NONBLOCK
?H:.
```

?T:status

?F:!try.out !try.ret !try.err !try !mtry

?LINT:use d\_open3

: check for non-blocking I/O stuff

```
case "$h_sysfile" in
true) echo "#include <sys/file.h>" > head.c;;
*)
    case "$h_fcntl" in
true) echo "#include <fcntl.h>" > head.c;;
*) echo "#include <sys/fcntl.h>" > head.c;;
    esac
    ;;
esac
echo " "
echo "Figuring out the flag used by open() for non-blocking I/O..." >&4
case "$o_nonblock" in
```

```

")
$cat head.c > try.c
$cat >>try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#$i_fcntl I_FCNTL
#ifdef I_FCNTL
#include <fcntl.h>
#endif
int main() {
#ifdef O_NONBLOCK
printf("O_NONBLOCK\n");
exit(0);
#endif
#ifdef
O_NDELAY
printf("O_NDELAY\n");
exit(0);
#endif
?X: Stevens "Advanced Programming in the UNIX Environment" page 364 mentions
?X: the FNDELAY symbol, used in 4.3BSD (source: Paul Marquess).
#ifdef FNDELAY
printf("FNDELAY\n");
exit(0);
#endif
exit(0);
}
EOCP
set try
if eval $compile_ok; then
o_nonblock=`$run ./try`
case "$o_nonblock" in
") echo "I can't figure it out, assuming O_NONBLOCK will do.";;
*) echo "Seems like we can use $o_nonblock.";;
esac
else
echo "(I can't compile the test program; pray O_NONBLOCK is right!)"
fi
;;
*) echo "Using $hint value $o_nonblock.";;
esac
$rm_try

echo " "
echo "Let's see what value errno gets from read() on a $o_nonblock file..." >&4

```

```

case "$eagain" in
")
case "$d_fork:$d_pipe:$d_alarm" in
define:define:define)
$cat head.c > try.c
$cat >>try.c <<EOCP
#include <errno.h>
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#$i_fcntl
I_FCNTL
#ifdef I_FCNTL
#include <fcntl.h>
#endif
#define MY_O_NONBLOCK $o_nonblock
#ifdef errno /* XXX need better Configure test */
extern int errno;
#endif
#$i_unistd I_UNISTD
#ifdef I_UNISTD
#include <unistd.h>
#endif
#include <string.h>
$signal_t blech(int x) { exit(3); }
EOCP
$cat >> try.c <<'EOCP'
int main()
{
int pd[2];
int pu[2];
char buf[1];
char string[100];
int ret;

ret = pipe(pd); /* Down: child -> parent */
if (ret != 0)
exit(3);
ret = pipe(pu); /* Up: parent -> child */
if (ret != 0)
exit(3);
if (0 != fork()) {
close(pd[1]); /* Parent reads from pd[0] */
close(pu[0]); /* Parent writes (blocking) to pu[1] */

```

```

#ifdef F_SETFL
    if (-1 == fcntl(pd[0], F_SETFL, MY_O_NONBLOCK))
        exit(1);
#else
    exit(4);
#endif
    signal(SIGALRM, blech);
    alarm(5);
    if ((ret = read(pd[0], buf, 1)) > 0) /* Nothing to read! */
        exit(2);
    sprintf(string, "%d\n", ret);
    ret = write(2, string, strlen(string));
    if (ret != strlen(string))
        exit(3);
    alarm(0);
#ifdef
EAGAIN
    if (errno == EAGAIN) {
        printf("EAGAIN\n");
        goto ok;
    }
#endif
#ifdef EWOULDBLOCK
    if (errno == EWOULDBLOCK)
        printf("EWOULDBLOCK\n");
#endif
ok:
    ret = write(pu[1], buf, 1); /* Unblocks child, tell it to close our pipe */
    if (ret != 1)
        exit(3);
    sleep(2); /* Give it time to close our pipe */
    alarm(5);
    ret = read(pd[0], buf, 1); /* Should read EOF */
    alarm(0);
    sprintf(string, "%d\n", ret);
    ret = write(4, string, strlen(string));
    if (ret != strlen(string))
        exit(3);
    exit(0);
}

close(pd[0]); /* We write to pd[1] */
close(pu[1]); /* We read from pu[0] */
ret = read(pu[0], buf, 1); /* Wait for parent to signal us we may continue */
if (ret != 1)
    exit(3);
close(pd[1]); /* Pipe pd is now fully closed! */
exit(0); /* Bye bye, thank you for playing! */

```

```

}
EOCP
set try
if eval $compile_ok; then
?X: Use script to avoid the possible 'alarm call' message
echo "$startsh" >mtry
echo "$run ./try >try.out 2>try.ret 4>try.err
|| exit 4" >>mtry
chmod +x mtry
$run ./mtry >/dev/null 2>&1
case $? in
0) eagain=`$cat try.out`;
1) echo "Could not perform non-blocking setting!";;
2) echo "I did a successful read() for something that was not there!";;
3) echo "Hmm... non-blocking I/O does not seem to be working!";;
4) echo "Could not find F_SETFL!";;
*) echo "Something terribly wrong happened during testing.";;
esac
rd_nodata=`$cat try.ret`
echo "A read() system call with no data present returns $rd_nodata."
case "$rd_nodata" in
0|-1) ;;
*)
echo "(That's peculiar, fixing that to be -1.)"
rd_nodata=-1
;;
esac
case "$eagain" in
")
echo "Forcing errno EAGAIN on read() with no data available."
eagain=EAGAIN
;;
*)
echo "Your read() sets errno to $eagain when no data is available."
;;
esac
status=`$cat try.err`
case "$status" in
0) echo "And it correctly returns 0 to signal EOF.";;
-1) echo "But it also returns -1 to signal EOF, so be careful!";;
*)
echo "However, your read() returns '$status' on EOF??";;
esac
val="$define"
if test "$status" = "$rd_nodata"; then
echo "WARNING: you can't distinguish between EOF and no data!"
val="$undef"
fi

```

```

else
  echo "I can't compile the test program--assuming errno EAGAIN will do."
  eagain=EAGAIN
fi
;;
*) echo "Can't figure out how to test this--assuming errno EAGAIN will do."
  eagain=EAGAIN
  val="$define"
  ;;
esac
set d_eofnblk
eval $setvar
;;
*)
echo "Using $hint value $eagain."
echo "Your read() returns $rd_nodata when no data is present."
case "$d_eofnblk" in
"$define") echo "And you can see EOF because read() returns 0.";;
"$undef") echo "But you can't see EOF status from read() returned value.";;
*)
?X: Should not happen, but if it does, assume the worst!
  echo "(Assuming you can't see EOF status from read anyway.)"
  d_eofnblk=$undef
  ;;
esac
;;
esac
$rm_try head.c mtry

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/nblock_io.U

```

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?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_wifstat.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:47:43 ram

?RCS: patch61: added a ?F: metalint hint

?RCS:

```

?RCS: Revision 3.0.1.2 1995/07/25 14:09:10 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.1 1995/03/21 08:47:46 ram
?RCS: patch52: created
?RCS:
?MAKE:d_wifstat: d_uwait +cc +ccflags +ldflags +libs Oldconfig cat rm
?MAKE: -pick add $@ %<
?S:d_wifstat:
?S: This symbol conditionally defines USE_WIFSTAT if the C program can
?S: safely
    use the WIFxxx macros with the kind of wait() parameter
?S: declared in the program (see UNION_WAIT), or if it can't. Should
?S: only matter on HP-UX, where the macros are incorrectly written and
?S: therefore cause programs using them with an 'union wait' variable
?S: to not compile properly.
?S:.
?C:USE_WIFSTAT:
?C: This symbol, if defined, indicates to the C program that the argument
?C: for the WIFxxx set of macros such as WIFSIGNALED or WIFEXITED can
?C: be of the same kind as the one used to hold the wait() status. Should
?C: only matter on HP-UX, where the macros are incorrectly written and
?C: therefore cause programs using them with an 'union wait' variable
?C: to not compile properly. See also UNION_WAIT.
?C:.
?H:#$d_wifstat USE_WIFSTAT /**/
?H:.
?T:type
?F:!foo
: see if we can use WIFxxx macros
echo " "
case "$d_wifstat" in
"$define") echo "As before, you can safely use WIFEXITED and friends!" >&4;;
"$undef") echo "You still can't use WIFEXITED and friends!" >&4;;
*)
echo
"Let's see whether you can use the WIFEXITED(status) macro and its"
case "$d_uwait" in
"$define") type='union wait';;
*) type='int';;
esac
echo "friends with status declared as '$type status'..."
$cat >foo.c <<EOCP
#include <sys/types.h>
#include <sys/wait.h>

int main()
{

```



```

$type status;
int e = 0;

#ifdef WIFEXITED
if (WIFEXITED(status))
    printf("\n");
    exit(0);
#else
    exit(2);
#endif
}
EOCP
d_wifstat="$undef"
if $cc $ccflags $ldflags -o foo foo.c $libs >/dev/null 2>&1; then
if ./foo >/dev/null; then
    echo "Great! Looks like we can use the WIFxxx macros." >&4
    d_wifstat="$define"
else
    echo "You don't seem to have WIFxxx macros, but that's ok." >&4
fi
else
    echo "Apparently you can't use WIFxxx macros properly." >&4
fi
$rm -f foo.* foo core
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_wifstat.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_systimeb.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_systimeb.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit looks wether <sys/timeb.h> should be included

```

?X: or not when using ftime() (for struct timeb definition).
?X:
?X: Force looking for <sys/time.h> for struct timeb.
?X:INC: i_systimeb
?MAKE:i_systimeb: test contains Loc Setvar Findhdr
?MAKE: -pick add $@ %<
?S:i_systimeb:
?S: This variable conditionally defines I_SYS_TIMEB,
    which indicates
?S: to the C program that it should include <sys/timeb.h>.
?S:.
?C:I_SYS_TIMEB (I_SYSTIMEB):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/timeb.h>, in order to define struct timeb (some systems
?C: define this in <sys/time.h>). This is useful when using ftime().
?C: You should include <sys/time.h> if I_SYS_TIMEB is not defined,
?C: nor is I_SYS_TIME.
?C:.
?H:#$i_systimeb I_SYS_TIMEB /**/
?H:.
?T:xxx
?LINT:set i_systimeb
: see where struct timeb is defined
echo " "
xxx=`./findhdr sys/timeb.h`
if $test "$xxx"; then
if $contains 'struct timeb' $xxx >/dev/null 2>&1; then
    val="$define"
    echo "You have struct timeb defined in <sys/timeb.h>." >&4
else
    val="$undef"
    echo "Assuming struct timeb is defined in <sys/time.h>." >&4
fi
else
    val="$undef"
echo "No <sys/timeb.h> -- Assuming struct timeb is defined in <sys/time.h>." >&4
fi
set i_systimeb
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/i_systimeb.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_getcwd: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getcwd:  
?S: This variable conditionally defines the HAS\_GETCWD symbol, which  
?S: indicates to the C program that the getcwd() routine is available  
?S: to get the current working directory.  
?S:.  
?C:HAS\_GETCWD :  
?C: This symbol, if defined, indicates that the getcwd routine is  
?C: available to get the current working directory.  
?C:.  
?H:#\$d\_getcwd HAS\_GETCWD /\*\*/  
?H:.  
?LINT:set d\_getcwd  
: see if getcwd exists  
set getcwd d\_getcwd  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_getcwd.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_trunc: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_trunc:  
?S: This variable conditionally defines the HAS\_TRUNC symbol, which  
?S: indicates to the C program that the trunc() routine is available  
?S: to round doubles towards zero.  
?S:.  
?C:HAS\_TRUNC:  
?C: This symbol, if defined, indicates that the trunc routine is  
?C: available to round doubles towards zero.  
?C:.  
?H:#\$d\_trunc HAS\_TRUNC /\*\*/  
?H:.  
?LINT:set d\_trunc  
: see if trunc exists  
set trunc d\_trunc  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_trunc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getprotby.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getpbyname d\_getpbynumber: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getpbyname:

?S: This variable conditionally defines the HAS\_GETPROTOBYNAME

?S: symbol, which indicates to the C program that the

?S: getprotobyname() routine is available to look up protocols

?S: by their name.

?S:.

?S:d\_getpbynumber:

?S: This variable conditionally defines the HAS\_GETPROTOBYNUMBER

?S: symbol, which indicates to the C program that the

?S: getprotobynumber() routine is available to look up protocols

?S: by their number.

?S:.

?C:HAS\_GETPROTOBYNAME:

?C: This symbol, if defined, indicates that the getprotobyname()

?C: routine is available to look up protocols by their name.

?C:.

?C:HAS\_GETPROTOBYNUMBER:

?C: This

symbol, if defined, indicates that the getprotobynumber()

?C: routine is available to look up protocols by their number.

?C:.

?H:#\$d\_getpbyname HAS\_GETPROTOBYNAME /\*\*/

?H:#\$d\_getpbynumber HAS\_GETPROTOBYNUMBER /\*\*/

?H:.

?LINT:set d\_getpbyname d\_getpbynumber

: Optional checks for getprotobyname and getprotobynumber

@if d\_getpbyname || HAS\_GETPROTOBYNAME

: see if getprotobyname exists

set getprotobyname d\_getpbyname

eval \$inlibc

@end

@if d\_getpbynumber || HAS\_GETPROTOBYNUMBER

```
: see if getprotobynumber exists
set getprotobynumber d_getpbynumber
eval $inlibc
@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_getprotby.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_readdir.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_readdir.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/05/06 14:46:37 ram
```

```
?RCS: patch23: added support for seekdir, telldir and rewinddir (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:06:52 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X: Force checking for <dirent.h> inclusion
```

```
?X:INC: i_dirent
```

```
?MAKE:d_readdir d_seekdir d_telldir d_rewinddir: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_readdir:
```

```
?S: This variable conditionally defines HAS_READDIR if readdir()
```

```
is
```

```
?S: available to read directory entries.
```

```
?S:.
```

```
?C:HAS_READDIR (READDIR):
```

```
?C: This symbol, if defined, indicates that the readdir routine is
```

```
?C: available to read directory entries. You may have to include
```

```
?C: <dirent.h>. See I_DIRENT.
```

```
?C:.
```

```
?H:#$d_readdir HAS_READDIR /**/
```

```
?H:.
```

```
?S:d_seekdir:
```

```
?S: This variable conditionally defines HAS_SEEKDIR if seekdir() is
```

```
?S: available.
```

```
?S:.
```

```
?C:HAS_SEEKDIR:
```

?C: This symbol, if defined, indicates that the seekdir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_seekdir HAS\_SEEKDIR /\*\*/  
?H:.  
?S:d\_telldir:  
?S: This variable conditionally defines HAS\_TELLDIR if telldir() is  
?S: available.  
?S:.  
?C:HAS\_TELLDIR:  
?C: This symbol, if defined, indicates that the telldir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_telldir HAS\_TELLDIR /\*\*/  
?H:.  
?S:d\_rewinddir:  
?S: This variable conditionally defines HAS\_REWINDDIR if rewinddir() is  
?S: available.  
?S:.  
?C:HAS\_REWINDDIR:  
?C: This  
symbol, if defined, indicates that the rewinddir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_rewinddir HAS\_REWINDDIR /\*\*/  
?H:.  
?LINT:set d\_readdir d\_seekdir d\_telldir d\_rewinddir  
: see if readdir and friends exist  
set readdir d\_readdir  
eval \$inlibc  
@if d\_seekdir || HAS\_SEEKDIR  
set seekdir d\_seekdir  
eval \$inlibc  
@end  
@if d\_telldir || HAS\_TELLDIR  
set telldir d\_telldir  
eval \$inlibc  
@end  
@if d\_rewinddir || HAS\_REWINDDIR  
set rewinddir d\_rewinddir  
eval \$inlibc  
@end

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_readdir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: AAAAA.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: AAAAA.U,v \$  
?RCS: Revision 3.0.1.4 1994/06/20 06:50:26 ram  
?RCS: patch30: changes from Jarkko Hietaniemi are tagged with JHI  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:01:39 ram  
?RCS: patch23: initials for Wayne Davison are now WED  
?RCS: patch23: added initials for new unit contributor Andy Dougherty  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:01:09 ram  
?RCS: patch16: make metalint shut up on special unit definition for All target  
?RCS:  
?RCS: Revision  
3.0.1.1 1993/09/13 15:43:57 ram  
?RCS: patch10: documents initials used for Wayne Davison's contributions  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:44 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: The purpose of this file is to supply the head of the Makefile created  
?X: by metaconfig. For this reason it must be first in alphabetical order.  
?X: The leading '+' in front of the unit name is a hint for metalint, since  
?X: the use of that special unit name as a "made" unit is legitimate here.  
?X:  
?MAKE:+All: Finish  
?X:  
?X: Throughout the units, the following initials are used to identify comments:  
?X:  
?X: HMS: Harlan Stenn  
?X: RAM: Raphael Manfredi  
?X: WED: Wayne Davison (was WAD by mistake--RAM)  
?X: ADO: Andy Dougherty  
?X: JHI: Jarkko Hietaniemi  
?X:  
?X: Agreed, this is a weird place to document it, but I couldn't find a better  
?X: place to do so. I've bet on the curiosity of users, who would probably  
?X: want to know what's in this strangely-named file--RAM.

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/AAAAA.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getespwnam: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getespwnam:

?S: This variable conditionally defines HAS\_GETESPWNAM if getespwnam() is

?S: available to retrieve enhanced (shadow) password entries by name.

?S:.

?C:HAS\_GETESPWNAM:

?C: This symbol, if defined, indicates that the getespwnam system call is

?C: available to retrieve enhanced (shadow) password entries by name.

?C:.

?H:#\$d\_getespwnam HAS\_GETESPWNAM /\*\*/

?H:.

?LINT:set d\_getespwnam

: see if getespwnam exists

set getespwnam d\_getespwnam

eval \$inlibc

Found in

path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getespwnam.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_stdlib.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.



?RCS:  
?RCS: \$Log: i\_stdlib.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:27 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_stdlib: Nothing  
?MAKE: -pick add \$@ %<  
?S:i\_stdlib:  
?S: This variable unconditionally defines the I\_STDLIB symbol.  
?S:.  
?C:I\_STDLIB:  
?C: This symbol is always defined, indicating that <stdlib.h> exists  
?C: and should be included.  
?C:.  
?H:#define I\_STDLIB /\*\*/  
?H:.  
: stub, used only to satisfy other units  
i\_stdlib='define'

Found in

path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/i\_stdlib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Instruct.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:02:55 ram  
?RCS: patch61: logname / whoami sequence rewritten to use case  
?RCS:  
?RCS: Revision 3.0.1.2 1995/02/15 14:11:34 ram  
?RCS: patch51: author name now appears at the end of the paragraph (WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1995/01/11 15:12:05 ram  
?RCS: patch45: now documents the & escape to turn -d on at the read prompt  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:04 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:

?X:

?X:

This unit spew out the directions that we want everyone to read. I try to

?X: keep the first "pagefull" much less than a page since they don't know it

?X: isn't going to go shooting off the top of the screen, and we don't want

?X: to panic them yet.

?X:

?MAKE:Instruct: Begin Myread Configdir contains

?MAKE: -pick wipe \$@ %<

?T:user needman firsttime

: general instructions

needman=true

firsttime=true

user=`(logname) 2>/dev/null`

case "\$user" in

) user=`whoami 2>&1`;;

esac

if \$contains "^\$user\$" ../.config/instruct >/dev/null 2>&1; then

firsttime=false

echo " "

rp='Would you like to see the instructions?'

dflt=n

. ./myread

case "\$ans" in

[yY]\*) ;;

\*) needman=false;;

esac

fi

if \$needman; then

cat <<EOH

This installation shell script will examine your system and ask you questions to determine how the <PACKAGENAME> package should be installed. If you get stuck on a question, you may use a ! shell escape to start a subshell or execute a command. Many of the questions will have default answers in square brackets; typing carriage return will give you the default.

On some of the questions which ask for file or directory names you are allowed to use the ~name construct to specify the login directory belonging to "name", even if you don't have a shell which knows about that. Questions where this is allowed will be marked "(~name ok)".

EOH

rp="

dflt='Type carriage return to continue'

. ./myread

cat <<'EOH'

The prompter used in this script allows you to use shell variables and backticks in your answers. You may use \$1, \$2, etc... to refer to the words in the default answer, as if the default line was a set of arguments given to a script shell. This means you may also use \$\* to repeat the whole default line, so you do not have to re-type everything to add something to the default.

Everytime there is a substitution, you will have to confirm. If there is an error (e.g. an unmatched backtick), the default answer will remain unchanged and you will be prompted again.

If you are in a hurry, you may run 'Configure -d'. This will bypass nearly all the questions and use the computed defaults (or the previous answers if there was already a config.sh file). Type 'Configure -h' for a list of options. You may also start interactively and then answer '& -d' at any prompt to turn on the non-interactive behaviour for the remainder of the execution.

EOH

```
. ./myread
cat <<EOH
```

Much effort has been expended to ensure that this shell script will run on any Unix system. If despite that it blows up on yours, your best bet is to edit Configure and run it again. If you can't run Configure for some reason, you'll have to generate a config.sh file by hand. Whatever problems you have, let me (<MAINTLOC>) know how I blew it.

This installation script affects things in two ways:

- 1) it may do direct variable substitutions on some of the files included in this kit.
- 2) it builds a config.h file for inclusion in C programs. You may edit any of these files as the need arises after running this script.

If you make a mistake on a question, there is no easy way to back up to it currently. The easiest thing to do is to edit config.sh and rerun all the SH files. Configure will offer to let you do this before it runs the SH files.

EOH

```
?X: In case they played with the prompter...
dflt="Type carriage return to continue"
. ./myread
case "$firsttime" in
true) echo $user >>../.config/instruct;;
esac
fi
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Instruct.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: selecttype.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:20:09 ram

?RCS: patch61: always include <sys/select.h> when available for test

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 14:14:06 ram

?RCS: patch56: removed harmful spaces in assignment

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:06:31 ram

?RCS: patch30: created by ADO

?RCS:

?MAKE:selecttype: cat +cc +ccflags rm Oldconfig Myread \

d\_fd\_set d\_select d\_socket i\_systeme

i\_sysselect

?MAKE: -pick add \$@ %<

?S:selecttype:

?S: This variable holds the type used for the 2nd, 3rd, and 4th

?S: arguments to select. Usually, this is 'fd\_set \*', if HAS\_FD\_SET

?S: is defined, and 'int \*' otherwise. This is only useful if you

?S: have select(), naturally.

?S:.

?C:Select\_fd\_set\_t:

?C: This symbol holds the type used for the 2nd, 3rd, and 4th

?C: arguments to select. Usually, this is 'fd\_set \*', if HAS\_FD\_SET

?C: is defined, and 'int \*' otherwise. This is only useful if you

?C: have select(), of course.

?C:.

?H:#define Select\_fd\_set\_t \$selecttype /\*\*/

?H:.

?T:xxx yyy

: check for type of arguments to select. This will only really

```

: work if the system supports prototypes and provides one for
: select.
case "$d_select" in
$define)
: Make initial guess
case "$selecttype" in
'| ')
case "$d_fd_set" in
$define) xxx='fd_set *' ;;
*) xxx='int *' ;;
esac
;;
*) xxx="$selecttype"
;;
esac
: backup guess
case "$xxx" in
'fd_set *') yyy='int *'
;;
'int *') yyy='fd_set *' ;;
esac

$cat <<EOM

```

Checking to see what type of arguments are expected by select().

EOM

```

$cat >try.c <<EOCP
#$i_systime I_SYS_TIME
#$i_sysselect I_SYS_SELECT
#$d_socket HAS_SOCKET
#include <sys/types.h>
#ifdef HAS_SOCKET
#include <sys/socket.h> /* Might include <sys/bsdtypes.h> */
#endif
#ifdef I_SYS_TIME
#include <sys/time.h>
#endif
#ifdef I_SYS_SELECT
#include <sys/select.h>
#endif
int main()
{
int width;
Select_fd_set_t readfds;
Select_fd_set_t writefds;
Select_fd_set_t exceptfds;
struct timeval timeout;
select(width, readfds, writefds, exceptfds, &timeout);

```

```

exit(0);
}
EOCP
if $cc $ccflags -c -DSelect_fd_set_t="$xxx" try.c >/dev/null 2>&1 ; then
selecttype="$xxx"
echo "Your system uses $xxx for the arguments to select." >&4
elif $cc $ccflags -c -DSelect_fd_set_t="$yyy" try.c >/dev/null 2>&1 ; then
selecttype="$yyy"
echo "Your system uses $yyy for the arguments to select." >&4
else
rp='What is the type for the 2nd, 3rd, and 4th arguments
to select?'
dflt="$xxx"
. ./myread
selecttype="$ans"
fi
$rm -f try.[co]
;;
*) selecttype='int *'
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/selecttype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_sresuproto: Hasproto i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_sresuproto:

?S: This variable conditionally defines the HAS\_SETRESUID\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the setresuid() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SETRESUID\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the setresuid() function. Otherwise, it is up

```
?C: to the program to supply one. Good guesses are
?C: extern
int setresuid(uid_t ruid, uid_t euid, uid_t suid);
?C:.
?H:#$d_sresuproto HAS_SETRESUID_PROTO /**/
?H:.
?LINT:set d_sresuproto
: see if prototype for setresuid is available
echo " "
set d_sresuproto setresuid $i_unistd unistd.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_sresuproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_gethostbyname_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_gethostbyname_r gethostbyname_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_gethostbyname_r:
?S: This variable conditionally defines the HAS_GETHOSTBYNAME_R symbol,
?S: which indicates to the C program that the gethostbyname_r()
?S: routine is available.
?S:.
?S:gethostbyname_r_proto:
?S: This variable encodes the prototype of gethostbyname_r.
?S: It is zero if d_gethostbyname_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyname_r
?S: is defined.
?S:.
?C:HAS_GETHOSTBYNAME_R:
?C: This symbol, if defined, indicates
that the gethostbyname_r routine
?C: is available to gethostbyname re-entrantly.
?C:.
?C:GETHOSTBYNAME_R_PROTO:
?C: This symbol encodes the prototype of gethostbyname_r.
?C: It is zero if d_gethostbyname_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyname_r
```

```

?C: is defined.
?C:.
?H:#$d_gethostbyname_r HAS_GETHOSTBYNAME_R /**/
?H:#define GETHOSTBYNAME_R_PROTO $gethostbyname_r_proto /**/
?H:.
?T:try hdrs d_gethostbyname_r_proto
: see if gethostbyname_r exists
set gethostbyname_r d_gethostbyname_r
eval $inlibc
case "$d_gethostbyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_gethostbyname_r_proto:$susethreads" in
":define") d_gethostbyname_r_proto=define
set d_gethostbyname_r_proto gethostbyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_gethostbyname_r_proto" in
define)
case "$gethostbyname_r_proto" in
"|0) try='int gethostbyname_r(const char*, struct hostent*, char*, size_t, struct
hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=I_CSBWRE ;;
esac
case "$gethostbyname_r_proto" in
"|0) try='struct hostent* gethostbyname_r(const char*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=S_CSBIE ;;
esac
case "$gethostbyname_r_proto" in
"|0) try='int gethostbyname_r(const char*, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=I_CSD ;;
esac
case "$gethostbyname_r_proto" in
"|0) d_gethostbyname_r=undef
gethostbyname_r_proto=0
echo "Disabling gethostbyname_r, cannot determine prototype." >&4 ;;
*) case "$gethostbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostbyname_r_proto="REENTRANT_PROTO_$gethostbyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "gethostbyname_r has no prototype, not using it." >&4 ;;
esac
d_gethostbyname_r=undef

```



```
gethostbyname_r_proto=0
;;
esac
;;
*) gethostbyname_r_proto=0
;;
esac
```

#### Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_gethostbyname_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: lex.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>

?RCS:

?RCS: \$Log: lex.U,v \$

?RCS: Revision 3.0.1.3 1994/10/29 16:22:50 ram

?RCS: patch36: spurious single quote could cause Configure to crash

?RCS: patch36: (reported by Xavier Le Vourch <xavierl@eiffel.com>.)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:27:09 ram

?RCS: patch32: added lexflags variable for lex flags setting

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:06:01 ram

?RCS: patch23: added

trailing blank line for metalint

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:55 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:lex lexflags: Guess Myread Oldconfig flex test

?MAKE: -pick add \$@ %<

?S:lex:

?S: This variable holds the name of the lexical analyser generator we

?S: want to use in the Makefile. It can be lex or flex.

?S:.

?S:lexflags:

?S: This variable holds any flags that should be passed to the lexical

?S: analyzer. It is up to the Makefile to use it.

?S:.

: determine lexical analyser generator

case "\$lex" in

")

dflt=lex;;

\*)

dflt="\$lex";;

esac

echo " "

if \$test -f "\$flex"; then

rp='Which lexical analyser generator (lex or flex) shall I use?'

else

rp='Which lexical analyser generator shall I use?'

fi

./myread

lex="\$ans"

@if lexflags

: if using lex this will normally be useless, but flex frequently takes args

echo " "

case "\$lexflags" in

") dflt='none';;

\*) dflt="\$lexflags";;

esac

rp="What flags should be given to \$lex?"

./myread

case "\$ans"

in

none) lexflags="";;

\*) lexflags="\$ans";;

esac

@end

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/lex.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2019 Karl Williamson

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_towupper: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_towupper:  
?S: This variable conditionally defines the HAS\_TOWUPPER symbol, which  
?S: indicates to the C program that the towupper() routine is available.  
?S:.  
?C:HAS\_TOWUPPER:  
?C: This symbol, if defined, indicates that the towupper () routine is  
?C: available to do case conversion.  
?C:.  
?H:#\$d\_towupper HAS\_TOWUPPER /\*\*/  
?H:.  
?LINT:set d\_towupper  
: see if towupper exists  
set towupper d\_towupper  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_towupper.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sunmath.U,v \$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_sunmath: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_sunmath:  
?S: This variable conditionally defines the I\_SUNMATH symbol, and indicates  
?S: whether a C program should include <sunmath.h>.  
?S:.  
?C:I\_SUNMATH:  
?C: This symbol, if defined, indicates that <sunmath.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_sunmath I\_SUNMATH /\*\*/  
?H:.  
?LINT:set i\_sunmath  
: see if this is a sunmath.h system  
set sunmath.h i\_sunmath  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/i\_sunmath.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_regex.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Sidney C. Smith <scsmith@cbda9.apgea.army.mil>
?RCS:
?RCS: $Log: i_regex.U,v $
?RCS: Revision 3.0.1.1 1995/01/30 14:35:45 ram
?RCS: patch49: created
?RCS:
?RCS:
?MAKE:i_regex: Inhdr
?MAKE: -pick add $@ %<
?S:i_regex:
?S: This variable conditionally defines the I_REGEX symbol, which
?S: indicates to the C program that <regex.h> exists and should
?S: be included.
?S:.
?C:I_REGEX:
?C: This symbol, if defined, indicates that <regex.h> exists
and should
?C: be included.
?C:.
?H:#$i_regex I_REGEX /**/
?H:.
?LINT:set i_regex
: see if regex is available
set regex.h i_regex
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_regex.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
```

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: errnolist.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:48:01 ram  
?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS: patch61: likewise for .o replaced by \$\_o  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24 14:10:54 ram  
?RCS: patch16: created  
?RCS:  
?MAKE:errnolist errnolist\_SH errnolist\_a errnolist\_c errnolist\_o: cat +cc \  
+ccflags +libs +d\_sysernlst \_a \_o  
?MAKE: -pick add \$@ %<  
?S:errnolist:  
?S: This variable holds the base name of a file containing the  
?S: definition of the sys\_errnolist  
array, if the C library  
?S: doesn't provide it already. Otherwise, its value is empty.  
?S: The following lines should be included in your Makefile.SH:  
?S:  
?S: case "\$errnolist" in  
?S: ") ;;  
?S: \*)  
?S: \$spitshell >>Makefile <<!GROK!THIS!  
?S: \$errnolist\_c: \$errnolist\_SH \$errnolist\_a  
?S: sh ./\$errnolist\_SH  
?S:  
?S: !GROK!THIS!  
?S: ;;  
?S: esac  
?S:  
?S: You may define the 'errnolist' variable in your Myinit.U if you  
?S: wish to override its default value "errnolist".  
?S:.  
?S:errnolist\_SH:  
?S: This is the name of a file which will generate errnolistc.  
?S:.  
?S:errnolist\_a:  
?S: This is the name of the awk script called by errnolist\_SH.  
?S:.  
?S:errnolist\_c:  
?S: This is the name of a generated C file which provides the  
?S: definition of the sys\_errnolist array.  
?S:.

```

?S:errnolist_o:
?S: This is the name of the object file which provides the
?S: definition of the sys_errnolist array, if the C library
?S: doesn't provide it already. Otherwise, its value is empty.
?S:.
?INIT:errnolist=errnolist
:
  check for sys_errnolist
@if d_sysernlst || HAS_SYS_ERRNOLIST
case "$d_sysernlst" in
"$define")
  errnolist="
  errnolist_SH="
  errnolist_a="
  errnolist_c="
  errnolist_o="
;;
*)
echo " "
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
  errnolist_SH=$errnolist.SH
  errnolist_a=$errnolist$_a
  errnolist_c=$errnolist.c
  errnolist_o=$errnolist$_o
;;
esac
@else
echo " "
$cat <<EOM
Checking to see if your C library provides us with sys_errnolist[...]
EOM
$cat >errnolist.c <<'EOCP'
extern char *sys_errnolist[];
int main() {
  char *p0 = sys_errnolist[0];
  char *p1 = sys_errnolist[1];

  return (p0 == p1); /* Make sure they're not optimized away */
}
EOCP
if $cc $ccflags -o errnolist errnolist.c $libs >/dev/null 2>&1 ; then
  echo "It does."
  errnolist="
  errnolist_SH="
  errnolist_a="
  errnolist_c="
  errnolist_o="
else

```

echo "I'll make sure your Makefile provides sys\_errnolist in \$errnolist.c"

```
errnolist_SH=$errnolist.SH
errnolist_a=$errnolist$_a
errnolist_c=$errnolist.c
errnolist_o=$errnolist$_o
fi
@end
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/errnolist.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Head.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 15:02:09 ram

?RCS: patch61: make sure we unset CDPATH for shells that support this

?RCS: patch61: improved Korn shell detection and handling

?RCS:

?RCS: Revision 3.0.1.8 1995/07/25 13:40:02 ram

?RCS: patch56: added SVR4-ish /opt directories to path list (ADO)

?RCS: patch56: OS/2 platforms are using another path separator

?RCS:

?RCS: Revision 3.0.1.7 1995/03/21 08:46:15 ram

?RCS: patch52: definition of paths wrongly added spurious ':' chars

?RCS:

?RCS:

Revision 3.0.1.6 1994/10/29 15:54:19 ram

?RCS: patch36: make sure ENV is unset before calling /bin/ksh

?RCS:

?RCS: Revision 3.0.1.5 1994/08/29 16:03:44 ram

?RCS: patch32: now sets PATH only using existing directories

?RCS:

?RCS: Revision 3.0.1.4 1994/06/20 06:54:28 ram

?RCS: patch30: now computes its invocation name into 'me'

?RCS: patch30: symbol me is made visible to all units read-only

?RCS:

?RCS: Revision 3.0.1.3 1993/12/15 08:15:07 ram

```

?RCS: patch15: added /sbin:/usr/sbin:/usr/libexec in PATH for BSD/386
?RCS:
?RCS: Revision 3.0.1.2 1993/11/10 17:32:35 ram
?RCS: patch14: ensure PATH is reset to '.' before testing for alias
?RCS:
?RCS: Revision 3.0.1.1 1993/08/27 14:38:07 ram
?RCS: patch7: not all 'test' programs support the -x option
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This is the very first unit in the Configure script. It is mostly just
?X: things to keep people from getting
?X: into a tizzy right off the bat.
?X:
?MAKE:Head:
?MAKE: -pick wipe $@ %<
?V:PATH p__exe me newsh
?T:argv Id p paths OS2_SHELL DJGPP
?T:inksh needksh avoidksh newsh changesh reason
?F:!*
?LINT:extern ENV CDPATH SHELL MACHTYPE
?LINT:change ENV CDPATH
?LINT:nocomment
#!/bin/sh
#
# If these # comments don't work, trim them. Don't worry about any other
# shell scripts, Configure will trim # comments from them for you.
#
# (If you are trying to port this package to a machine without sh,
# I would suggest you have a look at the prototypical config_h.SH file
# and edit it to reflect your system. Some packages may include samples
# of config.h for certain machines, so you might look for one of those.)
#
?X:
?X: NOTE THAT A CONFIGURE SCRIPT IS IN THE PUBLIC DOMAIN (whether or not
?X: the software which uses it is in the public domain).
?X:
# Yes, you may rip this off to use in other distribution packages. This
# script belongs to the public domain and cannot be copyrighted.
#
?X:
?X: WE ASK YOU
NOT TO REMOVE OR ALTER THE FOLLOWING PARAGRAPH, PLEASE:
?X:
# Note: this Configure script was generated automatically. Rather than
# working with this copy of Configure, you may wish to get metaconfig.

```



```
# The dist package (which contains metaconfig) is available via SVN:
#   svn co https://svn.code.sf.net/p/dist/code/trunk/dist
?X:
?X: NOTA BENE:
?X: If you develop you own version of metaconfig based on this work,
?X: you have to add some comments telling that the script was generated
?X: by your version, not mine: It credits your work.
?X:
```

```
# $Id: Head.U 6 2006-08-25 22:21:46Z rmanfredi $
#
# Generated on <DATE> [metaconfig <VERSION> PL<PATCHLEVEL>]
```

```
cat >c1$$ <<EOF
ARGGGHHHH!!!!
```

SCO csh still thinks true is false. Write to SCO today and tell them that next year Configure ought to "rm /bin/csh" unless they fix their blasted shell. :-)

(Actually, Configure ought to just patch csh in place. Hmm. Hmmmmm. All we'd have to do is go in and swap the && and || tokens, wherever they are.)

```
[End
of diatribe. We now return you to your regularly scheduled programming...]
EOF
cat >c2$$ <<EOF
```

```
OOPS! You naughty creature! You didn't run Configure with sh!
I will attempt to remedy the situation by running sh for you...
EOF
```

```
true || cat c1$$ c2$$
true || exec sh $0 $argv:q
```

```
(exit $?0) || cat c2$$
(exit $?0) || exec sh $0 $argv:q
rm -f c1$$ c2$$
```

```
: compute my invocation name
me=$0
case "$0" in
*/*)
me=`echo $0 | sed -e 's!.*\!(.*)!\1!' 2>/dev/null`
test "$me" || me=$0
;;
esac
```

```
?X:
```

?X: To be able to run under OS/2, we must detect that early enough to use

?X: the proper path separator, stored in \$p\_. It is : on UNIX and ; on

?X: DOSish systems such as OS/2.

?X:

: Proper separator for the PATH environment variable

p\_=:

: On OS/2 this directory should exist if this is not floppy only system ":-]"

if test -d c:/ ; then

if test -n "\$OS2\_SHELL"; then

p\_=\;

PATH=`cmd /c "echo %PATH%" | tr "\\\\" /`

?X: That's a bug in ksh5.22

OS2\_SHELL=`cmd /c "echo %OS2\_SHELL%" | tr

"/ | tr '[A-Z]' [a-z]"`

elif test -n "\$DJGPP"; then

case "X\${MACHTYPE:-nonesuchmach}" in

\*cygwin) ;;

\*) p\_=\; ;;

esac

fi

fi

?X:

?X: There are two schools of thoughts here. Some people correctly argue that

?X: the user has a better chance than we do of setting a reasonable PATH and

?X: others argue that Configure is the best place there is to set up a suitable

?X: PATH. Well, here we try to compromise by keeping the user's PATH and

?X: appending some directories which are known to work on some machine or the

?X: other. The rationale behind this being that a novice user might not have a

?X: proper environment variable set, and some directories like /etc (where

?X: chown is located on some BSD systems) may be missing--RAM.

?X:

?X: SVR4 adds an /opt directory for optional packages. Some sites use

?X: various permutations on /opt as opposed to /usr or /usr/local.-- ADO

?X:

?X: We only add directories that are not already in the PATH of the

?X: user and the directories must

exist also.

?X:

: Proper PATH setting

paths=/bin /usr/bin /usr/local/bin /usr/ucb /usr/local /usr/lbin'

paths="\$paths /opt/bin /opt/local/bin /opt/local /opt/lbin"

paths="\$paths /usr/5bin /etc /usr/gnu/bin /usr/new /usr/new/bin /usr/nbin"

paths="\$paths /opt/gnu/bin /opt/new /opt/new/bin /opt/nbin"

paths="\$paths /sys5.3/bin /sys5.3/usr/bin /bsd4.3/bin /bsd4.3/usr/ucb"

paths="\$paths /bsd4.3/usr/bin /usr/bsd /bsd43/bin /usr/ccs/bin"

paths="\$paths /etc /usr/lib /usr/ucb/lib /lib /usr/ccs/lib"

paths="\$paths /sbin /usr/sbin /usr/libexec"

```
paths="$paths /system/gnu_library/bin"
```

```
for p in $paths
do
case "$p_${PATH}$p_" in
*$p_${p}$p_*) ;;
*) test -d $p && PATH=${PATH}$p_${p} ;;
esac
done
```

```
PATH=.$p_${PATH}
export PATH
```

```
: shall we be using ksh?
```

```
inksh=""
```

```
needksh=""
```

```
avoidksh=""
```

```
newsh=/bin/ksh
```

```
changesh=""
```

```
?X: Use (alias -x) and not (alias) since zsh and bash recognize the alias
```

```
?X: builtin but not the -x option which is typically ksh...
```

```
?X: We need to set up PATH before calling the "alias" built-in since
some
```

```
?X: systems like HP-UX have a binary called /bin/alias.
```

```
if (PATH=.; alias -x) >/dev/null 2>&1; then
```

```
inksh=true
```

```
fi
```

```
?X: On HP-UX, large Configure scripts may exercise a bug in /bin/sh, use ksh
```

```
if test -f /hp-ux -a -f /bin/ksh; then
```

```
needksh='to avoid sh bug in "here document" expansion'
```

```
fi
```

```
?X: On AIX4, /bin/sh is really ksh and it causes problems, use sh
```

```
if test -d /usr/lpp -a -f /usr/bin/bsh -a -f /usr/bin/uname; then
```

```
if test X`/usr/bin/uname -v` = X4; then
```

```
avoidksh="to avoid AIX 4's /bin/sh"
```

```
newsh=/usr/bin/bsh
```

```
fi
```

```
fi
```

```
?X: On Digital UNIX, /bin/sh may start up buggy /bin/ksh, use sh
```

```
if test -f /osf_boot -a -f /usr/sbin/setld; then
```

```
if test X`/usr/bin/uname -s` = XOSF1; then
```

```
avoidksh="to avoid Digital UNIX' ksh"
```

```
newsh=/bin/sh
```

```
?X: if BIN_SH is set to 'xpg4', sh will start up ksh
```

```
unset BIN_SH
```

```
fi
```

```
fi
```

```
?X: If we are not in ksh and need it, then feed us back to it
```

```

case "$sinksh/$needksh" in
/[a-z]*)
?X: Clear ENV to avoid any ~/.kshrc that could alias cd or whatever...
?X: Don't
use "unset ENV", that is not portable enough
ENV="
changesh=true
reason="$needksh"
;;
esac
?X: If we are in ksh and must avoid it, then feed us back to a new shell
case "$sinksh/$avoidksh" in
true/[a-z]*)
changesh=true
reason="$avoidksh"
;;
esac
?X: Warn them if they use ksh on other systems, which are those where
?X: we don't need ksh nor want to avoid it explicitly, yet are using it.
case "$sinksh/$needksh-$avoidksh-" in
true/--)
cat <<EOM
(I see you are using the Korn shell. Some ksh's blow up on $me,
mainly on older exotic systems. If yours does, try the Bourne shell instead.)
EOM
;;
esac
case "$changesh" in
true)
export newsh
echo "(Feeding myself to $newsh $reason.)"
?X: Make sure they didn't say sh <Configure by checking whether $0 ends
?X: with Configure or not. If they did say sh <././Configure, then too
?X: bad for them anyway, since we lost that path indication...
?X: Otherwise, execing $0 ensures we keep the full remote source dir
?X: indication for src.U.
case
"$0" in
Configure|*/Configure) exec $newsh $0 "$@";;
*) exec $newsh Configure "$@";;
esac
;;
esac
?X: Unset CDPATH to avoid surprises when using cd under some shells
?X: Can't unset it because that's not portable to very old shells.
?X: Can't set it to " because then bash 2.02 won't do "cd UU" --AD 6/98.
?X: Don't want to set it to '.' because then ksh prints out the

```

```

?X: name of the directory every time you cd to it. --AD 6/98
?X: In order to inflict the least harm, change it only if it's set.
: if needed, set CDPATH to a harmless value that is not chatty
case "$CDPATH" in
") ;;
*) case "$SHELL" in
*bash*) CDPATH='.' ;;
*) CDPATH="" ;;
esac
;;
esac

```

```

: Configure runs within the UU subdirectory
test -d UU || mkdir UU
?X: Use ./* to avoid any confirmation prompts from enhanced shells -- WED
cd UU && rm -f ./*

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Head.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: defeditor.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: defeditor.U,v $
?RCS: Revision 3.0.1.1 1995/01/11 15:30:16 ram
?RCS: patch45: can now use the 'vi' variable since path stripping is deferred
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:05 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE: defeditor: Getfile Oldconfig Loc vi
?MAKE: -pick add $@ %<
?S: defeditor:
?S: This variable contains the eventual value of the DEFEDITOR symbol,
?S: which contains the name of the default editor.
?S:
?C: DEFEDITOR:
?C: This

```

symbol contains the full pathname of the default editor.

```
?C:.  
?H:#define DEFEDITOR "$defeditor" /**/  
?H:.  
: determine default editor  
echo " "  
case "$defeditor" in  
")  
case "$vi" in  
*) dflt="$vi";;  
*) dflt=/usr/ucb/vi;;  
esac  
;;  
*) dflt="$defeditor"  
;;  
esac  
fn=f/  
rp="What is the default editor on your system?"  
./getfile  
defeditor="$ans"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/defeditor.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_rmdir.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: d_rmdir.U,v $  
?RCS: Revision 3.0 1993/08/18 12:06:56 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d_rmdir: Inlibc  
?MAKE: -pick add $@ %<  
?S:d_rmdir:  
?S: This variable conditionally defines HAS_RMDIR if rmdir() is  
?S: available to remove directories.  
?S:.  
?C:HAS_RMDIR (RMDIR):  
?C: This symbol, if defined, indicates that the rmdir routine is
```

```
?C: available to remove directories. Otherwise you should fork off a
?C: new process to exec
/bin/rmdir.
?C:.
?H:#$d_rmdir HAS_RMDIR /**/
?H:.
?LINT:set d_rmdir
: see if rmdir exists
set rmdir d_rmdir
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_rmdir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: cpp_stuff.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cpp_stuff.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:08:24 ram
?RCS: patch36: now uses cppstdin instead of plain cpp for consistency (ADO)
?RCS: patch36: remove temporary files when done
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:36 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:cpp_stuff: cat contains cppstdin cppflags cppminus rm
?MAKE: -pick add $@ %<
?S:cpp_stuff:
?S: This variable contains an identification of the concatenation
mechanism
?S: used by the C preprocessor.
?S:.
?C:CAT2:
?C: This macro concatenates 2 tokens together.
?C:.
?C:CAT3:
?C: This macro concatenates 3 tokens together.
?C:.
?C:CAT4:
```

?C: This macro concatenates 4 tokens together.  
?C:.  
?C:CAT5:  
?C: This macro concatenates 5 tokens together.  
?C:.  
?C:STRINGIFY:  
?C: This macro surrounds its token with double quotes.  
?C:.  
?C:SCAT2:  
?C: This macro concatenates 2 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT3:  
?C: This macro concatenates 3 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT4:  
?C: This macro concatenates 4 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT5:  
?C: This macro concatenates 5 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?X: Dist pl70 included the following, but AIX's xlc compiler  
?X: (which  
is ANSI-ish and has cpp\_stuff == 42)) rejects  
?X: The SQuoTe/EQuoTe stuff because the string literals are on  
?X: separate lines. Sigh.  
?X: Andy Dougherty 24 Feb 1998  
?X: ?H:??<:#if \$cpp\_stuff == 1  
?X: ?H:CAT2:#define CAT2(a,b)a/\*\*/b  
?X: ?H:CAT3:#define CAT3(a,b,c)a/\*\*/b/\*\*/c  
?X: ?H:CAT4:#define CAT4(a,b,c,d)a/\*\*/b/\*\*/c/\*\*/d  
?X: ?H:CAT5:#define CAT5(a,b,c,d,e)a/\*\*/b/\*\*/c/\*\*/d/\*\*/e  
?X: ?H:STRINGIFY:#define STRINGIFY(a)"a"  
?X: ?H:??<:#define SQuoTe(a)"a"  
?X: ?H:??<:#define EQuoTe(a)a"  
?X: ?H:SCAT2:#define SCAT2(a,b)EQuoTe(SQuoTe(a)b)  
?X: ?H:SCAT3:#define SCAT3(a,b,c)EQuoTe(SQuoTe(a)b/\*\*/c)  
?X: ?H:SCAT4:#define SCAT4(a,b,c,d)EQuoTe(SQuoTe(a)b/\*\*/c/\*\*/d)  
?X: ?H:SCAT5:#define SCAT5(a,b,c,d,e)EQuoTe(SQuoTe(a)b/\*\*/c/\*\*/d/\*\*/e)  
?X: ?H:??<:#endif  
?H:??<:#if \$cpp\_stuff == 1  
?H:CAT2:#define CAT2(a,b) a/\*\*/b  
?H:CAT3:#define CAT3(a,b,c) a/\*\*/b/\*\*/c  
?H:CAT4:#define CAT4(a,b,c,d) a/\*\*/b/\*\*/c/\*\*/d  
?H:CAT5:#define CAT5(a,b,c,d,e) a/\*\*/b/\*\*/c/\*\*/d/\*\*/e



```

?H:?STRINGIFY:#define STRINGIFY(a) "a"
?X: If
you can get stringification with catify, tell me how!
?H:?%<:#endif
?H:?%<:#if $cpp_stuff == 42
?H:?%<:#define PeRl_CaTiFy(a, b) a ## b
?H:?%<:#define PeRl_StGiFy(a) #a
?X: The additional level of indirection enables these macros to be
?X: used as arguments to other macros. See K&R 2nd ed., page 231.
?H:?CAT2:#define CAT2(a,b) PeRl_CaTiFy(a,b)
?H:?CAT3:#define CAT3(a,b,c) CAT2(PeRl_CaTiFy(a,b),c)
?H:?CAT4:#define CAT4(a,b,c,d) CAT2(CAT3(a,b,c),d)
?H:?CAT5:#define CAT5(a,b,c,d,e) CAT2(CAT4(a,b,c,d),e)
?H:?%<:#define StGiFy(a) PeRl_StGiFy(a)
?H:?STRINGIFY:#define STRINGIFY(a) PeRl_StGiFy(a)
?H:?SCAT2:#define SCAT2(a,b) PeRl_StGiFy(a) PeRl_StGiFy(b)
?H:?SCAT3:#define SCAT3(a,b,c) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c)
?H:?SCAT4:#define SCAT4(a,b,c,d) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c) PeRl_StGiFy(d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c) PeRl_StGiFy(d)
PeRl_StGiFy(e)
?H:?%<:#endif
?H:?%<:#if $cpp_stuff != 1 && $cpp_stuff
!= 42
?H:?%<:#include "Bleth: How does this C preprocessor concatenate tokens?"
?H:?%<:#endif
?H:.
?W:%<:CAT2 CAT3 CAT4 CAT5 STRINGIFY SCAT2 SCAT3 SCAT4 SCAT5
?F:!cpp_stuff.c
?LINT:known StGiFy
?LINT:known PeRl_CaTiFy
?LINT:known PeRl_StGiFy
: how do we concatenate cpp tokens here?
echo " "
echo "Checking to see how your cpp does stuff like concatenate tokens..." >&4
$cat >cpp_stuff.c <<'EOCP'
#define RCAT(a,b)a/**/b
#define ACAT(a,b)a ## b
RCAT(Rei,ser)
ACAT(Cir,cus)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out 2>&1
if $contains 'Circus' cpp_stuff.out >/dev/null 2>&1; then
echo "Oh! Smells like ANSI's been here." >&4
echo "We can catify or stringify, separately or together!"
cpp_stuff=42
elif $contains 'Reiser' cpp_stuff.out >/dev/null 2>&1; then
echo "Ah, yes! The good old days!" >&4
echo "However, in the good old days we don't know how to stringify and"

```

```

echo "catify at the same time."
cpp_stuff=1
else
$cat >&4 <<EOM
Hmm, I don't seem to be able to concatenate
tokens with your cpp.
You're going to have to edit the values of CAT[2-5] in config.h...
EOM
?X: It would be nice to have configure remind us at the end that some manual
?X: intervention is needed -- FIXME
cpp_stuff="/* Help! How do we handle cpp_stuff? */*/"
fi
$rm -f cpp_stuff.*

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/cpp_stuff.U

```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_isinfl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_isinfl:

?S: This variable conditionally defines the HAS\_ISINFL symbol, which

?S: indicates to the C program that the isinfl() routine is available.

?S:.

?C:HAS\_ISINFL:

?C: This symbol, if defined, indicates that the isinfl routine is

?C: available to check whether a long double is an infinity.

?C:.

?H:#\$d\_isinfl HAS\_ISINFL /\*\*/

?H:.

?LINT:set d\_isinfl

: see if isinfl exists

set isinfl d\_isinfl

eval \$inlibc

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_isinfl.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: myhostname.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:15:55 ram

?RCS: patch61: improved hostname lookup by using ypmatch when NIS is used

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:25:43 ram

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS: patch36: now uses new Tr unit to convert to/from lowercase

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:06:20 ram

?RCS: patch30: now a little more clever for domain name guessing

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:18 ram

?RCS:

Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:myhostname phostname mydomain: contains sed test Myread Oldconfig \  
Guess Loc awk echo sort uniq +usrinc rm hostcat Tr osname

?MAKE: -pick add \$@ %<

?S:myhostname (hostname):

?S: This variable contains the eventual value of the MYHOSTNAME symbol,  
?S: which is the name of the host the program is going to run on.

?S: The domain is not kept with hostname, but must be gotten from mydomain.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:mydomain:

?S: This variable contains the eventual value of the MYDOMAIN symbol,  
?S: which is the domain of the host the program is going to run on.

?S: The domain must be appended to myhostname to form a complete host name.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:phostname:

?S: This variable contains the eventual value of the PHOSTNAME symbol,  
?S: which is a command that can be fed to popen() to get the host name.

?S: The program  
should probably not presume that the domain is or isn't  
?S: there already.

?S:.

?C:MYHOSTNAME (HOSTNAME):

?C: This symbol contains name of the host the program is going to run on.  
 ?C: The domain is not kept with hostname, but must be gotten from MYDOMAIN.  
 ?C: The dot comes with MYDOMAIN, and need not be supplied by the program.  
 ?C: If gethostname() or uname() exist, MYHOSTNAME may be ignored. If MYDOMAIN  
 ?C: is not used, MYHOSTNAME will hold the name derived from PHOSTNAME.

?C:.

?C:MYDOMAIN:

?C: This symbol contains the domain of the host the program is going to  
 ?C: run on. The domain must be appended to HOSTNAME to form a complete  
 ?C: host name. The dot comes with MYDOMAIN, and need not be supplied by  
 ?C: the program. If the host name is derived from PHOSTNAME, the domain  
 ?C: may or may not already be there, and the program should check.

?C:.

?H:#define MYHOSTNAME "\$myhostname" /\*\*/

?H:#define MYDOMAIN "\$mydomain" /\*\*/

?H:.

?T:cont i tans tmp\_re file

: now get the host name

echo

" "

echo "Figuring out host name..." >&4

case "\$myhostname" in

") cont=true

echo 'Maybe "hostname" will work...'

if tans=`sh -c hostname 2>&1` ; then

myhostname=\$tans

phostname=hostname

cont="

fi

::

\*) cont=";;

esac

if \$test "\$cont"; then

if ./xenix; then

echo 'Oh, dear. Maybe "/etc/systemid" is the key...'

if tans=`cat /etc/systemid 2>&1` ; then

myhostname=\$tans

phostname='cat /etc/systemid'

echo "Whadyaknow. Xenix always was a bit strange..."

cont="

fi

elif \$test -r /etc/systemid; then

echo "(What is a non-Xenix system doing with /etc/systemid?)"

fi

fi

if \$test "\$cont"; then

echo 'No, maybe "uname -l" will work...'

if tans=`sh -c 'uname -l' 2>&1` ; then

```

myhostname=$stans
phostname='uname -l'
else
echo 'Strange. Maybe "uname -n" will work...'
if tans=`sh -c 'uname -n' 2>&1` ; then
myhostname=$stans
phostname='uname -n'
else
echo 'Oh well, maybe I can mine it out of whoami.h...'
if tans=`sh -c $contains' sysname $usrinc/whoami.h'
2>&1` ; then
myhostname=`echo "$stans" | $sed 's/^\.*\(\.*\)^1/^
phostname="sed -n -e ""/sysname/s/^\.*\(\.*\)^1/{"" -e p -e q -e '}' <$usrinc/whoami.h"
else
case "$myhostname" in
") echo "Does this machine have an identity crisis or something?"
phostname="";
*)
echo "Well, you said $myhostname before..."
phostname='echo $myhostname';
esac
fi
fi
fi
fi
case "$myhostname" in
") myhostname=noname ;;
esac
: you do not want to know about this
set $myhostname
myhostname=$1

: verify guess
if $test "$myhostname" ; then
dflt=y
rp='Your host name appears to be "$myhostname"." Right?'
./myread
case "$ans" in
y*) ;;
*) myhostname="";
esac
fi

: bad guess or no guess
while $test "X$myhostname" = X ; do
dflt="
rp="Please type the (one word) name of your host:"
./myread

```

```
myhostname="$ans"
```

```
done
```

```
: translate upper to lower if necessary
```

```
case "$myhostname" in
```

```
*[A-Z]*)
```

```
echo "(Normalizing case in your host name)"
```

```
myhostname=`echo
```

```
$myhostname | ./tr '[A-Z]' '[a-z]`
```

```
::
```

```
esac
```

```
?X: Do not ask for domain name if this is not used later on. In that
```

```
?X: case, the hostname may keep its domain name, but it doesn't matter.
```

```
@if MYDOMAIN || mydomain
```

```
case "$myhostname" in
```

```
*.*)
```

```
dflt=`expr "X$myhostname" : "X[^.]*\(\..*\)"`
```

```
myhostname=`expr "X$myhostname" : "X\([^.*]\)\.``
```

```
echo "(Trimming domain name from host name--host name is now $myhostname)"
```

```
::
```

```
*) case "$mydomain" in
```

```
"
```

```
?X:
```

```
?X: There is currently no way to say we do not want hostcat if mydomain is not
```

```
?X: used. One way to achieve that would be to put that code in a mydomain.U
```

```
?X: unit. However, we want to stick the sanity checks right after the domain
```

```
?X: name computation, or if none is done, right after the hostname computation.
```

```
?X:
```

```
{
```

```
?X: If we use NIS, try ypmatch.
```

```
test "X$hostcat" = "Xypcat hosts" &&
```

```
ypmatch "$myhostname" hosts 2>/dev/null \
```

```
$sed -e 's/[ ]*#.*//; s/$/ /' > hosts && \
```

```
$test -s hosts
```

```
} || {
```

```
?X: Extract only
```

```
the relevant hosts, reducing file size,
```

```
?X: remove comments, insert trailing space for later use.
```

```
$hostcat | $sed -n -e "s/[ ]*#.*//; s^$/ /
```

```
/[ ]$myhostname[ . ]/p" > hosts
```

```
}
```

```
tmp_re="[ .]"
```

```
$test x`$awk "/[0-9].*[ ]$myhostname$tmp_re/ { sum++ }
```

```
END { print sum }" hosts` = x1 || tmp_re="[ ]"
```

```
dflt=`$awk \
```

```
"/[0-9].*[ ]$myhostname$tmp_re/ {for(i=2; i<=NF;i++) print \\$i}" \
```

```
hosts | $sort | $uniq | \
```

```

$sed -n -e "s/$myhostname\\.\\([-a-zA-Z0-9_\\.])\\1/p"
case `echo X$dflt` in
X*\\ *) echo "(Several hosts in /etc/hosts matched hostname)"
dflt=.
;;
?X: There is no /etc/hosts on os390
X.)
if $test -f /etc/hosts; then
echo "(You do not have fully-qualified names in /etc/hosts)"
else
echo "(I cannot locate a hosts database anywhere)"
fi
;;
esac
case "$dflt" in
.)
tans=`./loc resolv.conf X /etc /usr/etc`
if $test -f "$tans"; then
echo "(Attempting domain name extraction from $tans)"
?X: Look for either a search
or a domain directive.
dflt=`$sed -n -e 's/ /g' \
-e 's/^search *\\([\\^ ]*)\\.*/\\1/p' $tans \
| ./tr '[A-Z]' '[a-z]' 2>/dev/null`
case "$dflt" in
.) dflt=`$sed -n -e 's/ /g' \
-e 's/^domain *\\([\\^ ]*)\\.*/\\1/p' $tans \
| ./tr '[A-Z]' '[a-z]' 2>/dev/null`
;;
esac
fi
;;
esac
case "$dflt" in
.) echo "(No help from resolv.conf either -- attempting clever guess)"
dflt=`sh -c domainname 2>/dev/null`
case "$dflt" in
") dflt='.';
.nis.*|.yp.*|.main.*) dflt=`echo $dflt | $sed -e 's/^\\.\\[\\^\\.]*/^/';
esac
;;
esac
case "$dflt$osname" in
.os390)
file="//SYS1.TCPPARMS(TCPDATA)"
echo "(Attempting domain name extraction from $file)"
dflt=`awk '/^DOMAINORIGIN/ {print $2}' "$file" 2>/dev/null`
;;

```

```

esac
case "$dflt" in
.) echo "(Lost all hope -- silly guess then)"
dflt='.nonet'
;;
esac
$rm -f hosts
;;
*) dflt="$mydomain";;
esac;;
esac
echo " "
rp="What is your domain name?"
.
./myread
tans="$sans"
case "$sans" in
") ;;
.*) ;;
*) tans=".$tans";;
esac
mydomain="$stans"

: translate upper to lower if necessary
case "$mydomain" in
*[A-Z]*)
echo "(Normalizing case in your domain name)"
mydomain=`echo $mydomain | ./tr '[A-Z]' '[a-z]'`
;;
esac

@end
: a little sanity check here
case "$phostname" in
") ;;
*)
case ` $phostname | ./tr '[A-Z]' '[a-z]^` in
$myhostname$mydomain|$myhostname) ;;
*)
case "$phostname" in
sed*)
echo "(That doesn't agree with your whoami.h file, by the way.)"
;;
*)
echo "(That doesn't agree with your $phostname command, by the way.)"
;;
esac
;;

```



```
esac
;;
esac
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/myhostname.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: mboxchar.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mboxchar.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:13:12 ram
?RCS: patch56: ensure ctrl-A characters are visible in prompt (WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:11:22 ram
?RCS: patch23: added support for MMDF mailboxes (WED)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:15 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mboxchar: cat package shsharp Myread Oldconfig
?MAKE: -pick add $@ %<
?S:mboxchar:
?S: This variable
contains the eventual value of the MBOXCHAR symbol,
?S: which is how a C program can identify a file as a mailbox.
?S:.
?C:MBOXCHAR:
?C: This symbol contains a character which will match the beginning
?C: of a mailbox file.
?C:.
?H:#define MBOXCHAR '$mboxchar' /**/
?H:.
?T:CTRLA
?INIT:CTRLA=`echo a | tr a '\001`
:determine how to determine when a file is a mailbox
case "$mboxchar" in
") dflt=F;;
?X: The following ^A is two-chars to ensure it will print out -- WED
```

```
"$CTRLA") dflt='^A';;
*) dflt="$mboxchar";;
esac
$cat <<EOM
```

In saving articles, \$package wants to differentiate between saving to mailbox format files and normal files. It does this by examining the first character of the file in question. On most systems the first line starts with "From ...", so the first character is an F. Other systems use magic cookies like control codes between articles, so one of those would be first. For example, MMDF messages are separated with lines of four control-A's (you may specify one as ^A, i.e. caret A).

```
EOM
rp="What's the first character of a mailbox file?"
. ./myread
mboxchar="$ans"
case "$mboxchar" in
F) ;;
"$CTRLA") ;;
'^A'|'^a') mboxchar="$CTRLA";;
*) cat <<'EOM'
```

You will need to edit the shell script mbox.saver to properly append an article to a mailbox. The arguments to the script are documented in

```
EOM
case "$shsharp" in
false) echo "comments in mbox.saver.std.";;
true) echo "comments in the shell script itself.";;
esac
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/mboxchar.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_ffs.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: of the source tree for dist 4.0.
?RCS:
```

```

?RCS: $Log: d_ffs.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:03 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_ffs: Inlibc
?MAKE: -pick add $@ %<
?S:d_ffs:
?S: This variable conditionally defines the HAS_FFS symbol, which
?S: indicates to the C program that the ffs() routine is available
?S: to find the first bit which is set in its integer argument.
?S:.
?C:HAS_FFS:
?C: This symbol, if defined, indicates that the ffs routine is available
?C: to
    find the first bit set in its argument. If it's not available,
?C: roll your own.
?C:.
?H:#$d_ffs HAS_FFS /**/
?H:.
?LINT:set d_ffs
: see if ffs exists
set ffs d_ffs
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d_ffs.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_sethent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_sethent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_sethent: Inlibc
?MAKE: -pick add $@ %<
?S:d_sethent:
?S: This variable conditionally defines HAS_SETHOSTENT if sethostent() is
?S: available.

```

?S:.

?C:HAS\_SETHOSTENT:

?C: This symbol, if defined, indicates that the sethostent() routine is

?C: available.

?C:.

?H:#\$d\_sethent HAS\_SETHOSTENT /\*\*/

?H:.

?LINT:set d\_sethent

: see if sethostent exists

set

sethostent d\_sethent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_sethent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS:

?RCS: \$Log: d\_gethbynm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethbynm: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethbynm (d\_gethstby):

?S: This variable conditionally defines the HAS\_GETHOSTBYNAME symbol, which

?S: indicates to the C program that the gethostbyname() routine is available

?S: to lookup host names in some data base or other.

?S:.

?C:HAS\_GETHOSTBYNAME (GETHOSTBYNAME):

?C: This symbol, if defined, indicates that the gethostbyname()  
routine is

?C: available to lookup host names in some data base or other.

?C:.

?H:#\$d\_gethbynm HAS\_GETHOSTBYNAME /\*\*/

?H:.

?LINT:set d\_gethbynm

: see if gethostbyname exists

```
set gethostbyname d_gethbynm
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gethbynm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strdup.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_strdup.U,v $
```

```
?RCS: Revision 3.0.1.1 1993/12/15 08:21:41 ram
```

```
?RCS: patch15: created
```

```
?RCS:
```

```
?MAKE:d_strdup: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_strdup:
```

```
?S: This variable conditionally defines HAS_STRDUP if strdup() is
```

```
?S: available to duplicate strings in memory.
```

```
?S:.
```

```
?C:HAS_STRDUP:
```

```
?C: This symbol, if defined, indicates that the strdup routine is
```

```
?C: available to duplicate strings in memory. Otherwise, roll up
```

```
?C: your own...
```

```
?C:.
```

```
?H:#$d_strdup HAS_STRDUP /**/
```

```
?H:.
```

```
?LINT:set
```

```
d_strdup
```

```
: see if strdup exists
```

```
set strdup d_strdup
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_strdup.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_syssecl: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_syssecl:

?S: This variable conditionally defines the I\_SYS\_SECURITY symbol,

?S: and indicates whether a C program should include <sys/security.h>.

?S:.

?C:I\_SYS\_SECURITY:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/security.h>.

?C:.

?H:#\$i\_syssecl I\_SYS\_SECURITY /\*\*/

?H:.

?LINT:set i\_syssecl

: see if sys/security.h is available

set sys/security.h i\_syssecl

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/acl/i\_syssecl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_unordered: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_unordered:

?S: This variable conditionally defines the HAS\_UNORDERED symbol, which

?S: indicates to the C program that the unordered() routine is available.

?S:.

?C:HAS\_UNORDERED:

?C: This symbol, if defined, indicates that the unordered routine is

?C: available to check whether two doubles are unordered

?C: (effectively: whether either of them is NaN)

?C:.

?H:#\$d\_unordered HAS\_UNORDERED /\*\*/

?H:.

?LINT:set d\_unordered

: see if unordered exists

set unordered d\_unordered

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_unordered.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: archlib.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 15:23:38 ram

?RCS: patch61: skip existence checks for archlib

?RCS:

?RCS: Revision 3.0.1.4 1995/09/25 09:15:18 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/02/15 14:14:14 ram

?RCS: patch51: architecture name is now computed by a separate unit

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:32:22 ram

?RCS:

patch49: archname is now systematically recomputed

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:02:36 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_archlib archlib archlibexp installarchlib: archname afs spackage \

cat Getfile Loc Oldconfig prefixexp privlib test Prefixit Prefixup

?MAKE: -pick add \$@ %<

?Y:TOP

?S:d\_archlib:

?S: This variable conditionally defines ARCHLIB to hold the pathname

?S: of architecture-dependent library files for \$package. If  
 ?S: \$archlib is the same as \$privlib, then this is set to undef.  
 ?S:.  
 ?S:archlib:  
 ?S: This variable holds the name of the directory in which the user wants  
 ?S: to put architecture-dependent public library files for \$package.  
 ?S: It is most often a local directory such as /usr/local/lib.  
 ?S: Programs using this variable must be prepared to deal  
 ?S: with filename expansion.  
 ?S:.  
 ?S:archlibexp:  
 ?S: This variable is the same as the archlib variable, but is  
 ?S: filename  
 ?S: expanded at configuration time, for convenient use.  
 ?S:.  
 ?S:installarchlib:  
 ?S: This variable is really the same as archlibexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.  
 ?S:.  
 ?C:ARCHLIB:  
 ?C: This variable, if defined, holds the name of the directory in  
 ?C: which the user wants to put architecture-dependent public  
 ?C: library files for \$package. It is most often a local directory  
 ?C: such as /usr/local/lib. Programs using this variable must be  
 ?C: prepared to deal with filename expansion. If ARCHLIB is the  
 ?C: same as PRIVLIB, it is not defined, since presumably the  
 ?C: program already searches PRIVLIB.  
 ?C:.  
 ?C:ARCHLIB\_EXP:  
 ?C: This symbol contains the ~name expanded version of ARCHLIB, to be used  
 ?C: in programs that are not prepared to deal with ~ expansion at run-time.  
 ?C:.  
 ?H:#\$d\_archlib ARCHLIB "\$archlib" /\*\*/  
 ?H:#\$d\_archlib ARCHLIB\_EXP "\$archlibexp" /\*\*/  
 ?H:.  
 : determine where public architecture  
 dependent libraries go  
 set archlib archlib  
 eval \$prefixit  
 case "\$archlib" in  
 ")  
 case "\$privlib" in  
 ")  
 dflt=`./loc . ." \$prefixexp/lib /usr/local/lib /usr/lib /lib`  
 set dflt  
 eval \$prefixup  
 ;;



```

*) dflt="$privlib/$archname";;
esac
;;
*) dflt="$archlib";;
esac
cat <<EOM

```

\$spackage contains architecture-dependent library files. If you are sharing libraries in a heterogeneous environment, you might store these files in a separate location. Otherwise, you can just include them with the rest of the public library files.

```

EOM
fn=d+~
rp='Where do you want to put the public architecture-dependent libraries?'
./getfile
archlib="$ans"
archlibexp="$ansexp"

if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installarchlib" in
") dflt=`echo $archlibexp | sed 's#^/afs/#/afs/#`";;
*)
dflt="$installarchlib";;
esac
fn=de~
rp='Where will architecture-dependent library files be installed?'
./getfile
installarchlib="$ans"
else
installarchlib="$archlibexp"
fi
if $test X"$archlib" = X"$privlib"; then
d_archlib="$undef"
else
d_archlib="$define"
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/archlib.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: modetype.U,v 3.0.1.1 1994/10/29 16:25:07 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: modetype.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:25:07 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:modetype: Myread Typedef
?MAKE: -pick add $@ %<
?S:modetype:
?S: This variable defines modetype to be something like mode_t,
?S: int, unsigned short, or whatever type is used to declare file
?S: modes for system calls.
?S:.
?C:Mode_t:
?C: This symbol holds the type used to declare
file modes
?C: for systems calls. It is usually mode_t, but may be
?C: int or unsigned short. It may be necessary to include <sys/types.h>
?C: to get any typedef'ed information.
?C:.
?H:#define Mode_t $modetype /* file mode parameter for system calls */
?H:.
?LINT:set modetype
: see what type is used for mode_t
rp="What is the type used for file modes for system calls (e.g. fchmod())?"
set mode_t modetype int stdio.h sys/types.h
eval $typedef_ask
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/modetype.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_eofpipe.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/sbrksmart.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/fpossize.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_volatile.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sunscanf.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_isascii.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/byteorder.U

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/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/charsize.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getpgrp.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/abortsig.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/st\_ino\_def.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_sgndchr.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getpgrp.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_casti32.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/intsize.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_mmap.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/stdio\_streams.U

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 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/ptrsize.U  
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 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/nullified/fpu.U  
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 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_socklen\_t.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_sigaction.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/need\_va\_copy.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/gidsign.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_open3.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_wcsxfrm.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_volatile.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/alignbytes.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/alignbytes.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/sizesize.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sockopt.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_eofpipe.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_sanemcmp.U

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\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/uidsize.U

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 5.32.1~rc1/dist/U/d\_isascii.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_gai\_strerror.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

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?RCS:

?MAKE:d\_msghdr\_s: Hasstruct i\_systypes d\_socket i\_sysuio Setvar

?MAKE: -pick add \$@ %<

?S:d\_msghdr\_s:

?S: This variable conditionally defines the HAS\_STRUCT\_MSGHDR symbol,

?S: which indicates that the struct msghdr is supported.

?S:.

?C:HAS\_STRUCT\_MSGHDR:

?C: This symbol, if defined, indicates that the struct msghdr

?C: is supported.

?C:.

?H:#\$d\_msghdr\_s HAS\_STRUCT\_MSGHDR /\*\*/

?H:.

?LINT:set d\_msghdr\_s

: Check for msghdr\_s

echo " "

echo "Checking to see if your system supports struct msghdr..." >&4

set d\_msghdr\_s msghdr \$i\_systypes sys/types.h \$d\_socket sys/socket.h \$i\_sysuio sys/uio.h

eval \$hasstruct

case "\$d\_msghdr\_s" in

"\$define") echo "Yes, it does." ;;

\*) echo "No, it doesn't."

;;

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_msghdr\_s.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_rename.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: d\_rename.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:06:54 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_rename: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_rename:  
 ?S: This variable conditionally defines the HAS\_RENAME symbol, which  
 ?S: indicates to the C program that the rename() routine is available  
 ?S: to rename files.  
 ?S:.  
 ?C:HAS\_RENAME (RENAME):  
 ?C: This symbol, if defined, indicates that the rename routine is available  
 ?C: to rename files.  
 Otherwise you should do the unlink(), link(), unlink()  
 ?C: trick.  
 ?C:.  
 ?H:#\$d\_rename HAS\_RENAME /\*\*/  
 ?H:.  
 ?LINT:set d\_rename  
 : see if rename exists  
 set rename d\_rename  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_rename.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setsid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
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 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: d\_setsid.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/01/24 14:06:49 ram  
 ?RCS: patch16: created  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:05:56 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:



?MAKE:d\_setsid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setsid:  
?S: This variable conditionally defines HAS\_SETSID if setsid() is  
?S: available to set the process group ID.  
?S:.  
?C:HAS\_SETSID:  
?C: This symbol, if defined, indicates that the setsid routine is  
?C: available  
to set the process group ID.  
?C:.  
?H:#\$d\_setsid HAS\_SETSID /\*\*/  
?H:.  
?LINT:set d\_setsid  
: see if setsid exists  
set setsid d\_setsid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setsid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_shadow.U,v \$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_prot: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_prot:  
?S: This variable conditionally defines the I\_PROT symbol, and indicates  
?S: whether a C program should include <prot.h>.  
?S:.  
?C:I\_PROT:  
?C: This symbol, if defined, indicates that <prot.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_prot I\_PROT /\*\*/  
?H:.  
?LINT:set i\_prot  
: see if this is a prot.h system  
set prot.h i\_prot  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_prot.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_dld.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_dld.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:20:07 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:i\_dld: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_dld:

?S: This variable conditionally defines the I\_DLD symbol, which

?S: indicates to the C program that <dld.h> (GNU dynamic loading)

?S: exists and should be included.

?S:.

?C:I\_DLD:

?C: This symbol, if defined, indicates that <dld.h>

exists and should

?C: be included before using GNU dynamic loading features.

?C:.

?H:#\$i\_dld I\_DLD /\*\*/

?H:.

?LINT:set i\_dld

: see if dld is available

set dld.h i\_dld

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_dld.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:gidformat: gidsize gidsign ivsize uvsize longsize intsize shortsize \  
ivdformat uvuformat test echo

?MAKE: -pick add \$@ %<

?S:gidformat:

?S: This variable contains the format string used for printing a Gid\_t.

?S:.

?C:Gid\_t\_f:

?C: This symbol defines the format string used for printing a Gid\_t.

?C:.

?H:#define Gid\_t\_f \$gidformat /\*\*/

?H:.

: Check format string for GID

echo " "

\$echo "Checking the format string to be used for gids..." >&4

case "\$gidsign" in

-1) if \$test X"\$gidsize" = X"\$ivsize"; then  
gidformat="\$ivdformat"

else

if \$test X"\$gidsize" = X"\$longsize"; then  
gidformat="ld"

else

if \$test X"\$gidsize" = X"\$intsize"; then  
gidformat="d"

else

if \$test X"\$gidsize"  
= X"\$shortsize"; then  
gidformat="hd"

fi

fi

fi

fi

;;

\*) if \$test X"\$gidsize" = X"\$uvsize"; then  
gidformat="\$uvuformat"

else

if \$test X"\$gidsize" = X"\$longsize"; then  
gidformat="lu"

else

if \$test X"\$gidsize" = X"\$intsize"; then  
gidformat="u"

else

if \$test X"\$gidsize" = X"\$shortsize"; then  
gidformat="hu"

```
fi
fi
fi
fi
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/gidf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_system.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_system.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:44 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_system: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_system:
```

```
?S: This variable conditionally defines HAS_SYSTEM if system() is
```

```
?S: available to issue a shell command.
```

```
?S:.
```

```
?C:HAS_SYSTEM (SYSTEM):
```

```
?C: This symbol, if defined, indicates that the system routine is
```

```
?C: available to issue a shell command.
```

```
?C:.
```

```
?H:#$d_system HAS_SYSTEM /**/
```

```
?H:.
```

```
?LINT:set
```

```
d_system
```

```
: see if system exists
```

```
set system d_system
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_system.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_execinfo.U 34 2010-11-27 11:55:39Z rmanfredi $
?RCS:
?RCS: Copyright (c) 2011, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?MAKE:i_execinfo: Inhdr
?MAKE: -pick add $@ %<
?S:i_execinfo:
?S: This variable conditionally defines the I_EXECINFO symbol, and indicates
?S: whether a C program may include <execinfo.h>, for backtrace() support.
?S:.
?C:I_EXECINFO:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <execinfo.h> for backtrace() support.
?C:.
?H:#$i_execinfo I_EXECINFO /**/
?H:.
?LINT:set i_execinfo
: see if this is an execinfo.h system
set execinfo.h i_execinfo
eval
$inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_execinfo.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2017, Karl Williamson
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:i_wchar: Inhdr
?MAKE: -pick add $@ %<
?S:i_wchar:
```

?S: This variable conditionally defines the I\_WCHAR symbol,  
 ?S: that indicates whether a C program may include <wchar.h>.  
 ?S:.  
 ?C:I\_WCHAR:  
 ?C: This symbol, if defined, indicates to the C program that <wchar.h>  
 ?C: is available for inclusion  
 ?C:.  
 ?H:#\$i\_wchar I\_WCHAR /\*\*/  
 ?H:.  
 ?LINT:set i\_wchar  
 : see if wchar.h is present  
 set wchar.h i\_wchar  
 eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_wchar.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
 ?RCS: Copyright (c) 1998 Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?X: This unit generates a \$hasfield string that is used internally  
 ?X: by Configure to check if this system has a field for a  
 ?X: particular struct (of if this system has a particular struct!)  
 ?X:  
 ?X: To use it, say something like:  
 ?X: set d\_statblocks stat st\_blocks i\_sysstat sys/stat.h  
 ?X: eval \$hasfield  
 ?X: Or, for more complicated sets of headers, do something like  
 ?X: hdrs="\$define sys/foo.h  
 ?X: \$i\_sysbar sys/bar.h  
 ?X: \$i\_syszot sys/zot.h  
 ?X: \$i\_zappa zappa.h"  
 ?X: set d\_statblocks stat st\_blocks \$hdrs  
 ?X: eval \$hasfield  
 ?X:  
 ?MAKE:Hasfield: Setvar rm\_try test Compile  
 ?MAKE:-pick add \$@ %<  
 ?T:varname struct field  
 ?V:hasfield  
 : Define hasfield macro for Configure internal use  
 hasfield='varname=\$1;

```

struct=$2; field=$3; shift; shift; shift;
while $test $# -ge 2; do
case "$1" in
$define) echo "#include <$2>";;
esac ;
shift 2;
done > try.c;
echo "int main () { struct $struct foo; char* bar; bar = (char*)foo.$field; }" >> try.c;
set try;
if eval $compile; then
val="$define";
else
val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/protos/Hasfield.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lrintl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lrintl:

?S: This variable conditionally defines the HAS\_LRINTL symbol, which

?S: indicates to the C program that the lrintl() routine is available

?S: to return the integral value closest to a long double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LRINTL:

?C: This symbol, if defined, indicates that the lrintl routine is

?C: available to return the integral value closest to a long double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_lrintl HAS\_LRINTL /\*\*/

?H:.

?LINT:set d\_lrintl

: see if lrintl exists

set lrintl d\_lrintl

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```

5.32.1~rc1/U/perl/d\_lrintl.U

No license file was found, but licenses were detected in source scan.

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?RCS:

?MAKE:i\_stdint: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_stdint:

?S: This variable conditionally defines the I\_STDINT symbol, which

?S: indicates to the C program that <stdint.h> exists and should

?S: be included.

?S:.

?C:I\_STDINT:

?C: This symbol, if defined, indicates that <stdint.h> exists and

?C: should be included.

?C:.

?H:#\$i\_stdint I\_STDINT /\*\*/

?H:.

?LINT:set i\_stdint

: see if stdint is available

set stdint.h i\_stdint

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/i\_stdint.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_drem.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_drem.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:12:14 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_drem: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_drem:



?S: This variable conditionally defines the HAS\_DREM symbol, which

?S: indicates to the C program that the drem() routine is available.

?S:.

?C:HAS\_DREM :

?C: This symbol, if defined, indicates that the drem routine is

?C: available.

This routine is roughly the same as fmod, i.e. it

?C: computes the remainder  $r=x-n*y$ , where  $n=rint(x/y)$ , whereas fmod

?C: uses  $n=trunc(x/y)$ .

?C:.

?H:#\$d\_drem HAS\_DREM /\*\*/

?H:.

?LINT:set d\_drem

: see if drem exists

set drem d\_drem

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_drem.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: libnlist.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libnlist.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:08:02 ram

?RCS: patch61: added usrinc and mips on the dependency line

?RCS: patch61: make sure we call ./mips

?RCS: patch61: added a ?LINT: hint

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:00 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libnlist: Loc libpth Guess usrinc \_a

?MAKE: -pick add \$@ %<

?S:libnlist (libmld):

?S: This variable contains the name of the library required to  
get the

?S: definition of the nlist() function. On a MIPS RISC/OS box, it is -lmlld.

?S: Under Sys Vr4, it is -lelf. Otherwise, its value is empty.

```

?S:.
?T:xxx
?LINT:use usrin
: see if we need a special library for 'nlist()'
echo " "
: How about doing this if nlist is not in libc...
if ./mips ; then
  libnlist='-lmlld'
else
  xxx=`./loc libelf$_a x $libpth`
  case "$xxx" in
  x) ;;
  *)
    libnlist="$xxx"
    ;;
  esac
fi
case "$libnlist" in
") echo "No special library for nlist() seems necessary." >&4
;;
*) echo "nlist() can be found in $libnlist." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/libnlist.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: nblock_io.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 16:17:14 ram
?RCS: patch61: simplify here document for shells that can't handle them well
?RCS: patch61: force use of "startsh" at the head of the generated script
?RCS: patch61: added new files to the ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.1 1995/07/25 14:13:22 ram
?RCS: patch56: created
?RCS:

```

?X:

?X: Simplify here document for shells that can't handle them well.

?X: (Problem reported on FreeBSD; it's unclear if this helps.) --AD

?X:

?MAKE:o\_nonblock

eagain rd\_nodata d\_eofnblk: cat rm\_try +cc +ccflags +ldflags \  
d\_open3 h\_sysfile h\_fcntl signal\_t hint Oldconfig Setvar startsh Warn

?MAKE: -pick add \$@ %<

?S:o\_nonblock:

?S: This variable bears the symbol value to be used during open() or fcntl()

?S: to turn on non-blocking I/O for a file descriptor. If you wish to switch

?S: between blocking and non-blocking, you may try ioctl(FIOSNBIO) instead,

?S: but that is only supported by some devices.

?S:.

?S:eagain:

?S: This variable bears the symbolic errno code set by read() when no

?S: data is present on the file and non-blocking I/O was enabled (otherwise,

?S: read() blocks naturally).

?S:.

?S:rd\_nodata:

?S: This variable holds the return code from read() when no data is

?S: present. It should be -1, but some systems return 0 when O\_NDELAY is

?S: used, which is a shame because you cannot make the difference between

?S: no data and an EOF.. Sigh!

?S:.

?S:d\_eofnblk:

?S: This variable conditionally defines EOF\_NONBLOCK

if EOF can be seen

?S: when reading from a non-blocking I/O source.

?S:.

?C:VAL\_O\_NONBLOCK:

?C: This symbol is to be used during open() or fcntl(F\_SETFL) to turn on

?C: non-blocking I/O for the file descriptor. Note that there is no way

?C: back, i.e. you cannot turn it blocking again this way. If you wish to

?C: alternatively switch between blocking and non-blocking, use the

?C: ioctl(FIOSNBIO) call instead, but that is not supported by all devices.

?C:.

?C:VAL\_EAGAIN:

?C: This symbol holds the errno error code set by read() when no data was

?C: present on the non-blocking file descriptor.

?C:.

?C:RD\_NODATA:

?C: This symbol holds the return code from read() when no data is present

?C: on the non-blocking file descriptor. Be careful! If EOF\_NONBLOCK is

?C: not defined, then you can't distinguish between no data and EOF by

?C: issuing a read(). You'll have to find another way to tell for sure!

?C:.

?C:EOF\_NONBLOCK:

?C: This symbol, if defined, indicates to the C program that a read() on

?C: a

non-blocking file descriptor will return 0 on EOF, and not the value

?C: held in RD\_NODATA (-1 usually, in that case!).

?C:.

?H:#define VAL\_O\_NONBLOCK \$o\_nonblock

?H:#define VAL\_EAGAIN \$eagain

?H:#define RD\_NODATA \$rd\_nodata

?H:#\$d\_eofnblk EOF\_NONBLOCK

?H:.

?F:!try !try.out !try.ret !try.err !mtry

?T:status

?LINT:use d\_open3

: check for non-blocking I/O stuff

case "\$h\_sysfile" in

true) echo "#include <sys/file.h>" > head.c;;

\*)

case "\$h\_fcntl" in

true) echo "#include <fcntl.h>" > head.c;;

\*) echo "#include <sys/fcntl.h>" > head.c;;

esac

::

esac

echo " "

echo "Figuring out the flag used by open() for non-blocking I/O..." >&4

case "\$o\_nonblock" in

")

\$cat head.c > try.c

\$cat >>try.c <<'EOCP'

int main() {

#ifdef O\_NONBLOCK

printf("O\_NONBLOCK\n");

exit(0);

#endif

#ifdef O\_NDELAY

printf("O\_NDELAY\n");

exit(0);

#endif

?X: Stevens "Advanced Programming in the UNIX Environment" page 364 mentions

?X: the FNDELAY symbol, used in 4.33BSD (source: Paul Marquess).

#ifdef FNDELAY

printf("FNDELAY\n");

exit(0);

#endif

exit(0);

}

EOCP

if

```

$cc $ccflags $ldflags -o try try.c >/dev/null 2>&1; then
o_nonblock=`./try`
case "$o_nonblock" in
") echo "I can't figure it out, assuming O_NONBLOCK will do.";;
*) echo "Seems like we can use $o_nonblock.";;
esac
else
echo "(I can't compile the test program; pray O_NONBLOCK is right!)"
fi
;;
*) echo "Using $hint value $o_nonblock.";;
esac
$rm_try

echo " "
echo "Let's see what value errno gets from read() on a $o_nonblock file..." >&4
case "$$again" in
")
$cat head.c > try.c
$cat >>try.c <<EOCP
#include <errno.h>
#include <sys/types.h>
#include <signal.h>
#define MY_O_NONBLOCK $o_nonblock
extern int errno;
$signal_t blech(x) int x; { exit(3); }
EOCP
$cat >> try.c <<'EOCP'
int main()
{
int pd[2];
int pu[2];
char buf[1];
char string[100];

pipe(pd); /* Down: child -> parent */
pipe(pu); /* Up: parent -> child */
if (0 != fork()) {
int ret;
close(pd[1]); /* Parent reads from pd[0] */
close(pu[0]); /*
Parent writes (blocking) to pu[1] */
if (-1 == fcntl(pd[0], F_SETFL, MY_O_NONBLOCK))
exit(1);
signal(SIGALRM, blech);
alarm(5);
if ((ret = read(pd[0], buf, 1)) > 0) /* Nothing to read! */
exit(2);

```

```

sprintf(string, "%d\n", ret);
write(2, string, strlen(string));
alarm(0);
#ifdef EAGAIN
if (errno == EAGAIN) {
    printf("EAGAIN\n");
    goto ok;
}
#endif
#ifdef EWOULDBLOCK
if (errno == EWOULDBLOCK)
    printf("EWOULDBLOCK\n");
#endif
ok:
write(pu[1], buf, 1); /* Unblocks child, tell it to close our pipe */
sleep(2); /* Give it time to close our pipe */
alarm(5);
ret = read(pd[0], buf, 1); /* Should read EOF */
alarm(0);
sprintf(string, "%d\n", ret);
write(3, string, strlen(string));
exit(0);
}

close(pd[0]); /* We write to pd[1] */
close(pu[1]); /* We read from pu[0] */
read(pu[0], buf, 1); /* Wait for parent to signal us we may continue */
close(pd[1]); /* Pipe pd is now fully closed! */
exit(0); /* Bye bye, thank you for playing!
*/
}
EOCP
if $cc $cflags $ldflags -o try try.c >/dev/null 2>&1; then
?X: Use script to avoid the possible 'alarm call' message
echo "$startsh" >mtry
echo "./try >try.out 2>try.ret 3>try.err || exit 4" >>mtry
chmod +x mtry
./mtry >/dev/null 2>&1
case $? in
0) eagain=`$cat try.out`;
1) echo "Could not perform non-blocking setting!";
2) echo "I did a successful read() for something that was not there!";
3) echo "Hmm... non-blocking I/O does not seem to be working!";
*) echo "Something terribly wrong happened during testing.";;
esac
rd_nodata=`$cat try.ret`
echo "A read() system call with no data present returns $rd_nodata."
case "$rd_nodata" in

```

```

0|-1) ;;
*)
echo "(That's peculiar, fixing that to be -1.)"
rd_nodata=-1
;;
esac
case "$eagain" in
")
echo "Forcing errno EAGAIN on read() with no data available."
eagain=EAGAIN
;;
*)
echo "Your read() sets errno to $eagain when no data is available."
;;
esac
status=`$cat
try.err`
case "$status" in
0) echo "And it correctly returns 0 to signal EOF.";;
-1) echo "But it also returns -1 to signal EOF, so be careful!";;
*) echo "However, your read() returns '$status' on EOF??";;
esac
val="$define"
if test "$status" = "$rd_nodata"; then
./warn "your read() can't distinguish between EOF and no data!"
val="$undef"
fi
else
echo "I can't compile the test program--assuming errno EAGAIN will do."
eagain=EAGAIN
fi
set d_eofnblk
eval $setvar
;;
*)
echo "Using $hint value $eagain."
echo "Your read() returns $rd_nodata when no data is present."
case "$d_eofnblk" in
"$define") echo "And you can see EOF because read() returns 0.";;
"$undef") echo "But you can't see EOF status from read() returned value.";;
*)
?X: Should not happen, but if it does, assume the worst!
echo "(Assuming you can't see EOF status from read anyway.)"
d_eofnblk=$undef
;;
esac
;;
esac

```

\$rm\_try head.c mtry

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/nblock\_io.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getgrent\_r getgrent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_grp extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getgrent\_r:

?S: This variable conditionally defines the HAS\_GETGRENTR symbol,

?S: which indicates to the C program that the getgrent\_r()

?S: routine is available.

?S:.

?S:getgrent\_r\_proto:

?S: This variable encodes the prototype of getgrent\_r.

?S: It is zero if d\_getgrent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrent\_r

?S: is defined.

?S:.

?C:HAS\_GETGRENTR:

?C: This symbol, if defined, indicates that the getgrent\_r routine

?C: is available to

getgrent re-entrantly.

?C:.

?C:GETGRENTR\_PROTO:

?C: This symbol encodes the prototype of getgrent\_r.

?C: It is zero if d\_getgrent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrent\_r

?C: is defined.

?C:.

?H:#\$d\_getgrent\_r HAS\_GETGRENTR /\*\*/

?H:#define GETGRENTR\_PROTO \$getgrent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getgrent\_r\_proto

: see if getgrent\_r exists

set getgrent\_r d\_getgrent\_r

eval \$inlibc

case "\$d\_getgrent\_r" in



```

"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_grp grp.h"
case "$d_getgrent_r_proto:$usethreads" in
":define") d_getgrent_r_proto=define
set d_getgrent_r_proto getgrent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getgrent_r_proto" in
define)
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, size_t, struct group**);'
./protochk "$extern_C $try" $hdrs && getgrent_r_proto=I_SBWR ;;
esac
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, int, struct group**);'
./protochk
"$extern_C $try" $hdrs && getgrent_r_proto=I_SBIR ;;
esac
case "$getgrent_r_proto" in
"|0) try='struct group* getgrent_r(struct group*, char*, size_t);'
./protochk "$extern_C $try" $hdrs && getgrent_r_proto=S_SBW ;;
esac
case "$getgrent_r_proto" in
"|0) try='struct group* getgrent_r(struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrent_r_proto=S_SBI ;;
esac
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrent_r_proto=I_SBI ;;
esac
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, int, FILE**);'
./protochk "$extern_C $try" $hdrs && getgrent_r_proto=I_SBIH ;;
esac
case "$getgrent_r_proto" in
"|0) d_getgrent_r=undef
getgrent_r_proto=0
echo "Disabling getgrent_r, cannot determine prototype." >&4 ;;
* ) case "$getgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrent_r_proto="REENTRANT_PROTO_$getgrent_r_proto" ;;
esac
echo "Prototype:
$try" ;;
esac
;;
*) case "$usethreads" in

```

```
define) echo "getgrent_r has no prototype, not using it." >&4 ;;
esac
d_getgrent_r=undef
getgrent_r_proto=0
;;
esac
;;
*) getgrent_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getgrent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_erf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_erf:

?S: This variable conditionally defines the HAS\_ERF symbol, which

?S: indicates to the C program that the erf() routine is available.

?S:.

?C:HAS\_ERF:

?C: This symbol, if defined, indicates that the erf routine is

?C: available to do the error function.

?C:.

?H:#\$d\_erf HAS\_ERF /\*\*/

?H:.

?LINT:set d\_erf

: see if erf exists

set erf d\_erf

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_erf.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: ccflags.U,v \$  
?RCS: Revision 3.0.1.9 1997/02/28 15:27:07 ram  
?RCS: patch61: removed support for NO\_PROTOTYPE detection on SCO  
?RCS: patch61: new locincpth variable  
?RCS: patch61: added info on the "additional ld flags" question  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:48:54 ram  
?RCS: patch56: re-arranged compile line to include ldflags before objects  
?RCS:  
?RCS: Revision 3.0.1.7 1995/05/12 12:08:33 ram  
?RCS: patch54: now checks for cc/ccflags/ldflags coherency  
?RCS:  
?RCS: Revision 3.0.1.6  
1994/10/29 16:07:02 ram  
?RCS: patch36: gcc versioning no longer relies on the C compiler's name  
?RCS: patch36: simplified check for gcc version checking (ADO)  
?RCS:  
?RCS: Revision 3.0.1.5 1994/08/29 16:06:35 ram  
?RCS: patch32: propagate -posix flag from ccflags to ldflags  
?RCS:  
?RCS: Revision 3.0.1.4 1994/05/06 14:28:45 ram  
?RCS: patch23: -fpcc-struct-return only needed in gcc 1.x (ADO)  
?RCS: patch23: cppflags now computed on an option-by-option basis  
?RCS: patch23: magically added cc flags now only done the first time  
?RCS:  
?RCS: Revision 3.0.1.3 1993/09/13 15:58:29 ram  
?RCS: patch10: explicitly mention -DDEBUG just in case they need it (WAD)  
?RCS: patch10: removed all the "tans" variable usage (WAD)  
?RCS:  
?RCS: Revision 3.0.1.2 1993/08/27 14:39:38 ram  
?RCS: patch7: added support for OSF/1 machines  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:00:24 ram  
?RCS: patch6: added defaults for cppflags, ccflags and ldflags  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:31 ram  
?RCS:  
Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:ccflags ldflags lkflags cppflags optimize locincpth: test cat \  
Myread Guess Options Oldconfig gccversion mips\_type +usrinc \  
package contains rm rm\_try +cc cppstdin cppminus cprun cpplast libpth \  
loclibpth hint  
?MAKE: -pick add \$@ %<  
?S:ccflags:

?S: This variable contains any additional C compiler flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:cppflags:  
?S: This variable holds the flags that will be passed to the C pre-  
?S: processor. It is up to the Makefile to use it.  
?S:.  
?S:optimize:  
?S: This variable contains any optimizer/debugger flag that should be used.  
?S: It is up to the Makefile to use it.  
?S:.  
?S:ldflags:  
?S: This variable contains any additional C loader flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:lkflags:  
?S: This variable contains any additional C partial linker flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:locincpth:  
?S: This  
variable contains a list of additional directories to be  
?S: searched by the compiler. The appropriate -I directives will  
?S: be added to cflags. This is intended to simplify setting  
?S: local directories from the Configure command line.  
?S: It's not much, but it parallels the loclibpth stuff in libpth.U.  
?S:.  
?T:inctest thisincl xxx flag inclwanted ftry previous thislibdir  
?F:!cpp.c  
?D:cppflags="  
?D:cflags="  
?D:ldflags="  
?D:optimize="  
?INIT:: Possible local include directories to search.  
?INIT:: Set locincpth to "" in a hint file to defeat local include searches.  
?INIT:locincpth="/usr/local/include /opt/local/include /usr/gnu/include"  
?INIT:locincpth="\$locincpth /opt/gnu/include /usr/GNU/include /opt/GNU/include"  
?INIT::  
?INIT:: no include file wanted by default  
?INIT:inclwanted="  
?INIT:  
: determine optimize, if desired, or use for debug flag also  
case "\$optimize" in  
'|\$undef) dflt='none';;  
")  
case "\$gccversion" in  
") dflt='-O';;  
\*) dflt='-O2 -g';;

```

esac
;;
*)
dflt="$optimize";;
esac
case "$gccversion" in
") $cat <<EOH

```

Some C compilers have problems with their optimizers. By default, \$package compiles with the -O flag to use the optimizer. Alternately, you might want to use the symbolic debugger, which uses the -g flag (on traditional Unix systems). Either flag can be specified here. To use neither flag, specify the word "none".

```

EOH
;;
*) $cat <<EOH

```

With the GNU C compiler, it is possible to supply both -O2 and -g flags, to be able to reasonably optimize, whilst retaining the ability to use a symbolic debugger. Either flag can be specified here. To use neither flag, specify the word "none".

```

EOH
;;
esac
rp="What optimizer/debugger flag should be used?"
./myread
optimize="$ans"
case "$optimize" in
'none') optimize=" ";;
esac

```

```

dflt="
: We will not override a previous value, but we might want to
: augment a hint file
case "$hint" in
default|recommended)
case "$gccversion" in
1*) dflt='-fpcc-struct-return' ;;
esac
?X:
check for POSIXized ISC
case "$gccversion" in
2*) if test -d /etc/conf/kconfig.d &&
$contains _POSIX_VERSION $usrinc/sys/unistd.h >/dev/null 2>&1
then
dflt="$dflt -posix"

```

```

fi
;;
esac
?X: turn warnings on if they're using gcc
case "$gccversion" in
1*|2*) dflt="$dflt -Wall";;
?X: starting with version 3, add "-W -Wall -Wformat=2 -Wshadow" by default
*) dflt="$dflt -W -Wall -Wformat=2 -Wshadow";;
esac
;;
esac

```

?X: In USG mode, a MIPS system may need some BSD includes

```

case "$mips_type" in
*BSD*|*) inclwanted="$locincpth $usrinc";;
*) inclwanted="$locincpth $inclwanted $usrinc/bsd";;
esac
for thisincl in $inclwanted; do
if $test -d $thisincl; then
if $test x$thisincl != x$usrinc; then
case "$dflt" in
*$thisincl*);;
*) dflt="$dflt -I$thisincl";;
esac
fi
fi
done

```

?X: Include test function (header, symbol)

```

inctest='if $contains $2 $usrinc/$1 >/dev/null 2>&1; then
xxx=true;
elif $contains $2 $usrinc/sys/$1 >/dev/null 2>&1; then
xxx=true;
else
xxx=false;
fi;
if
$xxx; then
case "$dflt" in
*$2*);;
*) dflt="$dflt -D$2";;
esac;
fi'

```

?X:

?X: OSF/1 uses \_\_LANGUAGE\_C\_\_ instead of LANGUAGE\_C

?X:

```

if ./osf1; then

```

```

set signal.h __LANGUAGE_C__; eval $inctest
else
set signal.h LANGUAGE_C; eval $inctest
fi

```

```

case "$hint" in
default|recommended) dflt="$ccflags $dflt" ;;
*) dflt="$ccflags";;
esac

```

```

case "$dflt" in
'|' ') dflt=none;;
esac
$cat <<EOH

```

Your C compiler may want other flags. For this question you should include -I/whatever and -DWHATEVER flags and any other flags used by the C compiler, but you should NOT include libraries or ld flags like -lwhatever.

To use no flags, specify the word "none".

```

EOH
?X: strip leading space
set X $dflt
shift
dflt=${1+"$@"}
rp="Any additional cc flags?"
./myread
case "$ans" in
none) ccflags="";;
*) ccflags="$ans";;
esac

```

: the following weeds options from ccflags that are of no interest to cpp

```

cppflags="$ccflags"
case "$gccversion" in
1*) cppflags="$cppflags -D__GNUC__"
esac
case "$mips_type" in
");;
*BSD*)
cppflags="$cppflags -DSYSTYPE_BSD43";;
esac
case "$cppflags" in
");;
*)
echo " "
echo "Let me guess what the preprocessor flags are..." >&4

```

```

set X $cppflags
shift
cppflags=""
$cat >cpp.c <<'EOM'
#define BLURFL foo

BLURFL xx LFRULB
EOM
?X:
?X: For each cc flag, try it out with both cppstdin and cprun, since the
?X: first is almost surely a cc wrapper. We have to try both in case
?X: of cc flags like '-Olimit 2900' that are actually two words...
?X:
previous=""
for flag in $*
do
case "$flag" in
-*) ftry="$flag";;
*) ftry="$previous $flag";;
esac
if $cppstdin -DLFRULB=bar $ftry $cppminus <cpp.c \
>cpp1.out 2>/dev/null && \
$cprun -DLFRULB=bar $ftry $cplast <cpp.c \
>cpp2.out 2>/dev/null && \
$contains 'foo.*xx.*bar' cpp1.out >/dev/null 2>&1 && \
$contains 'foo.*xx.*bar' cpp2.out >/dev/null 2>&1
then
cppflags="$cppflags $ftry"
previous=""
else
previous="$flag"
fi
done
set X $cppflags
shift
cppflags=${1+"$@"}
case "$cppflags"
in
*~*) echo "They appear to be: $cppflags";;
esac
$rm -f cpp.c cpp?.out
;;
esac

: flags used in final linking phase
case "$ldflags" in
") if ./venix; then
dflt='-i -z'

```



```

else
  dflt=""
fi
case "$ccflags" in
*-posix*) dflt="$dflt -posix" ;;
esac
;;
*) dflt="$ldflags";;
esac

```

: Try to guess additional flags to pick up local libraries.

```

for thislibdir in $libpth; do
case " $loclibpth " in
*" $thislibdir ")
  case "$dflt " in
*" -L$thislibdir ") ;;
*) dflt="$dflt -L$thislibdir" ;;
esac
;;
esac
done

```

```

case "$dflt" in
") dflt='none' ;;
*) set X $dflt; shift; dflt="$@" ;;
esac

```

\$cat <<EOH

Your C linker may need flags. For this question you should include -L/whatever and any other flags used by the C linker, but you should NOT include libraries like -lwhatever.

Make sure you include the appropriate -L/path flags if your C linker does not normally search all of the directories you specified above, namely

\$libpth

To use no flags, specify the word "none".

EOH

```

rp="Any
additional ld flags (NOT including libraries)?"
./myread
case "$ans" in
none) ldflags="";;
*) ldflags="$ans";;
esac

```

```
rmlist="$rmlist pdp11"
```

```
@if lkflags
```

```
: partial linking may need other flags
```

```
case "$lkflags" in
```

```
) case "$ldflags" in
```

```
) dflt='none';;
```

```
*) dflt="$ldflags";;
```

```
esac;;
```

```
*) dflt="$lkflags";;
```

```
esac
```

```
echo " "
```

```
rp="Partial linking flags to be used (NOT including -r)?"
```

```
./myread
```

```
case "$ans" in
```

```
none) lkflags="";;
```

```
*) lkflags="$ans";;
```

```
esac
```

```
@end
```

```
?X:
```

```
?X: If the user changes compilers after selecting a hint file, it's
```

```
?X: possible that the suggested ccflags/ldflags will be wrong. Try to
```

```
?X: compile and run a simple test program. Let the user see all the
```

```
?X: error messages. -- ADO and RAM
```

```
?X:
```

```
: coherency check
```

```
echo " "
```

```
echo "Checking your choice of C compiler and flags for coherency..." >&4
```

```
?X: Strip extra blanks in case some of the following variables are empty
```

```
set X $cc $optimize $ccflags $ldflags -o try try.c
```

```
shift
```

```
$cat >try.msg <<EOM
```

```
I've tried to compile and run a simple program
```

```
with:
```

```
$*
```

```
./try
```

and I got the following output:

```
EOM
```

```
$cat > try.c <<'EOF'
```

```
#include <stdio.h>
```

```
int main() { exit(0); }
```

```
EOF
```

```
dflt=y
```

```
?X: Use "sh -c" to avoid error messages tagged with leading "Configure:".
```

?X: We need to try the resulting executable, because cc might yield a 0 status

?X: even when ld failed, in which case the executable will not run properly,

?X: if its x bit is set at all...

if sh -c "\$cc \$optimize \$ccflags \$ldflags -o try try.c" >>try.msg 2>&1; then

if sh -c './try' >>try.msg 2>&1; then

  dflt=n

else

  echo "The program compiled OK, but exited with status \$?." >>try.msg

  rp="You have a problem. Shall I abort Configure"

  dflt=y

fi

else

  echo "I can't compile the test program." >>try.msg

  rp="You have a BIG problem. Shall I abort Configure"

  dflt=y

fi

case "\$dflt" in

y)

  \$cat try.msg >&4

?X: using -K will prevent default aborting--maybe they're cross compiling?

  case "\$knowitall" in

  ")

    echo "(The supplied flags might be incorrect with this C compiler.)"

    ;;

  \*)

  dflt=n;;

esac

echo " "

  ./myread

  case "\$ans" in

  n\*|N\*) ;;

  \*) echo "Ok. Stopping Configure." >&4

  exit 1

  ;;

esac

;;

n) echo "OK, that should do.";;

esac

\$rm\_try

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/ccflags.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: dftime.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_fime.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:06 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_fime d_gettimeod: Inlibc Setvar
?MAKE: -pick add $@ %<
?S:d_fime:
?S: This variable conditionally defines the HAS_FTIME symbol, which indicates
?S: that the ftime() routine exists. The ftime() routine is basically
?S: a sub-second accuracy clock.
?S:.
?S:d_gettimeod:
?S: This variable conditionally defines the HAS_GETTIMEOFDAY symbol,
which
?S: indicates that the gettimeofday() system call exists (to obtain a
?S: sub-second accuracy clock). You should probably include <sys/resource.h>.
?S:.
?C:HAS_FTIME (FTIMER):
?C: This symbol, if defined, indicates that the ftime() routine exists.
?C: It is basically a sub-second accuracy clock, but is less accurate
?C: than gettimeofday(2) anyway. The type "Timeval" should be used to
?C: refer to "struct timeb".
?C:.
?C:HAS_GETTIMEOFDAY (GETTIMEOFDAY):
?C: This symbol, if defined, indicates that the gettimeofday() system
?C: call is available for a sub-second accuracy clock. Usually, the file
?C: <sys/resource.h> needs to be included (see I_SYS_RESOURCE).
?C: The type "Timeval" should be used to refer to "struct timeval".
?C:.
?H:#$d_fime HAS_FTIME /**/
?H:#$d_gettimeod HAS_GETTIMEOFDAY /**/
?H:?%<:@if HAS_FTIME
?H:?%<:#ifdef HAS_FTIME
?H:?%<:#define Timeval struct timeb /* Structure used by ftime() */
?H:?%<:#endif
?H:?%<:@end
?H:?%<:@if HAS_GETTIMEOFDAY
?H:?%<:#ifdef HAS_GETTIMEOFDAY
?H:?%<:#define
Timeval struct timeval /* Structure used by gettimeofday() */
?H:?%<:#endif

```

```

?H:?%<:@end
?H:.
?X:FIXME
?X:?I:?d_ftime:i_systimeb
?X:?I:?d_gettimeod:i_sysresrc
?LINT:set d_gettimeod d_ftime
?LINT:known Timeval
: see if gettimeofday or ftime exists
?X:
?X: Give priority to gettimeofday(2) because timing is more accurate
?X:
set gettimeofday d_gettimeod
eval $inlibc
case "$d_gettimeod" in
"$undef")
set ftime d_ftime
eval $inlibc
;;
*)
val="$undef"; set d_ftime; eval $setvar
;;
esac
case "$d_gettimeod$d_ftime" in
"$undef$undef")
echo " "
echo 'No ftime() nor gettimeofday() -- timing may be less accurate.' >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_ftime.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cppstdin.U,v $
?RCS: Revision 3.0.1.4 1994/10/29 16:08:34 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:

```

?RCS: Revision 3.0.1.3 1994/01/24 14:05:38 ram

?RCS: patch16: comment for CPPLAST was missing

?RCS:

?RCS: Revision 3.0.1.2 1993/12/15 08:18:58 ram

?RCS: patch15: new variables cpprun and cpplast, guaranteed wrapper-free

?RCS: patch15: cppstdin now tries to use cc, even at the cost of a wrapper

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:00:53 ram

?RCS: patch6:

remove wrapper when not actually used

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cppstdin cppminus cpprun cpplast: contains test Myread Oldconfig Loc \  
 cpp +cc rm hint osname gccversion startsh eunicefix

?MAKE: -pick add \$@ %<

?S:cppstdin:

?S: This variable contains the command which will invoke the C  
 ?S: preprocessor on standard input and put the output to stdout.  
 ?S: It is primarily used by other Configure units that ask about  
 ?S: preprocessor symbols.

?S:.

?S:cppminus:

?S: This variable contains the second part of the string which will invoke  
 ?S: the C preprocessor on the standard input and produce to standard  
 ?S: output. This variable will have the value "-" if cppstdin needs  
 ?S: a minus to specify standard input, otherwise the value is "".

?S:.

?S:cpprun:

?S: This variable contains the command which will invoke a C preprocessor  
 ?S: on standard input and put the output to stdout. It is guaranteed not  
 ?S: to be a wrapper  
 ?S: and may be a null string if no preprocessor can be  
 ?S: made directly available. This preprocessor might be different from the  
 ?S: one used by the C compiler. Don't forget to append cpplast after the  
 ?S: preprocessor options.

?S:.

?S:cpplast:

?S: This variable has the same functionality as cppminus, only it applies to  
 ?S: cpprun and not cppstdin.

?S:.

?C:CPPSTDIN:

?C: This symbol contains the first part of the string which will invoke  
 ?C: the C preprocessor on the standard input and produce to standard  
 ?C: output. Typical value of "cc -E" or "/lib/cpp", but it can also  
 ?C: call a wrapper. See CPPRUN.

?C:.

?C:CPPMINUS:

?C: This symbol contains the second part of the string which will invoke

?C: the C preprocessor on the standard input and produce to standard

?C: output. This symbol will have the value "-" if CPPSTDIN needs a minus

?C: to specify standard input, otherwise the value is "".

?C:.

?C:CPPRUN:

?C: This symbol contains the string which will invoke a C preprocessor on

?C: the

standard input and produce to standard output. It needs to end

?C: with CPPLAST, after all other preprocessor flags have been specified.

?C: The main difference with CPPSTDIN is that this program will never be a

?C: pointer to a shell wrapper, i.e. it will be empty if no preprocessor is

?C: available directly to the user. Note that it may well be different from

?C: the preprocessor used to compile the C program.

?C:.

?C:CPPLAST:

?C: This symbol is intended to be used along with CPPRUN in the same manner

?C: symbol CPPMINUS is used with CPPSTDIN. It contains either "-" or "".

?C:.

?H:#define CPPSTDIN "\$cppstdin"

?H:#define CPPMINUS "\$cppminus"

?H:#define CPPRUN "\$cpprun"

?H:#define CPPLAST "\$cpplast"

?H:.

?F:cppstdin !testcpp.out !testcpp.c

?T:wrapper x\_cpp x\_minus ok

: see how we invoke the C preprocessor

echo " "

echo "Now, how can we feed standard input to your C preprocessor..." >&4

cat <<'EOT' >testcpp.c

#define ABC abc

#define XYZ xyz

ABC.XYZ

EOT

cd ..

if \$test ! -f cppstdin;

then

echo "\$startsh" >cppstdin

if \$test "X\$osname" = "Xaix" -a "X\$gccversion" = X; then

?X: AIX cc -E doesn't show the absolute headerfile

?X: locations but we'll cheat by using the -M flag.

echo 'cat >.\$\$.c; rm -f .\$\$.u; ""\$cc"" \${1+"\$@"} -M -c .\$\$.c 2>/dev/null; \

test -s .\$\$.u && \

awk """"\$2 ~ /\.h\$/ { print "# 0 \""\$2\\"" }"""" .\$\$.u; \

rm -f .\$\$.o .\$\$.u; ""\$cc"" -E \${1+"\$@"} .\$\$.c; rm .\$\$.c' >> cppstdin

else

echo 'cat >.\$\$.c; ""\$cc"" -E \${1+"\$@"} .\$\$.c; rm .\$\$.c' >>cppstdin

```

fi; else
  echo "Keeping your $hint cppstdin wrapper."
fi
chmod 755 cppstdin
$eunicefix cppstdin
wrapper=`pwd`/cppstdin
ok='false'
cd UU

?X:
?X: We'll run the cpp tests again if we don't have any valid C preprocessor
?X: yet or don't know how to proceed without a wrapper (in which case cprun
?X: is empty and that's really annoying...)
?X:
if $test "X$cppstdin" != "X" && \
  $cppstdin $cppminus <testcpp.c >testcpp.out 2>&1 && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
  echo "You used to use
  $cppstdin $cppminus so we'll use that again."
  case "$cprun" in
  *) echo "But let's see if we can live without a wrapper..." ;;
  *)
  if $cprun $cpplast <testcpp.c >testcpp.out 2>&1 && \
    $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
  then
    echo "(And we'll use $cprun $cpplast to preprocess directly.)"
    ok='true'
  else
    echo "(However, $cprun $cpplast does not work, let's see...)"
  fi
  ;;
  esac
else
  case "$cppstdin" in
  *) ;;
  *)
  echo "Good old $cppstdin $cppminus does not seem to be of any help..."
  ;;
  esac
fi

if $ok; then
  : nothing
elif echo 'Maybe ""$cc" -E" will work...'; \
  $cc -E <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yup, it does."

```



```

x_cpp="$cc -E"
x_minus="";
elif echo 'Nope...maybe ""$cc" -E -" will work...'; \
$cc -E - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yup, it does."
x_cpp="$cc -E"
x_minus='-';
elif echo 'Nope...maybe ""$cc"
-P" will work...'; \
$cc -P <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yipee, that works!"
x_cpp="$cc -P"
x_minus="";
elif echo 'Nope...maybe ""$cc" -P -" will work...'; \
$cc -P - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "At long last!"
x_cpp="$cc -P"
x_minus='-';
elif echo 'No such luck, maybe ""$cpp" will work...'; \
$cpp <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "It works!"
x_cpp="$cpp"
x_minus="";
elif echo 'Nixed again...maybe ""$cpp' -" will work...'; \
$cpp - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Hooray, it works! I was beginning to wonder."
x_cpp="$cpp"
x_minus='-';
elif echo 'Uh-uh. Time to get fancy. Trying a wrapper...'; \
$wrapper <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
x_cpp="$wrapper"
x_minus="
echo
"Eureka!"
else
dflt="
rp="No dice. I can't find a C preprocessor. Name one:"
./myread
x_cpp="$ans"
x_minus="
$x_cpp <testcpp.c >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then

```

```

    echo "OK, that will do." >&4
else
echo "Sorry, I can't get that to work. Go find one and rerun Configure." >&4
    exit 1
fi
fi

case "$ok" in
false)
    cppstdin="$x_cpp"
    cppminus="$x_minus"
    cpprun="$x_cpp"
    cpplast="$x_minus"
?X:
?X: If /lib/cpp is used, try using a wrapper to increase our chances to have
?X: the C compiler and our $cppstdin agree on the same symbols... However,
?X: since cpprun is guaranteed not to be a wrapper, we must clear it if the
?X: only preprocessor we found was a wrapper, with all our luck...
?X:
    set X $x_cpp
    shift
    case "$1" in
"$cpp")
        echo "Perhaps can we force $cc -E using a wrapper..."
        if $wrapper <testcpp.c >testcpp.out 2>&1; \
            $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
        then
            echo "Yup, we can."
            cppstdin="$wrapper"
            cppminus="";
        else
            echo
            "Nope, we'll have to live without it..."
        fi
        ;;
    esac
    case "$cpprun" in
"$wrapper")
        cpprun="
cpplast="
        ;;
    esac
    ;;
    esac

    case "$cppstdin" in
"$wrapper"|"cppstdin") ;;
*) $rm -f $wrapper;;

```

```
esac
$rm -f testcpp.c testcpp.out
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cppstdin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Prefixup.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Prefixup.U,v $
?RCS: Revision 3.0.1.1 1995/01/30 14:30:40 ram
?RCS: patch49: created
?RCS:
?X:
?X: Used as: "set dflt; eval $prefixup" to set $dflt to be $prefix/dir
?X: instead of $prefixexp/dir, in case portability was involved somehow
?X: and $prefix uses ~name expansion.
?X:
?MAKE:Prefixup: prefix prefixexp
?MAKE: -pick add $@ %<
?LINT:define prefixup
?S:prefixup:
?S: This shell variable is used internally by Configure to reset
?S: the leading
?S: installation prefix correctly when $prefix uses
?S: ~name expansion.
?S: set dflt
?S: eval $prefixup
?S: That will set $dflt to $prefix/dir if it was $prefixexp/dir and
?S: $prefix differs from $prefixexp.
?S:.
?V:prefixup
: set the prefixup variable, to restore leading tilda escape
prefixup='case "$prefixexp" in
"$prefix") ;;
*) eval "$1=\`echo \$$1 | sed \"s,^$prefixexp,$prefix,\"\"";;
esac'
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Prefixup.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_values.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_values.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:48:34 ram

?RCS: patch61: created

?RCS:

?MAKE:i\_values: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_values:

?S: This variable conditionally defines the I\_VALUES symbol, and indicates

?S: whether a C program may include <values.h> to get symbols like MAXLONG

?S: and friends.

?S:.

?C:I\_VALUES:

?C: This symbol, if defined, indicates to the C program that it should

?C: include

<values.h> to get definition of symbols like MINFLOAT or

?C: MAXLONG, i.e. machine dependant limitations. Probably, you

?C: should use <limits.h> instead, if it is available.

?C:.

?H:#\$i\_values I\_VALUES /\*\*/

?H:.

?LINT:set i\_values

: see if this is a values.h system

set values.h i\_values

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_values.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:i\_sysaccess: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_sysaccess:  
?S: This variable conditionally defines the I\_SYS\_ACCESS symbol,  
?S: and indicates whether a C program should include <sys/access.h>.  
?S:.  
?C:I\_SYS\_ACCESS:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/access.h>.  
?C:.  
?H:#\$i\_sysaccess I\_SYS\_ACCESS /\*\*/  
?H:.  
?LINT:set i\_sysaccess  
: see if sys/access.h is available  
set sys/access.h i\_sysaccess  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/acl/i\_sysaccess.U

No license file was found, but licenses were detected in source scan.

?RCS:  
?RCS: Copyright (c) 2012 Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:Assert: cat  
?MAKE: -pick add \$@ %<  
?F:./static\_assert.h  
: static assertion checking include file  
?X:  
?X: C programs can include this file to perform STATIC\_ASSERT() checks  
?X: which are done at compile-time and cause the compilation to fail when  
?X: the expression is false.  
?X:  
?X: It is sufficient to compile with: \$cc -c \$cflags try.c

?X: There is no need to link the file to spot the assertion failure.

?X:

```
$cat >static_assert.h <<'EOC'  
#define STATIC_ASSERT(expr) \  
do { switch (0) { case ((expr) ? 1 : 0): case 0: break; } }  
while(0)  
EOC
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Assert.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getprpwnam: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getprpwnam:

?S: This variable conditionally defines HAS\_GETPRPWPNAM if getprpwnam() is

?S: available to retrieve protected (shadow) password entries by name.

?S:.

?C:HAS\_GETPRPWPNAM:

?C: This symbol, if defined, indicates that the getprpwnam system call is

?C: available to retrieve protected (shadow) password entries by name.

?C:.

?H:#\$d\_getprpwnam HAS\_GETPRPWPNAM /\*\*/

?H:.

?LINT:set d\_getprpwnam

: see if getprpwnam exists

set getprpwnam d\_getprpwnam

eval \$inlibc

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getprpwnam.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: longsize.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: longsize.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:09:35 ram  
?RCS: patch61: code moved to intsize.U  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:24:31 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: 'longsize' is now defined within intsize.U  
?X:  
?LINT: empty

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/longsize.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_strtod\_l: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtod\_l:  
?S: This variable conditionally defines the HAS\_STRTOD\_L symbol, which  
?S: indicates to the C program that the strtod\_l() routine is available.  
?S:.  
?C:HAS\_STRTOD\_L:  
?C: This symbol, if defined, indicates that the strtod\_l routine is  
?C: available to convert strings to long doubles.  
?C:.  
?H:#\$d\_strtod\_l HAS\_STRTOD\_L /\*\*/  
?H:.  
?LINT:set d\_strtod\_l

```
: see if strtod_l exists
set strtod_l d_strtod_l
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_strtod_l.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_shmdt.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_shmdt.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:19 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_shmdt: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_shmdt:
```

```
?S: This variable conditionally defines the HAS_SHMDT symbol, which
```

```
?S: indicates to the C program that the shmdt() routine is available.
```

```
?S:.
```

```
?C:HAS_SHMDT:
```

```
?C: This symbol, if defined, indicates that the shmdt() routine is
```

```
?C: available to detach a shared memory segment from the process
space.
```

```
?C:.
```

```
?H:#$d_shmdt HAS_SHMDT /**/
```

```
?H:.
```

```
?LINT:set d_shmdt
```

```
: see if shmdt exists
```

```
set shmdt d_shmdt
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_shmdt.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: prefix.U,v 3.1 1999/07/08 18:27:51 doughera Exp doughera $
```

```
?RCS:
```



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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: prefix.U,v \$

?RCS: Revision 3.1 1999/07/08 18:27:51 doughera

?RCS: 5.005\_5x version -- Andy Dougherty

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:44:05 ram

?RCS: patch49: new prefixexp variable holding a fully expanded prefix

?RCS: patch49: save off previous prefix value in oldprefix if changed (WED)

?RCS: patch49: added the INSTALLPREFIX define for C programs to use (WED)

?RCS:

?RCS:

Revision 3.0.1.1 1994/08/29 16:31:34 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:prefix prefixexp +oldprefix: Getfile Loc Oldconfig cat package

?MAKE: -pick add \$@ %<

?S:prefix:

?S: This variable holds the name of the directory below which the  
?S: user will install the package. Usually, this is /usr/local, and  
?S: executables go in /usr/local/bin, library stuff in /usr/local/lib,  
?S: man pages in /usr/local/man, etc. It is only used to set defaults  
?S: for things in bin.U, mansrc.U, privlib.U, or scriptdir.U.

?S:.

?S:prefixexp:

?S: This variable holds the full absolute path of the directory below  
?S: which the user will install the package. Derived from prefix.

?S:.

?S:oldprefix:

?S: This variable is set non-null if the prefix was previously defined  
?S: and gets set to a new value. Used internally by Configure only.

?S:.

?C:INSTALLPREFIX:

?C: This symbol contains the name of the install prefix for this package.

?C:.

?H:#define INSTALLPREFIX "\$prefix" /\*\*/  
?H:.

:

determine root of directory hierarchy where package will be installed.  
case "\$prefix" in

```
) dflt=`./loc ./usr/local /usr/local /local /opt /usr`
;;
*) dflt="$prefix"
;;
esac
$cat <<EOM
```

By default, \$package will be installed in \$dflt/bin, manual pages under \$dflt/man, etc..., i.e. with \$dflt as prefix for all installation directories. Typically this is something like /usr/local. If you wish to have binaries under /usr/bin but other parts of the installation under /usr/local, that's ok: you will be prompted separately for each of the installation directories, the prefix being only used to set the defaults.

```
EOM
fn=d~
rp='Installation prefix to use?'
./getfile
oldprefix=""
case "$prefix" in
") ;;
*) case "$ans" in
"$prefix") ;;
*) oldprefix="$prefix";;
esac
;;
esac

case "$ans" in
*?) prefix=`echo "$ans" | sed 's/.$//`
;;
*) prefix="$ans"
esac

case "$ansexp" in
*?) prefixexp=`echo "$ansexp" | sed 's/.$//`
;;
*) prefixexp="$ansexp"
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/prefix.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

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?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: Original author Jarkko Hietaniemi <jhi@iki.fi>

?RCS: Merged into dist by Andy Dougherty July 13, 1998

?RCS:

?MAKE:trnl: Nothing

?MAKE: -pick add \$@ %<

?S:trnl:

?S: This variable contains the value to be passed to the tr(1)  
?S: command to transliterate a newline. Typical values are  
?S: '\012' and '\n'. This is needed for EBCDIC systems where  
?S: newline is not necessarily '\012'.

?S:.

?T: DJGPP

: Find the appropriate value for a newline for tr

?X: We can't  
use \$tr since that would cause a circular dependency via Myread

?X: dos djgpp uses '\015\012', but reportedly is happy with '\012' in the  
?X: tr command. I don't know why it passes the '\n' test but later  
?X: refuses to work correctly with it. --AD 6/14/98

```

if test -n "$DJGPP"; then
    trnl='\012'
fi
if test X"$trnl" = X; then
    case "`echo foo | tr '\n' x 2>/dev/null`" in
    foox) trnl='\n' ;;
    esac
fi
if test X"$trnl" = X; then
    case "`echo foo | tr '\012' x 2>/dev/null`" in
    foox) trnl='\012' ;;
    esac
fi
if test X"$trnl" = X; then
    case "`echo foo | tr '\r\n' xy 2>/dev/null`" in
    fooxy) trnl='\n\r' ;;
    esac
fi
if test X"$trnl" = X; then
    cat <<EOM >&2

```

\$me: Fatal Error: cannot figure out how to translate newlines with 'tr'.

EOM

exit 1

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/trnl.U

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?RCS: \$Id\$

?RCS:

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?RCS:

?RCS: \$Log: d\_msg.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_msg: test d\_msgctl d\_msgget d\_msgsnd d\_msgrcv Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_msg:

?S: This variable conditionally defines the HAS\_MSG symbol, which

?S: indicates that the entire msg\*(2) library is present.

?S:.

?C:HAS\_MSG:

?C: This symbol, if defined, indicates that the entire msg\*(2) library is

?C: supported (IPC mechanism based on message queues).

?C:.

?H:#\$d\_msg

HAS\_MSG /\*\*/

?H:.

?T:h\_msg

?LINT:set d\_msg

: see how much of the 'msg\*(2)' library is present.

h\_msg=true

echo " "

case "\$d\_msgctl\$d\_msgget\$d\_msgsnd\$d\_msgrcv" in

\*"\$undef"\*) h\_msg=false;;

esac

case "\$osname" in

```

freebsd)
  case "`ipcs 2>&1`" in
    "SVID messages"*"not configured"*)
      echo "Your $osname does not have the msg*(2) configured." >&4
      h_msg=false
      val="$undef"
      set msgctl d_msgctl
      eval $setvar
      set msgget d_msgget
      eval $setvar
      set msgsnd d_msgsnd
      eval $setvar
      set msgrcv d_msgrcv
      eval $setvar
      ;;
    esac
  ;;
esac
: we could also check for sys/ipc.h ...
if $h_msg && $test `./findhdr sys/msg.h`; then
  echo "You have the full msg*(2) library." >&4
  val="$define"
else
  echo "You don't have the full msg*(2) library." >&4
  val="$undef"
fi
set d_msg
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_msg.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Loc\_sed.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS:

?X: This is used in perl.c.

?MAKE:full\_sed: sed

?MAKE: -pick add \$@ %<

?S:full\_sed:

?S: This variable contains the full pathname to 'sed', whether or

?S: not the user has specified 'portability'. This is only used

?S: in the compiled C program, and we assume that all systems which

?S: can share this executable will have the same full pathname to

?S: 'sed.'

?S:.

?X: Yes, I know about the C symbol PORTABLE, but I think sed

?X: is

unlikely to move, and I'm too lazy to add all the

?X: #ifdef PORTABLE sections to the perl source.

?X:

?C:LOC\_SED:

?C: This symbol holds the complete pathname to the sed program.

?C:.

?H:#define LOC\_SED "\$full\_sed" /\*\*/

?H:.

: Store the full pathname to the sed program for use in the C program

full\_sed=\$sed

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Loc\_sed.U

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_openat d\_unlinkat d\_renameat d\_linkat d\_fchmodat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchmodat:

?S: This variable conditionally defines the HAS\_FCHMODAT symbol, which

?S: indicates the POSIX fchmodat() function is available.

?S:.

?S:d\_linkat:

?S: This variable conditionally defines the HAS\_LINKAT symbol, which

?S: indicates the POSIX linkat() function is available.

?S:.

?S:d\_openat:

?S: This variable conditionally defines the HAS\_OPENAT symbol, which

?S: indicates the POSIX openat() function is available.

?S:.

?S:d\_renameat:

?S: This variable conditionally defines the HAS\_RENAMEAT symbol, which

?S: indicates the POSIX renameat() function is available.

?S:.

```

?S:d_unlinkat:
?S: This variable
    conditionally defines the HAS_UNLINKAT symbol, which
?S: indicates the POSIX unlinkat() function is available.
?S:.
?C:HAS_FCHMODAT:
?C: This symbol is defined if the fchmodat() routine is available.
?C:.
?C:HAS_LINKAT:
?C: This symbol is defined if the linkat() routine is available.
?C:.
?C:HAS_OPENAT:
?C: This symbol is defined if the openat() routine is available.
?C:.
?C:HAS_RENAMEAT:
?C: This symbol is defined if the renameat() routine is available.
?C:.
?C:HAS_UNLINKAT:
?C: This symbol is defined if the unlinkat() routine is available.
?C:.
?H:#$d_fchmodat HAS_FCHMODAT /**/
?H:#$d_linkat HAS_LINKAT /**/
?H:#$d_openat HAS_OPENAT /**/
?H:#$d_renameat HAS_RENAMEAT /**/
?H:#$d_unlinkat HAS_UNLINKAT /**/
?H:.
?LINT:set d_openat d_unlinkat d_renameat d_linkat d_fchmodat
: check for openat, unlinkat, renameat, linkat, fchmodat
set openat d_openat
eval $inlibc

set unlinkat d_unlinkat
eval $inlibc

set renameat d_renameat
eval $inlibc

set linkat d_linkat
eval $inlibc

set fchmodat d_fchmodat
eval
$inlibc

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_fsat.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_strtoul.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:46:43 ram
?RCS: patch61: created
?RCS:
?RCS:
?MAKE:d_strtoul: Inlibc
?MAKE: -pick add $@ %<
?S:d_strtoul:
?S: This variable conditionally defines the HAS_STRTOUL symbol, which
?S: indicates to the C program that the strtoul() routine is available
?S: to provide conversion of strings to unsigned long.
?S:
?C:HAS_STRTOUL (STRTOUL):
?C: This symbol, if defined, indicates that the strtoul routine is
?C: available
to provide conversion of strings to unsigned long.
?C:
?H:#$d_strtoul HAS_STRTOUL /**/
?H:
?LINT:set d_strtoul
: see if strtoul exists
set strtoul d_strtoul
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_strtoul.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_cbrt.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```



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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_cbrt.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_cbrt: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_cbrt:

?S: This variable conditionally defines the HAS\_CBRT symbol, which

?S: indicates to the C program that the cbrt() (cube root) function

?S: is available.

?S:.

?C:HAS\_CBRT (CBRT):

?C: This symbol, if defined, indicates that the cbrt() (cube root)

?C: function is available.

?C:.

?H:#\$d\_cbrt HAS\_CBRT /\*\*/

?H:.

?LINT:set

d\_cbrt

: see if cbrt exists

set cbrt d\_cbrt

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_cbrt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syswait.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS:

?RCS: \$Log: i\_syswait.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit looks wether <sys/wait.h> is available or not

?X:  
?MAKE:i\_syswait: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_syswait:  
?S: This variable conditionally defines I\_SYS\_WAIT, which indicates  
?S: to the C program that it should include <sys/wait.h>.  
?S:.  
?C:I\_SYS\_WAIT (I\_SYSWAIT):  
?C: This symbol, if defined, indicates to the C program  
that it should  
?C: include <sys/wait.h>.  
?C:.  
?H:#\$i\_syswait I\_SYS\_WAIT /\*\*/  
?H:.  
?LINT:set i\_syswait  
: see if this is a syswait system  
set sys/wait.h i\_syswait  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_syswait.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readlink.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_readlink.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:11:52 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_readlink: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_readlink:  
?S: This variable conditionally defines the HAS\_READLINK symbol, which  
?S: indicates to the C program that the readlink() routine is available  
?S: to read the value of a symbolic link.  
?S:.  
?C:HAS\_READLINK :

?C: This  
symbol, if defined, indicates that the readlink routine is  
available to read the value of a symbolic link.

?C:.  
?H:#\$d\_readlink HAS\_READLINK /\*\*/  
?H:.  
?LINT:set d\_readlink  
: see if readlink exists  
set readlink d\_readlink  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_readlink.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: newslib.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: newslib.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:09:23 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:newslib newslibexp: test inews Oldconfig Getfile  
?MAKE: -pick add \$@ %<  
?S:newslib:  
?S: This variable contains the eventual value of the NEWSLIB symbol,  
?S: which holds the name of the directory serving as the news library.  
?S: It may have a ~ on the front. See newslibexp for expanded version.  
?S:.  
?S:newslibexp:  
?S: This variable contains  
the ~ expanded name of the news library  
?S: directory. See newslib.  
?S:.  
?C:NEWSLIB:  
?C: This symbol contains the name of the directory serving as the news  
?C: library. The program must be prepared to do ~ expansion on it.  
?C:.  
?C:NEWSLIB\_EXP:  
?C: This symbol is the ~ expanded version of NEWSLIB, for programs that

```

?C: do not wish to deal with it at run-time.
?C:.
?H:#define NEWSLIB "$newslib" /**/
?H:#define NEWSLIB_EXP "$newslibexp" /**/
?H:.
?LINT:change inews
: figure out news library
case "$newslib" in
")
  dflt=/usr/lib/news
  ;;
*) dflt=$newslib ;;
esac
echo " "
fn=d~
rp="Where is your news library?"
./getfile
newslib="$ans"
newslibexp="$ansexp"
if $test -f $newslibexp/inews; then
echo "Aha! Inews is really in $newslibexp! Maybe this is 2.10.2..." >&4
case "$inews" in
inews)
: null
;;
*) echo "(Make sure $inews isn't an old version.)";;
esac
inews=$newslibexp/inews
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/newslib.U

```

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```

?RCS: $Id: Csym.U,v 3.0.1.4 1995/07/25 13:36:29 ram Exp $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:

```

```

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```

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?RCS: as specified in the README file that comes with the distribution.

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```

```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:

```

```

?RCS: $Log: Csym.U,v $

```

```

?RCS: Revision 3.0.1.4 1995/07/25 13:36:29 ram

```

```

?RCS: patch56: re-arranged compile line to include ldflags before objects

```

?RCS: patch56: added quotes for OS/2 support

?RCS:

?RCS: Revision 3.0.1.3 1995/05/12 12:00:33 ram

?RCS: patch54: fixed C test program to bypass gcc builtin type checks (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/10/31 09:34:13 ram

?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U

?RCS:

?RCS: Revision

3.0.1.1 1993/08/25 14:00:05 ram

?RCS: patch6: added ldflags as a conditional dependency and to compile line

?RCS: patch6: a final double quote was missing in csym variable after eval

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:Csym mistrustnm extern\_C: Options contains libc libs runnm test \  
+cc +optimize +ccflags +ldflags run rm\_try \_exe d\_cplusplus

?MAKE: -pick add \$@ %<

?LINT:define csym

?LINT:use libc

?LINT:extern mistrustnm

?LINT:set mistrustnm

?S:csym:

?S: This shell variable is used internally by Configure to check

?S: whether a given C symbol is defined or not. A typical use is:

?S: set symbol result [-fva] [previous]

?S: eval \$csym

?S: That will set result to 'true' if the function [-f], variable [-v]

?S: or array [-a] is defined, 'false' otherwise. If a previous value is

?S: given and the -r flag was provided on the command line, that value

?S: is reused without questioning.

?S:.

?S:extern\_C:

?S: ANSI C

requires 'extern' where C++ requires 'extern "C"'. This

?S: variable can be used in Configure to do the right thing.

?S:.

?S:mistrustnm:

?S: This variable can be used to establish a fallback for the cases

?S: where nm fails to find a symbol. If usenm is false or usenm is true

?S: and mistrustnm is false, this variable has no effect. If usenm is true

?S: and mistrustnm is "compile", a test program will be compiled to try to

?S: find any symbol that can't be located via nm lookup. If mistrustnm is

?S: "run", the test program will be run as well as being compiled.

?S:.

?V:csym

?T:tval tx tlook tf tdc

```

?F:!try
: is a C symbol defined?
csym='tlook=$1;
case "$3" in
-v) tf=libc.tmp; tdc="";;
-a) tf=libc.tmp; tdc="[]";;
*) tlook="^\$1\$"; tf=libc.list; tdc="()";;
esac;
case "$d_cplusplus" in
  $define) extern_C="extern \"C\"";;
  *) extern_C="extern";;
esac;
tx=yes;
case "$reuseval-$4" in
true-) ;;
true-*) tx=no; eval "tval=\$4"; case "$tval" in "") tx=yes;; esac;;
esac;
case "$tx"
in
yes)
?X:
?X: Put symbol inside a printf to fool optimizing compilers...
?X:
?X: We use 'short' instead of 'int' to try to circumvent overzealous
?X: optimizing compilers using built-in prototypes for commonly used
?X: routines to complain when seeing a different external declaration. For
?X: instance, gcc 2.6.3 fails if we use 'int' and we attempt a test against
?X: memcpy() on machines where sizeof(int) == sizeof(char *) (the usual return
?X: type), the compiler assuming it's a built-in declaration given that the
?X: returned size matches. At least with 'short' we are safe! -- RAM, for ADO
?X:
?X: Let's thank GNU cc for making our lives so easy! :-)
?X: (An alternative for the future would be to use our knowledge about gcc
?X: to force a -fno-builtin option in the compile test, in case the 'short'
?X: trick is obsoleted by future gcc releases). -- RAM
?X:
tval=false;
if $test "$runnm" = true; then
if $contains $tlook $tf >/dev/null 2>&1; then
tval=true;
elif $test "$mistrustnm"
= compile -o "$mistrustnm" = run; then
echo "$extern_C void *$1$tdc; void (*(p()))$tdc { return &$1; } int main(int argc, char **argv) { if(p() && p() !=
(void *)argv[0]) return(0); else return(1); }"> try.c;
$cc -o try $optimize $ccflags $ldflags try.c >/dev/null 2>&1 $libs && tval=true;
$test "$mistrustnm" = run -a -x try && { $run ./try$_exe >/dev/null 2>&1 || tval=false; };
$rm_try;
fi;

```

```

else
echo "$xtern_C void *$1$tdc; void *(*(p()))$tdc { return &$1; } int main(int argc, char **argv) { if(p() && p() !=
(void *)argv[0]) return(0); else return(1); }"> try.c;
$cc -o try $optimize $ccflags $ldflags try.c $libs >/dev/null 2>&1 && tval=true;
$rm_try;
fi;
;;
*)
case "$tval" in
$define) tval=true;;
*) tval=false;;
esac;
;;
esac;
eval "$2=$tval"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/compline/Csym.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_gethname.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:13:00 ram

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:11 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethname d\_uname d\_phostname aphostname: phostname cat \

myhostname package d\_portable Loc echo n c +i\_whoami +usrinc \

Myread Guess Oldconfig Csym

?MAKE: -pick add \$@ %<

?S:d\_gethname:

?S: This variable conditionally defines the HAS\_GETHOSTNAME symbol,  
which

?S: indicates to the C program that the gethostname() routine may be

?S: used to derive the host name.

?S:.

?S:d\_underscore:

?S: This variable conditionally defines the HAS\_UNAME symbol, which

?S: indicates to the C program that the uname() routine may be

?S: used to derive the host name.

?S:.

?S:d\_phostname:

?S: This variable conditionally defines the PHOSTNAME symbol, which

?S: contains the shell command which, when fed to popen(), may be

?S: used to derive the host name.

?S:.

?S:aphostname:

?S: This variable contains the command which can be used to compute the

?S: host name. The command is fully qualified by its absolute path, to make

?S: it safe when used by a process with super-user privileges.

?S:.

?C:HAS\_GETHOSTNAME (GETHOSTNAME):

?C: This symbol, if defined, indicates that the C program may use the

?C: gethostname() routine to derive the host name. See also HAS\_UNAME

?C: and PHOSTNAME.

?C:.

?C:HAS\_UNAME (UNAME):

?C: This symbol, if defined, indicates that the C program may

use the

?C: uname() routine to derive the host name. See also HAS\_GETHOSTNAME

?C: and PHOSTNAME.

?C:.

?C:PHOSTNAME:

?C: This symbol, if defined, indicates that the C program may use the

?C: contents of PHOSTNAME as a command to feed to the popen() routine

?C: to derive the host name. See also HAS\_GETHOSTNAME and HAS\_UNAME.

?C: Note that the command uses a fully qualified path, so that it is safe

?C: even if used by a process with super-user privileges.

?C:.

?H:#\$d\_underscore HAS\_GETHOSTNAME /\*\*/

?H:#\$d\_underscore HAS\_UNAME /\*\*/

?H:#\$d\_phostname PHOSTNAME "\$aphostname" /\* How to get the host name \*/

?H:.

?T:file val call

?LINT:change i\_whoami

: see how we will look up host name

echo " "

if false; then

: dummy stub to allow use of elif

@if HAS\_GETHOSTNAME

elif set gethostname val -f d\_underscore; eval \$csym; \$val; then

echo 'gethostname() found.' >&4

d\_underscore="\$define"

call=gethostname



```

@end
@if HAS_UNAME
elif set uname val -f d_uname; eval $csym; $val; then
if ./xenix; then
$cat <<'EOM'
uname()
was found, but you're running xenix, and older versions of xenix
have a broken uname(). If you don't really know whether your xenix is old
enough to have a broken system call, use the default answer.

```

```

EOM
dflt=y
case "$d_uname" in
"$define") dflt=n;;
esac
rp='Is your uname() broken?'
./myread
case "$ans" in
n*) d_uname="$define"; call=uname;;
esac
else
echo 'uname() found.' >&4
d_uname="$define"
call=uname
fi
@end
fi
case "$d_gethname" in
") d_gethname="$undef";;
esac
case "$d_uname" in
") d_uname="$undef";;
esac
@if PHOSTNAME || MYHOSTNAME
case "$d_uname$d_gethname" in
*define*)
dflt=n
cat <<EOM

```

Every now and then someone has a \$call() that lies about the hostname but can't be fixed for political or economic reasons. If you wish, I can

```

@if MYHOSTNAME && PHOSTNAME
pretend $call() isn't there and maybe compile in the hostname or
compute it from the '$phostname' command at run-time.
@elsif MYHOSTNAME
pretend $call() isn't there and maybe compile
in the hostname.
@elsif PHOSTNAME

```

pretend \$call() isn't there and maybe compute hostname at run-time thanks to the '\$phostname' command.

```
@elsif WHOAMI
get the hostname from whomai.h (provided you have one).
@else
simply ignore your host name and use something like "noname" instead.
@end
```

EOM

```
rp="Shall I ignore $call() from now on?"
./myread
case "$ans" in
y*) d_undef="$undef" d_gethname="$undef"; $echo $n "Okay...$c";;
esac;;
esac
@end
@if PHOSTNAME || aphostname
?X: Compute the full path name for the command
case "$phostname" in
") aphostname="";;
*) case "$aphostname" in
/*) ;;
*) set X $phostname
shift
file=$1
shift
file=`./loc $file $file $pth`
aphostname=`echo $file $*`
;;
esac
;;
esac
@end
@if PHOSTNAME && MYHOSTNAME
case "$d_undef$d_gethname" in
*define*) ;;
*)
case "$phostname" in
") ;;
*)
$cat <<EOT
```

There is no gethostname() or uname() on this system. You have two possibilities at this point:

- 1) You can have your host name (\$myhostname) compiled into \$package, which lets \$package start up faster, but makes your binaries non-portable, or

2) you can have \$package use a

```
popen("$aphostname","r")
```

which will start slower but be more portable.

```
@ if WHOAMI
```

Option 1 will give you the option of using whoami.h if you have one.

```
@ end
```

If you want option 2 but with a different command, you can edit config.sh at the end of this shell script.

```
EOT
```

```
case "$d_phostname" in
"$define") dflt=n;;
"$undef") dflt=y;;
")
case "$d_portable" in
"$define") dflt=n ;;
*) dflt=y ;;
esac;;
esac
rp="Do you want your host name compiled in?"
./myread
case "$ans" in
n*) d_phostname="$define" ;;
*) aphostname=""; d_phostname="$undef";;
esac;;
esac
case "$aphostname" in
")
@ if WHOAMI
case "$i_whoami" in
"$define")
dflt=y
$cat <<EOM
```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier  
(\$myhostname) hardwired in.

```
EOM
```

```
rp="Use whoami.h to get hostname?"
./myread
case "$ans" in
n*) i_whoami="$undef";;
```

```

    esac
    ;;
    "$undef")
    $cat <<EOM
No hostname function and no whoami.h -- hardwiring "$myhostname".
EOM
    ;;
    esac;;
@ else
    echo 'No hostname function -- hardwiring "$myhostname".' >&4;;
@ end
    esac;;
esac
@elsif PHOSTNAME
case "$d_underscore$d_gethostname" in
*define*) ;;
*)
case "$phostname" in
")
@ if WHOAMI
case "$i_whoami" in
"$define")
$cat <<EOM

```

No hostname function--we'll use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

```

EOM
    ;;
    *) echo "There will be no way for $package to get your hostname." >&4;;
    esac;;
@ else
    echo "There will be no way for $package to get your hostname." >&4;;
@ end
    *)
    echo "I'll use 'popen(\"\"$aphostname\", \"r\")' to get your hostname." >&4
    ;;
    esac;;
esac
@elsif MYHOSTNAME
case "$d_underscore$d_gethostname" in
*define*) ;;
*)
@ if WHOAMI
case "$i_whoami" in
"$define")
dflt=y

```

```
$cat
<<EOM
```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```
rp="Use whoami.h to get hostname?"
./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
echo 'No whoami.h--hardwiring "$myhostname".' >&4;;
esac;;
@ else
echo 'Hardwiring "$myhostname".' >&4;;
@ end
esac
@end
case "$d_phostname" in
") d_phostname="$undef";;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gethname.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: nis.U,v 3.0.1.3 1997/02/28 16:17:38 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: nis.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 16:17:38 ram
```

```
?RCS: patch61: ensure suitable defaults for hostcat and friends
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/03/21 08:48:34 ram
```

```
?RCS: patch52: continued fix for NeXT NIS/NetInfo handling
```

?RCS:  
?RCS: Revision 3.0.1.1 1995/02/15 14:16:23 ram  
?RCS: patch51: now correctly handles NeXT using NIS rather than NetInfo  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:24 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:passcat  
groupcat hostcat: Myread Oldconfig test contains  
?MAKE: -pick add \$@ %<  
?S:passcat:  
?S: This variable contains a command that produces the text of the  
?S: /etc/passwd file. This is normally "cat /etc/passwd", but can be  
?S: "ypcat passwd" when NIS is used.  
?S: On some systems, such as os390, there may be no equivalent  
?S: command, in which case this variable is unset.  
?S:.  
?S:groupcat:  
?S: This variable contains a command that produces the text of the  
?S: /etc/group file. This is normally "cat /etc/group", but can be  
?S: "ypcat group" when NIS is used.  
?S: On some systems, such as os390, there may be no equivalent  
?S: command, in which case this variable is unset.  
?S:.  
?S:hostcat:  
?S: This variable contains a command that produces the text of the  
?S: /etc/hosts file. This is normally "cat /etc/hosts", but can be  
?S: "ypcat hosts" when NIS is used.  
?S: On some systems, such as os390, there may be no equivalent  
?S: command, in which case this variable is unset.  
?S:.  
:  
see if we have to deal with yellow pages, now NIS.  
?X: NeXT gives us some fun here, as always, by having both NIS (former YP)  
?X: and NetInfo. But since it has both, it's ok to put the test inside the if.  
?X: Contributed by Thomas Neumann <tom@smart.bo.open.de>.  
if \$test -d /usr/etc/yp || \$test -d /etc/yp || \$test -d /usr/lib/yp; then  
@if passcat || groupcat  
case "\$passcat" in  
nidump\*) ;;  
\*)  
case "\$passcat" in  
\*ypcat\*) dflt=y;;  
") if \$contains '\+' /etc/passwd >/dev/null 2>&1; then  
dflt=y  
else  
dflt=n  
fi;;

```

*) dflt=n;;
esac
echo " "
rp='Are you getting the passwd file via yellow pages?'
./myread
case "$ans" in
y*) passcat='ypcat passwd'
@if groupcat
echo "(Assuming /etc/group is also distributed.)"
groupcat='ypcat group'
@end
;;
*) passcat='cat /etc/passwd'
@if groupcat
echo "(Assuming /etc/group is also local.)"
groupcat='cat /etc/group'
@end
;;
esac
;;
esac
@end
@if hostcat
case "$hostcat" in
nidump*) ;;
*)
case
"$hostcat" in
*y*) dflt=y;;
") if $contains '^+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the hosts file via yellow pages?'
./myread
case "$ans" in
y*) hostcat='ypcat hosts';;
*) hostcat='cat /etc/hosts';;
esac
;;
esac
@end
fi
?X: Ensure suitable default -- Manoj Srivastava

```

```

case "$hostcat" in
") test -f /etc/hosts && hostcat='cat /etc/hosts';;
esac
case "$groupcat" in
") test -f /etc/group && groupcat='cat /etc/group';;
esac
case "$passcat" in
") test -f /etc/passwd && passcat='cat /etc/passwd';;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/nis.U

```

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```

?RCS: $Id: d_setgrps.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_setgrps.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setgrps: Inlibc
?MAKE: -pick add $@ %<
?S:d_setgrps:
?S: This variable conditionally defines the HAS_SETGROUPS symbol, which
?S: indicates to the C program that the setgroups() routine is available
?S: to set the list of process groups.
?S:.
?C:HAS_SETGROUPS:
?C: This symbol, if defined, indicates that the setgroups() routine is
?C: available
?C: to set the list of process groups. If unavailable, multiple
?C: groups are probably not supported.
?C:.
?H:#$d_setgrps HAS_SETGROUPS /**/
?H:.
?LINT:set d_setgrps
: see if setgroups exists
set setgroups d_setgrps
eval $inlibc

```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setgrps.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_portable.U,v \$

?RCS: Revision 3.0.1.2 1995/01/11 15:28:52 ram

?RCS: patch45: executable path stripping moved to the end in Config\_sh.U

?RCS:

?RCS: Revision 3.0.1.1 1993/12/15 08:21:17 ram

?RCS: patch15: did not strip variables properly when needed

?RCS: patch15: now also strips down variables from trylist

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The Loc unit is wanted to get the definition of all the locating variables.

?X:

?MAKE:d\_portable:

cat Loc Myread Oldconfig

?MAKE: -pick add \$@ %<

?S:d\_portable:

?S: This variable conditionally defines the PORTABLE symbol, which

?S: indicates to the C program that it should not assume that it is

?S: running on the machine it was compiled on.

?S:.

?C:PORTABLE:

?C: This symbol, if defined, indicates to the C program that it should

?C: not assume that it is running on the machine it was compiled on.

?C: The program should be prepared to look up the host name, translate

?C: generic filenames, use PATH, etc.

?C:.

?H:#\$d\_portable PORTABLE /\*\*/

?H:.

?D:d\_portable="

: decide how portable to be

```

case "$d_portable" in
"$define") dflt=y;;
*) dflt=n;;
esac
$cat <<'EOH'

```

I can set things up so that your shell scripts and binaries are more portable, at what may be a noticable cost in performance. In particular, if you ask to be portable, the following happens:

- 1) Shell scripts will rely on the PATH variable rather than using the paths derived above.
- 2) ~username interpretations will be done at run time rather than by Configure.
- @if PHOSTNAME
  - 3) The system name will be determined at run time, if at all possible.
- @end

EOH

```

rp="Do you expect to run these scripts and binaries on multiple machines?"
./myread
case "$ans" in
y*) d_portable="$define"
?X:
?X: Paths will be stripped down (/usr/bin/vi -> vi) in Config_sh.U if needed.
?X:
;;
*) d_portable="$undef" ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_portable.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Init.U,v 3.0.1.1 1994/10/31 09:45:59 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: Init.U,v $
?RCS: Revision 3.0.1.1 1994/10/31 09:45:59 ram

```

?RCS: patch44: removed Options from MAKE to prevent Init overrides  
?RCS: patch44: option processing now done after Myinit thanks to new Begin.U  
?RCS: patch44: moved "Beginning of configuration questions" to Begin.U  
?RCS: patch44: moved signal trapping instruction to Begin.U as well  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:02 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This file  
initializes certain default variables used by Configure. They  
?X: may be overridden or added to by definitions in Myinit.U.  
?X:  
?MAKE:Init eunicefix: Null  
?MAKE: -pick add \$@ %<  
?MAKE: -pick weed \$@ ./Init  
?S:eunicefix:  
?S: When running under Eunice this variable contains a command which will  
?S: convert a shell script to the proper form of text file for it to be  
?S: executable by the shell. On other systems it is a no-op.  
?S:.  
?V:define undef smallmach:rmlist  
?X:  
?X: Throughout the units, one may make use of \$define and \$undef to reference  
?X: a defined symbol or an undefined one. There is no need to add them in  
?X: the dependency line since this unit makes them visible via ?V:, and  
?X: everyone inherits from those symbols since by convention Init.U is the  
?X: root dependency.  
?X:  
?LINT:extern DJGPP  
?LINT:extern \_exe  
?LINT:change \_exe  
?LINT:extern is\_os2  
: Detect odd OSs  
define='define'  
undef='undef'  
smallmach='pdp11 i8086 z8000 i80286 iAPX286'  
rmlist=""  
  
: We must find out about  
Eunice early  
eunicefix=':'  
if test -f /etc/unixtovms; then  
eunicefix=/etc/unixtovms  
fi  
if test -f /etc/unixtovms.exe; then  
eunicefix=/etc/unixtovms.exe  
fi

```

: Set executable suffix now -- needed before hints available
if test -f "/libs/version.library"; then
: Amiga OS
  _exe=""
elif test -f "/system/gnu_library/bin/ar.pm"; then
: Stratus VOS
  _exe=".pm"
elif test -n "$DJGPP"; then
: DOS DJGPP
  _exe=".exe"
elif test -f /kern/cookiejar; then
: MiNT
  _exe=""
elif test -d c:/ -o -n "$is_os2" ; then
: OS/2 or cygwin
  _exe=".exe"
fi

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Init.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: shm_for.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: shm_for.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:28:37 ram
?RCS: patch36: call ./Cppsym explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:shm_for shm_att shm_lim: Cppsym Myread ipc uname
?MAKE: -pick add $@ %<
?S:shm_for:
?S: This variable tells us the type of machine we're expecting the
?S: shared memory code to run on. The value is available to C
programs
?S: in the C_SHM_FOR manifest.

```

```

?S:.
?S:shm_att:
?S: This variable tells us where a shared memory segment should be
?S: attached. Good values are HIGH, LOW, and ZERO.
?S:.
?S:shm_lim:
?S: This variable tells us if shared memory attached HIGH should
?S: have an upper limit.
?S:.
?X: -----
?X: It's a potential lose to define anything beginning with SHM...
?X: At least we can think that S_ stands for "String version of ..." -- HMS
?X: -----
?C:S_SHM_FOR ~ %<:
?C: This symbol identifies what we chose for the target system's
?C: default shared memory configuration parameters.
?C:.
?C:S_SHM_ATT ~ %<:
?C: This symbol holds the default "place" to attach shared memory.
?C: Values are "HIGH", "ZERO", and "LOW".
?C:.
?C:S_SHM_LIM ~ %<:
?C: This symbol holds the default upper bound address limit if shared
?C: memory is attached HIGH. If zero, there is no upper limit.
?C:.
?H:%<:#ifdef
SERVE_SHM
?H:%<:#define S_SHM_FOR "$shm_for"
?H:%<:#define S_SHM_ATT "$shm_att"
?H:%<:#define S_SHM_LIM "$shm_lim"
?H:%<:#endif
?H:.
?W:%<:S_SHM_FOR S_SHM_ATT S_SHM_LIM
: see how to attach shared memory
echo " "
echo "Deciding how to attach shared memory..." >&4

case "$ipc" in
shm)
shm_for='Default case'
shm_att='HIGH'
shm_lim='0x0'
if ./Cppsym tower32 tower32_600; then
echo "NCR Towers are usually normal..."
: echo "Oh, an NCR Tower."
: This works for the 600
shm_for='NCR Tower 32'
shm_att='LOW'

```

```

else
case "$uname" in
*/uname)
case "`uname -m`" in
ACS??68*)
echo "Oh, an Altos 3068."
shm_for='Altos 3068:'
shm_lim='0x800000'
;;
esac
;;
*)
echo "Looks normal to me..."
;;
esac
fi

dflt="$shm_for"
rp='Description of shared memory configuration?'
./myread
shm_for="$ans"

dflt="$shm_att"
rp='Where should shared memory be attached?'
./myread
shm_att="$ans"

case "$shm_att" in
HIGH)
dflt="$shm_lim"
rp='What is
the upper address limit for shared memory?'
./myread
shm_lim="$ans"
;;
*)
shm_lim=""
;;
esac
;;

*)
echo "but you aren't using shared memory so I won't bother." >&4
shm_for='NOT CONFIGURED'
shm_att='NONE'
shm_lim='-1'
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/shm\_for.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gconvert.U,v 3.0.1.3 1997/02/28 15:33:38 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_gconvert.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:33:38 ram

?RCS: patch61: integrated new unit from perl5

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 13:55:59 ram

?RCS: patch56: improved comments about the Gconvert macro (ADO)

?RCS: patch56: force compile-link test since it may exist but be unusable (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:12:51 ram

?RCS: patch36:

created by ADO

?RCS:

?MAKE:d\_Gconvert: \

Compile cat Inlibc rm \_o rm\_try i\_stdlib d\_qgcvrt run \

uselongdouble d\_longdbl d\_PRIgldbl sPRIgldbl

?MAKE: -pick add \$@ %<

?S:d\_Gconvert:

?S: This variable holds what Gconvert is defined as to convert

?S: floating point numbers into strings. By default, Configure

?S: sets this macro to use the first of gconvert, gcvrt, or sprintf

?S: that pass sprintf-%g-like behavior tests. If perl is using

?S: long doubles, the macro uses the first of the following

?S: functions that pass Configure's tests: qgcvrt, sprintf (if

?S: Configure knows how to make sprintf format long doubles--see

?S: sPRIgldbl), gconvert, gcvrt, and sprintf (casting to double).

?S: The gconvert\_preferance and gconvert\_Id\_preferance variables

?S: can be used to alter Configure's preferences, for doubles and

?S: long doubles, respectively. If present, they contain a

?S: space-separated list of one or more of the above function

?S: names in the order they should be tried.

?S:  
?S: d\_Gconvert  
may be set to override Configure with a platform-  
?S: specific function. If this function expects a double, a  
?S: different value may need to be set by the uselongdouble.cbu  
?S: call-back unit so that long doubles can be formatted without  
?S: loss of precision.  
?S:.  
?C:Gconvert:  
?C: This preprocessor macro is defined to convert a floating point  
?C: number to a string without a trailing decimal point. This  
?C: emulates the behavior of sprintf("%g"), but is sometimes much more  
?C: efficient. If gconvert() is not available, but gcvt() drops the  
?C: trailing decimal point, then gcvt() is used. If all else fails,  
?C: a macro using sprintf("%g") is used. Arguments for the Gconvert  
?C: macro are: value, number of digits, whether trailing zeros should  
?C: be retained, and the output buffer.  
?C: The usual values are:  
?C: d\_Gconvert='gconvert((x),(n),(t),(b))'  
?C: d\_Gconvert='gcvt((x),(n),(b))'  
?C: d\_Gconvert='sprintf((b),"%.\*g",(n),(x))'  
?C: The last two assume trailing zeros should  
not be kept.  
?C:.  
?H:#define Gconvert(x,n,t,b) \$d\_Gconvert  
?H:.  
?T: xxx\_list xxx\_convert xxx\_ld\_list  
?F:!try  
?LINT:extern gconvert\_preference  
?LINT:extern gconvert\_ld\_preference  
: Check how to convert floats to strings.

```

if test "X$d_Gconvert" = X; then

echo " "
echo "Checking for an efficient way to convert floats to strings."
echo " " > try.c
case "$uselongdouble" in
"$define") echo "#define USE_LONG_DOUBLE" >>try.c ;;
esac
case "$d_longdbl" in
"$define") echo "#define HAS_LONG_DOUBLE" >>try.c ;;
esac
case "$d_PRIgldbl" in
"$define") echo "#define HAS_PRIgldbl" >>try.c ;;
esac
$cat >>try.c <<EOP
#endif TRY_gconvert

```



```

#define Gconvert(x,n,t,b) gconvert((x),(n),(t),(b))
const char *myname = "gconvert";
#endif
#ifdef TRY_gcvt
#define Gconvert(x,n,t,b) gcvt((x),(n),(b))
const char *myname = "gcvt";
#endif
#ifdef TRY_qgcvt
#define Gconvert(x,n,t,b) qgcvt((x),(n),(b))
const char *myname = "qgcvt";
#define DOUBLETYP long double
#endif
#ifdef TRY_sprintf
#if defined(USE_LONG_DOUBLE) &&
    defined(HAS_LONG_DOUBLE)
#ifdef HAS_PRIgdbl
#define Gconvert(x,n,t,b) sprintf((b),"%.*"$sPRIgdbl,(n),(x))
#else
#define Gconvert(x,n,t,b) sprintf((b),"%.*g", (n),(double)(x))
#endif
#else
#define Gconvert(x,n,t,b) sprintf((b),"%.*g", (n),(x))
#endif
const char *myname = "sprintf";
#endif

#ifdef DOUBLETYP
#if defined(USE_LONG_DOUBLE) && defined(HAS_LONG_DOUBLE)
#define DOUBLETYP long double
#else
#define DOUBLETYP double
#endif
#endif

#include <stdio.h>

#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <string.h>

void checkit(const char *expect, char *got)
{
    if (strcmp(expect, got)) {
        printf("%s oddity: Expected %s, got %s\n",
            myname, expect, got);
        exit(1);
    }
}

```

```

}
}

int main()
{
char buf[64];
buf[63] = '\0';

/* This must be 1st test on (which?) platform */
/* Alan Burlison <AlanBurlsin@unn.unisys.com> */
Gconvert((DOUBLETTYPE)0.1, 8, 0, buf);
checkit("0.1", buf);

Gconvert((DOUBLETTYPE)0.01, 8, 0, buf);
checkit("0.01", buf);

Gconvert((DOUBLETTYPE)0.001,
8, 0, buf);
checkit("0.001", buf);

Gconvert((DOUBLETTYPE)0.0001, 8, 0, buf);
checkit("0.0001", buf);

Gconvert((DOUBLETTYPE)0.00009, 8, 0, buf);
if (strlen(buf) > 5)
    checkit("9e-005", buf); /* for Microsoft ?? */
else
    checkit("9e-05", buf);

Gconvert((DOUBLETTYPE)1.0, 8, 0, buf);
checkit("1", buf);

Gconvert((DOUBLETTYPE)1.1, 8, 0, buf);
checkit("1.1", buf);

Gconvert((DOUBLETTYPE)1.01, 8, 0, buf);
checkit("1.01", buf);

Gconvert((DOUBLETTYPE)1.001, 8, 0, buf);
checkit("1.001", buf);

Gconvert((DOUBLETTYPE)1.0001, 8, 0, buf);
checkit("1.0001", buf);

Gconvert((DOUBLETTYPE)1.00001, 8, 0, buf);
checkit("1.00001", buf);

Gconvert((DOUBLETTYPE)1.000001, 8, 0, buf);

```

```

checkit("1.000001", buf);

Gconvert((DOUBLETTYPE)0.0, 8, 0, buf);
checkit("0", buf);

Gconvert((DOUBLETTYPE)-1.0, 8, 0, buf);
checkit("-1", buf);

/* Some Linux gcvt's give 1.e+5 here. */
Gconvert((DOUBLETTYPE)100000.0, 8, 0, buf);
checkit("100000", buf);

/* Some Linux gcvt's give -1.e+5
here. */
Gconvert((DOUBLETTYPE)-100000.0, 8, 0, buf);
checkit("-100000", buf);

Gconvert((DOUBLETTYPE)123.456, 8, 0, buf);
checkit("123.456", buf);

/* Testing of 1e+129 in bigintpm.t must not get extra '.' here. */
Gconvert((DOUBLETTYPE)1e34, 8, 0, buf);
/* 34 should be enough to scare even long double
* places into using the e notation. */
if (strlen(buf) > 5)
    checkit("1e+034", buf); /* for Microsoft */
else
    checkit("1e+34", buf);

/* For Perl, if you add additional tests here, also add them to
* t/base/num.t for benefit of platforms not using Configure or
* overriding d_Gconvert */

exit(0);
}
EOP
?X: List of order in which to search for functions.
?X: Usual order of efficiency is gconvert gcvt sprintf
?X: If a hint file sets a d_Gconvert="gconvert" or "gcvt" or "sprintf",
?X: then that is taken as a hint for which function to try first.
?X: (e.g. that function may be in a problematic /usr/ucblib library, and
?X: the user may or may not choose to use -luch
stuff.)
?X: Any other hint file (or previous config.sh) setting is left intact.
: first add preferred functions to our list
xxx_list=""
for xxx_convert in $gconvert_preference; do
    case $xxx_convert in

```

```

    gcvt|gconvert|sprintf) xxx_list="$xxx_list $xxx_convert" ;;
    *) echo "Discarding unrecognized gconvert_preference $xxx_convert" >&4 ;;
    esac
done
: then add any others
for xxx_convert in gconvert gcvt sprintf; do
    case "$xxx_list" in
        *$xxx_convert*) ;;
        *) xxx_list="$xxx_list $xxx_convert" ;;
    esac
done

case "$d_longdbl$uselongdouble" in
"$define$define")
    : again, add preferred functions to our list first
    xxx_ld_list=""
    for xxx_convert in $gconvert_ld_preference; do
        case $xxx_convert in
            qgcvt|gcvt|gconvert|sprintf) xxx_ld_list="$xxx_ld_list $xxx_convert" ;;
            *) echo "Discarding unrecognized gconvert_ld_preference $xxx_convert" ;;
        esac
    done
    : then add qgcvt, sprintf--then, in xxx_list order, gconvert and gcvt
    for xxx_convert in qgcvt sprintf $xxx_list; do
        case "$xxx_ld_list" in
            $xxx_convert*|*" $xxx_convert"*) ;;
            *) xxx_ld_list="$xxx_ld_list $xxx_convert" ;;
        esac
    done
    : if sprintf cannot do long doubles, move it to the end
    if test "$d_PRIgldbl" != "$define"; then
        xxx_ld_list="$xxx_ld_list|sed s/sprintf/^ sprintf"
    fi
    : if no qgcvt, remove it
    if test "$d_qgcvt" != "$define"; then
        xxx_ld_list="$xxx_ld_list|sed s/qgcvt/^"
    fi
    : use the ld_list
    xxx_list="$xxx_ld_list"
    ;;
esac

for xxx_convert in $xxx_list; do
    echo "Trying $xxx_convert..."
    ?X: Do NOT use $rm_try here, as we need to keep try.c
    $rm -f try try$_o core
    set try -DTRY_$xxx_convert
    if eval $compile; then

```

```

echo "$xxx_convert() found." >&4
if $run ./try; then
  echo "I'll use $xxx_convert to convert floats into a string." >&4
  break;
else
  echo "...But $xxx_convert didn't work as I expected."
  xxx_convert=""
fi
else
  echo
"$xxx_convert NOT found." >&4
  xxx_convert=""
fi
done

if test X$xxx_convert = X; then
  echo "*** WHOA THERE!!! ***" >&4
  echo "None of ($xxx_list) seemed to work properly. I'll use sprintf." >&4
  xxx_convert=sprintf
fi

case "$xxx_convert" in
gconvert) d_Gconvert='gconvert((x),(n),(t),(b))' ;;
gcvt) d_Gconvert='gcvt((x),(n),(b))' ;;
qgcvt) d_Gconvert='qgcvt((x),(n),(b))' ;;
*) case "$uselongdouble$d_longdbl$d_PRIgldbl" in
"$define$define$define")
  d_Gconvert="sprintf((b),\"%.*\">$sPRIgldbl,(n),(x))" ;;
"$define$define$undef")
  d_Gconvert='sprintf((b),"%.*g",(n),(double)(x))' ;;
*) d_Gconvert='sprintf((b),"%.*g",(n),(x))' ;;
esac
;;
esac

fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_gconvert.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_getservent\_r getservent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_getservent\_r:  
?S: This variable conditionally defines the HAS\_GETSERVENT\_R symbol,  
?S: which indicates to the C program that the getservent\_r()  
?S: routine is available.  
?S:.  
?S:getservent\_r\_proto:  
?S: This variable encodes the prototype of getservent\_r.  
?S: It is zero if d\_getservent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservent\_r  
?S: is defined.  
?S:.  
?C:HAS\_GETSERVENT\_R:  
?C: This symbol, if defined, indicates that the getservent\_r routine  
?C: is  
available to getservent re-entrantly.  
?C:.  
?C:GETSERVENT\_R\_PROTO:  
?C: This symbol encodes the prototype of getservent\_r.  
?C: It is zero if d\_getservent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_getservent\_r HAS\_GETSERVENT\_R /\*\*/  
?H:#define GETSERVENT\_R\_PROTO \$getservent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_getservent\_r\_proto  
: see if getservent\_r exists  
set getservent\_r d\_getservent\_r  
eval \$inlibc  
case "\$d\_getservent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_getservent\_r\_proto:\$usethreads" in  
":define") d\_getservent\_r\_proto=define  
set d\_getservent\_r\_proto getservent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_getservent\_r\_proto" in  
define)  
case "\$getservent\_r\_proto" in  
"|0) try='int getservent\_r(struct servent\*, char\*, size\_t, struct servent\*\*);'

```

./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SBWR ;;
esac
case "$getservent_r_proto"
in
"|0) try='int getservent_r(struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SBI ;;
esac
case "$getservent_r_proto" in
"|0) try='struct servent* getservent_r(struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=S_SBI ;;
esac
case "$getservent_r_proto" in
"|0) try='int getservent_r(struct servent*, struct servent_data*);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SD ;;
esac
case "$getservent_r_proto" in
"|0) d_getservent_r=undef
getservent_r_proto=0
echo "Disabling getservent_r, cannot determine prototype." >&4 ;;
*) case "$getservent_r_proto" in
REENTRANT_PROTO*) ;;
*) getservent_r_proto="REENTRANT_PROTO_$getservent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getservent_r has no prototype, not using it." >&4 ;;
esac
d_getservent_r=undef
getservent_r_proto=0
;;
esac
;;
*) getservent_r_proto=0
;;
esac

```

Found

in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getservent_r.U

```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_time.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:45 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit finds which "time" include to use. If 'timezone' is used by the  
?X: program, we also try to find which header should be included. Eventually,  
?X: we look for <sys/select.h> if I\_SYSSSELECT is used, to get struct timeval.  
?X:  
?MAKE:i\_time i\_systime i\_systimek timeincl: cat cc cflags contains rm\_try \  
echo n c +i\_sysselect Findhdr  
?MAKE: -pick add \$@ %<  
?S:i\_time:  
?S: This  
variable conditionally defines I\_TIME, which indicates  
?S: to the C program that it should include <time.h>.  
?S:.  
?S:i\_systime:  
?S: This variable conditionally defines I\_SYS\_TIME, which indicates  
?S: to the C program that it should include <sys/time.h>.  
?S:.  
?S:i\_systimek:  
?S: This variable conditionally defines I\_SYS\_TIME\_KERNEL, which  
?S: indicates to the C program that it should include <sys/time.h>  
?S: with KERNEL defined.  
?S:.  
?S:timeincl:  
?S: This variable holds the full path of the included time header(s).  
?S:.  
?C:I\_TIME (USE\_TIME\_H):  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <time.h>.  
?C:.  
?C:I\_SYS\_TIME (I\_SYSTIME USE\_SYS\_TIME\_H NO\_TIME\_WITH\_SYS\_TIME):  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/time.h>.  
?C:.  
?C:I\_SYS\_TIME\_KERNEL (I\_SYSTIMEKERNEL):  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/time.h> with KERNEL defined.  
?C:.  
?H:#\$i\_time I\_TIME /\*\*/



```

?H:#$i_systime
I_SYS_TIME /**/
?H:#$i_systimek I_SYS_TIME_KERNEL /**/
?H:.
?W::timezone
?T:xselect flags sysselect s_timeval s_timezone
?LINT:change i_sysselect
: see if we should include time.h, sys/time.h, or both
echo " "
echo "Testing to see if we should include <time.h>, <sys/time.h> or both." >&4
$echo $n "I'm now running the test program...$c"
$cat >try.c <<'EOCP'
#include <sys/types.h>
#ifdef I_TIME
#include <time.h>
#endif
#ifdef I_SYSTIME
#ifdef SYSTIMEKERNEL
#define KERNEL
#endif
#include <sys/time.h>
#endif
#ifdef I_SYSSELECT
#include <sys/select.h>
#endif
int main()
{
    struct tm foo;
#ifdef S_TIMEVAL
    struct timeval bar;
#endif
#ifdef S_TIMEZONE
    struct timezone tzp;
#endif
    if (foo.tm_sec == foo.tm_sec)
        exit(0);
#ifdef S_TIMEVAL
    if (bar.tv_sec == bar.tv_sec)
        exit(0);
#endif
    exit(1);
}
EOCP
flags="
@if I_SYSSELECT
if $contains 'timeval.*{' `./findhdr sys/select.h` >/dev/null 2>&1; then
    xselect='-DI_SYSSELECT'
else

```

```

xselect="
fi
@end
@if timezone
for s_timezone
in '-DS_TIMEZONE' "; do
@else
s_timezone="
@end
?X: Every package is given a try with 'struct timeval'
@if I_SYSSELECT
for sysselect in $xselect "; do
@else
sysselect="
@end
for s_timeval in '-DS_TIMEVAL' "; do
for i_systimek in "-DSYSTEMEKERNEL'; do
for i_time in "-DI_TIME'; do
for i_systime in '-DI_SYSTIME' "; do
case "$flags" in
") $echo $n ".$.c"
if $cc $ccflags \
$i_time $i_systime $i_systimek $sysselect $s_timeval $s_timezone \
-o try try.c >/dev/null 2>&1 ; then
set X $i_time $i_systime $i_systimek $sysselect $s_timeval
shift
flags="$*"
echo " "
$echo $n "Succeeded with $flags$c"
fi
;;
esac
done
done
done
done
done
@if I_SYSSELECT
done
@end
@if timezone
done
@end
timeincl="
echo " "
case "$flags" in
*SYSTEMEKERNEL*) i_systimek="$define"
timeincl=`./findhdr sys/time.h`
echo "We'll include <sys/time.h> with KERNEL defined." >&4;;

```

```

*) i_systimek="$undef";;
esac
case "$flags" in
*I_TIME*) i_time="$define"
timeincl=`./findhdr time.h`" $timeincl"
echo
"We'll include <time.h>." >&4;;
*) i_time="$undef";;
esac
case "$flags" in
*I_SYSTIME*) i_systime="$define"
timeincl=`./findhdr sys/time.h`" $timeincl"
echo "We'll include <sys/time.h>." >&4;;
*) i_systime="$undef";;
esac
@if I_SYSSSELECT
case "$flags" in
*I_SYSSSELECT*) i_syssselct="$define"
timeincl=`./findhdr sys/select.h`" $timeincl"
echo "We'll also include <sys/select.h> to get struct timeval." >&4;;
*) case "$i_syssselct" in
") i_syssselct="$undef";;
esac
esac
@end
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_time.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Compile.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS:

?X:

?X: This unit is just a quick shorthand for the compile command

?X: to be used in all the other metaconfig units.

?X:

?MAKE:Compile: +cc +optimize +ccflags +ldflags +libs test

?MAKE: -pick wipe \$@ %<

?LINT:extern usedevel maintloc

?LINT:define compile compile\_ok

```

?V:compile compile_ok mc_file
?S:compile:
?S: This shell variable is used internally by Configure to provide
?S: a convenient shorthand for the typical compile command, namely
?S: $cc $optimize $ccflags $ldflags -o $1 $1.c $libs > /dev/null 2>&1
?S: Note that the output filename does not include the _exe
?S: extension. Instead we assume that the linker will be
?S: "helpful" and automatically appending the correct suffix.
?S: OS/2
users will apparently need to supply the -Zexe flag to
?S: get this behavior.
?S:
?S: To use this variable, say something like:
?S: echo 'int main() { exit(0); }' > try.c
?S: set try
?S: if eval $compile; then
?S: echo "success" # and do whatever . . .
?S: else
?S: echo "failure" # and do whatever . . .
?S: fi
?S: To add extra flags cc flags (e.g. -DWHATEVER) just put them
?S: in $*, e.g.
?S: set try -DTRY_THIS_FLAG
?S:.
?S:compile_ok:
?S: This shell variable is used internally by Configure to provide
?S: a convenient shorthand for the typical compile command that you
?S: expect to work ok. It is the same as $compile, except we
?S: deliberately let the user see any error messages.
?S:.
: define a shorthand compile call
compile='
mc_file=$1;
shift;
case "$usedevel" in $define|true|[yY]*) if $test ! -f "${mc_file}.c"; then
echo "Internal Configure script bug - compiler test file ${mc_file}.c is missing. Please report this to <$maintloc>"
>&4;
exit 1;
fi;
esac;
$cc
-o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs > /dev/null 2>&1;'
: define a shorthand compile call for compilations that should be ok.
compile_ok='
mc_file=$1;
shift;
$cc -o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs > /dev/null 2>&1;'

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/Compile.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: bin.U,v 3.1 1999/07/09 18:20:13 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: bin.U,v $
?RCS: Revision 3.1 1999/07/09 18:20:13 doughera
?RCS: Updated for installprefix
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:15:32 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.3 1995/01/30 14:32:40 ram
?RCS: patch49: can now handle installation prefix changes (from WED)
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:05:28 ram
?RCS: patch32: now uses installation prefix
?RCS:
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 15:56:51 ram
?RCS: patch10: made prompting more explicit (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:26 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:bin binexp installbin userelocatableinc initialinstalllocation: \
Myread Prefixit Getfile Setvar Setprefixvar Oldconfig \
test prefix prefixexp
?MAKE: -pick add $@ %<
?Y:TOP
?D:bin="
?S:bin:
?S: This variable holds the name of the directory in which the user wants
?S: to put publicly executable images for the package in question. It
?S: is most often a local directory such as /usr/local/bin. Programs using
?S: this variable must be prepared to deal with ~name substitution.
?S:.
?D:binexp="
```

?S:binexp:  
 ?S: This is the same as the bin variable, but is filename expanded at  
 ?S: configuration time, for use in your makefiles.  
 ?S:.  
 ?D:installbin="  
 ?S:installbin:  
 ?S: This variable is the same as binexp unless AFS is running in which case  
 ?S: the user is explicitly prompted for it. This variable  
 should always  
 ?S: be used in your makefiles for maximum portability.  
 ?S:.  
 ?D:userrelocatableinc="  
 ?S:userrelocatableinc:  
 ?S: This variable is set to true to indicate that perl should relocate  
 ?S: @INC entries at runtime based on the path to the perl binary.  
 ?S: Any @INC paths starting ".../" are relocated relative to the directory  
 ?S: containing the perl binary, and a logical cleanup of the path is then  
 ?S: made around the join point (removing "dir../" pairs)  
 ?S:.  
 ?S:initialinstalllocation:  
 ?S: When userrelocatableinc is true, this variable holds the location  
 ?S: that make install should copy the perl binary to, with all the  
 ?S: run-time relocatable paths calculated from this at install time.  
 ?S: When used, it is initialized to the original value of binexp, and  
 ?S: then binexp is set to '.../', as the other binaries are found  
 ?S: relative to the perl binary.  
 ?S:.  
 ?C:BIN:  
 ?C: This symbol holds the path of the bin directory where the package will  
 ?C: be installed. Program must be  
 prepared to deal with ~name substitution.  
 ?C:.  
 ?C:BIN\_EXP:  
 ?C: This symbol is the filename expanded version of the BIN symbol, for  
 ?C: programs that do not want to deal with that at run-time.  
 ?C:.  
 ?C:PERL\_RELOCATABLE\_INC:  
 ?C: This symbol, if defined, indicates that we'd like to relocate entries  
 ?C: in @INC at run time based on the location of the perl binary.  
 ?C:.  
 ?H:#define BIN "\$bin" /\*\*/  
 ?H:#define BIN\_EXP "\$binexp" /\*\*/  
 ?H:#define PERL\_RELOCATABLE\_INC "\$userrelocatableinc" /\*\*/  
 ?H:.  
 ?D:bin='/usr/local/bin'  
 ?LINT:change prefix  
 ?LINT:change prefixexp  
 ?LINT:change prefixvar

```

?LINT:change installprefixexp
?LINT:set userelocatableinc
: determine where public executables go
echo " "
set dflt bin bin
eval $prefixit
fn=d~
rp='Pathname where the public executables will reside?'
./getfile
if $test "X$ansexp" != "X$binexp"; then
  installbin="
fi
prefixvar=bin
: XXX Bug? -- ignores Configure -Dinstallprefix setting.
: XXX If this is fixed, also fix the "start perl" hunk below, which relies on
:
  this via initialinstalllocation
./setprefixvar

case "$userelocatableinc" in
$define|true|[yY]*) dflt='y' ;;
*) dflt='n' ;;
esac
cat <<EOM

```

Would you like to build Perl so that the installation is relocatable, so that library paths in @INC are determined relative to the path of the perl binary? This is not advised for system Perl installs, or if you need to run setid scripts or scripts under taint mode.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

```

rp='Use relocatable @INC?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set userelocatableinc
eval $setvar

```

```

initialinstalllocation="$binexp"
: Default prefix is now "up one level from where the binaries are"
case "$userelocatableinc" in
$define|true|[yY]*)
  bin="..."
  binexp="..."
  prefix=".../"

```

```
prefixexp="../.."
installprefixexp="../.."
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/bin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getservprotos.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?MAKE:d_getservprotos : Hasproto i_netdb
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_getservprotos:
```

```
?S: This variable conditionally defines the HAS_GETSERV_PROTOS symbol,
```

```
?S: which indicates to the C program that <netdb.h> supplies
```

```
?S: prototypes for the various getserv*() functions.
```

```
?S: See also netdbtype.U for probing for various netdb types.
```

```
?S:.
```

```
?C:HAS_GETSERV_PROTOS:
```

```
?C: This symbol, if defined, indicates that <netdb.h> includes
```

```
?C: prototypes for getservent(), getservbyname(), and
```

```
?C: getservbyaddr(). Otherwise,
```

```
it is up to the program to guess
```

```
?C: them. See netdbtype.U for probing for various Netdb_xxx_t types.
```

```
?C:.
```

```
?H:#$d_getservprotos HAS_GETSERV_PROTOS /**/
```

```
?H:.
```

```
?LINT:set d_getservprotos
```

```
: see if prototypes for various getservxxx netdb.h functions are available
```

```
echo " "
```

```
set d_getservprotos getservent $i_netdb netdb.h
```

```
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d_getservprotos.U
```

No license file was found, but licenses were detected in source scan.



```

?RCS: $Id: d_gmtime_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_gmtime_r gmtime_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_time i_systime extern_C
?MAKE: -pick add $@ %<
?S:d_gmtime_r:
?S: This variable conditionally defines the HAS_GMTIME_R symbol,
?S: which indicates to the C program that the gmtime_r()
?S: routine is available.
?S:.
?S:gmtime_r_proto:
?S: This variable encodes the prototype of gmtime_r.
?S: It is zero if d_gmtime_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gmtime_r
?S: is defined.
?S:.
?C:HAS_GMTIME_R:
?C: This symbol, if defined, indicates that the gmtime_r routine
?C: is available to gmtime re-entrantly.
?C:.
?C:GMTIME_R_PROTO:
?C: This
  symbol encodes the prototype of gmtime_r.
?C: It is zero if d_gmtime_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gmtime_r
?C: is defined.
?C:.
?H:#$d_gmtime_r HAS_GMTIME_R /**/
?H:#define GMTIME_R_PROTO $gmtime_r_proto /**/
?H:.
?T:try hdrs d_gmtime_r_proto
: see if gmtime_r exists
set gmtime_r d_gmtime_r
eval $inlibc
case "$d_gmtime_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
  case "$d_gmtime_r_proto:$usethreads" in
  ":define") d_gmtime_r_proto=define
  set d_gmtime_r_proto gmtime_r $hdrs
  eval $hasproto ;;
  *) ;;

```

```

esac
case "$d_gmtime_r_proto" in
define)
case "$gmtime_r_proto" in
"|0) try='struct tm* gmtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && gmtime_r_proto=S_TS ;;
esac
case "$gmtime_r_proto" in
"|0) try='int gmtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && gmtime_r_proto=I_TS ;;
esac
case
"$gmtime_r_proto" in
"|0) d_gmtime_r=undef
gmtime_r_proto=0
echo "Disabling gmtime_r, cannot determine prototype." >&4 ;;
*) case "$gmtime_r_proto" in
REENTRANT_PROTO*) ;;
*) gmtime_r_proto="REENTRANT_PROTO_$gmtime_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "gmtime_r has no prototype, not using it." >&4 ;;
esac
d_gmtime_r=undef
gmtime_r_proto=0
;;
esac
;;
*) gmtime_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/threads/d_gmtime_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_mprotect: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mprotect:  
?S: This variable conditionally defines HAS\_MPROTECT if mprotect() is  
?S: available to modify the access protection of a memory mapped file.  
?S:.  
?C:HAS\_MPROTECT:  
?C: This symbol, if defined, indicates that the mprotect system call is  
?C: available to modify the access protection of a memory mapped file.  
?C:.  
?H:#\$d\_mprotect HAS\_MPROTECT /\*\*/  
?H:.  
?LINT:set d\_mprotect  
: see if mprotect exists  
set mprotect d\_mprotect  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_mprotect.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Loc.U 14 2006-08-28 16:51:14Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Loc.U,v \$  
?RCS: Revision 3.0.1.10 1997/02/28 15:04:16 ram  
?RCS: patch61: allow users to specify paths on the command line  
?RCS: patch61: will now substitute cp for ln if not supported  
?RCS:  
?RCS: Revision 3.0.1.9 1995/09/25 09:11:24 ram  
?RCS: patch59: commented the purpose of the #un-def directive  
?RCS: patch59: abort Configure run when mandatory command is missing  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:40:40 ram  
?RCS: patch56: now knows about  
OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.7 1995/01/11 15:13:37 ram

?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI

?RCS: patch45: added path lookup for the 'comm' program

?RCS:

?RCS: Revision 3.0.1.6 1994/10/29 15:56:14 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: be careful and guard against wildcard searching (ADO)

?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 06:54:55 ram

?RCS: patch30: now locates find

?RCS:

?RCS: Revision 3.0.1.4 1994/05/13 15:18:15 ram

?RCS: patch27: added byacc to the trylist (ADO)

?RCS: patch27: lint lines reformatted (ADO)

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:01:44 ram

?RCS: patch16: added metalint hint on changed PATH variable

?RCS:

?RCS: Revision 3.0.1.2 1993/12/15 08:16:52 ram

?RCS: patch15: now set \_test variable when test is built-in

?RCS: patch15: fixed rare cases where echo is not needed

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 15:47:13 ram

?RCS: patch10: test program not always  
in /bin/test (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:05 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script "loc" which can be used to find out  
?X: where in a list of directories something is. It then uses loc to  
?X: determine the location of commonly used programs. It leaves loc sitting  
?X: around for other Configure units to use, but arranges for its demise  
?X: at the end of Configure.

?X:

?X: To add a new program to find, add it both to the ?MAKE: line and to either  
?X: the loclist or trylist variable.

?X:

?X: I put startsh at the end of the dependency list, in order to avoid the  
?X: loading of the spitshell unit before the instructions.

?X:

?MAKE:Loc awk ar bash bison byacc cat chgrp chmod chown \  
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \  
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \  
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \  
shar sleep smail sort  
submit tail tar tbl tee test touch tr troff \  
uname uniq uuname vi zcat zip: eunicefix n c startsh Instruct sysroot

```

?MAKE: -pick weed $@ %<
?LINT:describe awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee test touch tr troff \
uname uniq uuname vi zcat zip
?V::pth loclist trylist
?F:./loc test_h
?T:thisthing thing xxx dir file say _test DJGPP
?LINT:change PATH _egrep _ln _make _less
?LINT:extern _exe
: find out where common programs are
echo " "
echo "Locating common programs..." >&4
cat <<EOOSC >loc
$startsh
case $# in
0) exit 1;;
esac
thing=\$1
shift
dflt=\$1
shift
for dir in \$*; do
case "\$thing" in
.)
if test -d \$dir/\$thing; then
echo \$dir
exit 0
fi
;;
*)
?X: Be careful in case thing includes wildcards that might expand
to multiple
?X: files. Choose the last one. This happens when searching for shared
?X: libraries with version numbers. How to choose which one we want is
?X: probably an insoluble problem, in general.
?X: Some folks leave things like libc.so.orig around w/o read
?X: permission. A -r test would handle that, but since ./loc is
?X: also used to find executables (which are installed w/o read
?X: permission on SCO ODT 3.0, we can't include the -r test.
?X: If you need to use an _exe that is different from .exe
?X: you need to set it in Head.U.
for thisthing in \$dir/\$thing; do
: just loop through to pick last item
done
if test -f \$thisthing; then

```

```

echo \$thisthing
exit 0
elif test "X$_exe" != X -a -f \$thisthing$_exe; then
echo \$thisthing
exit 0
elif test -f \$dir/\$thing.exe; then
if test -n "$DJGPP"; then
echo \$dir/\$thing.exe
elif test "$eunicefix" != ":"; then
: on Eunice apparently
echo \$dir/\$thing
fi
exit 0
fi
;;
esac
done
echo \$dflt
exit
1
EOSC
chmod +x loc
$eunicefix loc
loclist="
?awk:awk
?cat:cat
?chgrp:chgrp
?chmod:chmod
?chown:chown
?comm:comm
?cp:cp
?echo:echo
?expr:expr
?find:find
?grep:grep
?ls:ls
?mkdir:mkdir
?mv:mv
?rm:rm
?sed:sed
?sleep:sleep
?sort:sort
?tail:tail
?touch:touch
?tr:tr
?uniq:uniq
"
trylist="

```

?Mcc:Mcc  
?ar:ar  
?bash:bash  
?bison:bison  
?byacc:byacc  
?compress:compress  
?cpio:cpio  
?cpp:cpp  
?csh:csh  
?date:date  
?egrep:egrep  
?emacs:emacs  
?flex:flex  
?gmake:gmake  
?gzip:gzip  
?inews:inews  
?ksh:ksh  
?less:less  
?line:line  
?lint:lint  
?ln:ln  
?lp:lp  
?lpr:lpr  
?mail:mail  
?mailx:mailx  
?make:make  
?more:more  
?nm:nm  
?nroff:nroff  
?perl:perl  
?pg:pg  
?pmake:pmake  
?pr:pr  
?rmail:rmail  
?sendmail:sendmail  
?shar:shar  
?smail:smail  
?submit:submit  
?tar:tar  
?tbl:tbl  
?tee:tee  
?test:test  
?troff:troff  
?uname:uname  
?uuname:uuname  
?vi:vi  
?zcat:zcat  
?zip:zip

```

"
?LINT:set awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo emacs expr find flex \
gmake gzip grep inews ksh line lint lp lpr ls mail mailx
\
mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee touch tr troff \
uname uniq uuname vi zcat zip
pth=`echo $PATH | sed -e "s/$p_/ /g"`
pth="$pth $sysroot/lib $sysroot/usr/lib"
for file in $loclist; do
?X:
?X: Allow them to -Dmake=pmake on the command line for instance...
?X: If the file is not fully qualified, as in -Dmake=pmake, then we
?X: look the for the specified command (pmake here). If they say
?X: -Dmake=/sbin/make for instance, then we make sure the file
?X: exists, or we die...
?X:
eval xxx=\\$file
case "$xxx" in
/*|?:[\\]*)
if test -f "$xxx"; then
: ok
else
echo "WARNING: no $xxx -- ignoring your setting for $file." >&4
xxx=`./loc $file $file $pth`
fi
;;
*) xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval _$file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\\]*)
echo $file is in $xxx.
;;
*)
echo
"I don't know where '$file' is, and my life depends on it." >&4
echo "Go find a public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac

```



```

done
echo " "
echo "Don't worry if any of the following aren't found..."
say=offhand
for file in $trylist; do
?X: Allow them to -Dmake=pmake on the command line for instance (see above)
eval xxx=\$$file
case "$xxx" in
/*|?:[\\]*)
if test -f "$xxx"; then
: ok
else
echo "WARNING: no $xxx -- ignoring your setting for $file." >&4
xxx=`./loc $file $file $pth`
fi
;;
") xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval _$file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?:[\\]*)
echo $file is in $xxx.
;;
*)
echo "I don't see $file out there, $say."
say=either
;;
esac
done
case "$egrep" in
egrep)
echo "Substituting grep for egrep."
egrep=$grep
_egrep=$grep
;;
esac
@if less
case "$less"
in
") ;;
*) if $less -R </dev/null >/dev/null 2>&1; then
echo "Substituting less -R for less."

```

```

        less="$less -R"
        _less=$less
    fi
;;
esac
@end
@if ln
case "$ln" in
ln)
    echo "Substituting cp for ln."
    ln=$cp
    _ln=$cp
    ;;
esac
@end
@if make || gmake
case "$make" in
make)
case "$gmake" in
gmake)
    echo "I can't find make or gmake, and my life depends on it." >&4
    echo "Go find a public domain implementation or fix your PATH setting!" >&4
    exit 1
    ;;
esac
;;
esac
case "$gmake" in
gmake) ;;
*) # We can't have osname yet.
if test -f "/system/gnu_library/bin/ar.pm"; then # Stratus VOS
# Assume that gmake, if found, is definitely GNU make
# and prefer it over the system make.
echo "Substituting gmake for make."
make=$gmake
_make=$gmake
fi
;;
esac
@end
case "$test" in
test)
    echo "Hopefully test is built into your sh."
    ;;
*)
if `sh -c "PATH= test true" >/dev/null 2>&1`; then
    echo "Using the test built into your sh."
?X:

```

?X: We need to set both test  
and \_test, since Oldconfig.U will use the \_test  
?X: value to systematically restore computed paths, which may be wrong if  
?X: we choose to load an old config.sh generated on another platform.

?X:

```
test=test
_test=test
```

```
fi
```

```
::
```

```
esac
```

?LINT:change n c

```
case "$echo" in
```

```
echo)
```

```
echo "Hopefully echo is built into your sh."
```

```
::
```

?X: For those rare cases where we don't need \$echo...

```
) ;;
```

```
*)
```

```
echo " "
```

```
echo "Checking compatibility between $echo and builtin echo (if any)..." >&4
```

```
$echo $n "hi there$c" >foo1
```

```
echo $n "hi there$c" >foo2
```

```
if cmp foo1 foo2 >/dev/null 2>&1; then
```

```
echo "They are compatible. In fact, they may be identical."
```

```
else
```

```
case "$n" in
```

```
'-n') n=" c='\c';;
```

```
*) n='-n' c="";;
```

```
esac
```

```
cat <<FOO
```

They are not compatible! You are probably running ksh on a non-USG system.

I'll have to use \$echo instead of the builtin, since Bourne shell doesn't  
have echo built in and we may have to run some Bourne shell scripts. That  
means I'll have to use '\$n\$c' to suppress newlines now.

Life is ridiculous.

```
FOO
```

```
$echo $n "The star should be here-->$c"
```

```
$echo "*"
```

```
fi
```

```
$rm -f foo1 foo2
```

```
::
```

```
esac
```

?X: The next part is irrelevant to the real process

```
# This question was auctioned at YAPC::Europe-2007 in Vienna
```

```
# I never promised you could answer it. I only auctioned the question.
```

```
cat <<FOO
```

The following message is sponsored by

Dresden.pm<--The stars should be here.

Dear Perl user, system administrator or package maintainer, the Perl community sends greetings to you. Do you (emblematical) greet back [Y/n]? n

FOO

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Loc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_PRIId64 d\_PRIi64 d\_PRIu64 d\_PRIo64 d\_PRIx64 d\_PRIXU64 \

sPRIId64 sPRIi64 sPRIu64 sPRIo64 sPRIx64 sPRIXU64: \

quadtype i\_inttypes test cat rm\_try Setvar Compile run

?MAKE: -pick add \$@ %<

?S:d\_PRIId64:

?S: This variable conditionally defines the PERL\_PRIId64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit decimal numbers.

?S:.

?S:d\_PRIi64:

?S: This variable conditionally defines the PERL\_PRIi64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit decimal numbers.

?S:.

?S:d\_PRIu64:

?S: This variable conditionally defines the PERL\_PRIu64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit unsigned decimal

?S: numbers.

?S:.

?S:d\_PRIo64:

?S: This variable

conditionally defines the PERL\_PRIo64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit octal numbers.

?S:.

?S:d\_PRIx64:

?S: This variable conditionally defines the PERL\_PRIx64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit hexadecimal numbers.

?S:.

?S:d\_PRIXU64:

?S: This variable conditionally defines the PERL\_PRIXU64 symbol, which  
?S: indicates that stdio has a symbol to print 64-bit hEXADEcImAl numbers.  
?S: The 'U' in the name is to separate this from d\_PRIx64 so that even  
?S: case-blind systems can see the difference.

?S:.

?S:sPRId64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit decimal numbers (format 'd') for output.

?S:.

?S:sPRIi64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit decimal numbers (format 'i') for output.

?S:.

?S:sPRIu64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit unsigned decimal numbers (format 'u')  
for output.

?S:.

?S:sPRIo64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit octal numbers (format 'o') for output.

?S:.

?S:sPRIx64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit hexadecimal numbers (format 'x') for output.

?S:.

?S:sPRIXU64:

?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit hEXADEcImAl numbers (format 'X') for output.  
?S: The 'U' in the name is to separate this from sPRIx64 so that even  
?S: case-blind systems can see the difference.

?S:.

?C:PERL\_PRIId64:

?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit decimal numbers (format 'd') for output.

?C:.

?C:PERL\_PRIi64:

?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit decimal numbers (format 'i') for output.

?C:.

?C:PERL\_PRIu64:

?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit unsigned decimal numbers (format 'u')  
for output.

?C:.

?C:PERL\_PRIo64:

?C: This symbol, if defined, contains the string used by stdio to

```

?C: format 64-bit octal numbers (format 'o') for output.
?C:.
?C:PERL_PRIx64:
?C: This symbol, if defined, contains the string used by stdio to
?C: format 64-bit hexadecimal numbers (format 'x') for output.
?C:.
?C:PERL_PRIXU64:
?C: This symbol, if defined, contains the string used by stdio to
?C: format 64-bit hExADEcImAl numbers (format 'X') for output.
?C:.
?H:#$d_PRIId64 PERL_PRIId64 $sPRIId64 /**/
?H:#$d_PRIi64 PERL_PRIi64 $sPRIi64 /**/
?H:#$d_PRIu64 PERL_PRIu64 $sPRIu64 /**/
?H:#$d_PRIo64 PERL_PRIo64 $sPRIo64 /**/
?H:#$d_PRIx64 PERL_PRIx64 $sPRIx64 /**/
?H:#$d_PRIx64 PERL_PRIXU64 $sPRIXU64 /**/
?H:.
?T:yyy
?F:!try
: Check 64bit sizes
echo " "

if $test X"$quadtype" != X; then

echo "Checking how to print 64-bit integers..." >&4

if $test X"$sPRIId64" = X -a X"$quadtype" = Xint; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
int q = 12345678901;

printf("%ld\n", q);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
12345678901)
sPRIId64="d"; sPRIi64="i"; sPRIu64="u";
sPRIo64="o"; sPRIx64="x"; sPRIXU64="X";
echo "We will use %d."
;;
esac
fi
fi

```

```
if $test X"$sPRId64" = X -a X"$quadtype" = Xlong; then
```

```
$cat >try.c <<'EOCP'
```

```
#include <sys/types.h>
```

```
#include <stdio.h>
```

```
int main() {
```

```
long q = 12345678901;
```

```
printf("%ld\n", q);
```

```
}
```

```
EOCP
```

```
set try
```

```
if eval $compile; then
```

```
yyy=`$run ./try`
```

```
case "$yyy" in
```

```
12345678901)
```

```
sPRId64="ld"; sPRIi64="li"; sPRIu64="lu";
```

```
sPRIo64="lo"; sPRIx64="lx"; sPRIXU64="lX";
```

```
echo "We will use %ld."
```

```
::
```

```
esac
```

```
fi
```

```
fi
```

```
if $test X"$sPRId64" = X -a X"$i_inttypes" = X"$define" -a X"$quadtype" = Xint64_t; then
```

```
$cat >try.c <<'EOCP'
```

```
#include <sys/types.h>
```

```
#include <inttypes.h>
```

```
#include <stdio.h>
```

```
int main() {
```

```
int64_t q = 12345678901;
```

```
printf("%" PRId64 "\n", q);
```

```
}
```

```
EOCP
```

```
set try
```

```
if eval $compile; then
```

```
yyy=`$run ./try`
```

```
case "$yyy" in
```

```
12345678901)
```

```
sPRId64=PRId64;
```

```
sPRIi64=PRIi64; sPRIu64=PRIu64;
```

```
sPRIo64=PRIo64; sPRIx64=PRIx64; sPRIXU64=PRIXU64;
```

```
echo "We will use the C9X style."
```

```
::
```

```
esac
```

```
fi
```

```
fi
```

```
if $test X"$sPRId64" = X -a X"$quadtype" != X; then
```

```

$cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
int main() {
    $quadtype q = 12345678901;
    printf("%Ld\n", q);
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in
    12345678901)
        sPRId64="%Ld"; sPRi64="%Li"; sPRi64="%Lu";
        sPRIo64="%Lo"; sPRIx64="%Lx"; sPRIXU64="%LX";
        echo "We will use %Ld."
        ;;
    esac
fi
fi

if $test X"$sPRId64" = X -a X"$quadtype" = X"long long"; then
    $cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
    long long q = 12345678901LL; /* AIX cc requires the LL suffix. */
    printf("%lld\n", q);
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in
    12345678901)
        sPRId64="%lld"; sPRi64="%lli"; sPRi64="%llu";
        sPRIo64="%llo"; sPRIx64="%llx";
        sPRIXU64="%llX";
        echo "We will use the %lld style."
        ;;
    esac
fi
fi

if $test X"$sPRId64" = X -a X"$quadtype" != X; then
    $cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>

```



```

int main() {
    $quadtype q = 12345678901;
    printf("%qd\n", q);
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in
        12345678901)
            sPRId64=""qd"; sPRIi64=""qi"; sPRIu64=""qu";
            sPRIo64=""qo"; sPRIx64=""qx"; sPRIXU64=""qX";
            echo "We will use %qd."
            ;;
        esac
    fi
fi

if $test X"$sPRId64" = X; then
    echo "Cannot figure out how to print 64-bit integers." >&4
fi
$rm_try

fi

case "$sPRId64" in
    *) d_PRId64="$undef"; d_PRIi64="$undef"; d_PRIu64="$undef";
       d_PRIo64="$undef"; d_PRIx64="$undef"; d_PRIXU64="$undef";
       ;;
    *) d_PRId64="$define"; d_PRIi64="$define"; d_PRIu64="$define";
       d_PRIo64="$define"; d_PRIx64="$define"; d_PRIXU64="$define";
       ;;
    esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/quadfio.U

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llrint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llrint:

?S: This variable conditionally defines the HAS\_LLRLINT symbol, which

?S: indicates to the C program that the llrint() routine is available

?S: to return the long long value closest to a double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LLRRINT:

?C: This symbol, if defined, indicates that the llrint routine is

?C: available to return the long long value closest to a double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_llrint HAS\_LLRRINT /\*\*/

?H:.

?LINT:set d\_llrint

: see if llrint exists

set llrint d\_llrint

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_llrint.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readdir64\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_readdir64\_r readdir64\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_dirent extern\_C

?MAKE: -pick add \$@ %<

?S:d\_readdir64\_r:

?S: This variable conditionally defines the HAS\_READDIR64\_R symbol,

?S: which indicates to the C program that the readdir64\_r()

?S: routine is available.

?S:.

?S:readdir64\_r\_proto:

?S: This variable encodes the prototype of readdir64\_r.

?S: It is zero if d\_readdir64\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir64\_r

?S: is defined.

?S:.

?C:HAS\_READDIR64\_R:

?C: This symbol, if defined, indicates that the readdir64\_r routine

?C: is

available to readdir64 re-entrantly.

?C:.

?C:READDIR64\_R\_PROTO:

?C: This symbol encodes the prototype of readdir64\_r.

```

?C: It is zero if d_readdir64_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_readdir64_r
?C: is defined.
?C:.
?H:#$d_readdir64_r HAS_READDIR64_R /**/
?H:#define READDIR64_R_PROTO $readdir64_r_proto /**/
?H:.
?T:try hdrs d_readdir64_r_proto
: see if readdir64_r exists
set readdir64_r d_readdir64_r
eval $inlibc
case "$d_readdir64_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_dirent dirent.h"
case "$d_readdir64_r_proto:$usetheads" in
":define") d_readdir64_r_proto=define
set d_readdir64_r_proto readdir64_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_readdir64_r_proto" in
define)
case "$readdir64_r_proto" in
"|0) try='int readdir64_r(DIR*, struct dirent64*, struct dirent64**);'
./protochk "$extern_C $try" $hdrs && readdir64_r_proto=I_TSR ;;
esac
case "$readdir64_r_proto" in
"|0) try='int readdir64_r(DIR*,
struct dirent64*);'
./protochk "$extern_C $try" $hdrs && readdir64_r_proto=I_TS ;;
esac
case "$readdir64_r_proto" in
"|0) d_readdir64_r=undef
readdir64_r_proto=0
echo "Disabling readdir64_r, cannot determine prototype." >&4 ;;
*) case "$readdir64_r_proto" in
REENTRANT_PROTO*) ;;
*) readdir64_r_proto="REENTRANT_PROTO_$readdir64_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetheads" in
define) echo "readdir64_r has no prototype, not using it." >&4 ;;
esac
d_readdir64_r=undef
readdir64_r_proto=0
;;

```

```
esac
;;
*) readdir64_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_readdir64_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysndir.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_sysndir.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:33 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_sysndir: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_sysndir:
```

```
?S: This variable conditionally defines the I_SYS_NDIR symbol, and indicates
```

```
?S: whether a C program should include <sys/ndir.h>.
```

```
?S:.
```

```
?C:I_SYS_NDIR (I_SYSNDIR):
```

```
?C: This symbol, if defined, indicates to the C program that it should
```

```
?C: include <sys/ndir.h>.
```

```
?C:.
```

```
?H:#$i_sysndir
```

```
I_SYS_NDIR /**/
```

```
?H:.
```

```
?LINT:set i_sysndir
```

```
: see if this is an sysndir system
```

```
set sys/ndir.h i_sysndir
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_sysndir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: contains.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: contains.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:35 ram  
?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:contains: Nothing  
?MAKE: -pick add \$@ %<

?S:contains:  
?S: This variable holds the command to do a grep with a proper return  
?S: status. On most sane systems it is simply "grep". On insane systems  
?S: it is a grep followed by a cat followed by a test. This variable  
?S: is primarily for the use of other Configure units.  
?S:.

```
: Some
  greps do not return status, grrr.
  echo "grimblepritz" >grimble
  if grep blurfldyick grimble >/dev/null 2>&1 ; then
    contains=contains
  elif grep grimblepritz grimble >/dev/null 2>&1 ; then
    contains=grep
  else
    contains=contains
  fi
rm -f grimble
: the following should work in any shell
case "$contains" in
contains*)
  echo " "
  echo "AGH! Grep doesn't return a status. Attempting remedial action."
  cat >contains <<'EOSS'
  grep "$1" "$2" >.greptmp && cat .greptmp && test -s .greptmp
EOSS
chmod +x contains
esac
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/contains.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysuio.U,v $
?RCS:
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_sysuio: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysuio:
?S: This variable conditionally defines the I_SYSUIO symbol, and indicates
?S: whether a C program should include <sys/uio.h>.
?S:.
?C:I_SYSUIO:
?C: This symbol, if defined, indicates that <sys/uio.h> exists and
?C: should be included.
?C:.
?H:#$i_sysuio I_SYSUIO /**/
?H:.
?LINT:set i_sysuio
: see if this is a sys/uio.h system
set sys/uio.h i_sysuio
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/i_sysuio.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strerror.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_strerror.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:33 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_strerror: Inlibc
?MAKE: -pick add $@ %<
?S:d_strerror:
```

?S: This variable conditionally defines the HAS\_STRCSPN symbol, which  
?S: indicates to the C program that the strcspn() routine is available  
?S: to scan strings.  
?S:.  
?C:HAS\_STRCSPN (STRCSPN):  
?C: This symbol, if defined, indicates that the strcspn routine is  
?C: available to scan  
strings.  
?C:.  
?H:#\$d\_strcspn HAS\_STRCSPN /\*\*/  
?H:.  
?LINT:set d\_strcspn  
: see if strcspn exists  
set strcspn d\_strcspn  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strcspn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Thomas Neumann <tom@smart.bo.open.de>  
?RCS:  
?RCS: \$Log: Findhdr.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 15:53:08 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:03:56 ram  
?RCS: patch23: cppminus must be after other cppflags, not before  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a findhdr script which is used to locate the header  
?X: files  
in \$usrinc or other stranger places using cpp capabilities. The  
?X: script is given an include file base name, like 'stdio.h' or 'sys/file.h'

?X: and it returns the full path of the include file and a zero status or an  
?X: empty string with an error status if the file could not be located.  
?X:  
?MAKE:Findhdr: grep test tr rm +usrinc awk cat startsh \  
cppstdin cppminus +cppflags eunicefix osname  
?MAKE: -pick add \$@ %<  
?LINT:define fieldn  
?S:fieldn:  
?S: This variable is used internally by Configure. It contains the position  
?S: of the included file name in cpp output. That is to say, when cpp  
?S: pre-processes a #include <file> line, it replaces it by a # line which  
?S: contains the original position in the input file and the full name of  
?S: included file, between "quotes".  
?S:.  
?V:fieldn  
?F:./findhdr !fieldn  
?T:cline pos wanted name awkprg cppfilter testaccess status usrincdir  
: determine filename position in cpp output  
echo " "  
echo "Computing filename position in cpp output for #include  
directives..." >&4  
echo '#include <stdio.h>' > foo.c  
case "\$osname" in  
vos)  
testaccess=-e  
?X: VOS: path component separator is >  
cppfilter="tr '\\\\>' '/' |"  
;;  
\*)  
testaccess=-r  
cppfilter=""  
;;  
esac  
\$cat >fieldn <<EOF  
\$startsh  
\$cppstdin \$cppflags \$cppminus <foo.c 2>/dev/null | \  
\$grep '^[ ]\*#.\*stdio.h' | \  
while read cline; do  
pos=1  
set \ \$cline  
while \$test \ \$# -gt 0; do  
if \$test \$testaccess \ `echo \ \$1 | \$tr -d ""`; then  
echo "\ \$pos"  
exit 0  
fi  
shift  
pos=\`expr \ \$pos + 1\  
done



```

done
EOF
chmod +x fieldn
fieldn=`./fieldn`
$rm -f foo.c fieldn
case $fieldn in
") pos='???';;
1) pos=first;;
2) pos=second;;
3) pos=third;;
*) pos="{fieldn}th";;
esac
echo "Your cpp writes the filename in the $pos field of the line."

```

?X: To locate a header file, we cannot simply check for \$usrinc/file.h, since  
?X: some machine have the headers in weird places and our only hope is that  
?X: the C pre-processor will know how to find those headers. Thank you Next!

: locate header file

```

$cat
>findhdr <<EOF
$startsh
wanted=$1
name=""
for usrincdir in $usrinc; do
if test -f $usrincdir/$wanted; then
echo "$usrincdir/$wanted"
exit 0
fi
done
awkprg='{ print \$$fieldn }'
echo "#include <$wanted>" > foo\$\$.c
$cppstdin $cppminus $cppflags < foo\$\$.c 2>/dev/null | \
$cppfilter $grep "^[ ]*#.*\$wanted" | \
while read cline; do
name=`echo $cline | $awk "\$awkprg" | $tr -d ""`
case "\$name" in
*[\|\\\]$wanted) echo "\$name"; exit 1;;
*[\|\\\]$wanted) echo "\$name"; exit 1;;
*) exit 2;;
esac
done
?X: status = 0: grep returned 0 lines, case statement not executed
?X: status = 1: headerfile found
?X: status = 2: while loop executed, no headerfile found
status=$?
$rm -f foo\$\$.c
if test $status -eq 1; then
exit 0

```

```
fi
exit 1
EOF
chmod +x findhdr
$eunicefix findhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Findhdr.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Config_sh.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
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?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Config_sh.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 14:57:53 ram
```

```
?RCS: patch61: added support for src.U
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/01/11 14:53:31 ram
```

```
?RCS: patch45: moved path stripping from d_portable.U to end of Configure
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/29 15:50:37 ram
```

```
?RCS: patch36: added ?F: line for metalint file checking
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:04:48 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X:
```

This unit ends up producing the config.sh script, which contains all the

```
?X: definitions figured out by Configure. The add.Config_sh command knows
```

```
?X: which variables need to be remembered. It also adds the EOT (ends the
```

```
?X: here document redirection with variable substitution).
```

```
?X:
```

```
?MAKE:Config_sh: cf_time cf_by test spitshell startsh myuname Myread \
```

```
End Obsol_sh Loc +d_portable package src cat
```

```
?MAKE: -pick add.Config_sh $@ %<
```

```
?MAKE: -pick add $@ ./Obsol_sh
```

```
?MAKE: -pick close.Config_sh $@ %<
```

```
?F:!config.over !config.arch
```

```
?T:file temp
```

```
?LINT:unclosed EOT
: back to where it started
if test -d ../UU; then
  cd ..
fi
```

```
: configuration may be unconditionally patched via a 'config.arch' file
if $test -f config.arch; then
  echo "I see a config.arch file, loading it." >&4
  . ./config.arch
fi
```

```
: configuration may be patched via a 'config.over' file
if $test -f config.over; then
  echo " "
  dflt=y
  rp='I see a config.over file. Do you wish to load it?'
  . UU/myread
  case "$ans" in
  n*) echo
    "OK, I'll ignore it.";;
  *) . ./config.over
    echo "Configuration override changes have been loaded."
    ;;
  esac
fi
```

```
@if d_portable
: in case they want portability, strip down executable paths
?X:
?X: Strip down paths in located executables. For each file, e.g. vi, there
?X: is a $vi variable whose value is for instance '/usr/bin/vi'. By resetting
?X: $vi to 'vi', we rely on the PATH variable to locate the executable...
?X:
case "$d_portable" in
"$define")
  echo " "
  echo "Stripping down executable paths..." >&4
?X:
?X: Previously, we used to do eval $file="\$file" but in order
?X: to handle things like sh Configure -Dmake=gmake, we can't do
?X: that. What we *really* want is to strip away the absolute path
?X: and rely on the end user's $PATH to correctly find the executable.
?X: This method assumes there is a "basename" command available. If
?X: not, replace it with the following expr-based command:
?X: expr $temp : '.*^(.*)' \| $temp
?X: Since this preserves the actual
```

```

command name, we can now drop the
?X: OS/2 specific code.
?X: --Andy Dougherty August 1999
?X:
?X: On OS/2, a special $ar command not even named 'ar' is required,
?X: so we don't strip that name.
?X: Also, on DOS-ish systems, there might not be a ln command, but we
?X: might have ln='cp'.
?X: However, we can't set d_portable=undef on such systems since
?X: Unix-ish tools don't have standard locations there. Thus we
?X: MUST rely on the user's $PATH.
?X: --Andy Dougherty 4/1998
?X:
for file in $loclist $trylist; do
    eval temp=\\$file
    eval $file=`basename $temp`
done
;;
esac

@end
: create config.sh file
echo " "
echo "Creating config.sh..." >&4
$spitshell <<EOT >config.sh
$startsh
#
# This file was produced by running the Configure script. It holds all the
# definitions figured out by Configure. Should you modify one of these values,
# do not forget to propagate your changes by running "Configure -der". You may
# instead choose to run each of the .SH files by yourself, or "Configure
-S".
#

# Package name    : $package
# Source directory : $src
# Configuration time: $cf_time
# Configured by   : $cf_by
# Target system   : $myuname

EOT
?X: Command line options are saved by the Options.U unit in the
?X: temporary file UU/cmdline.opt
: Add in command line options if available
$test -f UU/cmdline.opt && $cat UU/cmdline.opt >> config.sh

$spitshell <<EOT >>config.sh

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Config\_sh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_utime.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_utime.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:47 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_utime: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_utime:

?S: This variable conditionally defines the I\_UTIME symbol, and indicates

?S: whether a C program should include <utime.h>.

?S:.

?C:I\_UTIME:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <utime.h>.

?C:.

?H:#\$i\_utime I\_UTIME /\*\*/

?H:.

?LINT:set i\_utime

:

see if this is an utime system

set utime.h i\_utime

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_utime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetprotos.U,v \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?MAKE:d\_getnetprotos : Hasproto i\_netdb  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_getnetprotos:  
 ?S: This variable conditionally defines the HAS\_GETNET\_PROTOS symbol,  
 ?S: which indicates to the C program that <netdb.h> supplies  
 ?S: prototypes for the various getnet\*() functions.  
 ?S: See also netdbtype.U for probing for various netdb types.  
 ?S:.  
 ?C:HAS\_GETNET\_PROTOS:  
 ?C: This symbol, if defined, indicates that <netdb.h> includes  
 ?C: prototypes for getnetent(), getnetbyname(), and  
 ?C: getnetbyaddr(). Otherwise,  
 it is up to the program to guess  
 ?C: them. See netdbtype.U for probing for various Netdb\_xxx\_t types.  
 ?C:.  
 ?H:#\$d\_getnetprotos HAS\_GETNET\_PROTOS /\*\*/  
 ?H:.  
 ?LINT:set d\_getnetprotos  
 : see if prototypes for various getnetxxx netdb.h functions are available  
 echo " "  
 set d\_getnetprotos getnetent \$i\_netdb netdb.h  
 eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d\_getnetprotos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vaprotos.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
 ?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>  
 ?RCS:  
 ?RCS: \$Log: vaprotos.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/01/24 14:17:16 ram  
 ?RCS: patch16: definition of \_V now appears only when needed  
 ?RCS:

```

?RCS: Revision 3.0 1993/08/18 12:09:59 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:vaproto: prototype i_stdarg Setvar
?MAKE: -pick add $@ %<
?S:vaproto:
?S: This variable conditionally defines CAN_VAPROTO on systems supporting
?S: prototype
    declaration of functions with a variable number of
?S: arguments. See also prototype.
?S:.
?C:CAN_VAPROTO ~ %<:
?C: This variable is defined on systems supporting prototype declaration
?C: of functions with a variable number of arguments.
?C:.
?C:_V:
?C: This macro is used to declare function parameters in prototypes for
?C: functions with a variable number of parameters. Use double parentheses.
?C: For example:
?C:
?C: int printf _V((char *fmt, ...));
?C:
?C: Remember to use the plain simple _() macro when declaring a function
?C: with no variable number of arguments, since it might be possible to
?C: have a non-effect _V() macro and still get prototypes via _().
?C:.
?H:?%<:#$vaproto CAN_VAPROTO /**/
?H:?_V:#ifdef CAN_VAPROTO
?H:?_V:#define _V(args) args
?H:?_V:#else
?H:?_V:#define _V(args) ()
?H:?_V:#endif
?H:.
?W:?%<:_V
?LINT:set vaproto
: see if prototypes support variable argument declarations
echo " "
case "$prototype$i_stdarg" in
$define$define)
    echo "It appears we'll
    be able to prototype varargs functions." >&4
    val="$define"
    ;;
*)
    echo "Too bad... We won't be using prototyped varargs functions..." >&4
    val="$undef"
    ;;
esac

```

```
set vaprotol
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/vaprotol.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: pkgsrc.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

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?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?MAKE:pkgsrc: src rsrc
```

```
?MAKE: -pick add $@ %<
```

```
?S:pkgsrc:
```

```
?S: This variable holds the absolute path of the package source.
```

```
?S:.
```

```
?C:PACKAGE_SOURCE_DIR:
```

```
?C: Holds the directory name holding the package source.
```

```
?C:.
```

```
?H:#define PACKAGE_SOURCE_DIR "$pkgsrc"
```

```
?H:.
```

```
: define absolute package source directory
```

```
case "$src" in
```

```
/*) pkgsrc=$src;;
```

```
*) pkgsrc=`cd $rsrc; pwd`;;
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/pkgsrc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Rcs.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
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?RCS: You may redistribute only under the terms of the Artistic Licence,
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```

```
?RCS: of the source tree for dist 4.0.
```



?RCS:  
?RCS: \$Log: Rcs.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:15 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This is a unit that helps people who write SH scripts and keep them under  
?X: RCS, but don't think to protect the \$Log and other \$Id keywords from  
?X: variable substitution (or people like me who do not like to).  
?X:  
?MAKE:Author Date Header Id Locker Log RCSfile Revision Source State: Oldconfig  
?MAKE: -pick weed \$@ %<  
?LINT:describe Author  
Date Header Id Locker Log RCSfile Revision Source State  
: preserve RCS keywords in files with variable substitution, grrr  
?Author:Author='\$Author'  
?Date:Date='\$Date'  
?Header:Header='\$Header'  
?Id:Id='\$Id'  
?\$Locker'  
?Log:Log='\$Log'  
?RCSfile:RCSfile='\$RCSfile'  
?Revision:Revision='\$Revision'  
?Source:Source='\$Source'  
?State:State='\$State'

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Rcs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2015 Jarkko Hietaniemi, H.Merijn Brand  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:longdblmanbits doublemanbits nvmantbits: Inlibc cat Compile run \  
rm\_try Setvar echo i\_sunmath usequadmath \  
d\_longdbl longdblkind nvsiz double size longdblsize  
?MAKE: -pick add \$@ %<  
?S:doublemanbits:  
?S: This symbol, if defined, tells how many mantissa bits  
?S: there are in double precision floating point format.  
?S: Note that this is usually DBL\_MANT\_DIG minus one, since  
?S: with the standard IEEE 754 formats DBL\_MANT\_DIG includes  
?S: the implicit bit which doesn't really exist.

?S:.

?S:longdblmantbits:

?S: This symbol, if defined, tells how many mantissa bits

?S: there are in long double precision floating point format.

?S: Note that this can be LDBL\_MANT\_DIG minus one,

?S: since

LDBL\_MANT\_DIG can include the IEEE 754 implicit bit.

?S: The common x86-style 80-bit long double does not have

?S: an implicit bit.

?S:.

?S:nvmantbits:

?S: This variable tells how many bits the mantissa of a Perl NV has,

?S: not including the possible implicit bit.

?S:.

?C:DOUBLEMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: there are in double precision floating point format.

?C: Note that this is usually DBL\_MANT\_DIG minus one, since

?C: with the standard IEEE 754 formats DBL\_MANT\_DIG includes

?C: the implicit bit, which doesn't really exist.

?C:.

?C:LONGDBLMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: there are in long double precision floating point format.

?C: Note that this can be LDBL\_MANT\_DIG minus one,

?C: since LDBL\_MANT\_DIG can include the IEEE 754 implicit bit.

?C: The common x86-style 80-bit long double does not have

?C: an implicit bit.

?C:.

?C:NVMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: (not

including implicit bit) there are in a Perl NV.

?C: This depends on which floating point type was chosen.

?C:.

?H:#define DOUBLEMANTBITS \$doublemantbits

?H:#define LONGDBLMANTBITS \$longdblmantbits

?H:#define NVMANTBITS \$nvmantbits

?H:.

?F:!try

: Check the length of the double mantissa

\$echo "Checking how many mantissa bits your doubles have..." >&4

\$cat >try.c <<EOP

#\$i\_sunmath I\_SUNMATH

#include <float.h>

#ifdef I\_SUNMATH

# include <sunmath.h>

#endif

```

#ifdef DBL_MANT_DIG
# define BITS (DBL_MANT_DIG - 1) /* the implicit bit does not count */
#endif
#include <stdio.h>
int main(int argc, char *argv[]) {
#ifdef BITS
printf("%d\n", BITS);
#endif
return 0;
}
EOP
set try
if eval $compile; then
doublemantbits=`$run ./try`
else
doublemantbits="$undef"
fi
$rm_try

: Check the length of the longdouble mantissa
$echo "Checking how many mantissa bits your long doubles have..." >&4
$cat >try.c <<EOP
#$i_sunmath I_SUNMATH
#include <float.h>
#ifdef I_SUNMATH
# include <sunmath.h>
#endif
#$d_longdbl
HAS_LONG_DOUBLE
#if defined(HAS_LONG_DOUBLE) && defined(LDBL_MANT_DIG)
# if ($longdblkind == 3) || ($longdblkind == 4) /* 80-bit extended precision */
/* This format has no implicit bit. Beware, however, that for
* this format the bare LDBL_MANT_DIG is misleading for inf/nan:
* the top three bits are used for inf (100) / qnan (11x) / snan (101),
* and the top bit must have been one since 387, zero is plain invalid.
* For normal fp values, the LDBL_MANT_DIG is fine, though. */
# define BITS LDBL_MANT_DIG
# elif ($longdblkind == 5 || $longdblkind == 6 || $longdblkind == 7 || $longdblkind == 8) /* double double */
/* LDBL_MANT_DIG of 106 (twice 53) would be logical, but for some
* reason e.g. Irix thinks 107. But in any case, we want only
* the number of real bits, the implicit bits are of no interest. */
# define BITS 2 * (DBL_MANT_DIG - 1)
# else
# define BITS (LDBL_MANT_DIG - 1) /* the implicit bit does not count */
# endif
#endif
#include <stdio.h>
int

```

```

main(int argc, char *argv[]) {
#ifdef BITS
printf("%d\n", BITS);
#endif
return 0;
}

```

EOP

```

set try
if eval $compile; then
    longdblmanbits=`$run ./try`
else
    longdblmanbits="$undef"
fi
$rm_try

```

: Check the length of the NV mantissa

```
$echo "Checking how many mantissa bits your NVs have..." >&4
```

```
if test "X$susequadmath" = "X$define"; then
```

```
    nvmantbits=112 # 128-1-15
```

```
else
```

```
if test "X$nvsize" = "X$doublesize"; then
```

```
    nvmantbits="$doublemantbits"
```

```
else
```

```
if test "X$nvsize" = "X$longdblsize"; then
```

```
    nvmantbits="$longdblmanbits"
```

```
else
```

```
    nvmantbits="$undef"
```

```
fi
```

```
fi
```

```
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/mantbits.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libs.U,v \$

?RCS: Revision 3.0.1.6 1997/02/28 16:09:11 ram

?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS:  
?RCS: Revision 3.0.1.5 1995/07/25 14:12:05 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 16:24:22 ram  
?RCS: patch36: removed old broken thislib/thatlib processing (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/06/20 07:05:44 ram  
?RCS: patch30: code cleanup with if/elif by ADO and RAM  
?RCS: patch30: undone patch23 for libswanted default  
setting  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/06 15:08:45 ram  
?RCS: patch23: now includes ordered default libswanted variable (ADO)  
?RCS: patch23: major cleanup for library lookups (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:02:31 ram  
?RCS: patch6: added default for libs  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:03 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:libs libsfound libsfiles libsdirs libspath libscheck: \  
test cat Myread Oldconfig Loc libpth package xlibpth so \_a \  
+usesocks sed +cc +ccflags +ldflags rm  
?MAKE: -pick add \$@ %<  
?S:libs:  
?S: This variable holds the additional libraries we want to use.  
?S: It is up to the Makefile to deal with it. The list can be empty.  
?S:.  
?S:libsfound:  
?S: This variable holds the full pathnames of the libraries  
?S: we found and accepted.  
?S:.  
?S:libsfiles:  
?S: This variable holds the filenames aka basenames of the libraries  
?S: we found and accepted.  
?S:.  
?S:libsdirs:  
?S: This variable holds the directory  
names aka dirnames of the libraries  
?S: we found and accepted, duplicates are removed.  
?S:.  
?S:libspath:  
?S: This variable holds the directory names probed for libraries.  
?S:.  
?S:libscheck:

?S: This variable is intended to be set by hint files, if needed.

?S: It should contain shell code that will be eval'ed with \$xxx holding

?S: some library file. It may change \$xxx if needed.

?S: For instance, on an Irix platform, you may make sure the right

?S: library file is used depending on the cc command line, so that the

?S: correct library is used depending on the selected ABI (for 32 and

?S: 64-bit compilations).

?S:

?S: Here is an example of code that could be found in a hint file on Irix

?S: when the selected compiler was for 32-bit -- that code is put in the

?S: cc.cbu call-back unit to be invoked AFTER the C compiler and its

?S: flags have been chosen:

?S:

```

?S: libscheck='case "$xxx" in
?S: *.a) /bin/ar p $xxx ` /bin/ar t $xxx | sed q` >$$o;
?S: case "`/usr/bin/file $$o`" in
?S: *N32*)
?S:   rm -f $$o ;;
?S: *) rm -f $$o; xxx=/no/n32$xxx ;;
?S: esac ;;
?S: *) case "`/usr/bin/file $xxx`" in
?S: *N32*) ;;
?S: *) xxx=/no/n32$xxx ;;
?S: esac ;;
?S: esac'
?S:.
?D:libs="
?LINT:extern libswanted
?LINT:change libswanted
?INIT:: default library list
?INIT:libswanted="
?X: This order is chosen so that libraries -lndir, -ldir, -lucb, -lbsd,
?X: -lBSD, -lPW, and -lx only get used if there are unresolved
?X: routines at link time. Usually, these are backwards compatability
?X: libraries, and may not be as reliable as the standard c library.
?X:
?X: The -lsocket -linet -lnsl order has been reported to be necessary
?X: for at least one SVR4 implementation.
?X: -lc must proceed -lucb or -lbsd for most Solaris applications.
?X: -lc_s proceeds -lc so we pick up the shared library version, if
?X: it is available.
?X:
?X: The ordering of c, posix, and cposix is a guess and almost
?X: certainly wrong on about half of all systems.
?X:
?X: Set proper libswanted in your private
?X: Myinit.U if needed.
?X:

```

```

?X:: default ordered library list
?X:libswanted='net socket inet bind nsl nm sdbm gdbm ndbm dbm malloc dl'
?X:libswanted="$libswanted dld sun m c_s c posix cposix ndir dir ucb"
?X:libswanted="$libswanted bsd BSD PW x"
?X:
?INIT:: should be set by hint files if needed
?INIT:libscheck=""
?T:xxx yyy thislib thisdir libstyle linkmsg
?F:lt.c lt
: Looking for optional libraries
echo " "
echo "Checking for optional libraries..." >&4
case "$libs" in
'|') dflt="";;
*) dflt="$libs";;
esac
case "$libswanted" in
") libswanted='c_s';;
esac
?X: libsocks has nasty naming scheme.
?X: This does not work if somebody wants SOCKS 4.
case "$susesocks" in
"$define") libswanted="$libswanted socks5 socks5_sh" ;;
esac
?X: Used later for link checks
echo "extern char printf(); int main() { printf(); return 0; }" > lt.c
libsfound=""
libsfiles=""
libsdirs=""
libspath=""
for thisdir in $libpth $xlibpth; do
test -d $thisdir && libspath="$libspath $thisdir"
done
for thislib in $libswanted;
do
for thisdir in $libspath; do
xxx=""
if test ! -f "$xxx" ; then
xxx=`ls $thisdir/lib$thislib.$so.[0-9]* 2>/dev/null | $sed -n '1p'`
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib.$so
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then

```

```

xxx=$thisdir/lib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib${thislib}_s$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
$test -f "$xxx" && thislib=${thislib}_s
fi
if test ! -f "$xxx"; then
xxx=$thisdir/Slib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test
-f "$xxx" && libstyle=static
fi
if $test -f "$xxx"; then
?X:
?X: It is not sufficient to find a .so on the disk. We must make sure
?X: that we can indeed supply the -lfoo line on the cc line to link against
?X: that library. On Linux for instance, a versioned .so will not be
?X: implicitly linked against, whereas it will work fine on Solaris 2.6.
?X: --RAM, 10/10/2003
?X:
if $cc -o lt $ccflags $ldflags lt.c -l$thislib >/dev/null 2>&1;
then
    linkmsg=""
else
    linkmsg=" but I can't link against it"
fi
case "$libstyle" in
shared) echo "Found -l$thislib (shared)$linkmsg." ;;
static) echo "Found -l$thislib$linkmsg." ;;
*)    echo "Found -l$thislib ($libstyle)$linkmsg." ;;
esac
case " $dflt " in
*" -l$thislib "*) ;;
*)
case "$linkmsg" in
")
dflt="$dflt -l$thislib"
libsfound="$libsfound $xxx"
yyy=`basename $xxx`

```



```

libsfiles="$libsfiles $yyy"
yyy=`echo $xxx|sed -e "s%/$yyy\\$%%"`
case " $libsdirs
" in
*" $yyy "*) ;;
*) libsdirs="$libsdirs $yyy" ;;
esac
;;
esac
;;
esac
break
fi
done
if $test ! -f "$xxx"; then
    echo "No -l$thislib."
fi
done
set X $dflt
shift
dflt="$*"
case "$libs" in
") dflt="$dflt";;
*) dflt="$libs";;
esac
case "$dflt" in
'|') dflt='none';;
esac
$rm -f lt.c lt

$cat <<EOM

```

In order to compile \$package on your machine, a number of libraries are usually needed. Include any other special libraries here as well. Say "none" for none. The default list is almost always right.  
EOM

```

echo " "
rp="Which libraries to use?"
./myread
case "$ans" in
none) libs='';;
*) libs="$ans";;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libs.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: byteorder.U,v 3.0.1.2 1997/02/28 15:24:55 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: byteorder.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:24:55 ram
?RCS: patch61: no longer ask the user if the test runs ok
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:02:58 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:28 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:byteorder: cat Myread Oldconfig Loc Compile rm_try run \
multiarch uvtype uvsize i_stdlib
?MAKE: -pick add $@ %<
?S:byteorder:
?S: This
variable holds the byte order in a UV. In the following,
?S: larger digits indicate more significance. The variable byteorder
?S: is either 4321 on a big-endian machine, or 1234 on a little-endian,
?S: or 87654321 on a Cray ... or 3412 with weird order !
?S:.
?C:BYTEORDER:
?C: This symbol holds the hexadecimal constant defined in byteorder,
?C: in a UV, i.e. 0x1234 or 0x4321 or 0x12345678, etc...
?C: If the compiler supports cross-compiling or multiple-architecture
?C: binaries, use compiler-defined macros to
?C: determine the byte order.
?C:.
?H:%<:#if defined(MULTIARCH)
?H:%<:# ifdef __LITTLE_ENDIAN__
?H:%<:# if LONGSIZE == 4
?H:%<:# define BYTEORDER 0x1234
?H:%<:# else
?H:%<:# if LONGSIZE == 8
?H:%<:# define BYTEORDER 0x12345678
?H:%<:# endif
?H:%<:# endif
```

```

?H:?%<:# else
?H:?%<:#  ifdef __BIG_ENDIAN__
?H:?%<:#   if LONGSIZE == 4
?H:?%<:#     define BYTEORDER 0x4321
?H:?%<:#   else
?H:?%<:#     if LONGSIZE
== 8
?H:?%<:#       define BYTEORDER 0x87654321
?H:?%<:#     endif
?H:?%<:#   endif
?H:?%<:# endif
?H:?%<:# endif
?H:?%<:#endif
?H:?%<:#define BYTEORDER 0x$byteorder /* large digits for MSB */
?H:?%<:#endif
?H:.
?T:xxx_prompt
?F:!try
: check for ordering of bytes in a UV
echo " "
case "$multiarch" in
*$define*)
$cat <<EOM
You seem to be doing a multiarchitecture build,
skipping the byteorder check.

```

```

EOM
byteorder='ffff'
;;
*)
case "$byteorder" in
")
$cat <<'EOM'

```

In the following, larger digits indicate more significance. A big-endian machine like a Pyramid or a Motorola 680?0 chip will come out to 4321. A little-endian machine like a Vax or an Intel 80?86 chip would be 1234. Other machines may have weird orders like 3412. A Cray will report 87654321, an Alpha will report 12345678. If the test program works the default is probably right.

I'm now running the test program...

```

EOM
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include

```

```

<sys/types.h>
typedef $svtype UV;
int main()
{
  int i;
  union {
    UV l;
    char c[$svsize];
  } u;

  if ($svsize > 4)
    u.l = (((UV)0x08070605) << 32) | (UV)0x04030201;
  else
    u.l = (UV)0x04030201;
  for (i = 0; i < $svsize; i++)
    printf("%c", u.c[i]+'0');
  printf("\n");
  exit(0);
}
EOCP
xxx_prompt=y
set try
if eval $compile && $run ./try > /dev/null; then
  dflt=`$run ./try`
  case "$dflt" in
    [1-4][1-4][1-4][1-4]|12345678|87654321)
      echo "(The test program ran ok.)"
      echo "byteorder=$dflt"
      xxx_prompt=n
      ;;
    ??????????) echo "(The test program ran ok.)" ;;
    *) echo "(The test program didn't run right for some reason.)" ;;
  esac
else
  dflt='4321'
  cat <<'EOM'
(I can't seem to compile the test program. Guessing big-endian...)
EOM
fi
case "$xxx_prompt" in
y)
  rp="What is the order of bytes in $svtype?"
  ./myread
  byteorder="$ans"
  ;;
*) byteorder=$dflt
  ;;
esac

```

```
;;
esac
$rm_try
;;
esac
```

Found in path(s):

\*

```
/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/byteorder.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_getpwent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpwent: Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_getpwent:

?S: This variable conditionally defines the HAS\_GETPWENT symbol, which

?S: indicates to the C program that it should use the getpwent()

?S: routine instead of the getpw() routine.

?S:.

?C:HAS\_GETPWENT (GETPWENT):

?C: This symbol, if defined, indicates that the getpwent() routine

?C: should be used instead of the getpw()

routine.

?C:.

?H:#\$d\_getpwent HAS\_GETPWENT /\*\*/

?H:.

?LINT:set d\_getpwent

: see if there is a getpwent

echo " "

if set getpwent val -f d\_getpwent; eval \$csym; \$val; then

echo "getpwent() found." >&4

val="\$define"

else

echo "No getpwent() found -- will use getpw() instead." >&4

```
val="$undef"  
fi  
set d_getpwent  
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_getpwent.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fsync: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_fsync:

?S: This variable conditionally defines the HAS\_FSYNC symbol, which

?S: indicates to the C program that the fsync() routine is available.

?S:.

?C:HAS\_FSYNC:

?C: This symbol, if defined, indicates that the fsync routine is

?C: available to write a file's modified data and attributes to

?C: permanent storage.

?C:.

?H:#\$d\_fsync HAS\_FSYNC /\*\*/

?H:.

?LINT:set d\_fsync

: see if fsync exists

set fsync d\_fsync

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_fsync.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setpgid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_setpgid.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:41:49 ram  
?RCS: patch61: reworded symbol comments  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24 14:06:40 ram  
?RCS: patch16: created  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:56 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setpgid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setpgid:  
?S: This variable conditionally defines the HAS\_SETPGID symbol if the  
?S: setpgid(pid, gpid) function is  
available to set process group ID.  
?S:.  
?C:HAS\_SETPGID:  
?C: This symbol, if defined, indicates that the setpgid(pid, gpid)  
?C: routine is available to set process group ID.  
?C:.  
?H:#\$d\_setpgid HAS\_SETPGID /\*\*/  
?H:.  
?LINT:set d\_setpgid  
: see if setpgid exists  
set setpgid d\_setpgid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setpgid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Oldconfig.U,v \$  
?RCS: Revision 3.0.1.10 1997/02/28 15:06:39 ram  
?RCS: patch61: added support for src.U

?RCS: patch61: new OSNAME define  
?RCS: patch61: can now sense new OSes  
?RCS:  
?RCS: Revision 3.0.1.9 1995/07/25 13:40:51 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.8 1995/05/12 12:04:18 ram  
?RCS: patch54: config.sh reload logic now knows about new -K switch  
?RCS: patch54: cleaned up and extended osvers for DEC OSF/1 (ADO)  
?RCS: patch54: added MachTen detection  
(ADO)  
?RCS:  
?RCS: Revision 3.0.1.7 1995/02/15 14:13:41 ram  
?RCS: patch51: adapted osvers computation for AIX (ADO)  
?RCS:  
?RCS: Revision 3.0.1.6 1995/01/30 14:27:15 ram  
?RCS: patch49: unit Options.U now exports file optdef.sh, not a variable  
?RCS: patch49: update code for myuname changed (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:15:36 ram  
?RCS: patch45: added quotes around the INITPROG variable (ADO)  
?RCS: patch45: allows variable overriding after config file loading  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 15:57:05 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: merged with the version used for perl5's Configure (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:24:17 ram  
?RCS: patch23: added support for osf1 hints  
?RCS: patch23: new support for solaris and i386 systems (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:05:02 ram  
?RCS: patch16: added post-processing on myuname for Xenix targets  
?RCS: patch16: message proposing config.sh  
defaults made consistent  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:56:32 ram  
?RCS: patch10: force use of config.sh when -d option is used (WAD)  
?RCS: patch10: complain about non-existent hint files (WAD)  
?RCS: patch10: added Options dependency for fastread variable  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:12 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit tries to remember what we did last time we ran Configure, mostly  
?X: for the sake of setting defaults.  
?X:



?MAKE:Oldconfig hint myuname osname osvers: Instruct Myread Checkcc \  
Mksymlinks Loc Options Tr src trnl ln uname sh awk sed test cat grep \  
rm lns tr n c contains targetarch

?MAKE: -pick wipe \$@ %<

?S:myuname:

?S: The output of 'uname -a' if available, otherwise the hostname. On Xenix,  
?S: pseudo variables assignments in the output are stripped, thank you. The  
?S: whole thing is then lower-cased.

?S:.

?S:hint:

?S: Gives the type of hints used for previous answers. May be one of  
?S: "default",  
"recommended" or "previous".

?S:.

?S:osname:

?S: This variable contains the operating system name (e.g. sunos,  
?S: solaris, hpux, etc.). It can be useful later on for setting  
?S: defaults. Any spaces are replaced with underscores. It is set  
?S: to a null string if we can't figure it out.

?S:.

?S:osvers:

?S: This variable contains the operating system version (e.g.  
?S: 4.1.3, 5.2, etc.). It is primarily used for helping select  
?S: an appropriate hints file, but might be useful elsewhere for  
?S: setting defaults. It is set to " if we can't figure it out.  
?S: We try to be flexible about how much of the version number  
?S: to keep, e.g. if 4.1.1, 4.1.2, and 4.1.3 are essentially the  
?S: same for this package, hints files might just be os\_4.0 or  
?S: os\_4.1, etc., not keeping separate files for each little release.

?S:.

?C:OSNAME:

?C: This symbol contains the name of the operating system, as determined  
?C: by Configure. You shouldn't rely on it too much; the specific  
?C: feature  
tests from Configure are generally more reliable.

?C:.

?C:OSVERS:

?C: This symbol contains the version of the operating system, as determined  
?C: by Configure. You shouldn't rely on it too much; the specific  
?C: feature tests from Configure are generally more reliable.

?C:.

?H:#define OSNAME "\$osname" /\*\*/  
?H:#define OSVERS "\$osvers" /\*\*/  
?H:.

?F:!config.sh

?T:tmp tmp\_n tmp\_c tmp\_sh file

?T:xxxxfile xxxfile xxfile xfile hintfile newmyuname

?T:tans \_ isesix INITPROG DJGPP has\_uname

```

?D:osname=""
?LINT:change n c sh
?LINT:extern hostarch
?LINT:change hostarch
: Determine the name of the machine
myuname=`$uname -a 2>/dev/null`
$test -z "$myuname" && myuname=`hostname 2>/dev/null`
?X: Special mention for Xenix, whose 'uname -a' gives us output like this:
?X: sysname=XENIX
?X: nodename=whatever
?X: release=2.3.2 .. etc...
?X: Therefore, we strip all this variable assignment junk and remove all the
?X: new lines to keep the myuname variable sane... --RAM
myuname=`echo $myuname | $sed -e
's/^[^=]*=/' -e 's/\\//g' | \
./tr '[A-Z]' '[a-z]' | $tr $trnl ' '`
?X: Save the value we just computed to reset myuname after we get done here.
newmyuname="$myuname"
$test -f "$uname$_exe" && has_uname=y

```

: Guessing of the OS name -- half the following guesses are probably wrong...

: If you have better tests or hints, please send them to the metaconfig

: authors and to <MAINTLOC>

```

$test -f /irix && osname=irix
$test -f /xenix && osname=sco_xenix
$test -f /dynix && osname=dynix
$test -f /dnix && osname=dnix
$test -f /lynx.os && osname=lynxos
$test -f /unicos && osname=unicos && osvers=`$uname -r`
$test -f /unicosmk && osname=unicosmk && osvers=`$uname -r`
$test -f /unicosmk.ar && osname=unicosmk && osvers=`$uname -r`
$test -f /bin/mips && /bin/mips && osname=mips
$test -d /NextApps && set X `hostinfo | $grep 'NeXT Mach.*:' | \
$sed -e 's:/://' -e 's/\./_/' && osname=next && osvers=$4
$test -d /usr/apollo/bin && osname=apollo
$test -f /etc/saf/_sactab && osname=svr4
$test -d /usr/include/minix
&& osname=minix
$test -f /system/gnu_library/bin/ar.pm && osname=vos
if $test -d /MachTen -o -d /MachTen_Folder; then
?X: MachTen uname -a output looks like
?X: xxx 4 0.0 Macintosh
?X: MachTen /sbin/version output looks like
?X: MachTen 4.0 Mon Aug 28 10:18:00 1995
?X: MachTen 3.x had the 'version' command in /usr/etc/version.
osname=machten
if $test -x /sbin/version; then
osvers=`/sbin/version | $awk '{print $2}' |

```

```

$sed -e 's/[A-Za-z]$//'^
elif $test -x /usr/etc/version; then
  osvers=`/usr/etc/version | $awk '{print $2}' |
$sed -e 's/[A-Za-z]$//'^
else
  osvers="$2.$3"
fi
fi
$test -f /sys/posix.dll &&
$test -f /usr/bin/what &&
set X `usr/bin/what /sys/posix.dll` &&
$test "$3" = UWIN &&
osname=uwin &&
osvers="$5"
?X: If we have uname, we already computed a suitable uname -a output, correctly
?X: formatted for Xenix, and it lies in $myuname.
if $test "X$has_uname" != X; then
  set X $myuname
  shift
  case "$5" in
  fps*) osname=fps ;;
  mips*)
    case "$4"
  in
  umips) osname=umips ;;
  *) osname=mips ;;
  esac;;
[23]100) osname=mips ;;
next*) osname=next ;;
?X: Interactive Unix.
i386*)
  tmp=`/bin/uname -X 2>/dev/null|awk '/3\,2v[45]/{ print $(NF) }'^
  if $test "$tmp" != "" -a "$3" = "3.2" -a -f /etc/systemid; then
    osname='sco'
    osvers=$tmp
  elif $test -f /etc/kconfig; then
    osname=isc
    if $test "$lns" = "$ln -s"; then
      osvers=4
    elif $contains _SYSV3 /usr/include/stdio.h > /dev/null 2>&1 ; then
      osvers=3
    elif $contains _POSIX_SOURCE /usr/include/stdio.h > /dev/null 2>&1 ; then
      osvers=2
    fi
  fi
  tmp=""
  ;;
?X: MS-DOS djgpp uname -a output looks like:

```

?X: ms-dos xxx 6 22 pc

?X: \$1 is the "dos flavor" (need not be "ms-dos").

?X: \$2 is the node name

?X: \$3 and \$4 are version/subversion

?X: \$5 is always "pc", but that might not be unique to DJGPP.

?X: (e.g. Solaris\_x86 has \$5 = i86pc, which doesn't actually conflict,

?X: but it's close enough that I can easily imagine other vendors also

?X: using variants  
of pc\* in \$5.)

?X: The "DJGPP" environment variable is always set when djgpp is active.  
pc\*)  
if \$test -n "\$DJGPP"; then  
  osname=dos  
  osvers=djgpp  
fi  
;;  
esac  
case "\$1" in  
  aix) osname=aix  
?X: aix 4.1 uname -a output looks like  
?X: AIX foo 1 4 000123456789  
?X: where \$4 is the major release number and \$3 is the (minor) version.  
?X: More detail on the version is available with the oslevel command.  
?X: in 3.2.x, it output a string (see case statements below). In 4.1,  
?X: it puts out something like 4.1.1.0  
  tmp=`( oslevel) 2>/dev/null || echo "not found") 2>&1`  
  case "\$tmp" in  
    'not found') osvers="\$4"."\$3" ;;  
    '<3240'|<>3240') osvers=3.2.0 ;;  
    '=3240'|>3240'|<3250'|<>3250') osvers=3.2.4 ;;  
    '=3250'|>3250') osvers=3.2.5 ;;  
    \*) osvers=\$tmp;;  
  esac  
  ;;  
  bsd386) osname=bsd386  
    osvers=`\$uname -r`  
    ;;  
  cygwin\*) osname=cygwin  
    osvers="\$3"  
    ;;  
  \*dc.osx) osname=dcosx  
    osvers="\$3"  
    ;;  
  dnix) osname=dnix  
    osvers="\$3"  
    ;;  
  domainos) osname=apollo  
    osvers="\$3"

```

;;
dgux)
osname=dgux
osvers="$3"
;;
?X: uname -a returns
?X: DYNIX/ptx xxx 4.0 V4.1.2 i386
dynixptx*) osname=dynixptx
osvers=`echo "$4"|sed 's/^v//'^
;;
freebsd) osname=freebsd
osvers="$3" ;;
genix) osname=genix ;;
?X: HP-UX uname -a gives something like
?X: HP-UX foobar B.10.20 A 9000/735 2016483812 two-user license
?X: Preserve the full 10.20 string instead of the previous plain '10'.
?X: Thanks to Graham Barr. --AD 6/30/1998
hp*) osname=hpux
osvers=`echo "$3" | $sed 's,.*\.[0-9]*\.[0-9]*\),\1,`
;;
irix*) osname=irix
case "$3" in
4*) osvers=4 ;;
5*) osvers=5 ;;
*) osvers="$3" ;;
esac
;;
linux) osname=linux
case "$3" in
*) osvers="$3" ;;
esac
;;
MiNT) osname=mint
;;
netbsd*) osname=netbsd
osvers="$3"
;;
news-os) osvers="$3"
case "$3" in
4*) osname=newsos4 ;;
*) osname=newsos ;;
esac
;;
next*) osname=next ;;
nonstop-ux) osname=nonstopux ;;
openbsd) osname=openbsd
osvers="$3"
;;

```

```

POSIX-BC | posix-bc
) osname=posix-bc
osvers="$3"
;;
powerux | power_ux | powermax_os | powermaxos | \
powerunix | power_unix) osname=powerux
osvers="$3"
;;
qnx) osname=qnx
osvers="$4"
;;
solaris) osname=solaris
case "$3" in
5*) osvers=`echo $3 | $sed 's/^5/2/g'` ;;
*) osvers="$3" ;;
esac
;;
sunos) osname=sunos
case "$3" in
5*) osname=solaris
osvers=`echo $3 | $sed 's/^5/2/g'` ;;
*) osvers="$3" ;;
esac
;;
titanos) osname=titanos
case "$3" in
1*) osvers=1 ;;
2*) osvers=2 ;;
3*) osvers=3 ;;
4*) osvers=4 ;;
*) osvers="$3" ;;
esac
;;
ultrix) osname=ultrix
osvers="$3"
;;
osf1|mls+) case "$5" in
alpha)
?X: DEC OSF/1 myuname -a output looks like: osf1 xxxx t3.2 123.4 alpha
?X: where the version number can be something like [xvt]n.n
osname=dec_osf
?X: sizer knows the minor minor version: the letter
osvers=`sizer -v | awk '{print $3}' | \
.tr '[A-Z]' '[a-z]' | sed 's/^[xvt]//'`
case "$osvers" in
[1-9].[0-9]*) ;;
*) osvers=`echo

```

```

"$3" | sed 's/^[xvt]//'^ ;;
esac
;;
hp*) osname=hp_osf1 ;;
mips) osname=mips_osf1 ;;
?X: hp and mips were unsupported Technology Releases -- ADO, 24/10/94
esac
;;
unixware) osname=svr5
osvers="$4"
;;
uts) osname=uts
osvers="$3"
;;
vos) osvers="$3"
;;
$2) case "$osname" in
*isc*) ;;
*freebsd*) ;;
svr*)
: svr4.x or possibly later
case "svr$3" in
${osname}*)
osname=svr$3
osvers=$4
;;
esac
case "$osname" in
svr4.0)
: Check for ESIX
if $test -f /stand/boot ; then
eval `grep '^INITPROG=[a-z/0-9]*$' /stand/boot`
if $test -n "$INITPROG" -a -f "$INITPROG"; then
isesix=`strings -a $INITPROG | \
$grep 'ESIX SYSTEM V/386 Release 4.0`
if $test -n "$isesix"; then
osname=esix4
fi
fi
fi
;;
esac
;;
*) if $test -f /etc/systemid; then
osname=sco
set `echo $3 | $sed 's/\./ /g'^ $4
if $test -f $src/hints/sco_$1_$2_$3.sh; then
osvers=$1.$2.$3

```

```

elif $test
-f $src/hints/sco_$1_$2.sh; then
    osvers=$1.$2
elif $test -f $src/hints/sco_$1.sh; then
    osvers=$1
fi
else
case "$osname" in
") : Still unknown. Probably a generic Sys V.
    osname="sysv"
    osvers="$3"
    ;;
esac
fi
;;
esac
;;
*) case "$osname" in
") : Still unknown. Probably a generic BSD.
    osname="$1"
    osvers="$3"
    ;;
esac
;;
esac
else
?X: Try to identify sony's NEWS-OS (BSD unix)
if $test -f /vmunix -a -f $src/hints/news_os.sh; then
(what /vmunix | UU/tr '[A-Z]' '[a-z]') > UU/kernel.what 2>&1
if $contains news-os UU/kernel.what >/dev/null 2>&1; then
    osname=news_os
fi
$rm -f UU/kernel.what
?X: Maybe it's OS/2 or DOS or something similar
elif $test -d c:/.; then
set X $myuname
osname=os2
osvers="$5"
fi
fi

: Try to determine whether config.sh was made on this system
case "$config_sh" in
")
?X: indentation wrong on purpose--RAM
dflt=n
case "$knowitall" in
")

```



```

if test -f ../config.sh; then
  if $contains
  myuname= ../config.sh >/dev/null 2>&1; then
    eval "`$grep myuname= ../config.sh`"
  fi
  if test "X$myuname" = "X$newmyuname"; then
    dflt=y
  fi
fi
;;
*) dflt=y;;
esac

: Get old answers from config file if it was generated on the same system
hint=default
if $test -f ../config.sh; then
  echo " "
  rp="I see a config.sh file. Shall I use it to set the defaults?"
  . ./myread
  case "$ans" in
  n*|N*) echo "OK, I'll ignore it."
    mv ../config.sh ../config.sh.old
    myuname="$newmyuname"
    ;;
  *) echo "Fetching default answers from your old config.sh file..." >&4
    tmp_n="$n"
    tmp_c="$c"
    tmp_sh="$sh"
    ../config.sh
    cp ../config.sh .
    n="$tmp_n"
    c="$tmp_c"
    hint=previous
    ;;
  esac
fi
?X: remember, case indentation is wrong--RAM
;;
*)
  echo " "
  echo "Fetching default answers from $config_sh..." >&4
  tmp_n="$n"
  tmp_c="$c"
  tmp_sh="$sh"
  cd ..
  ?X: preserve symbolic links, if any
  cp $config_sh config.sh 2>/dev/null
  chmod +w config.sh

```

```

./config.sh
cd UU
cp ../config.sh
.
n="$tmp_n"
c="$tmp_c"
hint=previous
;;
esac
?X: Older versions did not always set $sh.
case "$sh" in
") sh="$tmp_sh" ;;
esac
$test "$soverride" && . ./optdef.sh

: Restore computed paths
for file in $loclist $strylist; do
eval $file="\$_$file"
done

./checkcc
?X: Cross-compiling support
case "$targetarch" in
") ;;
*) hostarch=$osname
osname=`echo $targetarch|sed 's,^[^-]*-,`
osvers="
;;
esac

@if { test -d ../hints }
: Offer them some hints based on their OS
cd ..
?X: Since we are now at the root of the source tree, we must use $src
?X: to access the sources and not $rsrc. See src.U for details...
if $test ! -f config.sh; then
$cat <<EOM

First time through, eh? I have some defaults handy for some systems
that need some extra help getting the Configure answers right:

EOM
(cd $src/hints; ls -C *.sh) | $sed 's/\,sh/ /g' >&4
dflt="

: Now look for a hint file osname_osvers, unless one has been
: specified already.
case "$hintfile" in

```

```

"| ' )
file=`echo "${osname}_${osvers}"
| $sed -e 's%\.%_%g' -e 's%_%%%`
: Also try without trailing minor version numbers.
xfile=`echo $file | $sed -e 's%[_^]*$%%`^
xxfile=`echo $xfile | $sed -e 's%[_^]*$%%`^
xxxfile=`echo $xxfile | $sed -e 's%[_^]*$%%`^
xxxxfile=`echo $xxxfile | $sed -e 's%[_^]*$%%`^
case "$file" in
") dflt=none ;;
*) case "$osvers" in
") dflt=$file
;;
*) if $test -f $src/hints/$file.sh ; then
dflt=$file
elif $test -f $src/hints/$xfile.sh ; then
dflt=$xfile
elif $test -f $src/hints/$xxfile.sh ; then
dflt=$xxfile
elif $test -f $src/hints/$xxxfile.sh ; then
dflt=$xxxfile
elif $test -f $src/hints/$xxxxfile.sh ; then
dflt=$xxxxfile
elif $test -f "$src/hints/${osname}.sh" ; then
dflt="${osname}"
else
dflt=none
fi
;;
esac
;;
esac
if $test -f Policy.sh ; then
case "$dflt" in
*Policy*) ;;
none) dflt="Policy" ;;
*) dflt="Policy $dflt" ;;
esac
fi
;;
*)
dflt=`echo
$hintfile | $sed 's/\.sh$/`^
;;
esac

if $test -f Policy.sh ; then
$cat <<EOM

```

There's also a Policy hint file available, which should make the site-specific (policy) questions easier to answer.

EOM

fi

\$cat <<EOM

You may give one or more space-separated answers, or "none" if appropriate. A well-behaved OS will have no hints, so answering "none" or just "Policy" is a good thing. DO NOT give a wrong version or a wrong OS.

EOM

```
rp="Which of these apply, if any?"
. UU/myread
tans=$ans
for file in $tans; do
if $test X$file = XPolicy -a -f Policy.sh; then
. Policy.sh
$cat Policy.sh >> UU/config.sh
elif $test -f $src/hints/$file.sh; then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif $test X"$tans" = X -o X"$tans" = Xnone ; then
: nothing
else
: Give one chance to correct a possible typo.
echo "$file.sh does not exist"
dflt=$file
rp="hint to use instead?"
. UU/myread
for file in $ans; do
if $test -f "$src/hints/$file.sh";
then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif $test X$ans = X -o X$ans = Xnone ; then
: nothing
else
echo "$file.sh does not exist -- ignored."
fi
done
fi
done

hint=recommended
```

```

: Remember our hint file for later.
if $test -f "$src/hints/$file.sh" ; then
  hintfile="$file"
else
  hintfile=""
fi
fi
cd UU
?X: From here on, we must use $rsrc instead of $src

```

```

@end
: Process their -A options
. ./posthint.sh

```

```

@if osname || osvers
: Ask them to confirm the OS name
cat << EOM

```

Configure uses the operating system name and version to set some defaults. The default value is probably right if the name rings a bell. Otherwise, since spelling matters for me, either accept the default or answer "none" to leave it blank.

```

EOM
@end
@if osname
case "$osname" in
  '| ')
    case "$hintfile" in
      '| |none) dflt=none ;;
      *) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/_.*$//'^` ;;
    esac
    ;;
  *) dflt="$osname" ;;
esac
rp="Operating
system name?"
. ./myread
case "$ans" in
  none) osname="" ;;
  *) osname=`echo "$ans" | $sed -e 's/[ | ]*/_/g' | ./tr '[A-Z]' '[a-z]'^` ;;
esac
@end
@if osvers
@if osname
echo " "
@end
case "$osvers" in

```

```

"|' )
case "$hintfile" in
"|' |none) dflt=none ;;
*) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/^[^_]*//'^
dflt=`echo $dflt | $sed -e 's/^\_/' -e 's/_/./g'^
case "$dflt" in
"|' ) dflt=none ;;
esac
;;
esac
;;
*) dflt="$osvers" ;;
esac
rp="Operating system version?"
./myread
case "$ans" in
none) osvers="" ;;
*) osvers="$ans" ;;
esac

@end

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Oldconfig.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ctermid\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_ctermid\_r ctermid\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads extern\_C

?MAKE: -pick add \$@ %<

?S:d\_ctermid\_r:

?S: This variable conditionally defines the HAS\_CTERMID\_R symbol,

?S: which indicates to the C program that the ctermid\_r()

?S: routine is available.

?S:.

?S:ctermid\_r\_proto:

?S: This variable encodes the prototype of ctermid\_r.

?S: It is zero if d\_ctermid\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ctermid\_r

?S: is defined.

```

?S:.
?C:HAS_CTERMID_R:
?C: This symbol, if defined, indicates that the ctermid_r routine
?C: is available to ctermid re-entrantly.
?C:.
?C:CTERMID_R_PROTO:
?C: This
symbol encodes the prototype of ctermid_r.
?C: It is zero if d_ctermid_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_ctermid_r
?C: is defined.
?C:.
?H:#$d_ctermid_r HAS_CTERMID_R /**/
?H:#define CTERMID_R_PROTO $ctermid_r_proto /**/
?H:.
?T:try hdrs d_ctermid_r_proto
: see if ctermid_r exists
set ctermid_r d_ctermid_r
eval $inlibc
case "$d_ctermid_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h "
case "$d_ctermid_r_proto:$usethreads" in
":define") d_ctermid_r_proto=define
set d_ctermid_r_proto ctermid_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_ctermid_r_proto" in
define)
case "$ctermid_r_proto" in
"|0) try='char* ctermid_r(char*);'
./protechk "$extern_C $try" $hdrs && ctermid_r_proto=B_B ;;
esac
case "$ctermid_r_proto" in
"|0) d_ctermid_r=undef
ctermid_r_proto=0
echo "Disabling ctermid_r, cannot determine prototype." >&4 ;;
* ) case "$ctermid_r_proto" in
REENTRANT_PROTO*) ;;
*)
ctermid_r_proto="REENTRANT_PROTO_$ctermid_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "ctermid_r has no prototype, not using it." >&4 ;;

```

```
esac
d_ctermid_r=undef
ctermid_r_proto=0
;;
esac
;;
*) ctermid_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_ctermid_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getgrnam\_r getgrnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_grp extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getgrnam\_r:

?S: This variable conditionally defines the HAS\_GETGRNAM\_R symbol,

?S: which indicates to the C program that the getgrnam\_r()

?S: routine is available.

?S:.

?S:getgrnam\_r\_proto:

?S: This variable encodes the prototype of getgrnam\_r.

?S: It is zero if d\_getgrnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrnam\_r

?S: is defined.

?S:.

?C:HAS\_GETGRNAM\_R:

?C: This symbol, if defined, indicates that the getgrnam\_r routine

?C: is available to

getgrnam re-entrantly.

?C:.

?C:GETGRNAM\_R\_PROTO:

?C: This symbol encodes the prototype of getgrnam\_r.

?C: It is zero if d\_getgrnam\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrnam\_r

?C: is defined.

?C:.



```

?H:#$d_getgrnam_r HAS_GETGRNAM_R /**/
?H:#define GETGRNAM_R_PROTO $getgrnam_r_proto /**/
?H:.
?T:try hdrs d_getgrnam_r_proto
: see if getgrnam_r exists
set getgrnam_r d_getgrnam_r
eval $inlibc
case "$d_getgrnam_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_grp grp.h"
case "$d_getgrnam_r_proto:$usetthreads" in
":define") d_getgrnam_r_proto=define
set d_getgrnam_r_proto getgrnam_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getgrnam_r_proto" in
define)
case "$getgrnam_r_proto" in
"|0) try='int getgrnam_r(const char*, struct group*, char*, size_t, struct group**);'
./protochk "$extern_C $try" $hdrs && getgrnam_r_proto=I_CSBR ;;
esac
case "$getgrnam_r_proto" in
"|0) try='int getgrnam_r(const char*, struct group*, char*,
int, struct group**);'
./protochk "$extern_C $try" $hdrs && getgrnam_r_proto=I_CSBI ;;
esac
case "$getgrnam_r_proto" in
"|0) try='struct group* getgrnam_r(const char*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrnam_r_proto=S_CBI ;;
esac
case "$getgrnam_r_proto" in
"|0) try='int getgrnam_r(const char*, struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrnam_r_proto=I_CSBI ;;
esac
case "$getgrnam_r_proto" in
"|0) try='struct group* getgrnam_r(const char*, struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrnam_r_proto=S_CSBI ;;
esac
case "$getgrnam_r_proto" in
"|0) d_getgrnam_r=undef
getgrnam_r_proto=0
echo "Disabling getgrnam_r, cannot determine prototype." >&4 ;;
*) case "$getgrnam_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrnam_r_proto="REENTRANT_PROTO_$getgrnam_r_proto" ;;
esac
echo "Prototype: $try" ;;

```

```

esac
;;
*) case "$usethreads" in
  define) echo "getgrnam_r has no prototype, not using it."
>&4 ;;
  esac
  d_getgrnam_r=undef
  getgrnam_r_proto=0
  ;;
  esac
  ;;
*) getgrnam_r_proto=0
  ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getgrnam_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sh.U,v 3.0.1.1 1997/02/28 16:20:13 ram Exp \$

?RCS:

?RCS: Copyright (c) 1997, Chip Salzenberg

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: sh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:20:13 ram

?RCS: patch61: created

?RCS:

?MAKE:sh targetsh: Head

?MAKE: -pick wipe \$@ %<

?S:sh:

?S: This variable contains the full pathname of the shell used

?S: on this system to execute Bourne shell scripts. Usually, this will be

?S: /bin/sh, though it's possible that some systems will have /bin/ksh,

?S: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?S: D:/bin/sh.exe.

?S: This

unit comes before Options.U, so you can't set sh with a -D

?S: option, though you can override this (and startsh)

?S: with -O -Dsh=/bin/whatever -Dstartsh=whatever

?S:.

?S:targetsh:  
 ?S: If cross-compiling, this variable contains the location of sh on the  
 ?S: target system.  
 ?S: If not, this will be the same as \$sh.  
 ?S:.  
 ?C:SH\_PATH:  
 ?C: This symbol contains the full pathname to the shell used on this  
 ?C: on this system to execute Bourne shell scripts. Usually, this will be  
 ?C: /bin/sh, though it's possible that some systems will have /bin/ksh,  
 ?C: /bin/pdksh, /bin/ash, /bin/bash, or even something such as  
 ?C: D:/bin/sh.exe.  
 ?C:.  
 ?H:#define SH\_PATH "\$targetsh" /\*\*/  
 ?H:.  
 ?T:xxx try pth p SYSTYPE  
 ?LINT:extern maintloc maintname \_exe  
 ?X:  
 ?X: Be quiet unless something unusual happens because this gets  
 ?X: loaded up even before options are processed.  
 ?X: Can't use ./loc because that depends on startsh, which, in turn  
 ?X: depends on this unit.  
 ?X:  
 : Find the basic shell for  
 Bourne shell scripts  
 case "\$sh" in  
 ")  
 ?X: SYSTYPE is for some older MIPS systems.  
 ?X: I do not know if it is still needed.  
 case "\$SYSTYPE" in  
 \*bsd\*|sys5\*) xxx="/\$SYSTYPE/bin/sh";;  
 \*) xxx='/bin/sh';;  
 esac  
 if test -f "\$xxx"; then  
 sh="\$xxx"  
 else  
 : Build up a list and do a single loop so we can 'break' out.  
 pth=`echo \$PATH | sed -e "s/\$p\_/ /g"`  
 for xxx in sh bash ksh pdksh ash; do  
 for p in \$pth; do  
 try="\$try \${p}/\${xxx}"  
 done  
 done  
 for xxx in \$try; do  
 if test -f "\$xxx"; then  
 sh="\$xxx";  
 break  
 elif test "X\$\_exe" != X -a -f "\$xxx\$\_exe"; then  
 sh="\$xxx";

```
break
elif test -f "$xxx.exe"; then
sh="$xxx";
break
fi
done
fi
;;
esac
```

?X: fd 4 isn't open yet...

```
case "$sh" in
") cat >&2 <<EOM
$me: Fatal Error: I can't find a Bourne Shell anywhere.
```

Usually it's in /bin/sh. How did you even get this far?

Please report this issue at <\$maintloc>

and we'll try to straighten this all out.

EOM

```
exit 1
```

```
;;
```

```
esac
```

: When cross-compiling we

need to separate the sh-to-run-Configure-with from the sh-to-use-in-Perl

: default both to the same thing, cross-compilers can then set targetsh differently if they like  
targetsh=\$sh

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/sh.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: archname.U,v 3.0.1.3 1997/02/28 15:24:32 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

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?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: as specified in the README file that comes with the distribution.
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```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: archname.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 15:24:32 ram
```

```
?RCS: patch61: changed the way the archname is mangled from uname
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/05/12 12:05:24 ram
```

```

?RCS: patch54: protect against spaces in "uname -m" output (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1995/02/15 14:14:21 ram
?RCS: patch51: created
?RCS:
?MAKE:archname myarchname useversionedarchname: sed Loc Myread Oldconfig \
osname test rm usethreads usemultiplicity use64bitint
use64bitall \
archname64 uselongdouble longdblsize doublesize targetarch Setvar \
api_versionstring usequadmath
?MAKE: -pick add $@ %<
?S:archname:
?S: This variable is a short name to characterize the current
?S: architecture. It is used mainly to construct the default archlib.
?S:.
?S:myarchname:
?S: This variable holds the architecture name computed by Configure in
?S: a previous run. It is not intended to be perused by any user and
?S: should never be set in a hint file.
?S:.
?S:useversionedarchname:
?S: This variable indicates whether to include the $api_versionstring
?S: as a component of the $archname.
?S:.
?C:ARCHNAME:
?C: This symbol holds a string representing the architecture name.
?C: It may be used to construct an architecture-dependant pathname
?C: where library files may be held under a private library, for
?C: instance.
?C:.
?H:#define ARCHNAME "$archname" /**/
?H:.
?T:xxx tarch
?F:!archname.cbu
?INIT:archname="
: determine the architecture name
echo " "
?X:
We always recompute archname in case osname changes. However, we need
?X: to be careful since, as ADO rightfully pointed out, some systems pick
?X: silly architecture names (0001307135000-aix on AIX or 9000/715-ux under
?X: HP-UX). Therefore, we allow hint files to supersede our guess and ask
?X: the user for confirmation.
if xxx=`./loc arch blurfl $pth`; $test -f "$xxx"; then
tarch=`arch`-"-$osname"
elif xxx=`./loc uname blurfl $pth`; $test -f "$xxx" ; then
if uname -m > tmparch 2>&1 ; then
tarch=`$sed -e 's/ *$//' -e 's/ /_g' \

```

```

    -e 's/"/"-.$osname/" tmparch`
else
    tarch="$osname"
fi
$rm -f tmparch
else
    tarch="$osname"
fi
case "$myarchname" in
|"|$tarch") ;;
*)
    echo "(Your architecture name used to be $myarchname.)"
    archname="
;;
esac
case "$targetarch" in
") ;;
?X: Very GCCian.
*) archname=`echo $targetarch|sed 's,^[^]*-,^` ;;
esac
myarchname="$tarch"
case "$sarchname" in
") dflt="$tarch";;
*) dflt="$sarchname";;
esac
rp='What is your architecture name'
./myread
archname="$sans"

:
    optionally add API version to the architecture for versioned archlibs
case "$useversionedarchname" in
$define|true|[yY]*) dflt='y';;
*)          dflt='n';;
esac
rp='Add the Perl API version to your archname?'
./myread
case "$sans" in
y|Y) useversionedarchname="$define" ;;
*)   useversionedarchname="$undef" ;;
esac
case "$useversionedarchname" in
$define)
    case "$sarchname" in
    *-$api_versionstring)
        echo "...and architecture name already has -$api_versionstring" >&4
        ;;
    *)

```

```

archname="$archname-$api_versionstring"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac

@if usethreads
case "$usethreads" in
$define)
echo "Threads selected." >&4
case "$archname" in
*-thread*) echo "...and architecture name already has -thread." >&4
;;
*) archname="$archname-thread"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
@end
@if usemultiplicity
case "$usemultiplicity" in
$define)
echo "Multiplicity selected."
>&4
case "$archname" in
*-multi*) echo "...and architecture name already has -multi." >&4
;;
*) archname="$archname-multi"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
@end
@if use64bitint
case "$use64bitint$use64bitall" in
*"$define"*)
case "$archname64" in
")
echo "This architecture is naturally 64-bit, not changing architecture name." >&4
;;
*)
case "$use64bitint" in
"$define") echo "64 bit integers selected." >&4 ;;
esac
case "$use64bitall" in

```

```

"$define") echo "Maximal 64 bitness selected." >&4 ;;
esac
case "$sarchname" in
*-$sarchname64*) echo "...and architecture name already has $sarchname64." >&4
;;
*)   archname="$sarchname-$sarchname64"
echo "...setting architecture name to $sarchname." >&4
;;
esac
;;
esac
esac
@end
@if uselongdouble
case "$uselongdouble" in
$define)
echo "Long doubles selected." >&4
case "$longdblsize" in
$doublesize)
echo "...but long doubles are equal to doubles, not
changing architecture name." >&4
;;
*)
case "$sarchname" in
*-ld*) echo "...and architecture name already has -ld." >&4
;;
*)   archname="$sarchname-ld"
echo "...setting architecture name to $sarchname." >&4
;;
esac
;;
esac
;;
esac
@end
@if usequadmath
case "$usequadmath" in
$define)
echo "quadmath selected." >&4
case "$sarchname" in
*-quadmath*) echo "...and architecture name already has -quadmath." >&4
;;
*)   archname="$sarchname-quadmath"
echo "...setting architecture name to $sarchname." >&4
;;
esac
;;
esac

```



```
@end
if $test -f archname.cbu; then
  echo "Your platform has some specific hints for architecture name, using them..."
  . ./archname.cbu
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/archname.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Cppsym.U,v \$

?RCS: Revision 3.0.1.5 1995/05/12 11:59:11 ram

?RCS: patch54: split awk command onto two lines for older awks (ADO)

?RCS:

?RCS: Revision 3.0.1.4 1995/01/11 14:55:57 ram

?RCS: patch45: new cc vs. cpp symbol checking suggested by JHI

?RCS: patch45: added more cpp symbols (JHI)

?RCS:

?RCS: Revision 3.0.1.3 1994/10/29 15:51:32 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: new symbols ardent and titan (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/06/20

06:53:32 ram

?RCS: patch30: extended cpp symbol lookup list (JHI)

?RCS: patch30: renamed attrlist symbol into al for brevity

?RCS:

?RCS: Revision 3.0.1.1 1993/12/15 08:14:14 ram

?RCS: patch15: added new cpp symbols \_\_bsdi\_\_ and BSD\_NET2

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script called Cppsym, which can be used to

?X: determine whether any in a list of symbols is defined by the C compilation

?X: chain (C preprocessor symbols plus C compiler native ones).

?X: It can determine the status of any symbol, though the symbols in \$al  
?X: are more easily determined. If you want to add to \$al you can do  
?X: it in Myinit.U.  
?X:  
?MAKE:Cppsym ccsymbols cppsymbols cppccsymbols: run \  
eunicefix Guess awk cat tr sed sort rm startsh osname \  
+cc gccversion test comm uniq echo Options trnl \  
optimize cflags ldflags libs  
?MAKE: -pick add \$@ %<  
?S:ccsymbols:  
?S: The variable contains the symbols  
defined by the C compiler alone.  
?S: The symbols defined by cpp or by cc when it calls cpp are not in  
?S: this list, see cppsymbols and cppccsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppsymbols:  
?S: The variable contains the symbols defined by the C preprocessor  
?S: alone. The symbols defined by cc or by cc when it calls cpp are  
?S: not in this list, see ccsymbols and cppccsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppccsymbols:  
?S: The variable contains the symbols defined by the C compiler  
?S: when it calls cpp. The symbols defined by the cc alone or cpp  
?S: alone are not in this list, see ccsymbols and cppsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?T:also symbols i postprocess\_cc\_v flags  
?F:./Cppsym  
?F:!Cppsym.true !Cppsym.know !ccsym.com !ccsym.cpp !ccsym.own  
: determine known pre-processor and compiler symbols  
echo " "  
\$echo "Guessing which symbols your C compiler and preprocessor  
define..." >&4  
?X:  
?X: The symbol list is in alpha order for ease of maintenance...  
?X:  
?X: Lots of new symbols (mostly rummaged from gcc), courtesy of  
?X: Jarkko Hietaniemi <jhi@snakemail.hut.fi> -- RAM, 06/06/94  
?X:  
?X: If your symbol is mixed case, just add it as-is.  
?X: All symbols will be transformed to both all-lower and all-upper.  
?X: Also drop any leading/trailing underscores, the scan will try all those.  
?X:  
\$cat <<'EOSH' > Cppsym.know  
a29k ABI64 aegis AES\_SOURCE AIX AIX32 AIX370  
AIX41 AIX42 AIX43 AIX\_SOURCE aixpc ALL\_SOURCE

alliant alpha am29000 AM29000 AMD64 amiga AMIGAOS AMIX  
ansi ANSI\_C\_SOURCE apollo ardent ARM32 atarist att386 att3b  
BeOS BIG\_ENDIAN BIT\_MSF bsd BSD bsd43 bsd4\_2 bsd4\_3 BSD4\_3 bsd4\_4  
BSD\_4\_3 BSD\_4\_4 BSD\_NET2 BSD\_TIME BSD\_TYPES BSDCOMPAT bsd  
bull c cadmus clipper CMU COFF COMPILER\_VERSION  
concurrent convex cpu cray CRAY CRAYMPP ctix CX\_UX  
CYGWIN DGUX DGUX\_SOURCE DJGPP dmert DOLPHIN DPX2 DSO  
Dynix DynixPTX ELF encore EPI EXTENSIONS FAVOR\_BSD  
FILE\_OFFSET\_BITS  
FreeBSD GCC\_NEW\_VARARGS gcos gcx gimpel  
GLIBC GLIBC\_MINOR  
GNU\_SOURCE GNUC GNUC\_MINOR GNU\_LIBRARY GO32 gould GOULD\_PN  
H3050R H3050RX hbulx20 hcx host\_mips  
hp200 hp300 hp700 HP700 hp800 hp9000  
hp9000s200 hp9000s300 hp9000s400 hp9000s500  
hp9000s700 hp9000s800 hp9k8 hp\_osf hppa hpux HPUX\_SOURCE  
i186 i286 i386 i486 i586 i686 i8086 i80960 i860 I960  
IA64 iAPX286 ibm ibm032 ibmesa IBMR2 ibmrt ILP32 ILP64  
INLINE\_INTRINSICS INTRINSICS INT64 interdata is68k ksr1  
LANGUAGE\_C LARGE\_FILE\_API LARGEFILE64\_SOURCE  
LARGEFILE\_SOURCE LFS64\_LARGEFILE LFS\_LARGEFILE  
Linux LITTLE\_ENDIAN LONG64 LONG\_DOUBLE LONG\_LONG  
LONGDOUBLE LONGLONG LP64 luna luna88k Lynx  
M68000 m68k m88100 m88k M88KBCS\_TARGET M\_COFF  
M\_I186 M\_I286 M\_I386 M\_I8086 M\_I86 M\_I86SM M\_SYS3  
M\_SYS5 M\_SYSIII M\_SYSV M\_UNIX M\_XENIX MACH machine MachTen  
MATH\_HAS\_NO\_SIDE\_EFFECTS  
mc300 mc500 mc68000 mc68010 mc68020 mc68030 mc68040  
mc68060 mc68k mc68k32 mc700 mc88000 mc88100 merlin  
mert MiNT mips MIPS\_FPSET MIPS\_ISA MIPS\_SIM MIPS\_SZINT  
MIPS\_SZLONG  
MIPS\_SZPTR MIPSEB MIPSEL MODERN\_C motorola  
mpeix MSDOS MTXINU MULTIMAX mvs MVS n16 ncl\_el ncl\_mr  
NetBSD news1500 news1700 news1800 news1900 news3700  
news700 news800 news900 NeXT NLS nonstopux ns16000 ns32000  
ns32016 ns32332 ns32k nsc32000  
OCS88 OEMVS OpenBSD os OS2 OS390 osf OSF1 OSF\_SOURCE  
pa\_risc PA\_RISC1\_1 PA\_RISC2\_0 PARAGON parisc  
pc532 pdp11 PGC PIC plexus PORTAR posix  
POSIX1B\_SOURCE POSIX2\_SOURCE POSIX4\_SOURCE  
POSIX\_C\_SOURCE POSIX\_SOURCE POWER  
PROTOTYPES PWB pyr QNX R3000 REENTRANT RES Rhapsody RISC6000  
riscix riscos RT S390 SA110 scs SCO sequent sgi SGI\_SOURCE SH3 sinix  
SIZE\_INT SIZE\_LONG SIZE\_PTR SOCKET\_SOURCE SOCKETS\_SOURCE  
sony sony\_news sonyrisc sparc sparclite spectrum  
stardent stdc STDC\_EXT stratos sun sun3 sun386  
Sun386i svr3 svr4 SVR4\_2 SVR4\_SOURCE svr5  
SX system SYSTYPE\_BSD SYSTYPE\_BSD43 SYSTYPE\_BSD44

```

SYSTYPE_SVR4 SYSTYPE_SVR5 SYSTYPE_SYSV SYSV SYSV3 SYSV4 SYSV5
sysV68 sysV88 Tek4132 Tek4300 titan
TM3200 TM5400 TM5600
tower tower32 tower32_200 tower32_600 tower32_700
tower32_800
tower32_850 tss
u370 u3b u3b2 u3b20 u3b200 u3b20d u3b5
ultrix UMAXV UnicomPBB UnicomPBD UNICOS UNICOSMK
unix UNIX95 UNIX99 unixpc unos
USE_BSD USE_FILE_OFFSET64 USE_GNU USE_ISOC9X USE_LARGEFILE USE_LARGEFILE64
USE_MISC USE_POSIX USE_POSIX199309 USE_POSIX199506 USE_POSIX2
USE_REENTRANT USE_SVID USE_UNIX98 USE_XOPEN USE_XOPEN_EXTENDED
USGr4 USGr4_2
Utek UTeK UTS UWIN uxpm uxps vax venix VMESA vms xenix Xenix286
XOPEN_SOURCE XOPEN_SOURCE_EXTENDED XPG2 XPG2_EXTENDED
XPG3 XPG3_EXTENDED XPG4 XPG4_EXTENDED
z8000
EOSH
?X: Maybe put other stuff here too.
cat <<EOSH >>Cppsym.know
$osname
EOSH
./tr '[a-z]' '[A-Z]' < Cppsym.know > Cppsym.a
./tr '[A-Z]' '[a-z]' < Cppsym.know > Cppsym.b
$cat Cppsym.know > Cppsym.c
$cat Cppsym.a Cppsym.b Cppsym.c | $tr ' ' $trnl | $sort | $uniq > Cppsym.know
$rm -f Cppsym.a Cppsym.b Cppsym.c
cat <<EOSH > Cppsym
$startsh
if $test $# -gt 0; then
    echo $* | $tr " " "$trnl" | ./Cppsym.try > Cppsym.got
    if $test -s Cppsym.got; then
        $rm -f Cppsym.got
        exit 0
    fi
    $rm -f Cppsym.got
    exit 1
else
    $tr " " "$trnl" | ./Cppsym.try
    exit 0
fi
EOSH
chmod +x Cppsym
$unicefix Cppsym
?X: The below awk script will die a horrible death if
?X: some of the tested symbols are not long ints.
?X: Also, we do not make difference between just defined and defined zero.
cat <<EOSH > Cppsym.try

```

```

$startsh
cat <<'EOCP' > try.c
#include <stdio.h>
int main() {
EOCP
?X: The length($1) command guards against possible empty entries.
?X: The awk snippet is know to give heartburn to UNICOS/mk awk.
$awk \\
EOSH
cat <<'EOSH' >> Cppsym.try
'length($1) > 0 {
    printf "#ifdef %s\n#if %s+0\nprintf(\"%s=%ld\n\", (long)%s);\n#else\nprintf(\"%s\n\");\n#endif\n#endif\n", $1,
$1, $1, $1, $1
    printf "#ifdef __s\n#if __s+0\nprintf(\"__s=%ld\n\",
(long)__s);\n#else\nprintf(\"__s\n\");\n#endif\n#endif\n", $1, $1, $1, $1, $1
    printf "#ifdef __s\n#if __s+0\nprintf(\"__s=%ld\n\",
(long)__s);\n#else\nprintf(\"__s\n\");\n#endif\n#endif\n",
$1, $1, $1, $1, $1
    printf "#ifdef __s__\n#if __s__+0\nprintf(\"__s__=%ld\n\",
(long)__s__); \n#else\nprintf(\"__s__\n\");\n#endif\n#endif\n", $1, $1, $1, $1, $1
}' >> try.c
echo 'return 0;}' >> try.c
EOSH
cat <<'EOSH' >> Cppsym.try
flags="$ccflags"
case "$osname-$gccversion" in
irix-) flags="$flags -woff 1178" ;;
os2-*) flags="$flags -Zlinker /PM:VIO" ;;
esac
$cc -o try $optimize $flags $ldflags try.c $libs && $run ./try
EOSH
chmod +x Cppsym.try
$eunicefix Cppsym.try
./Cppsym < Cppsym.know > Cppsym.true
: now check the C compiler for additional symbols
?X: suggested by Jarkko Hietaniemi <jhi@snakemail.hut.fi>, thanks!
postprocess_cc_v="
case "$osname" in
aix) postprocess_cc_v="|$tr , ' "' ;;
esac
$cat >ccsym <<'EOS
$startsh
$cat >tmp.c <<'EOF
extern int foo;
EOF
for i in ` $cc -v -c tmp.c 2>&1 $postprocess_cc_v `
do
case "$i" in

```

```

-D*) echo "\$i" | $sed 's/^-D//';;
-A*) $test "$gccversion" && echo "\$i" | $sed 's/^-A//' | $sed 's/(.*)((.*))\1=\2//';;
esac
done
$rm
-f try.c
EOS
postprocess_cc_v="
chmod +x ccsym
$unicefix ccsym
./ccsym > ccsym1.raw
?X: AIX complains if $uniq is passed an empty file. ($sort apparently
?X: doesn't care.) --AD 14 July 1998
if $test -s ccsym1.raw; then
    $sort ccsym1.raw | $uniq >ccsym.raw
else
    mv ccsym1.raw ccsym.raw
fi

?X: canonicalize symbols for easier sort/uniq/comm usage: append =1 if no = sign
?X: the awk script must be on two lines for older awk programs, sigh! -- ADO
$awk '/^=/ { print $0; next }
{ print $0"=1" }' ccsym.raw >ccsym.list
$awk '/^=/ { print $0; next }
{ print $0"=1" }' Cppsym.true >ccsym.true
$comm -13 ccsym.true ccsym.list >ccsym.own
$comm -12 ccsym.true ccsym.list >ccsym.com
$comm -23 ccsym.true ccsym.list >ccsym.cpp
also="
if $test -z ccsym.raw; then
echo "Your C compiler doesn't seem to define any symbols!" >&4
echo " "
echo "However, your C preprocessor defines the following symbols:"
$cat Cppsym.true
    ccsymbols="
cppsymbols=`$cat Cppsym.true`
    cppsymbols=`echo
$cppsymbols`
cppccsymbols="$cppsymbols"
else
if $test -s ccsym.com; then
echo "Your C compiler and pre-processor define these symbols:"
$sed -e 's/(.*\)=.*\1/' ccsym.com
also='also '
symbols='ones'
cppccsymbols=`$cat ccsym.com`
cppccsymbols=`echo $cppccsymbols`
$test "$silent" || sleep 1

```

```

fi
if $test -s ccsym.cpp; then
  $test "$also" && echo " "
  echo "Your C pre-processor ${also} defines the following symbols:"
  $sed -e 's/(.*)=.*\1/' ccsym.cpp
  also='further '
  cppsymbols=`$cat ccsym.cpp`
  cppsymbols=`echo $cppsymbols`
  $test "$silent" || sleep 1
fi
if $test -s ccsym.own; then
  $test "$also" && echo " "
  echo "Your C compiler ${also} defines the following cpp symbols:"
  $sed -e 's/(.*)=1\1/' ccsym.own
  $sed -e 's/(.*)=.*\1/' ccsym.own | $uniq >>Cppsymb.true
  ccsymbols=`$cat ccsym.own`
  ccsymbols=`echo $ccsymbols`
  $test "$silent" || sleep 1
fi
fi
$rm -f Cppsymb.know Cppsymb.true

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/Cppsymb.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_stat.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: d\_stat.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:28 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_stat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_stat:

?S: This variable conditionally defines HAS\_STAT if stat() is

?S: available to get file status.

?S:.

?C:HAS\_STAT (STAT):

?C: This symbol, if defined, indicates that the stat routine is

?C: available to get file status.

?C:.

?H:#\$d\_stat HAS\_STAT /\*\*/

?H:.

?LINT:set d\_stat

: see if stat exists

set

stat d\_stat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_stat.U

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?RCS:

?MAKE:i\_netinettcp: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_netinettcp:

?S: This variable conditionally defines the I\_NETINET\_TCP symbol,

?S: and indicates whether a C program should include <netinet/tcp.h>.

?S:.

?C:I\_NETINET\_TCP:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <netinet/tcp.h>.

?C:.

?H:#\$i\_netinettcp I\_NETINET\_TCP /\*\*/

?H:.

?LINT:set i\_netinettcp

: see if netinet/tcp.h is available

set netinet/tcp.h i\_netinettcp

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_netinettcp.U

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?RCS:

?MAKE:d\_snprintf\_1 d\_vsnprintf\_1 : Inlibc d\_snprintf d\_vsnprintf

?MAKE: -pick add \$@ %<

?S:d\_snprintf\_1:

?S: This variable conditionally defines the HAS\_SNPRINTF\_L symbol, which

?S: indicates to the C program that the snprintf\_1 () library function

?S: is available.

?S:.

?S:d\_vsnprintf\_1:

?S: This variable conditionally defines the HAS\_VSNPRINTF\_L symbol, which

?S: indicates to the C program that the vsnprintf\_1 () library function

?S: is available.

?S:.

?C:HAS\_SNPRINTF\_L:

?C: This symbol, if defined, indicates that the snprintf\_1 () library

?C: function

is available for use.

?C:.

?C:HAS\_VSNPRINTF\_L:

?C: This symbol, if defined, indicates that the vsnprintf\_1 () library

?C: function is available for use.

?C:.

?H:#\$d\_snprintf\_1 HAS\_SNPRINTF\_L /\*\*/

?H:#\$d\_vsnprintf\_1 HAS\_VSNPRINTF\_L /\*\*/

?H:.

: see if snprintf\_1 exists

set snprintf\_1 d\_snprintf\_1

eval \$inlibc

: see if vsnprintf\_1 exists

set vsnprintf\_1 d\_vsnprintf\_1

eval \$inlibc

case "\$d\_snprintf-\$d\_vsnprintf-\$d\_snprintf\_1-\$d\_vsnprintf\_1" in

"\$define-\$define-\$define-\$define")

;;

\*) echo "(These require the basic snprintf and vsnprintf to also be available, which they aren't"

d\_snprintf\_1="\$undef"

d\_vsnprintf\_1="\$undef"

;;

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_snprintf\_1.U

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?RCS: \$Id: d\_getnbyad.U,v \$

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?RCS:

?MAKE:d\_getbyname: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getbyname:

?S: This variable conditionally defines the HAS\_GETNETBYNAME symbol, which

?S: indicates to the C program that the getnetbyname() routine is available

?S: to look up networks by their names.

?S:.

?C:HAS\_GETNETBYNAME:

?C: This symbol, if defined, indicates that the getnetbyname() routine is

?C: available to look up networks by their names.

?C:.

?H:#\$d\_getbyname HAS\_GETNETBYNAME /\*\*/

?H:.

?LINT:set d\_getbyname

: see if getnetbyname exists

set getnetbyname d\_getbyname

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getnbyn.U

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?RCS: \$Id: Tr.U,v 3.0.1.2 1994/10/29 18:00:54 ram Exp \$

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?RCS:

?RCS: \$Log: Tr.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 18:00:54 ram

```

?RCS: patch43: forgot to quote $@ to protect against "evil" characters
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 15:58:35 ram
?RCS: patch36: created
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to do a character translation. It catches translations to uppercase or
?X: to lowercase, and then invokes the real tr to perform the job.
?X:
?X: This unit is necessary
    on HP machines (HP strikes again!) with non-ascii
?X: ROMAN8-charset, where normal letters are not arranged in a row, so a-z
?X: covers not the whole alphabet but lots of special chars. This was reported
?X: by Andreas Sahlbach <a.sahlbach@tu-bs.de>.
?X:
?X: Units performing a tr '[A-Z]' '[a-z]' or the other way round should include
?X: us in their dependency and use ./tr instead.
?X:
?MAKE:Tr: startsh tr eunicefix
?MAKE: -pick add $@ %<
?F:./tr
?T:up low
: see whether [:lower:] and [:upper:] are supported character classes
echo " "
case ""echo AbyZ | $tr '[:lower:]' '[:upper:]' 2>/dev/null`"-`"echo AbyZ | $tr '[:upper:]' '[:lower:]' 2>/dev/null`" in
ABYZ-abyz)
echo "Good, your tr supports [:lower:] and [:upper:] to convert case." >&4
up='[:upper:]'
low='[:lower:]'
;;
*) # There is a discontinuity in EBCDIC between 'R' and 'S'
# (0xd9 and 0xe2), therefore that is a nice testing point.
if test "X$up" = X -o "X$low" = X; then
    case ""echo RS | $tr '[R-S]' '[r-s]' 2>/dev/null`"
in
    rs) up='[A-Z]'
        low='[a-z]'
        ;;
    esac
fi
if test "X$up" = X -o "X$low" = X; then
    case ""echo RS | $tr R-S r-s 2>/dev/null`" in
    rs) up='A-Z'
        low='a-z'
        ;;
    esac
fi

```

```

if test "X$up" = X -o "X$low" = X; then
  case "`echo RS | od -x 2>/dev/null`" in
    *D9E2*|*d9e2*)
      echo "Hey, this might be EBCDIC." >&4
if test "X$up" = X -o "X$low" = X; then
  case "`echo RS | $tr '[A-IJ-RS-Z]' '[a-ij-rs-z]' 2>/dev/null`" in
    rs) up='[A-IJ-RS-Z]'
       low='[a-ij-rs-z]'
       ;;
    esac
fi
if test "X$up" = X -o "X$low" = X; then
  case "`echo RS | $tr A-IJ-RS-Z a-ij-rs-z 2>/dev/null`" in
    rs) up='A-IJ-RS-Z'
       low='a-ij-rs-z'
       ;;
    esac
fi
;;
esac
fi
esac
case "`echo RS | $tr \"\$up\" \"\$low\" 2>/dev/null`" in
rs)
  echo "Using $up and $low to convert case." >&4
  ;;
*)
  echo "I don't know how to translate letters from upper to lower case." >&4
  echo "Your tr is not acting any way I know of." >&4
  exit 1
  ;;
esac
:
  set up the translation script tr, must be called with ./tr of course
cat >tr <<EOESC
$startsh
case "\$1\$2" in
[A-Z][a-z]) exec $tr '$up' '$low';;
[a-z][A-Z]) exec $tr '$low' '$up';;
esac
exec $tr "\$@"
EOESC
chmod +x tr
$unicefix tr

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Tr.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Init.U,v \$

?RCS: Revision 3.0.1.1 1994/10/31 09:45:59 ram

?RCS: patch44: removed Options from MAKE to prevent Init overrides

?RCS: patch44: option processing now done after Myinit thanks to new Begin.U

?RCS: patch44: moved "Beginning of configuration questions" to Begin.U

?RCS: patch44: moved signal trapping instruction to Begin.U as well

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This file initializes certain default variables

used by Configure. They

?X: may be overridden or added to by definitions in Myinit.U.

?X:

?MAKE:Init eunicefix \_exe: Null

?MAKE: -pick add \$@ %<

?MAKE: -pick weed \$@ ./Init

?S:eunicefix:

?S: When running under Eunice this variable contains a command which will

?S: convert a shell script to the proper form of text file for it to be

?S: executable by the shell. On other systems it is a no-op.

?S:.

?S:\_exe (exe\_ext):

?S: This variable defines the extension used for executable files.

?S: For unix it is empty. Other possible values include '.exe'.

?S: DJGPP, Cygwin and OS/2 use '.exe'. Stratus VOS uses '.pm'.

?S: On operating systems which do not require a specific extension

?S: for executable files, this variable is empty.

?S:.

?V:define undef smallmach:rmlist

?X:

?X: Throughout the units, one may make use of \$define and \$undef to reference

?X: a defined symbol or an undefined one. There is no need to add them in

?X: the dependency line since this unit makes them visible via ?V:, and

?X:

everyone inherits from those symbols since by convention Init.U is the

?X: root dependency.

?X:

?T: DJGPP

: Initialize wide constants

define='define'

undef='undef'

smallmach='pdp11 i8086 z8000 i80286 iAPX286'

rmlist=""

: We must find out about Eunice early

eunicefix=':'

if test -f /etc/unixtovms; then

  eunicefix=/etc/unixtovms

fi

if test -f /etc/unixtovms.exe; then

  eunicefix=/etc/unixtovms.exe

fi

: Set executable suffix now -- needed before hints available

if test -f "/libs/version.library"; then

  : Amiga OS

  \_exe=""

elif test -f "/system/gnu\_library/bin/ar.pm"; then

  : Stratus VOS

  \_exe=".pm"

elif test -n "\$DJGPP"; then

  : DOS DJGPP

  \_exe=".exe"

elif test -d c:/.; then

  : OS/2 or cygwin

  \_exe=".exe"

else

  : All other UNIX systems

  \_exe=""

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Init.U

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?RCS:  
?MAKE:run to from targetarch usecrosscompile: src awk cat grep test rm \  
echo sed mkdir cp touch chmod  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:usecrosscompile:  
?S: This variable conditionally defines the USE\_CROSS\_COMPILE symbol,  
?S: and indicates that our package has been cross-compiled.  
?S:.  
?S:run:  
?S: This variable contains the command used by Configure  
?S: to copy and execute a cross-compiled executable in the  
?S: target host. Useful and available only during  
the build.  
?S: Empty string " if not cross-compiling.  
?S:.  
?S:from:  
?S: This variable contains the command used by Configure  
?S: to copy files from the target host. Useful and available  
?S: only during the build.  
?S: The string ':' if not cross-compiling.  
?S:.  
?S:to:  
?S: This variable contains the command used by Configure  
?S: to copy to from the target host. Useful and available  
?S: only during the build.  
?S: The string ':' if not cross-compiling.  
?S:.  
?S:targetarch:  
?S: If cross-compiling, this variable contains the target architecture.  
?S: If not, this will be empty.  
?S:.  
?C:USE\_CROSS\_COMPILE:  
?C: This symbol, if defined, indicates that the package is being  
?C: cross-compiled.  
?C:.  
?C:CROSS\_TARGET\_ARCH:  
?C: This symbol, if defined, indicates the target architecture  
?C: the package has been cross-compiled to.  
?C: Undefined if not a cross-compile.  
?C:.  
?H:?usecrosscompile:#ifndef USE\_CROSS\_COMPILE  
?H:?usecrosscompile:#\$usecrosscompile USE\_CROSS\_COMPILE /\*\*/

```

?H:?usecrosscompile:#define
  CROSS_TARGET_ARCH "$targetarch" /**/
?H:?usecrosscompile:#endif
?H:.
?T:croak pwd exe f q i j cwd
?LINT:extern usecrosscompile
?LINT:extern cc
?LINT:extern usrinc
?LINT:change usrinc
?LINT:change ar
?LINT:change nm
?LINT:change ranlib
?LINT:extern targethost
?LINT:extern targetdir
?LINT:change targetdir
?LINT:extern targetuser
?LINT:change targetuser
?LINT:extern targetrun
?LINT:extern targetfrom
?LINT:extern targetto
?LINT:extern targetmkdir
?LINT:change targetrun
?LINT:change targetfrom
?LINT:change targetto
?LINT:change targetmkdir
?LINT:extern incpth
?LINT:extern libpth
?LINT:change incpth
?LINT:change libpth
?LINT:extern locincpth
?LINT:extern loclibpth
?LINT:change locincpth
?LINT:change loclibpth
?LINT:extern TMPDIR
: setup for possible cross-compilation
run="
to=:
from=:
usecrosscompile='undef'
targetarch="
case "$usecrosscompile" in
$define|true|[yY]*)
@if { test -d ../Cross }
?X:
?X: Cross-compilation is enabled when there is a 'Cross' directory found
?X: at the root
  of the package. This directory must contain the following
?X: entries for defining the cross-compilation process:

```



?X:  
?X: FIXME FIXME  
?X: WE MUST DISTINGUISH BETWEEN LOCAL cross-compiling AND REMOTE ONE  
?X: ACTUALLY, REMOTE COMPILATION SHOULD BE CONFIGURED INTERACTIVELY  
?X: IT WILL COPY ALL THE FILES FROM THE MANIFEST DOWN TO THE REMOTE DIR...  
?X: (and copy things like 'mkdep', etc...)

?X:

```
$echo "Cross-compiling..."
```

```
croak="
```

```
case "$cc" in
```

```
*-*-gcc)
```

?X: A cross-compiling gcc, probably.

```
targetarch=`$echo $cc|$sed 's/-gcc$//`
```

```
ar=$targetarch-ar
```

?X: leave out ld, choosing it is more complex

```
nm=$targetarch-nm
```

```
ranlib=$targetarch-ranlib
```

```
$echo 'extern int foo;' > try.c
```

```
set X ` $cc -v -E try.c 2>&1 | \
```

```
$awk '/^#include </,/^End of search /| $grep '/include`
```

```
shift
```

```
if $test $# -gt 0; then
```

```
    incpth="$incpth $*"
```

```
incpth="" $echo $incpth|$sed 's/^ //'
```

```
echo "Guessing incpth '$incpth'." >&4
```

```
for i in $*; do
```

```
    j="" $echo $i|$sed 's,/include$,/lib,`
```

```
    if
```

```
$test -d $j; then
```

```
    libpth="$libpth $j"
```

```
    fi
```

```
done
```

```
libpth="" $echo $libpth|$sed 's/^ //'
```

```
echo "Guessing libpth '$libpth'." >&4
```

```
    fi
```

```
    $rm -f try.c
```

```
    ;;
```

```
esac
```

```
case "$targetarch" in
```

```
) echo "Targetarch not defined." >&4; croak=y ;;
```

```
*) echo "Using targetarch $targetarch." >&4 ;;
```

```
esac
```

```
case "$incpth" in
```

```
) echo "Incpth not defined." >&4; croak=y ;;
```

```
*) echo "Using incpth '$incpth'." >&4 ;;
```

```
esac
```

```
case "$libpth" in
```

```
) echo "Libpth not defined." >&4; croak=y ;;
```

```

*) echo "Using libpth '$libpth.'" >&4 ;;
esac
case "$usrinc" in
")
for i in $incpth; do
if $test -f $i/errno.h -a -f $i/stdio.h -a -f $i/time.h; then
usrinc=$i
echo "Guessing usrinc $usrinc." >&4
break
fi
done
case "$usrinc" in
") echo "Usrinc not defined." >&4; croak=y ;;
esac
;;
*) echo "Using usrinc $usrinc." >&4 ;;
esac
case "$targethost" in
") echo "Targethost not defined." >&4; croak=y ;;
*) echo "Using targethost $targethost."
>&4
esac
locincpth=' '
loclibpth=' '
case "$croak" in
y) echo "Cannot continue, aborting." >&4; exit 1 ;;
esac
case "$src" in
/*) run=$src/Cross/run
targetmkdir=$src/Cross/mkdir
to=$src/Cross/to
from=$src/Cross/from
;;
*) pwd=`$test -f ../Configure & cd ..; pwd`
run=$pwd/Cross/run
targetmkdir=$pwd/Cross/mkdir
to=$pwd/Cross/to
from=$pwd/Cross/from
;;
esac
case "$targetrun" in
") targetrun=ssh ;;
esac
case "$targetto" in
") targetto=scp ;;
esac
case "$targetfrom" in
") targetfrom=scp ;;

```

```

esac
run=$run-$targetrun
to=$to-$targetto
from=$from-$targetfrom
case "$targetdir" in
")
targetdir="{TMPDIR:-/tmp}"
echo "Guessing targetdir $targetdir." >&4
;;
esac
case "$targetuser" in
")
targetuser=root
echo "Guessing targetuser $targetuser." >&4
;;
esac
case "$targetfrom" in
scp) q=-q ;;
*) q=" ;;
esac
case "$targetrun" in
ssh|rsh)
$cat >$run <<EOF
#!/bin/sh
case "$1" in
-cwd)
shift
cwd=$1
shift
;;
esac
case "$cwd" in
") cwd=$targetdir ;;
esac
exe=$1
shift
if $test ! -f \${exe}.xok; then
$to \${exe}
$touch \${exe}.xok
fi
$targetrun -l $targetuser $targethost "cd \${cwd} && ./\${exe} \${@"
EOF
;;
*) echo "Unknown targetrun '$targetrun'" >&4
exit 1
;;
esac
case "$targetmkdir" in

```

```

*/Cross/mkdir)
$cat >$targetmkdir <<EOF
#!/bin/sh
$targetrun -l $targetuser $targethost "mkdir -p \${@"
EOF
    $chmod a+rx $targetmkdir
    ;;
*) echo "Unknown targetmkdir '$targetmkdir'" >&4
    exit 1
    ;;
esac
case "$targetto" in
scp|rcp)
    $cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\${f}" in
/*)
    $targetmkdir \dirname \${f}\
    $targetto $q \${f} $targetuser@$targethost:\${f} || exit 1
    ;;
*)
    $targetmkdir $targetdir/\dirname \${f}\
    $targetto $q \${f} $targetuser@$targethost:$targetdir/\${f} || exit 1
    ;;
esac
done
exit 0
EOF
    ;;
cp) $cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\${f}" in
/*)
    $mkdir -p $targetdir/\dirname
\${f}\
    $cp \${f} $targetdir/\${f} || exit 1
    ;;
*)
    $targetmkdir $targetdir/\dirname \${f}\
    $cp \${f} $targetdir/\${f} || exit 1
    ;;
esac
done
exit 0

```

```

EOF
;;
*) echo "Unknown targetto '$targetto'" >&4
  exit 1
;;
esac
case "$targetfrom" in
scp|rcp)
  $cat >$from <<EOF
#!/bin/sh
for f in @$@
do
  $rm -f $f
  Targetfrom $q Targetuser@Targethost:Targetdir/$f . || exit 1
done
exit 0
EOF
;;
cp) $cat >$from <<EOF
#!/bin/sh
for f in @$@
do
  $rm -f $f
  cp Targetdir/$f . || exit 1
done
exit 0
EOF
;;
*) echo "Unknown targetfrom '$targetfrom'" >&4
  exit 1
;;
esac
if $test ! -f $run; then
  echo "Target 'run' script '$run' not found." >&4
else
  $chmod a+rx $run
fi
if $test ! -f $to; then
  echo "Target 'to' script '$to' not found." >&4
else
  $chmod a+rx $to
fi
if $test ! -f $from; then
  echo "Target 'from' script '$from' not found." >&4
else
  $chmod a+rx $from
fi
if $test ! -f $run -o ! -f $to -o !

```

```

-f $from; then
  exit 1
fi
$cat >&4 <<EOF
Using '$run' for remote execution,
and '$from' and '$to'
for remote file transfer.
EOF
@else
  echo "Cross-compilation is not supported for this package." >&4
  exit 1
@end
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Cross.U

```

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?RCS:

?MAKE:d\_fpclass: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fpclass:

?S: This variable conditionally defines the HAS\_FPCLASS symbol, which

?S: indicates to the C program that the fpclass() routine is available.

?S:.

?C:HAS\_FPCLASS:

?C: This symbol, if defined, indicates that the fpclass routine is

?C: available to classify doubles. Available for example in Solaris/SVR4.

?C: The returned values are defined in <ieeefp.h> and are:

?C:

?C: FP\_SNAN signaling NaN

?C: FP\_QNAN quiet NaN

?C: FP\_NINF negative infinity

?C: FP\_PINF positive infinity

?C: FP\_NDENORM negative denormalized non-zero

?C: FP\_PDENORM positive denormalized non-zero

?C: FP\_NZERO negative zero

?C: FP\_PZERO positive zero

?C: FP\_NNORM negative normalized

non-zero  
?C: FP\_PNORM positive normalized non-zero  
?C:.  
?H:#\$d\_fpclass HAS\_FPCLASS /\*\*/  
?H:.  
?LINT:set d\_fpclass  
: see if fpclass exists  
set fpclass d\_fpclass  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fpclass.U

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?RCS: \$Id: d\_setgrent\_r.U,v 0RCS:  
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?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_setgrent\_r setgrent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_grp extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_setgrent\_r:  
?S: This variable conditionally defines the HAS\_SETGRENT\_R symbol,  
?S: which indicates to the C program that the setgrent\_r()  
?S: routine is available.  
?S:.  
?S:setgrent\_r\_proto:  
?S: This variable encodes the prototype of setgrent\_r.  
?S: It is zero if d\_setgrent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setgrent\_r  
?S: is defined.  
?S:.  
?C:HAS\_SETGRENT\_R:  
?C: This symbol, if defined, indicates that the setgrent\_r routine  
?C: is available to  
setgrent re-entrantly.  
?C:.  
?C:SETGRENT\_R\_PROTO:  
?C: This symbol encodes the prototype of setgrent\_r.  
?C: It is zero if d\_setgrent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setgrent\_r  
?C: is defined.  
?C:.

```

?H:#$d_setgrent_r HAS_SETGRENT_R /**/
?H:#define SETGRENT_R_PROTO $setgrent_r_proto /**/
?H:.
?T:try hdrs d_setgrent_r_proto
: see if setgrent_r exists
set setgrent_r d_setgrent_r
eval $inlibc
case "$d_setgrent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_grp grp.h"
case "$d_setgrent_r_proto:$usethreads" in
":define") d_setgrent_r_proto=define
set d_setgrent_r_proto setgrent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setgrent_r_proto" in
define)
case "$setgrent_r_proto" in
"|0) try='int setgrent_r(FILE**);'
./prochck "$extern_C $try" $hdrs && setgrent_r_proto=I_H ;;
esac
case "$setgrent_r_proto" in
"|0) try='void setgrent_r(FILE**);'
./prochck "$extern_C $try" $hdrs && setgrent_r_proto=V_H ;;
esac
case "$setgrent_r_proto"
in
"|0) d_setgrent_r=undef
setgrent_r_proto=0
echo "Disabling setgrent_r, cannot determine prototype." >&4 ;;
* ) case "$setgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) setgrent_r_proto="REENTRANT_PROTO_$setgrent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setgrent_r has no prototype, not using it." >&4 ;;
esac
d_setgrent_r=undef
setgrent_r_proto=0
;;
esac
;;
*) setgrent_r_proto=0
;;

```



esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_setgrent\_r.U

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?RCS:

?MAKE:d\_nan: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nan:

?S: This variable conditionally defines HAS\_NAN if nan() is

?S: available to generate NaN.

?S:.

?C:HAS\_NAN:

?C: This symbol, if defined, indicates that the nan routine is

?C: available to generate NaN.

?C:.

?H:#\$d\_nan HAS\_NAN /\*\*/

?H:.

?LINT:set d\_nan

: see if nan exists

set nan d\_nan

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_nan.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: lib.U,v \$

?RCS: Revision 3.0.1.3 1995/09/25 09:16:47 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:38:08 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

```

?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:27:40 ram
?RCS: patch32: now uses installation prefix to set the default
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:lib libexp: Getfile
Loc Oldconfig Prefixit Prefixup prefixexp
?MAKE: -pick add $@ %<
?Y:TOP
?S:lib:
?S: This variable holds the name of the directory in which the user wants
?S: to put public library files for the package in question. It is most
?S: often a local directory such as /usr/local/lib. Programs using this
?S: variable must be prepared to deal with filename expansion.
?S:.
?S:libexp:
?S: This variable is the same as the lib variable, but is filename expanded
?S: at configuration time, for convenient use in your makefiles.
?S:.
: determine where public libraries go
set lib lib
eval $prefixit
case "$lib" in
")
dflt=`./loc . ." $prefixexp/lib /usr/local/lib /usr/lib /lib`
set dflt
eval $prefixup
;;
*) dflt="$lib";;
esac
echo " "
fn=d~
rp='Where do you want to put the public libraries?'
../getfile
lib="$ans"
libexp="$ansexp"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/lib.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: voidflags.U,v 3.0.1.2 1997/02/28 16:27:58 ram Exp $

```

```

?RCS:

```

```

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```

```

?RCS:

```

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: voidflags.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:27:58 ram  
?RCS: patch61: don't prompt them if the void support is high enough for us  
?RCS:  
?RCS: Revision 3.0.1.1 1995/01/11 15:37:44 ram  
?RCS: patch45: cosmetic change to avoid spurious blank lines when using -s  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:10:01 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:voidflags defvoidused: cat rm\_try contains +cc +ccflags package \  
Oldconfig  
Myread i\_stdlib  
?MAKE: -pick add \$@ %<  
?S:voidflags:  
?S: This variable contains the eventual value of the VOIDFLAGS symbol,  
?S: which indicates how much support of the void type is given by this  
?S: compiler. See VOIDFLAGS for more info.  
?S:.  
?S:defvoidused:  
?S: This variable contains the default value of the VOIDUSED symbol (15).  
?S:.  
?X: Exceptionally, we have to explicitly alias the symbol name for  
?X: config\_h.SH, otherwise the comment would not appear.  
?C:VOIDFLAGS ~ %<:  
?C: This symbol indicates how much support of the void type is given by this  
?C: compiler. What various bits mean:  
?C:  
?C: 1 = supports declaration of void  
?C: 2 = supports arrays of pointers to functions returning void  
?C: 4 = supports comparisons between pointers to void functions and  
?C: addresses of void functions  
?C: 8 = supports declaration of generic void pointers  
?C:  
?C: The package designer should define VOIDUSED to indicate the requirements  
?C: of the package. This can be done either  
by #defining VOIDUSED before  
?C: including config.h, or by defining defvoidused in Myinit.U. If the  
?C: latter approach is taken, only those flags will be tested. If the  
?C: level of void support necessary is not present, defines void to int.  
?C:.  
?H:%<:#ifndef VOIDUSED

```

?H:%<:#define VOIDUSED $defvoidused
?H:%<:#endif
?H:%<:#define VOIDFLAGS $voidflags
?H:%<:#if (VOIDFLAGS & VOIDUSED) != VOIDUSED
?H:%<:#define void int /* is void to be avoided? */
?H:%<:#define M_VOID /* Xenix strikes again */
?H:%<:#endif
?H.:
?INIT:: full support for void wanted by default
?INIT:defvoidused=15
?INIT:
?LINT:known void M_VOID VOIDUSED
: check for void type
echo " "
echo "Checking to see how well your C compiler groks the void type..." >&4
case "$voidflags" in
")
$cat >try.c <<EOCP
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#if TRY & 1
void sub() {
#else
sub() {
#endif
extern void moo(); /* function returning void */
void (*goo)(); /* ptr to func returning void
*/
#if TRY & 8
void *hue; /* generic ptr */
#endif
#if TRY & 2
void (*foo[10])();
#endif

#if TRY & 4
if(goo == moo) {
exit(0);
}
#endif
exit(0);
}
int main() { sub(); }
EOCP
?X: This unit used to use cc -S in those tests to try to speed up things, but
?X: unfortunately, AIX 3.2 does not support this option.

```

```

if $cc $cflags -c -DTRY=$defvoidused try.c >.out 2>&1 ; then
  voidflags=$defvoidused
  echo "Good. It appears to support void to the level $package wants.">&4
  if $contains warning .out >/dev/null 2>&1; then
    echo "However, you might get some warnings that look like this:"
    $cat .out
  fi
else
  echo "Hmm, your compiler has some difficulty with void. Checking further..." >&4
  if $cc $cflags -c -DTRY=1 try.c >/dev/null 2>&1; then
    echo "It supports 1..."
  if $cc $cflags -c -DTRY=3 try.c >/dev/null 2>&1; then
    echo "It also supports 2..."
  if $cc $cflags -c -DTRY=7 try.c >/dev/null 2>&1; then
    voidflags=7
    echo "And it supports 4 but not 8 definitely."
  else
    echo
    "It doesn't support 4..."
    if $cc $cflags -c -DTRY=11 try.c >/dev/null 2>&1; then
      voidflags=11
      echo "But it supports 8."
    else
      voidflags=3
      echo "Neither does it support 8."
    fi
  fi
  else
    echo "It does not support 2..."
    if $cc $cflags -c -DTRY=13 try.c >/dev/null 2>&1; then
      voidflags=13
      echo "But it supports 4 and 8."
    else
      if $cc $cflags -c -DTRY=5 try.c >/dev/null 2>&1; then
        voidflags=5
        echo "And it supports 4 but has not heard about 8."
      else
        echo "However it supports 8 but not 4."
      fi
    fi
  fi
  fi
  else
    echo "There is no support at all for void."
    voidflags=0
  fi
fi
esac
?X: Only prompt user if support does not match the level we want

```

```
case "$voidflags" in
"$defvoidused") ;;
*) $cat >&4 <<'EOM'
Support flag bits are:
  1: basic void declarations.
  2: arrays of pointers to functions returning void.
  4: operations between pointers to and addresses of
void functions.
  8: generic void pointers.
```

```
EOM
dflt="$voidflags";
rp="Your void support flags add up to what?"
. ./myread
voidflags="$ans"
;;
esac
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/voidflags.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: models.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:13:17 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:02:39 ram

?RCS: patch6: added default for large

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:models split small medium large huge: test cat Myread sysman Oldconfig \

Loc Warn contains rm

?MAKE: -pick add \$@ %<

?S:models:

?S: This variable contains the list of memory models supported by

this

?S: system. Possible component values are none, split, unsplit, small,

?S: medium, large, and huge. The component values are space separated.

?S:.

?S:split:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program that will run in separate I and D space, for those

?S: machines that support separation of instruction and data space. It is

?S: up to the Makefile to use this.

?S:.

?S:small:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a small memory model. It is up to

?S: the Makefile to use this.

?S:.

?S:medium:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a medium memory model. If the

?S: medium model is not supported, contains the flag to produce large

?S: model programs. It is up to the Makefile to use this.

?S:.

?S:large:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to

produce a program running with a large memory model. It is up to

?S: the Makefile to use this.

?S:.

?S:huge:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a huge memory model. If the

?S: huge model is not supported, contains the flag to produce large

?S: model programs. It is up to the Makefile to use this.

?S:.

?T:unsplit tans modelcc

?F:!pdp11

?D:large="

?LINT:extern cc

: see what memory models we can support

case "\$models" in

")

?X: We may not use Cppsym or we get a circular dependency through cc.

?X: But this should work regardless of which cc we eventually use.

\$cat >pdp11.c <<'EOP'

int main() {

#ifdef pdp11

exit(0);

#else

exit(1);

```

#endif
}
EOP
?X: Run cc in a subshell in case they don't have a 'cc' command.
?X: Presumably they do have gcc or something.
case "$cc" in
") modelcc="$cc" ;;
*) modelcc="cc" ;;
esac
( $modelcc -o pdp11 pdp11.c ) >/dev/null 2>&1
if $test -f pdp11 && ./pdp11 2>/dev/null;
then
dflt='unsplit split'
else
tans=`./loc . X /lib/small /lib/large /usr/lib/small /usr/lib/large /lib/medium /usr/lib/medium /lib/huge`
case "$tans" in
X) dflt='none';;
*) if $test -d /lib/small || $test -d /usr/lib/small; then
dflt='small'
else
dflt="
fi
if $test -d /lib/medium || $test -d /usr/lib/medium; then
dflt="$dflt medium"
fi
if $test -d /lib/large || $test -d /usr/lib/large; then
dflt="$dflt large"
fi
if $test -d /lib/huge || $test -d /usr/lib/huge; then
dflt="$dflt huge"
fi
esac
fi;;
*) dflt="$models";;
esac
$cat <<EOM

```

Some systems have different model sizes. On most systems they are called small, medium, large, and huge. On the PDP11 they are called unsplit and split. If your system doesn't support different memory models, say "none". If you wish to force everything to one memory model, say "none" here and put the appropriate flags later when it asks you for other cc and ld flags.

Venix systems may wish

to put "none" and let the compiler figure things out.

(In the following question multiple model names should be space separated.)

The default for most systems is "none".



```

EOM
rp="Which memory models are supported?"
./myread
models="$ans"

case "$models" in
none)
small="
medium="
large="
huge="
unsplit="
split="
;;
*split)
case "$split" in
") if $contains \-i' $sysman/ld.1 >/dev/null 2>&1 || \
    $contains \-i' $sysman/cc.1 >/dev/null 2>&1; then
dflt='-i'
else
dflt='none'
fi;;
*) dflt="$split";;
esac
rp="What flag indicates separate I and D space?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
split="$tans"
unsplit="";;
*large*|*small*|*medium*|*huge*)
case "$models" in
*large*)
case "$large" in
") dflt='-M!';;
*) dflt="$large";;
esac
rp="What flag indicates large model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
large="$tans";;
*) large="";;
esac

```

```

case "$models" in
*huge*) case "$huge" in
")
dflt='-Mh';;
*) dflt="$huge";;
esac
rp="What flag indicates huge model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
huge="$tans";;
*) huge="$large";;
esac
case "$models" in
*medium*) case "$medium" in
") dflt='-Mm';;
*) dflt="$medium";;
esac
rp="What flag indicates medium model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
medium="$tans";;
*) medium="$large";;
esac
case "$models" in
*small*) case "$small" in
") dflt='none';;
*) dflt="$small";;
esac
rp="What flag indicates small model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
small="$tans";;
*) small="";;
esac
;;
*)
./warn "Unrecognized memory models--you may have to edit Makefile.SH"
;;
esac

```

\$rm -f pdp11.\* pdp11

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/models.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Configdir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Configdir.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 14:58:36 ram

?RCS: patch61: have README explicitly mention the package name

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:Configdir: package

?MAKE: -pick add \$@ %<

: create .config dir to save info across Configure sessions

test -d ../.config || mkdir ../.config

cat >../.config/README <<EOF

This directory created by Configure to save

information that should

persist across sessions for \$package.

You may safely delete it if you wish.

EOF

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Configdir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pipe.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_pipe.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:11:44 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_pipe: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pipe:

?S: This variable conditionally defines the HAS\_PIPE symbol, which

?S: indicates to the C program that the pipe() routine is available

?S: to create an inter-process channel.

?S:.

?C:HAS\_PIPE :

?C: This symbol, if defined, indicates

that the pipe routine is

?C: available to create an inter-process channel.

?C:.

?H:#\$d\_pipe HAS\_PIPE /\*\*/

?H:.

?LINT:set d\_pipe

: see if pipe exists

set pipe d\_pipe

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_pipe.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_socks5\_init: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_socks5\_init:

?S: This variable conditionally defines the HAS\_SOCKS5\_INIT symbol, which

?S: indicates to the C program that the socks5\_init() routine is available.

?S:.

?C:HAS\_SOCKS5\_INIT:

?C: This symbol, if defined, indicates that the socks5\_init routine is

?C: available to initialize SOCKS 5.  
?C:.  
?H:#\$d\_socks5\_init HAS\_SOCKS5\_INIT /\*\*/  
?H:.  
?LINT:set d\_socks5\_init  
: see if socks5\_init exists  
set socks5\_init d\_socks5\_init  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_socks5\_init.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lround:

?S: This variable conditionally defines the HAS\_LROUND symbol, which

?S: indicates to the C program that the lround() routine is available

?S: to return the integral value nearest to x.

?S:.

?C:HAS\_LROUND:

?C: This symbol, if defined, indicates that the lround routine is

?C: available to return the nearest integral value.

?C:.

?H:#\$d\_lround HAS\_LROUND /\*\*/  
?H:.

?LINT:set d\_lround

: see if lround exists

set lround d\_lround

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_lround.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strftime.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:36 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strftime: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strftime:  
?S: This variable conditionally defines HAS\_STRFTIME if strftime() is  
?S: available to format locale-specific times.  
?S:.  
?C:HAS\_STRFTIME:  
?C: This symbol, if defined, indicates that the strftime routine is  
?C: available to format locale-specific times.  
?C:.  
?H:#\$d\_strftime HAS\_STRFTIME /\*\*/  
?H:.  
?LINT:set d\_strftime  
: see  
if strftime exists  
set strftime d\_strftime  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_strftime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: voidflags.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:27:58 ram  
?RCS: patch61: don't prompt them if the void support is high enough for us  
?RCS:  
?RCS: Revision 3.0.1.1 1995/01/11 15:37:44 ram  
?RCS: patch45: cosmetic change to avoid spurious blank lines when using -s  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:10:01 ram  
?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:voidflags defvoidused: cat sed rm rm\_try contains +cc +ccflags package \  
 Oldconfig Myread

?MAKE: -pick add \$@ %<

?S:voidflags:

?S: This  
 variable contains the eventual value of the VOIDFLAGS symbol,  
 ?S: which indicates how much support of the void type is given by this  
 ?S: compiler. See VOIDFLAGS for more info.

?S:.

?S:defvoidused:

?S: This variable contains the default value of the VOIDUSED symbol (15).

?S:.

?X: Exceptionally, we have to explicitly alias the symbol name for  
 ?X: config\_h.SH, otherwise the comment would not appear.

?C:VOIDFLAGS ~ %<:

?C: This symbol indicates how much support of the void type is given by this  
 ?C: compiler. What various bits mean:

?C:

?C: 1 = supports declaration of void

?C: 2 = supports arrays of pointers to functions returning void

?C: 4 = supports comparisons between pointers to void functions and  
 ?C: addresses of void functions

?C: 8 = supports declaration of generic void pointers

?C:

?C: The package designer should define VOIDUSED to indicate the requirements  
 ?C: of the package. This can be done either by #defining VOIDUSED before  
 ?C: including  
 config.h, or by defining defvoidused in Myinit.U. If the  
 ?C: latter approach is taken, only those flags will be tested. If the  
 ?C: level of void support necessary is not present, defines void to int.

?C:.

?H:%<:#ifndef VOIDUSED

?H:%<:#define VOIDUSED \$defvoidused

?H:%<:#endif

?H:%<:#define VOIDFLAGS \$voidflags

?H:%<:#if (VOIDFLAGS & VOIDUSED) != VOIDUSED

?H:%<:#define void int /\* is void to be avoided? \*/

?H:%<:#define M\_VOID /\* Xenix strikes again \*/

?H:%<:#endif

?H:.

?W:%<:void

?F:!.out !try.c !flags

?LINT:usefile .out flags try.c

?INIT:: full support for void wanted by default

?INIT:defvoidused=15

?INIT:

?LINT:known void M\_VOID VOIDUSED

```
: check for void type
echo " "
echo "Checking to see how well your C compiler groks the void type..." >&4
$cat >flags <<EOM
```

Support flag bits are:

- 1: basic void declarations.
- 2: arrays of pointers to functions returning void.
- 4: operations between pointers to and addresses of void functions.
- 8: generic void pointers.

EOM

```
case
"$voidflags" in
")
$cat >try.c <<'EOCP'
#if TRY & 1
void sub() {
#else
sub() {
#endif
extern void moo(); /* function returning void */
void (*goo)(); /* ptr to func returning void */
#if TRY & 8
void *hue; /* generic ptr */
#endif
#if TRY & 2
void (*foo[10])();
#endif

#if TRY & 4
if(goo == moo) {
    exit(0);
}
#endif
exit(0);
}
int main() { sub(); }
EOCP
?X: This unit used to use cc -S in those tests to try to speed up things, but
?X: unfortunately, AIX 3.2 does not support this option.
if $cc $ccflags -c -DTRY=$defvoidused try.c >.out 2>&1 ; then
voidflags=$defvoidused
echo "Good. It appears to support void to the level $package wants."
if $contains warning .out >/dev/null 2>&1; then
echo "However, you might get some warnings that look like this:"
$sed -e 's/^/ /' .out
fi
```



```

else
echo "Hmm, your compiler has some difficulty with void. Checking further..." >&4
$cat >&4 flags
$rm -f flags
if $cc $ccflags -c -DTRY=1 try.c >/dev/null 2>&1; then
echo
"It supports 1..."
if $cc $ccflags -c -DTRY=3 try.c >/dev/null 2>&1; then
echo "It also supports 2..."
if $cc $ccflags -c -DTRY=7 try.c >/dev/null 2>&1; then
voidflags=7
echo "And it supports 4 but not 8 definitely."
else
echo "It doesn't support 4..."
if $cc $ccflags -c -DTRY=11 try.c >/dev/null 2>&1; then
voidflags=11
echo "But it supports 8."
else
voidflags=3
echo "Neither does it support 8."
fi
fi
else
echo "It does not support 2..."
if $cc $ccflags -c -DTRY=13 try.c >/dev/null 2>&1; then
voidflags=13
echo "But it supports 4 and 8."
else
if $cc $ccflags -c -DTRY=5 try.c >/dev/null 2>&1; then
voidflags=5
echo "And it supports 4 but has not heard about 8."
else
echo "However it supports 8 but not 4."
fi
fi
fi
else
echo "There is no support at all for void."
voidflags=0
fi
fi
esac
?X: Only prompt user if support does not match the
level we want
case "$voidflags" in
"$defvoidused")
echo "Good. I already know it supports void to the level $package wants."
;;

```

```

*)
dflt="$voidflags";
test -f flags && $cat flags
rp="Your void support flags add up to what?"
. ./myread
voidflags="$ans"
;;
esac
$rm_try flags

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/voidflags.U

```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_tgamma: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_tgamma:

?S: This variable conditionally defines the HAS\_TGAMMA symbol, which

?S: indicates to the C program that the tgamma() routine is available

?S: for the gamma function. See also d\_lgamma.

?S:.

?C:HAS\_TGAMMA:

?C: This symbol, if defined, indicates that the tgamma routine is

?C: available to do the gamma function. See also HAS\_LGAMMA.

?C:.

?H:#\$d\_tgamma HAS\_TGAMMA /\*\*/

?H:.

?LINT:set d\_tgamma

: see if tgamma exists

set tgamma d\_tgamma

eval \$inlibc

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_tgamma.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_madvise: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_madvise:

?S: This variable conditionally defines HAS\_MADVISE if madvise() is

?S: available to map a file into memory.

?S:.

?C:HAS\_MADVISE:

?C: This symbol, if defined, indicates that the madvise system call is

?C: available to map a file into memory.

?C:.

?H:#\$d\_madvise HAS\_MADVISE /\*\*/

?H:.

?LINT:set d\_madvise

: see if madvise exists

set madvise d\_madvise

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_madvise.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_malloc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:21 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_malloc: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_malloc:

?S: This variable conditionally defines the I\_MALLOC symbol, and indicates

?S: whether a C program should include <malloc.h>.

?S:.

?C:I\_MALLOC:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <malloc.h>.

```
?C:
?H:#$i_malloc I_MALLOC /**/
?H:
?LINT:set i_malloc
: see if this is a malloc.h system
set
  malloc.h i_malloc
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_malloc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_longdbl.U,v $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_longdbl.U,v $
?RCS:
?MAKE:d_longdbl longdblsize d_ldexpl longdblkind \
d_long_double_style_ieee d_long_double_style_ieee_doubledouble \
d_long_double_style_ieee_extended d_long_double_style_ieee_std \
d_long_double_style_vax: Compile Setvar Myread \
Inlibc run echo cat rm_try test doublesize i_stdlib
?MAKE: -pick add $@ %<
?S:d_longdbl:
?S: This variable conditionally defines HAS_LONG_DOUBLE if
?S: the long double type is supported.
?S:
?S:d_ldexpl:
?S: This variable conditionally defines the HAS_LDEXPL symbol, which
?S: indicates to the C program that the ldexpl() routine is available.
?S:
?S:longdblsize:
?S: This variable contains the value of the LONG_DOUBLESIZE symbol,
  which
?S: indicates to the C program how many bytes there are in a long double,
?S: if this system supports long doubles. Note that this is
?S: sizeof(long double), which may include unused bytes.
?S:
?S:longdblkind:
?S: This variable, if defined, encodes the type of a long double:
?S: 0 = double,
?S: 1 = IEEE 754 128-bit little endian,
```

?S: 2 = IEEE 754 128-bit big endian,  
 ?S: 3 = x86 80-bit little endian,  
 ?S: 4 = x86 80-bit big endian,  
 ?S: 5 = double-double 128-bit little endian,  
 ?S: 6 = double-double 128-bit big endian,  
 ?S: 7 = 128-bit mixed-endian double-double (64-bit LEs in BE),  
 ?S: 8 = 128-bit mixed-endian double-double (64-bit BEs in LE),  
 ?S: 9 = 128-bit PDP-style mixed-endian long doubles,  
 ?S: -1 = unknown format.  
 ?S:.  
 ?S:d\_long\_double\_style\_ieee:  
 ?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE  
 ?S: if the long double is any of the IEEE 754 style long doubles:  
 ?S: LONG\_DOUBLE\_STYLE\_IEEE\_STD, LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED,  
 ?S: LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE.  
 ?S:.  
 ?S:d\_long\_double\_style\_ieee\_doubledouble:  
 ?S: This  
 variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE  
 ?S: if the long double is the 128-bit IEEE 754 double-double.  
 ?S:.  
 ?S:d\_long\_double\_style\_ieee\_extended:  
 ?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED  
 ?S: if the long double is the 80-bit IEEE 754 extended precision.  
 ?S: Note that despite the 'extended' this is less than the 'std',  
 ?S: since this is an extension of the double precision.  
 ?S:.  
 ?S:d\_long\_double\_style\_ieee\_std:  
 ?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_STD  
 ?S: if the long double is the 128-bit IEEE 754.  
 ?S:.  
 ?S:d\_long\_double\_style\_vax:  
 ?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_VAX  
 ?S: if the long double is the 128-bit VAX format H.  
 ?S:.  
 ?C:HAS\_LONG\_DOUBLE:  
 ?C: This symbol will be defined if the C compiler supports long  
 ?C: doubles.  
 ?C:.  
 ?C:LONG\_DOUBLESIZE:  
 ?C: This symbol contains the size of a long double, so that the  
 ?C: C  
 preprocessor can make decisions based on it. It is only  
 ?C: defined if the system supports long doubles. Note that this  
 ?C: is sizeof(long double), which may include unused bytes.  
 ?C:.  
 ?C:HAS\_LDEXPL:  
 ?C: This symbol, if defined, indicates that the ldexpl routine is

?C: available to shift a long double floating-point number  
?C: by an integral power of 2.  
?C:.  
?C:LONG\_DOUBLEKIND:  
?C: LONG\_DOUBLEKIND will be one of  
?C: LONG\_DOUBLE\_IS\_DOUBLE  
?C: LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN  
?C: LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN  
?C: LONG\_DOUBLE\_IS\_X86\_80\_BIT\_LITTLE\_ENDIAN  
?C: LONG\_DOUBLE\_IS\_X86\_80\_BIT\_BIG\_ENDIAN  
?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_LE  
?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_BE  
?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_BE  
?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_LE  
?C: LONG\_DOUBLE\_IS\_VAX\_H\_FLOAT  
?C: LONG\_DOUBLE\_IS\_UNKNOWN\_FORMAT  
?C: It is only defined if the system supports long doubles.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE:  
?C: This symbol, if defined, indicates  
that the long double  
?C: is any of the IEEE 754 style long doubles:  
?C: LONG\_DOUBLE\_STYLE\_IEEE\_STD, LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED,  
?C: LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit double-double.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 80-bit IEEE 754. Note that despite the 'extended' this  
?C: is less than the 'std', since this is an extension of  
?C: the double precision.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE\_STD:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit IEEE 754.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_VAX:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit VAX format H.  
?C:.  
?H:#\$d\_ldexpl HAS\_LDEXPL /\*\*/  
?H:#\$d\_longdbl HAS\_LONG\_DOUBLE /\*\*/  
?H:?LONG\_DOUBLESIZE:#ifdef HAS\_LONG\_DOUBLE  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLESIZE \$longdblsize /\*\*/  
?H:?LONG\_DOUBLESIZE:#define

```

LONG_DOUBLEKIND $longdblkind /**/
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLE 0
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_IEEE_754_128_BIT_LITTLE_ENDIAN 1
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_IEEE_754_128_BIT_BIG_ENDIAN 2
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_X86_80_BIT_LITTLE_ENDIAN 3
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_X86_80_BIT_BIG_ENDIAN 4
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_LE 5
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_BE 6
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_BE 7
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_LE 8
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_VAX_H_FLOAT 9
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_UNKNOWN_FORMAT -1
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LITTLE_ENDIAN
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_LE /* back-compat */
?H:?LONG_DOUBLESIZE:#define LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_BE
/* back-compat */
?H:?LONG_DOUBLESIZE:#$d_long_double_style_ieee LONG_DOUBLE_STYLE_IEEE
?H:?LONG_DOUBLESIZE:#$d_long_double_style_ieee_doubledouble
LONG_DOUBLE_STYLE_IEEE_DOUBLEDDOUBLE
?H:?LONG_DOUBLESIZE:#$d_long_double_style_ieee_extended
LONG_DOUBLE_STYLE_IEEE_EXTENDED
?H:?LONG_DOUBLESIZE:#$d_long_double_style_ieee_std LONG_DOUBLE_STYLE_IEEE_STD
?H:?LONG_DOUBLESIZE:#$d_long_double_style_vax LONG_DOUBLE_STYLE_VAX
?H:?LONG_DOUBLESIZE:#endif
?H:
?F:!try
?LINT:known LONG_DOUBLE_IS_DOUBLE LONG_DOUBLE_IS_IEEE_754_128_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_IEEE_754_128_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_X86_80_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_X86_80_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_UNKNOWN_FORMAT
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_LE
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_BE
?LINT:known
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_BE
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_LE
?LINT:known LONG_DOUBLE_IS_VAX_H_FLOAT
?LINT:set d_longdbl
?LINT:set d_ldexpl
: check for long doubles
echo " "
echo "Checking to see if you have long double..." >&4
echo 'int main() { long double x = 7.0; }' > try.c
set try
if eval $compile; then

```

```

val="$define"
echo "You have long double."
else
val="$undef"
echo "You do not have long double."
fi
$rm_try
set d_longdbl
eval $setvar

: see if ldexpl exists
set ldexpl d_ldexpl
eval $inlibc

@if LONG_DOUBLESIZE || longdblsize
: check for length of long double
?X: Check only if d_longdbl and if longdblsize is not already set.
case "${d_longdbl}${longdblsize}" in
$define)
echo " "
echo "Checking to see how big your long doubles are..." >&4
$cat >try.c <<'EOCP'
#include <stdio.h>
int main()
{
printf("%d\n", sizeof(long double));
}
EOCP
set try
?X: Don't use compile_ok because some compilers warn you that they have
?X: 'long double'
as just 'double'.
set try
if eval $compile; then
longdblsize=`$run ./try`
echo "Your long doubles are $longdblsize bytes long."
else
dflt='8'
echo " "
echo "(I can't seem to compile the test program. Guessing...)" >&4
rp="What is the size of a long double (in bytes)?"
./myread
longdblsize="$ans"
fi
if $test "X$doublesize" = "X$longdblsize"; then
echo "That isn't any different from an ordinary double."
echo "I'll keep your setting anyway, but you may see some"
echo "harmless compilation warnings."

```



```

fi
;;
esac
$rm_try
@end

$echo "Checking the kind of long doubles you have..." >&4
case "$d_longdbl" in
define)
$cat <<EOP >try.c
#$_stdlib L_STDLIB
#define LONGDBLSIZE $longdblsize
#define DOUBLESIZE $doublesize
#include <float.h>
#ifdef L_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
static const long double d = -0.1L;
int main() {
    unsigned const char* b = (unsigned const char*)&d;
#if DOUBLESIZE == LONGDBLSIZE
    printf("0\n"); /* if it floats
like double */
    exit(0);
#endif
#if (LDBL_MANT_DIG == 113 || FLT128_MANT_DIG == 113) && LONGDBLSIZE == 16
    if (b[0] == 0x9A && b[1] == 0x99 && b[15] == 0xBF) {
        /* IEEE 754 128-bit little-endian */
        printf("1\n");
        exit(0);
    }
    if (b[0] == 0xBF && b[14] == 0x99 && b[15] == 0x9A) {
        /* IEEE 128-bit big-endian, e.g. solaris sparc */
        printf("2\n");
        exit(0);
    }
#endif
/* For alignment 32-bit platforms have the 80 bits in 12 bytes,
* while 64-bits platforms have it in 16 bytes. The trailing bytes
* cannot be trusted. */
#if LDBL_MANT_DIG == 64 && (LONGDBLSIZE == 16 || LONGDBLSIZE == 12)
    if (b[0] == 0xCD && b[9] == 0xBF) {
        /* x86 80-bit little-endian, sizeof 12 (ILP32, Solaris x86)
* or 16 (LP64, Linux and OS X), 4 or 6 bytes of padding.
* Also known as "extended precision". */
        printf("3\n");
        exit(0);

```

```

}
if (b[0] == 0xBF && b[9] == 0xCD) {
    /* Is there ever big-endian 80-bit, really?
    *
    * The Motorola 68881 had another "extended
precision" format:
    * sign:1 exp:15 zero:16 integer:1 mantissa:63
    * for total of 96 bits of bytes. The zero bits were unused.
    * See "M68000 FAMILY PROGRAMMER'S REFERENCE MANUAL" for more details.
    * If it ever becomes relevant, this format should be allocated
    * a new doublekind code since it's quite different from the Intel x87.
    */
    printf("4\n");
    exit(0);
}
#endif
#if (LDBL_MANT_DIG == 106 || LDBL_MANT_DIG == 107) && LONGDBLSIZE == 16
    /* software "double double", the 106 is 53+53.
    * but irix thinks it is 107. */
    if (b[0] == 0x9A && b[7] == 0x3C && b[8] == 0x9A && b[15] == 0xBF) {
        /* double double 128-bit fully little-endian,
        * little-endian doubles in little-endian order,
        * 9a 99 99 99 99 99 59 3c 9a 99 99 99 99 99 b9 bf */
        printf("5\n");
        exit(0);
    }
    if (b[0] == 0xBF && b[7] == 0x9A && b[8] == 0x3C && b[15] == 0x9A) {
        /* double double 128-bit fully big-endian,
        * big-endian doubles in big-endian order,
        * e.g. PPC/Power and MIPS:
        * bf b9 99 99 99 99 9a 3c 59 99 99 99 99 9a */
        printf("6\n");
        exit(0);
    }
    if (b[0] == 0x9A && b[7] == 0xBF && b[8] == 0x9A && b[15] == 0x3C) {
        /* double double 128-bit mixed endian.
        * little-endian doubles in big-endian order,
        * e.g. ppc64el,
        * 9a 99 99 99 99 99 b9 bf 9a 99 99 99 99 59 3c */
        printf("7\n");
        exit(0);
    }
    if (b[0] == 0x3C && b[7] == 0x9A && b[8] == 0xBF && b[15] == 0x9A) {
        /* double double 128-bit mixed endian,
        * big-endian doubles in little-endian order,
        * 3c 59 99 99 99 99 9a bf b9 99 99 99 99 9a */
        printf("8\n");
        exit(0);
    }

```

```

}
#endif
/* We are largely making this up because it may well be
 * that the VAX format H was never made available to C,
 * only to Fortran. */
#if LONGDBLSIZE == 16 && defined(__vax__)
if (b[0] == 0xFD && b[15] == 0x99) {
    /* VAX format H, PDP-11 mixed endian. */
    printf("9\n");
    exit(0);
}
#endif
printf("-1\n"); /* unknown
 */
exit(0);
}
EOP
set try
if eval $compile; then
    longdblkind=`$run ./try`
else
    longdblkind=-1
fi
;;
*) longdblkind=0 ;;
esac
case "$longdblkind" in
0) echo "Your long doubles are doubles." >&4 ;;
1) echo "You have IEEE 754 128-bit little endian long doubles." >&4 ;;
2) echo "You have IEEE 754 128-bit big endian long doubles." >&4 ;;
3) echo "You have x86 80-bit little endian long doubles." >& 4 ;;
4) echo "You have x86 80-bit big endian long doubles." >& 4 ;;
5) echo "You have 128-bit fully little-endian double-double long doubles (64-bit LEs in LE)." >& 4 ;;
6) echo "You have 128-bit fully big-endian double-double long doubles (64-bit BEs in BE)." >& 4 ;;
7) echo "You have 128-bit mixed-endian double-double long doubles (64-bit LEs in BE)." >& 4 ;;
8) echo "You have 128-bit mixed-endian double-double long doubles (64-bit BEs in LE)." >& 4 ;;
9) echo "You have 128-bit PDP-style mixed-endian long doubles (VAX format H)." >& 4 ;;
*) echo "Cannot figure out your long double."
>&4 ;;
esac
d_long_double_style_ieee=$undef
d_long_double_style_ieee_std=$undef
d_long_double_style_ieee_extended=$undef
d_long_double_style_ieee_doubledouble=$undef
d_long_double_style_vax=$undef
case "$longdblkind" in
1|2|3|4|5|6|7|8) d_long_double_style_ieee=$define ;;
esac

```

```

case "$longdblkind" in
1|2) d_long_double_style_ieee_std=$define ;;
esac
case "$longdblkind" in
3|4) d_long_double_style_ieee_extended=$define ;;
esac
case "$longdblkind" in
5|6|7|8) d_long_double_style_ieee_doubledouble=$define ;;
esac
case "$longdblkind" in
9) d_long_double_style_vax=$define ;;
esac
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_longdbl.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_dup2.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_dup2.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_dup2: Inlibc
?MAKE: -pick add $@ %<
?S:d_dup2:
?S: This variable conditionally defines HAS_DUP2 if dup2() is
?S: available to duplicate file descriptors.
?S:.
?C:HAS_DUP2 (DUP2):
?C: This symbol, if defined, indicates that the dup2 routine is
?C: available to duplicate file descriptors.
?C:.
?H:#$d_dup2 HAS_DUP2 /**/
?H:.
?LINT:set d_dup2
:

```

```
see if dup2 exists
set dup2 d_dup2
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_dup2.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Findhdr.U,v 3.0.1.2 1994/10/29 15:53:08 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Thomas Neumann <tom@smart.bo.open.de>
?RCS:
?RCS: $Log: Findhdr.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 15:53:08 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:03:56 ram
?RCS: patch23: cppminus must be after other cppflags, not before
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:54 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a findhdr script which
is used to locate the header
?X: files in $usrinc or other stranger places using cpp capabilities. The
?X: script is given an include file base name, like 'stdio.h' or 'sys/file.h'
?X: and it returns the full path of the include file and a zero status or an
?X: empty string with an error status if the file could not be located.
?X:
?MAKE:Findhdr: grep test tr rm incpth awk cat startsh \
cppstdin cppminus +cppflags osname
?MAKE: -pick add $@ %<
?LINT:extern cppfilter
?LINT:define fieldn
?S:fieldn:
?S: This variable is used internally by Configure. It contains the position
?S: of the included file name in cpp output. That is to say, when cpp
?S: pre-processes a #include <file> line, it replaces it by a # line which
```

?S: contains the original position in the input file and the full name of

?S: included file, between "quotes".

?S:.

?V:fieldn

?F:./findhdr !fieldn

?T:cline pos wanted name awkprg usrinmdir status testaccess

: determine filename position in cpp output

echo " "

echo "Computing

filename position in cpp output for #include directives..." >&4

case "\$osname" in

amigaos) fieldn=3 ;; # Workaround for a bug in abc (pdksh).

esac

case "\$fieldn" in

")

case "\$osname" in

vos) testaccess=-e ;;

\*) testaccess=-r ;;

esac

echo '#include <stdio.h>' > foo.c

\$cat >fieldn <<EOF

\$startsh

\$cppstdin \$cppflags \$cppminus <foo.c 2>/dev/null | \

\$grep '^[ ]\*#.\*stdio\.h'| \

while read cline; do

pos=1

set \$cline

while \$test \$# -gt 0; do

if \$test \$testaccess \`echo \$1 | \$tr -d ""\`; then

echo "\$pos"

exit 0

fi

shift

pos=\`expr \$pos + 1\`

done

done

EOF

chmod +x fieldn

fieldn=`./fieldn`

\$rm -f foo.c fieldn

::

esac

case \$fieldn in

") pos='???';;

1) pos=first;;

2) pos=second;;

3) pos=third;;

\*) pos="{ \$fieldn }th";;

```
esac
```

```
echo "Your cpp writes the filename in the $pos field of the line."
```

?X: To locate a header file, we cannot simply check for \$usrinc/file.h, since  
?X: some machine have the headers in weird places and our only hope is that  
?X: the C pre-processor

will know how to find those headers. Thank you Next!

```
: locate header file
```

```
$cat >findhdr <<EOF
```

```
$startsh
```

```
wanted=$1
```

```
name=""
```

```
for usrincdir in $incpth
```

```
do
```

```
if test -f \${usrincdir}/${wanted}; then
```

```
echo "\${usrincdir}/${wanted}"
```

```
exit 0
```

```
fi
```

```
done
```

```
awkprg='{ print \$$fieldn }'
```

```
echo "#include <${wanted}>" > foo\${$.c
```

```
$cppstdin $cppminus $cppflags < foo\${$.c 2>/dev/null | \
```

```
$cppfilter $grep "^[ ]*#.*\${wanted}" | \
```

```
while read cline; do
```

```
name=\`echo \${cline} | $awk "\${awkprg}" | $tr -d ""\`
```

```
case "\${name}" in
```

```
*[^\|]\${wanted}) echo "\${name}"; exit 1;;
```

```
*[|\|]\${wanted}) echo "\${name}"; exit 1;;
```

```
*) exit 2;;
```

```
esac;
```

```
done;
```

```
#
```

```
# status = 0: grep returned 0 lines, case statement not executed
```

```
# status = 1: headerfile found
```

```
# status = 2: while loop executed, no headerfile found
```

```
#
```

```
status=${ $? }
```

```
$rm -f foo\${$.c;
```

```
if test \${status} -eq 1; then
```

```
exit 0;
```

```
fi
```

```
exit 1
```

```
EOF
```

```
chmod +x findhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```

```
5.32.1~rc1/U/modified/Findhdr.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: instubperl.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:installusrbinperl: installbin cat bin Myread Setvar test Devel

?MAKE: -pick add \$@ %<

?LINT:set installusrbinperl

?Y:TOP

?S:installusrbinperl:

?S: This variable tells whether Perl should be installed also as

?S: /usr/bin/perl in addition to

?S: \$installbin/perl

?S:.

?C:INSTALL\_USR\_BIN\_PERL:

?C: This symbol, if defined, indicates that Perl is to be installed

?C: also as /usr/bin/perl.

?C:.

?H:#\$installusrbinperl INSTALL\_USR\_BIN\_PERL /\*\*/

?H:.

: determine

whether to install perl also as /usr/bin/perl

echo " "

if \$test -d /usr/bin -a "\$installbin" != X/usr/bin; then

\$cat <<EOM

Many scripts expect perl to be installed as /usr/bin/perl.

If you want to, I can install the perl you are about to compile

as /usr/bin/perl (in addition to \$bin/perl).

EOM

if test -f /usr/bin/perl; then

\$cat <<EOM

However, please note that because you already have a /usr/bin/perl,  
overwriting that with a new Perl would very probably cause problems.  
Therefore I'm assuming you don't want to do that (unless you insist).

EOM

case "\$installusrbinperl" in

"\$define"|[yY]\*) dflt='y';;



```
*) dflt='n';;
esac
else
$cat <<EOM
```

Since you don't have a /usr/bin/perl I'm assuming creating one is okay.

EOM

```
case "$installusrbinperl" in
"$undef"|[nN]*) dflt='n';;
*) dflt='y';;
esac
fi
rp="Do you want to install perl as /usr/bin/perl?"
./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef" ;;
esac
else
val="$undef"
fi
set
installusrbinperl
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/installdirs/instubperl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_fgetpos.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_fgetpos.U,v $
?RCS: Revision 3.0.1.1 1994/06/20 06:57:33 ram
?RCS: patch30: created
?RCS:
?MAKE:d_fgetpos: Inlibc
?MAKE: -pick add $@ %<
?S:d_fgetpos:
```

?S: This variable conditionally defines HAS\_FGETPOS if fgetpos() is

?S: available to get the file position indicator.

?S:.

?C:HAS\_FGETPOS:

?C: This symbol, if defined, indicates that the fgetpos routine is

?C: available to get the file position indicator, similar to ftell().

?C:.

?H:#\$d\_fgetpos

HAS\_FGETPOS /\*\*/

?H:.

?LINT:set d\_fgetpos

: see if fgetpos exists

set fgetpos d\_fgetpos

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fgetpos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pathconf.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_pathconf.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:14:54 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_pathconf d\_fpathconf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pathconf:

?S: This variable conditionally defines the HAS\_PATHCONF symbol, which

?S: indicates to the C program that the pathconf() routine is available

?S: to determine file-system related limits and options

associated

?S: with a given filename.

?S:.

?S:d\_fpathconf:

?S: This variable conditionally defines the HAS\_FPATHCONF symbol, which

?S: indicates to the C program that the pathconf() routine is available

?S: to determine file-system related limits and options associated

?S: with a given open file descriptor.

?S:.

?C:HAS\_PATHCONF:

?C: This symbol, if defined, indicates that pathconf() is available

?C: to determine file-system related limits and options associated

?C: with a given filename.

?C:.

?C:HAS\_FPATHCONF:

?C: This symbol, if defined, indicates that pathconf() is available

?C: to determine file-system related limits and options associated

?C: with a given open file descriptor.

?C:.

?H:#\$d\_pathconf HAS\_PATHCONF /\*\*/

?H:#\$d\_fpathconf HAS\_FPATHCONF /\*\*/

?H:.

?LINT:set d\_pathconf

?LINT:set d\_fpathconf

: see if pathconf exists

set pathconf d\_pathconf

eval \$inlibc

@if d\_fpathconf || HAS\_FPATHCONF

: see if fpathconf exists

set fpathconf d\_fpathconf

eval \$inlibc

@end

Found in path(s):

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_pathconf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_srandom\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_srandom\_r random\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_srandom\_r:

?S: This variable conditionally defines the HAS\_SRANDOM\_R symbol,

?S: which indicates to the C program that the `srandom_r()`  
?S: routine is available.  
?S:.  
?S:`srandom_r_proto`:  
?S: This variable encodes the prototype of `srandom_r`.  
?S: It is zero if `d_srandom_r` is undef, and one of the  
?S: `REENTRANT_PROTO_T_ABC` macros of `reentr.h` if `d_srandom_r`  
?S: is defined.  
?S:.  
?C:`HAS_SRANDOM_R`:  
?C: This symbol, if defined, indicates that the `srandom_r` routine  
?C: is available to `srandom` re-entrantly.  
?C:.  
?C:`SRANDOM_R_PROTO`:  
?C: This  
symbol encodes the prototype of `srandom_r`.  
?C: It is zero if `d_srandom_r` is undef, and one of the  
?C: `REENTRANT_PROTO_T_ABC` macros of `reentr.h` if `d_srandom_r`  
?C: is defined.  
?C:.  
?H:`#$d_srandom_r HAS_SRANDOM_R /**/  
?H:#define SRANDOM_R_PROTO $srandom_r_proto /**/  
?H:.  
?T:try hdrs d_srandom_r_proto  
: see if srandom_r exists  
set srandom_r d_srandom_r  
eval $inlibc  
case "$d_srandom_r" in  
"$define")  
hdrs="$i_systypes sys/types.h define stdio.h $i_stdlib stdlib.h"  
case "$d_srandom_r_proto:$usetthreads" in  
":define") d_srandom_r_proto=define  
set d_srandom_r_proto srandom_r $hdrs  
eval $hasproto ;;  
*) ;;  
esac  
case "$d_srandom_r_proto" in  
define)  
case "$srandom_r_proto" in  
"|0) try='int srandom_r(unsigned int, struct random_data*);'  
./protochk "$extern_C $try" $hdrs && srandom_r_proto=I_TS ;;  
esac  
case "$srandom_r_proto" in  
"|0) d_srandom_r=undef  
srandom_r_proto=0  
echo "Disabling srandom_r, cannot determine prototype." >&4 ;;  
*`

```

) case "$srandom_r_proto" in
REENTRANT_PROTO*) ;;
*) srandom_r_proto="REENTRANT_PROTO_$$srandom_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "srandom_r has no prototype, not using it." >&4 ;;
esac
d_srandom_r=undef
srandom_r_proto=0
;;
esac
;;
*) srandom_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_srandom_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_lseekproto: Hasproto i\_systypes i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_lseekproto:

?S: This variable conditionally defines the HAS\_LSEEK\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the lseek() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_LSEEK\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the lseek() function. Otherwise, it is up

?C: to the program to supply one. A good guess is

?C: extern

```
off_t lseek(int, off_t, int);
?C:.
?H:#$d_lseekproto HAS_LSEEK_PROTO /**/
?H:.
?LINT:set d_lseekproto
: see if prototype for lseek is available
echo " "
set d_lseekproto lseek $i_systypes sys/types.h $i_unistd unistd.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d_lseekproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_flexfnam.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:04 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_flexfnam: cat rm test Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_flexfnam:
```

```
?S: This variable conditionally defines the FLEXFILENAMES symbol, which
```

```
?S: indicates that the system supports filenames longer than 14 characters.
```

```
?S:.
```

```
?C:FLEXFILENAMES:
```

```
?C: This symbol, if defined, indicates that the system supports filenames
```

```
?C: longer than 14 characters.
```

```
?C:.
```

```
?H:#$d_flexfnam FLEXFILENAMES /**/
```

```
?H:.
```

```
?T:first
```

```
second
```

```
?LINT:set d_flexfnam
```

```
: see if we can have long filenames
```

```
echo " "
```

```
?X:
```

```
?X: We have to test in both /tmp and . because of NFS (remote server may allow
```

?X: long filenames while the local filesystem cannot support them). If at least  
?X: one of those file systems cannot support long filenames, then we assume the  
?X: whole system can't.  
?X:

```
rmlist="$rmlist /tmp/cf$$"  
$test -d /tmp/cf$$ || mkdir /tmp/cf$$  
first=123456789abcdef  
second=/tmp/cf$$/$first  
$rm -f $first $second  
if (echo hi >$first) 2>/dev/null; then  
if $test -f 123456789abcde; then  
echo 'You cannot have filenames longer than 14 characters. Sigh.' >&4  
val="$undef"  
else  
if (echo hi >$second) 2>/dev/null; then  
if $test -f /tmp/cf$$/123456789abcde; then  
$cat <<'EOM'
```

That's peculiar... You can have filenames longer than 14 characters, but only  
on some of the filesystems. Maybe you are using NFS. Anyway, to avoid problems  
I shall consider your system cannot support long filenames at all.

```
EOM  
val="$undef"  
else  
echo  
'You can have filenames longer than 14 characters.' >&4  
val="$define"  
fi  
else  
$cat <<'EOM'
```

How confusing! Some of your filesystems are sane enough to allow filenames  
longer than 14 characters but some others like /tmp can't even think about them.  
So, for now on, I shall assume your kernel does not allow them at all.

```
EOM  
val="$undef"  
fi  
fi  
else  
$cat <<'EOM'
```

You can't have filenames longer than 14 chars. You can't even think about them!

```
EOM  
val="$undef"  
fi  
set d_flexfnam  
eval $setvar  
$rm -rf /tmp/cf$$ 123456789abcde*
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/dist/U/d\_flexfnam.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS:

?RCS: \$Log: perlpath.U,v \$

?RCS: Revision 3.0.1.2 1995/09/25 09:17:04 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.1 1995/01/11 15:33:53 ram

?RCS: patch45: can now use Loc variables since path stripping is deferred

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The purpose of this unit is to locate perl good enough to construct a #!

?X:

?MAKE:perlpath: Getfile Oldconfig Loc perl

?MAKE: -pick

add @\$ %<

?Y:TOP

?S:perlpath:

?S: This variable contains the eventual value of the PERLPATH symbol,

?S: which contains the absolute location of the perl interpreter.

?S:.

?C:PERLPATH:

?C: This symbol contains the absolute location of the perl interpreter.

?C:.

?H:#define PERLPATH "\$perlpath" /\*\*/

?H:.

: determine perl absolute location

case "\$perlpath" in

")

if test -f /usr/bin/perl; then

  dflt=/usr/bin/perl

else

  case "\$perl" in

  \*) dflt="\$perl";;

  \*) dflt=/usr/bin/perl;;



```

esac
fi
;;
*) dflt="$perlpath"
;;
esac
echo " "
fn=f~/
rp="Where is perl located on your system?"
./getfile
perlpath="$ans"

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/perlpath.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Chk_MANI.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Chk_MANI.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 14:57:25 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.1 1994/10/31 09:33:14 ram
?RCS: patch44: now lists Begin instead of Myinit in its dependencies
?RCS: patch44: leading comment now explains how this unit is included
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:45 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit checks the package by making sure
?X: every file listed in MANIFEST
?X: is present. It is systematically "included" via the Finish unit (which
?X: is always present in every Configure script), although it may result in
?X: an empty inclusion when no MANIFEST is present.
?X:
?MAKE:Chk_MANI: Begin c n rsrc
?MAKE: -pick wipe $@ %<
?T:filelist ans tmppwd

```

?X: This check happens at metaconfig-time, so it's ok to hard-code the path.

```
@if {test -f ../MANIFEST}
```

```
: Now test for existence of everything in MANIFEST
```

```
echo " "
```

```
if test -f "$src/MANIFEST"; then
```

```
echo "First let's make sure your kit is complete. Checking..." >&4
```

?X:

?X: Files spelled uppercased and beginning with PACK are produced by the

?X: shell archive builder and may be removed by the user. Usually, they are

?X: not listed in the MANIFEST file, but you never know...

?X:

?X: "split -l" is the new way of running a split, but we also try the older way

?X:

```
awk ' $1 !~ /PACK[A-Z]+/ {print $1}' "$src/MANIFEST" | \
```

```
(split -l 50 2>/dev/null || split -50)
```

```
rm -f missing
```

```
tmppwd=`pwd`
```

```
for
```

```
filelist in x??: do
```

```
(cd "$src"; ls `cat "$tmppwd/$filelist"` \
```

```
>/dev/null 2>>"$tmppwd/missing")
```

```
done
```

```
if test -s missing; then
```

```
cat missing >&4
```

```
cat >&4 <<'EOM'
```

THIS PACKAGE SEEMS TO BE INCOMPLETE.

You have the option of continuing the configuration process, despite the distinct possibility that your kit is damaged, by typing 'y'es. If you do, don't blame me if something goes wrong. I advise you to type 'n'o and contact the author (<MAINTLOC>).

EOM

?X: Can't use \$echo at this early stage

```
echo $n "Continue? [n] $c" >&4
```

```
read ans
```

```
case "$ans" in
```

```
y*)
```

```
echo "Continuing..." >&4
```

```
rm -f missing
```

```
::
```

```
*)
```

?X:

?X: Use kill and not exit, so that the trap gets executed to clean up

?X:

```
echo "ABORTING..." >&4
```

```
kill $$
```

```
;;
esac
else
  echo "Looks good..."
fi
else
  echo "There is no MANIFEST file. I hope your kit is complete !"
fi
rm -f missing x??

@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Chk_MANI.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endhent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_endhent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_endhent: Inlibc
?MAKE: -pick add $@ %<
?S:d_endhent:
?S: This variable conditionally defines HAS_ENDHOSTENT if endhostent() is
?S: available to close whatever was being used for host queries.
?S:.
?C:HAS_ENDHOSTENT:
?C: This symbol, if defined, indicates that the endhostent() routine is
?C: available to close whatever was being used for host
?C:.
?C: queries.
?C:.
?H:#$d_endhent HAS_ENDHOSTENT /**/
?H:.
?LINT:set d_endhent
: see if endhostent exists
set endhostent d_endhent
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_endhent.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_ilogb: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ilogb:

?S: This variable conditionally defines the HAS\_ILOGB symbol, which

?S: indicates to the C program that the ilogb() routine is available

?S: for extracting the exponent of double x as a signed integer.

?S:.

?C:HAS\_ILOGB:

?C: This symbol, if defined, indicates that the ilogb routine is

?C: available to get integer exponent of a floating-point value.

?C:.

?H:#\$d\_ilogb HAS\_ILOGB /\*\*/

?H:.

?LINT:set d\_ilogb

: see if ilogb exists

set ilogb d\_ilogb

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_ilogb.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memcpy.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memcpy.U,v \$

?RCS: Revision 3.0.1.1 1993/09/13 16:02:58 ram

?RCS: patch10: removed text recommending bcopy over memcpy (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:34 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:d\_memcpy: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_memcpy:  
?S: This variable conditionally defines the HAS\_MEMCPY symbol, which  
?S: indicates to the C program that the memcpy() routine is available  
?S: to copy blocks of  
memory.  
?S:.  
?C:HAS\_MEMCPY (MEMCPY):  
?C: This symbol, if defined, indicates that the memcpy routine is available  
?C: to copy blocks of memory.  
?C:.  
?H:#\$d\_memcpy HAS\_MEMCPY /\*\*/  
?H:.  
?LINT:set d\_memcpy  
: see if memcpy exists  
set memcpy d\_memcpy  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_memcpy.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_fstatfs : Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fstatfs:  
?S: This variable conditionally defines the HAS\_FSTATFS symbol, which  
?S: indicates to the C program that the fstatfs() routine is available.  
?S:.  
?C:HAS\_FSTATFS:  
?C: This symbol, if defined, indicates that the fstatfs routine is  
?C: available to stat filesystems by file descriptors.  
?C:.  
?H:#\$d\_fstatfs HAS\_FSTATFS /\*\*/  
?H:.  
?LINT:set d\_fstatfs  
: see if fstatfs exists  
set fstatfs d\_fstatfs  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fstatsfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: usrinc.U,v 1.1 2000/06/27 00:20:28 jhi Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: usrinc.U,v \$

?RCS: Revision 1.1 2000/06/27 00:20:28 jhi

?RCS: Initial revision

?RCS:

?RCS: Revision 3.0.1.3 1997/02/28 16:27:12 ram

?RCS: patch61: don't ask for the include path unless they are on a MIPS

?RCS:

?RCS: Revision 3.0.1.2 1995/05/12 12:24:36 ram

?RCS: patch54: ensure that ./mips always exists (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:18:31 ram

?RCS: patch23: ensure usrinc value is preserved across sessions (WED)

?RCS:

?RCS: Revision

3.0 1993/08/18 12:09:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:usrinc incpath mips\_type: test cat echo n c Getfile Guess \

Oldconfig eunicefix contains rm sysroot cc

?MAKE: -pick add \$@ %<

?S:usrinc:

?S: This variable holds the path of the include files, which is

?S: usually /usr/include. It is mainly used by other Configure units.

?S:.

?S:incpath:

?S: This variable must precede the normal include path to get the

?S: right one, as in "\$incpath/usr/include" or "\$incpath/usr/lib".

?S: Value can be "" or "/bsd43" on mips.

?S:.

?S:mips\_type:

?S: This variable holds the environment type for the mips system.

?S: Possible values are "BSD 4.3" and "System V".

```

?S:.
?D:usrinc='/usr/include'
?LINT:extern cppflags
?LINT:create mips
?T:xxx_prompt
?F:./mips
: What should the include directory be ?
: Use sysroot if set, so findhdr looks in the right place.
echo " "
$echo $n "Hmm... $c"
dflt="$sysroot/usr/include"
incpath=""
?X: mips_type is used later, to add -DSYSTYPE_BSD43
to cppflags if needed.
mips_type=""
?X:
?X: Cannot put the following in Guess, or we get a circular dependency.
?X:
if $test -f /bin/mips && /bin/mips; then
echo "Looks like a MIPS system..."
$cat >usr.c <<'EOCP'
#ifdef SYSTYPE_BSD43
/bsd43
#endif
EOCP
if $cc $cppflags -E usr.c > usr.out && $contains /usr.out >/dev/null 2>&1; then
dflt='/bsd43/usr/include'
incpath='/bsd43'
mips_type='BSD 4.3'
else
mips_type='System V'
fi
$rm -f usr.c usr.out
echo "and you're compiling with the $mips_type compiler and libraries."
xxx_prompt=y
echo "exit 0" >mips
else
echo "Doesn't look like a MIPS system."
xxx_prompt=n
echo "exit 1" >mips
fi
chmod +x mips
$unicefix mips
case "$usrinc" in
") ;;
*) dflt="$usrinc";;
esac
case "$xxx_prompt" in

```

```

y) fn=d/
echo " "
rp='Where are the include files you want to use?'
./getfile
usrinc="$ans"
;;
*) usrinc="$dflt"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/usrinc.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_dlopen.U,v 3.0.1.2 1995/07/25 13:52:56 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_dlopen.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 13:52:56 ram
?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:07:34 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_dlopen: Inlibc runnm d_cplusplus ccflags gccversion
?MAKE: -pick add $@ %<
?S:d_dlopen:
?S: This variable conditionally defines the HAS_DLOPEN
symbol, which
?S: indicates to the C program that the dlopen() routine is available.
?S:
?C:HAS_DLOPEN :
?C: This symbol, if defined, indicates that the dlopen routine is
?C: available.
?C:
?H:#$d_dlopen HAS_DLOPEN /**/
?H:
?T: xxx_runnm

```



```

?T: xxx_ccflags
?LINT:set d_dlopen
?X: We don't permanently change runnm and ccflags, but we do temporarily.
?LINT: change runnm
?LINT: change ccflags
: see if dlopen exists
?X: On NetBSD and FreeBSD, dlopen is available, but it is in
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not
?X: use the nm extraction, but use a real compile and link test instead.
xxx_runnm="$runnm"
xxx_ccflags="$ccflags"
runnm=false
: with g++ one needs -shared to get is-in-libc to work for dlopen
case "$gccversion" in
") ;;
*Clang*) ;;
*) case "$d_cplusplus" in
"$define") ccflags="$ccflags -shared" ;;
esac
;;
esac
set dlopen d_dlopen
eval $inlibc
runnm="$xxx_runnm"
ccflags="$xxx_ccflags"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/d_dlopen.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:usesocks: Myread Oldconfig Setvar

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usesocks:

?S: This variable conditionally defines the USE\_SOCKS symbol,

?S: and indicates that Perl should be built to use SOCKS.

?S:.

?C:USE\_SOCKS:

?C: This symbol, if defined, indicates that Perl should

?C: be built to use socks.

```

?C:.
?H:?%<:#ifndef USE_SOCKS
?H:?%<:#$usesocks USE_SOCKS /**/
?H:?%<:#endif
?H:.
?LINT:set usesocks
?INIT:: set usesocks on the Configure command line to enable socks.
: Check is we will use socks
?X: We should really have some explanatory text here, and some
?X: automatic setting of sensible defaults.
case "$usesocks" in
$define|true|[yY]*) dflt='y';
*) dflt='n';;
esac
cat <<EOM

```

Perl can be built to use the SOCKS proxy protocol library. To do so, Configure must be run with `-Dusesocks`. If you use SOCKS you also need to use the PerlIO abstraction layer, this will be implicitly selected.

If this doesn't make any sense to you, just accept the default '\$dflt'.

```

EOM
rp='Build Perl for SOCKS?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set usesocks
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/usesocks.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: cpp_trad.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cpp_stuff.U,v $

```

```

?MAKE:cpp_trad: cpp cat contains rm
?MAKE: -pick add $@ %<
?S:cpp_trad:
?S: This variable contains the program to run to get traditional C
?S: preprocessor semantics and not ISO C semantics: we want something
?S: that knows as little about C as possible to use as a more general
?S: purpose preprocessor.
?S:.
?F:!foo.c !foo.cpp
: how do we get traditional cpp semantics?
echo " "
echo "Checking to see how to get traditional cpp semantics..."
>&4
$cat >foo.c <<'EOF'
#define A(x) x
#define B(y) y
A(a)B(b)
EOF
if $cpp foo.c >foo.cpp; $contains ab foo.cpp >/dev/null 2>&1; then
echo "Plain '$cpp' works just fine."
cpp_trad="$cpp"
elif $cpp -traditional foo.c >foo.cpp; \
$contains ab foo.cpp >/dev/null 2>&1; then
echo "We'll use '$cpp -traditional' to get proper semantics."
cpp_trad="$cpp -traditional"
else
echo "I don't know how to get traditional semantics with '$cpp'." >&4
cpp_trad="$cpp"
fi
$rm -f foo.c foo.cpp

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cpp_trad.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a \$hasstruct string that is used internally

?X: by Configure to check if this system has a field for a

?X: particular struct (of if this system has a particular struct!)

?X:

?X: To use it, say something like:

```

?X: set d_statblocks stat i_sysstat sys/stat.h
?X: eval $hasstruct
?X: Or, for more complicated sets of headers, do something like
?X: hdrs="$define sys/foo.h
?X: $i_sysbar sys/bar.h
?X: $i_syszot sys/zot.h
?X: $i_zappa zappa.h"
?X: set d_statblocks stat $hdrs
?X: eval $hasstruct
?X:
?MAKE:Hasstruct: Setvar rm_try test Compile
?MAKE: -pick add $@ %<
?T:varname struct
?V:hasstruct
: Define hasstruct macro for Configure internal use
hasstruct='varname=$1; struct=$2; shift;
shift;
while $test $# -ge 2; do
case "$1" in
$define) echo "#include <$2>";;
esac ;
shift 2;
done > try.c;
echo "int main () { struct $struct foo; }" >> try.c;
set try;
if eval $compile; then
val="$define";
else
val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/Hasstruct.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: lib.U,v 3.0.1.3 1995/09/25 09:16:47 ram Exp $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

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```

```

?RCS: that same Artistic License; a copy of which may be found at the root

```

```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:
?RCS: $Log: lib.U,v $
?RCS: Revision 3.0.1.3 1995/09/25 09:16:47 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.2 1995/01/30 14:38:08 ram
?RCS: patch49: can now handle installation prefix changes (from WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:27:40 ram
?RCS: patch32: now uses installation prefix to set the default
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?LINT:
empty
?X:?MAKE:lib libexp: Getfile Loc Oldconfig Prefixit Prefixup prefixexp
?X:?MAKE: -pick add $@ %<
?X:?Y:TOP
?X:?S:lib:
?X:?S: This variable holds the name of the directory in which the user wants
?X:?S: to put public library files for the package in question. It is most
?X:?S: often a local directory such as /usr/local/lib. Programs using this
?X:?S: variable must be prepared to deal with filename expansion.
?X:?S:.
?X:?S:libexp:
?X:?S: This variable is the same as the lib variable, but is filename expanded
?X:?S: at configuration time, for convenient use in your makefiles.
?X:?S:.
?X:: determine where public libraries go
?X:set lib lib
?X:eval $prefixit
?X:case "$lib" in
?X:*)
?X: dflt=`./loc . ." $prefixexp/lib /usr/local/lib /usr/lib /lib`
?X: set dflt
?X: eval $prefixup
?X: ;;
?X:*) dflt="$lib";;
?X:esac
?X:echo " "
?X:fn=d~
?X:rp='Where do you want to put the public libraries?'
?X:. /getfile
?X:lib="$ans"
?X:libexp="$ansexp"

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/nullified/lib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: spitshell.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: spitshell.U,v \$

?RCS: Revision 3.0.1.4 1997/02/28 16:22:12 ram

?RCS: patch61: removed useless chatter as this is now done very early

?RCS:

?RCS: Revision 3.0.1.3 1995/01/11 15:37:01 ram

?RCS: patch45: use 'test -f' instead of 'test -r' for exec-only cat progs (WED)

?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:33:00 ram

?RCS: patch32: don't create spitshell under the UU directory

?RCS:

patch32: allow for cat in /bin or /usr/bin

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:12:58 ram

?RCS: patch10: made #-failure message more friendly (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:spitshell shsharp sharpbang: eunicefix sh Head

?MAKE: -pick add \$@ %<

?S:spitshell:

?S: This variable contains the command necessary to spit out a runnable

?S: shell on this system. It is either cat or a grep -v for # comments.

?S:.

?S:shsharp:

?S: This variable tells further Configure units whether your sh can

?S: handle # comments.

?S:.

?S:sharpbang:

?S: This variable contains the string #! if this system supports that

?S: construct.

?S:.

?F:!sharp

```

?T:xcat p
?X: "paths" comes from Head
?LINT:extern paths _exe
: see if sh knows # comments
?X: This is loaded up early, so avoid being chatty.
?X: echo " "
?X: echo "Checking your $sh to see if it knows about # comments..." >&2
if ` $sh -c '#' >/dev/null 2>&1`; then
?X: echo
"Your $sh handles # comments correctly."
shsharp=true
spitshell=cat
?X: echo " "
?X: echo "Okay, let's see if #! works on this system..."
xcat=/bin/cat
test -f $xcat$_exe || xcat=/usr/bin/cat
if test ! -f $xcat$_exe; then
for p in `echo $PATH | sed -e "s/$p_/ /g"` $paths; do
if test -f $p/cat$_exe; then
xcat=$p/cat
break
fi
done
if test ! -f $xcat$_exe; then
echo "Can't find cat anywhere!"
exit 1
fi
fi
echo "#!$xcat" >sharp
$unicefix sharp
chmod +x sharp
./sharp > today 2>/dev/null
if test -s today; then
?X: echo "It does."
sharpbang='#!'
else
echo "#! $xcat" > sharp
$unicefix sharp
chmod +x sharp
./sharp > today 2>/dev/null
if test -s today; then
?X: echo "It does."
sharpbang='#! '
else
?X: echo "Okay, let's see if #! works on this system..."
?X: echo "It's just a comment."
sharpbang=': use '
fi

```

```

fi
else
echo " "
echo "Your $sh doesn't grok # comments--I will strip them later on."
shsharp=false
?X: The
spitshell script will be perused, so leave it out the UU directory
cd ..
echo "exec grep -v '^[ ]*#' >spitshell
chmod +x spitshell
$unicefix spitshell
spitshell=`pwd`/spitshell
cd UU
echo "I presume that if # doesn't work, #! won't work either!"
sharpbang=: use '
fi
rm -f sharp today

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/spitshell.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:uselargefiles \

ccflags\_uselargefiles \

ldflags\_uselargefiles \

libswanted\_uselargefiles: \

Myread Oldconfig Setvar test lseeksize fpossize \

fpostype Compile echo n c cat lseektype rm\_try run \

use64bitint use64bitall i\_stdlib

?MAKE: -pick add \$@ %<

?Y:TOP

?S:uselargefiles:

?S: This variable conditionally defines the USE\_LARGE\_FILES symbol,

?S: and indicates that large file interfaces should be used when

?S: available.

?S:.

?S:ccflags\_uselargefiles:

?S: This variable contains the compiler flags needed by large file builds

?S: and added to ccflags by hints files.

?S:.



```

?S:ldflags_uselargefiles:
?S: This variable contains the loader flags needed by large file builds
?S: and added to ldflags by
?S: hints files.
?S:.
?S:libswanted_uselargefiles:
?S: This variable contains the libraries needed by large file builds
?S: and added to ldflags by hints files. It is a space separated list
?S: of the library names without the "lib" prefix or any suffix, just
?S: like libswanted..
?S:.
?C:USE_LARGE_FILES:
?C: This symbol, if defined, indicates that large file support
?C: should be used when available.
?C:.
?H:?%<:#ifndef USE_LARGE_FILES
?H:?%<:#$uselargefiles USE_LARGE_FILES /**/
?H:?%<:#endif
?H:.
?INIT:ccflags_uselargefiles="
?INIT:ldflags_uselargefiles="
?INIT:libswanted_uselargefiles="
?T:yyy zzz
?F:!uselargefiles.cbu !try
?LINT:change lseeksize
?LINT:change fpossize
?LINT:extern usefs
?LINT:use use64bitint
?LINT:use use64bitall
: Check for large file support
# Backward compatibility (usefs is deprecated).
case "$usefs" in
"$define"|true|[yY]*)
cat <<EOM >&4

*** Configure -Dusefs is deprecated, using -Duselargefiles instead.
EOM
uselargefiles="$define"
;;
esac

case "$lseeksize:$fpossize"
in
8:8) cat <<EOM

You can have files larger than 2 gigabytes.
EOM
val="$define" ;;

```

```

*) case "$uselargefiles" in
  "$undef"|false|[nN]*) dflt='n' ;;
*) dflt='y' ;;
esac
cat <<EOM

```

Perl can be built to understand large files (files larger than 2 gigabytes) on some systems. To do so, Configure can be run with `-Duselargefiles`.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

```

rp="Try to understand large files, if available?"
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set uselargefiles
eval $setvar
: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a large files perl is to be built,
: we may need to set or change some other defaults.
if $test -f uselargefiles.cbu; then
  echo "Your platform has some specific hints regarding large file builds, using them..."
  . ./uselargefiles.cbu
fi
case "$uselargefiles" in
"$define")
  if $test -f uselargefiles.cbu;
  then
    echo " "
    echo "Rechecking to see how big your file offsets are..." >&4
    $cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
int main()
{
  printf("%d\n", (int)sizeof($lseektype));
  return(0);
}
EOCP
set try
if eval $compile_ok; then
  lseeksize=`$run ./try`
  $echo "Your file offsets are now $lseeksize bytes long."
else

```

```

dflt="$lseeksize"
echo " "
echo "(I can't seem to compile the test program. Guessing...)"
rp="What is the size of your file offsets (in bytes)?"
./myread
lseeksize="$ans"
fi
case "$fpostype" in
*_t) zzz="$fpostype" ;;
*) zzz="fpos_t" ;;
esac
$echo $n "Rechecking the size of $zzz...$c" >&4
$cat > try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
    printf("%d\n", (int)sizeof($fpostype));
    return(0);
}
EOCP
set try
if eval $compile_ok; then
yyy=`$run ./try`
dflt="$lseeksize"
case "$yyy" in
") echo
" "
echo "(I can't execute the test program--guessing $fpossize.)" >&4
;;
*) fpossize=$yyy
echo "$fpossize bytes." >&4
;;
esac
else
dflt="$fpossize"
echo " "
echo "(I can't compile the test program. Guessing...)" >&4
rp="What is the size of your file positions (in bytes)?"
./myread
fpossize="$ans"
fi
$rm_try
fi
;;

```

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/uselfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_db.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 14:10:22 ram

?RCS: patch56: conditionally use const in test programs (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1995/05/12 12:14:42 ram

?RCS: patch54: extended for more intimate DB probing (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:21:50 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:i\_db db\_hashtype db\_prefixtype: Inhdr +cc +ccflags rm\_try contains cat \  
d\_const

?MAKE: -pick

add \$@ %<

?S:i\_db:

?S: This variable conditionally defines the I\_DB symbol, and indicates

?S: whether a C program may include Berkeley's DB include file <db.h>.

?S:.

?S:db\_hashtype:

?S: This variable contains the type of the hash structure element

?S: in the <db.h> header file. In older versions of DB, it was

?S: int, while in newer ones it is u\_int32\_t.

?S:.

?S:db\_prefixtype:

?S: This variable contains the type of the prefix structure element

?S: in the <db.h> header file. In older versions of DB, it was

?S: int, while in newer ones it is size\_t.

?S:.

?C:I\_DB:

?C: This symbol, if defined, indicates to the C program that it should

?C: include Berkeley's DB include file <db.h>.

?C:.

?C:DB\_Prefix\_t:

?C: This symbol contains the type of the prefix structure element

?C: in the <db.h> header file. In older versions of DB, it was

?C: int, while in newer ones it is u\_int32\_t.

?C:.

?C:DB\_Hash\_t:

?C: This symbol contains the type of the prefix structure element

?C: in the <db.h> header

file. In older versions of DB, it was

?C: int, while in newer ones it is size\_t.

?C:.

?H:#\$i\_db I\_DB /\*\*/

?H:#define DB\_Hash\_t \$db\_hashtype /\*\*/

?H:#define DB\_Prefix\_t \$db\_prefixtype /\*\*/

?H:.

?LINT:set i\_db

: see if this is a db.h system

set db.h i\_db

eval \$inhdr

@if DB\_Hash\_t

case "\$i\_db" in

define)

: Check the return type needed for hash

echo " "

echo "Checking return type needed for hash for Berkeley DB ..." >&4

\$cat >try.c <<EOCP

#\$d\_const HASCONST

#ifndef HASCONST

#define const

#endif

#include <sys/types.h>

#include <db.h>

u\_int32\_t hash\_cb (ptr, size)

const void \*ptr;

size\_t size;

{

}

HASHINFO info;

int main()

{

info.hash = hash\_cb;

}

EOCP

if \$cc \$ccflags -c try.c >try.out 2>&1 ; then

```

if $contains warning try.out >>/dev/null 2>&1 ; then
  db_hashtype='int'
else
  db_hashtype='u_int32_t'
fi
else
  echo "I can't seem to compile the test program." >&4
  db_hashtype=int
fi
$rm_try
echo "Your version of Berkeley DB uses $db_hashtype for hash."
;;
*) db_hashtype=int
;;
esac

@end
@if
  DB_Prefix_t
case "$i_db" in
define)
  : Check the return type needed for prefix
  echo " "
  echo "Checking return type needed for prefix for Berkeley DB ..." >&4
  cat >try.c <<EOCP
#$d_const HASCONST
#ifdef HASCONST
#define const
#endif
#include <sys/types.h>
#include <db.h>
size_t prefix_cb (key1, key2)
const DBT *key1;
const DBT *key2;
{
}
BTREEINFO info;
int main()
{
  info.prefix = prefix_cb;
}
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
  if $contains warning try.out >>/dev/null 2>&1 ; then
    db_prefixtype='int'
  else
    db_prefixtype='size_t'
  fi

```

```

else
  echo "I can't seem to compile the test program." >&4
  db_prefixtype='int'
fi
$rm_try
echo "Your version of Berkeley DB uses $db_prefixtype for prefix."
;;
*) db_prefixtype='int'
;;
esac

@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_db.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: sizetype.U,v 3.0.1.1 1994/08/29 16:32:10 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: sizetype.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:32:10 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:sizetype: Myread Typedef
?MAKE: -pick add $@ %<
?S:sizetype:
?S: This variable defines sizetype to be something like size_t,
?S: unsigned long, or whatever type is used to declare length
?S: parameters for string functions.
?S:.
?C:Size_t:
?C: This symbol holds the type used
to declare length parameters
?C: for string functions. It is usually size_t, but may be
?C: unsigned long, int, etc. It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.

```

```
?H:#define Size_t $sizetype /* length parameter for string functions */
?H:.
?LINT: set sizetype
: see what type is used for size_t
rp="What is the type used for the length parameter for string functions?"
set size_t sizetype 'unsigned int' stdio.h sys/types.h
eval $typedef_ask
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/sizetype.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_syslog.U,v $
?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_syslog: Inhdr Hasfield
?MAKE: -pick add $@ %<
?S:i_syslog:
?S: This variable conditionally defines the I_SYSLOG symbol,
?S: and indicates whether a C program should include <syslog.h>.
?S:.
?C:I_SYSLOG:
?C: This symbol, if defined, indicates that <syslog.h> exists and
?C: should be included.
?C:.
?H:#$i_syslog I_SYSLOG /**/
?H:.
?LINT:set i_syslog
: see if this is a syslog.h system
set syslog.h i_syslog
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_syslog.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: archlib.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
```



?RCS: In accordance with clause 7 of dist's modified Artistic License:  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: archlib.U,v \$  
?RCS: Revision 3.1 1999/07/08 18:32:29 doughera  
?RCS: Updated for perl5.005\_5x  
?RCS:  
?RCS:  
?RCS: Revision 3.0.1.4 1995/09/25 09:15:18 ram  
?RCS: patch59: unit is now forced to the top of Configure, if possible  
?RCS:  
?RCS: Revision 3.0.1.3 1995/02/15 14:14:14 ram  
?RCS: patch51: architecture name is now  
computed by a separate unit  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/30 14:32:22 ram  
?RCS: patch49: archname is now systematically recomputed  
?RCS: patch49: can now handle installation prefix changes (from WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:02:36 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_archlib archlib archlibexp installarchlib: \  
cat Getfile Setprefixvar Loc Oldconfig archname spackage \  
privlib sed test Prefixit Prefixup binexp  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:d\_archlib:  
?S: This variable conditionally defines ARCHLIB to hold the pathname  
?S: of architecture-dependent library files for \$package. If  
?S: \$archlib is the same as \$privlib, then this is set to undef.  
?S:.  
?D:archlib="  
?S:archlib:  
?S: This variable holds the name of the directory in which the user wants  
?S: to put architecture-dependent public library files for \$package.  
?S: It is most often a local directory such as /usr/local/lib.  
?S: Programs using this variable must be prepared to deal  
?S: with  
filename expansion.  
?S:.  
?D:archlibexp="  
?S:archlibexp:  
?S: This variable is the same as the archlib variable, but is

?S: filename expanded at configuration time, for convenient use.

?S:.

?D:installarchlib="

?S:installarchlib:

?S: This variable is really the same as archlibexp but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

?S:.

?C:ARCHLIB:

?C: This variable, if defined, holds the name of the directory in which the user wants to put architecture-dependent public library files for \$package. It is most often a local directory such as /usr/local/lib. Programs using this variable must be prepared to deal with filename expansion. If ARCHLIB is the same as PRIVLIB, it is not defined, since presumably the program already searches PRIVLIB.

?C:.

?C:ARCHLIB\_EXP:

?C: This symbol contains the ~name expanded version of ARCHLIB, to be used in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?H:#\$d\_archlib ARCHLIB "\$sarchlib" /\*\*/

?H:#\$d\_archlib ARCHLIB\_EXP "\$sarchlibexp" /\*\*/

?H:.

?T: tdfit

?LINT:change prefixvar

?LINT:set archlib

?LINT:set archlibexp

?LINT:set installarchlib

: determine where public architecture dependent libraries go

set archlib archlib

eval \$prefixit

: privlib default is /usr/local/lib/\$package/\$version

: archlib default is /usr/local/lib/\$package/\$version/\$sarchname

: privlib may have an optional trailing /share.

tdflt=`echo \$privlib | \$sed 's,/share\$,,'`

tdflt=\$tdflt/\$sarchname

case "\$sarchlib" in

) dflt=\$tdflt

;;

\*) dflt="\$sarchlib"

;;

esac

\$cat <<EOM

\$package contains architecture-dependent library files. If you are sharing libraries in a heterogeneous environment, you might store

these files in a separate location. Otherwise, you can just include them with the rest of the public library files.

EOM

?X: Force dependency on bin.U

fn=\$binexp

fn=d+~

rp="Where do you want to put the public architecture-dependent libraries?"

.

./getfile

prefixvar=archlib

./setprefixvar

if \$test X"\$sarchlib" = X"\$sprivlib"; then

d\_archlib="\$undef"

else

d\_archlib="\$define"

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/installdirs/archlib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:sysroot: Head

?MAKE: -pick add \$@ %<

?S:sysroot:

?S: This variable is empty unless supplied by the Configure user.

?S: It can contain a path to an alternative root directory, under which

?S: headers and libraries for the compilation target can be found. This

?S: is generally used when cross-compiling using a gcc-like compiler.

?S:.

?LINT:extern cc

?LINT:extern cppflags

?LINT:change cppflags

?LINT:extern ccflags

?LINT:change ccflags

?LINT:extern ldflags

?LINT:change ldflags

?LINT:extern cccdlflags

?X: \_sysroot is later used in ccflags, but we do not want it in config.sh

?T:var xxx path \_sysroot

: Set 'sysroot' to change the logical root directory to your headers and libraries see man gcc

: This is primarily meant for cross-compile environments, and

```

may fail to be useful in other cases
if test "X$sysroot" = X; then
  sysroot=""
else
  case "$cc" in
  *gcc*|*g++*)
    echo "Using $sysroot to find your headers and libraries, adding to ccflags"
    # _sysroot is used in places where we need --sysroot=foo
    # but using the rest of the flags could cause issues.
    _sysroot="--sysroot=$sysroot";
    case "$ccflags" in
  *sysroot*) ;;
  'undef'|*)
    ccflags="$ccflags $_sysroot"
    esac
    case "$ldflags" in
  *sysroot*) ;;
  'undef'|*)
    ldflags="$ldflags $_sysroot"
    esac
    case "$cppflags" in
  *sysroot*) ;;
  'undef'|*)
    cppflags="$cppflags $_sysroot"
    esac
    # lddflags updated below in lddflags section;
    # same with cccdlflags
    ;;
  esac

  # Adjust some defaults to also use $sysroot
  for var in xlibpth loclibpth locincpth glibpth; do
    eval xxx=\$$var
    eval $var=""
    for path in $xxx; do
      eval $var="\$$var $sysroot$path\"
    done
  done

fi

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Sysroot.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_chsize.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_chsize.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:50 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_chsize: Inlibc
?MAKE: -pick add $@ %<
?S:d_chsize:
?S: This variable conditionally defines the CHSIZE symbol, which
?S: indicates to the C program that the chsize() routine is available
?S: to truncate files. You might need a -lx to get this routine.
?S:.
?C:HAS_CHSIZE (CHSIZE):
?C: This symbol, if defined, indicates that the chsize
routine is available
?C: to truncate files. You might need a -lx to get this routine.
?C:.
?H:#$d_chsize HAS_CHSIZE /**/
?H:.
?LINT:set d_chsize
: see if chsize exists
set chsize d_chsize
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_chsize.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Inlibc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Inlibc.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 15:55:08 ram

```

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks for the definition of a given function.

?X:

?X: To use it, say:

?X: set function d\_func

?X: eval \$inlibc

?X:

?MAKE:Inlibc: Csym Whoa Oldconfig

?MAKE: -pick add \$@ %<

?LINT:define inlibc

?V:inlibc

?S:inlibc:

?S: This

shell variable is used internally by Configure to check

?S: wether a given function is defined or not. A typical use is:

?S: set function d\_func

?S: eval \$inlibc

?S: That will print a message, saying wether function was found or

?S: not and set d\_func accordingly.

?S:.

?T:was tx sym tres td tu var

: define an is-in-libc? function

inlibc='echo " "; td=\$define; tu=\$undef;

sym=\$1; var=\$2; eval "was=\(\$\$2";

tx=yes;

case "\$reuserval\$was" in

true) ;;

true\*) tx=no;;

esac;

case "\$tx" in

yes)

set \$sym tres -f;

eval \$csym;

case "\$tres" in

true)

echo "\$sym() found." >&4;

case "\$was" in \$undef) ./whoa; esac; eval "\$var=\\$td";;

\*)

echo "\$sym() NOT found." >&4;

case "\$was" in \$define) ./whoa; esac; eval "\$var=\\$tu";;

esac;;

\*)

case "\$was" in

```
$define) echo "$sym() found." >&4;;
*) echo "$sym() NOT found." >&4;;
esac;;
esac'
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Inlibc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_psignal.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
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?RCS:
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?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_psignal.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:49 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_psignal: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_psignal:
```

```
?S: This variable conditionally defines the HAS_P SIGNAL symbol, which
```

```
?S: indicates that the psignal() routine exists. The psignal() routine
```

```
?S: prints a description of a signal on the standard error output.
```

```
?S:.
```

```
?C:HAS_P SIGNAL (P SIGNAL):
```

```
?C: This symbol, if defined, indicates
```

```
that the psignal() routine exists.
```

```
?C:.
```

```
?H:#$d_psignal HAS_P SIGNAL /**/
```

```
?H:.
```

```
?LINT:set d_psignal
```

```
: see if psignal exists
```

```
set psignal d_psignal
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_psignal.U
```

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```
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```

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:usequadmath: Setvar cat uselongdouble

?MAKE: -pick add \$@ %<

?S:usequadmath:

?S: This variable conditionally defines the USE\_QUADMATH symbol,

?S: and indicates that the quadmath library \_\_float128 long doubles

?S: should be used when available.

?S:.

?C:USE\_QUADMATH:

?C: This symbol, if defined, indicates that the quadmath library should

?C: be used when available.

?C:.

?H:%<:#ifndef USE\_QUADMATH

?H:%<:#\$usequadmath USE\_QUADMATH /\*\*/

?H:%<:#endif

?H:.

: Check if quadmath is requested

case "\$usequadmath" in

"\$define"|true|[yY]\*) usequadmath="\$define" ;;

\*) usequadmath="\$undef" ;;

esac

: Fail if both uselongdouble and usequadmath are requested

case "\$usequadmath:\$uselongdouble" in

define:define)

\$cat <<EOM >&4

\*\*\* You requested the use of

the quadmath library and use

\*\*\* of long doubles.

\*\*\*

\*\*\* Please select one or the other.

EOM

exit 1

::

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/usequadmath.U

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?RCS: \$Id: d\_safebcpy.U,v 3.0.1.4 1997/02/28 15:40:58 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_safebcpy.U,v \$

?RCS: Revision 3.0.1.4 1997/02/28 15:40:58 ram

?RCS: patch61: improved overlapping copy check

?RCS: patch61: comfort them if they have memmove

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.3 1995/07/25 13:58:40 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.2 1995/01/11 15:29:23 ram

?RCS: patch45: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS:

Revision 3.0.1.1 1994/05/06 14:49:03 ram

?RCS: patch23: ensure string is not optimized in read-only memory (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_safebcpy: cat d\_bcopy Compile rm\_try run \  
d\_memmove i\_memory i\_stdlib i\_string i\_unistd Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_safebcpy:

?S: This variable conditionally defines the HAS\_SAFE\_BCOPY symbol if

?S: the bcopy() routine can do overlapping copies. Normally, you

?S: should probably use memmove().

?S:.

?C:HAS\_SAFE\_BCOPY (SAFE\_BCOPY):

?C: This symbol, if defined, indicates that the bcopy routine is available

?C: to copy potentially overlapping memory blocks. Normally, you should

?C: probably use memmove() or memcpy(). If neither is defined, roll your

?C: own version.

?C:.

?H:#\$d\_safebcpy HAS\_SAFE\_BCOPY /\*\*/

?H:.

?F:!try

?LINT: set d\_safebcpy

: can bcopy handle overlapping blocks?

echo " "

?X: assume the worst.

val="\$undef"

case "\$d\_memmove" in

"\$define")

```

echo "I'll use memmove() instead of bcopy() for overlapping copies." ;;
*) case "$d_bcopy" in
"$define")
echo "Checking to see if bcopy() can do overlapping copies..." >&4
$cat >try.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>try.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

/* Copy "abcde..." string to char abc[] so that gcc doesn't
try to store the string in read-only memory. */
bcopy("abcdefghijklmnopqrstuvwxy0123456789", abc, 36);

for (align = 7; align >= 0; align--) {
for (len = 36; len; len--) {
b = buf+align;
bcopy(abc, b, len);
for (off = 1; off <= len; off++) {
bcopy(b, b+off, len);
bcopy(b+off,
b, len);
if (bcmp(b, abc, len))
exit(1);

```

```

}
}
}
exit(0);
}
EOCP
set try
if eval $compile_ok; then
if $run ./try 2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "It can't, sorry."
fi
else
echo "(I can't compile the test program, so we'll assume not...)"
fi
;;
esac
$rm_try
;;
esac
set d_safebcpy
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_safebcpy.U
```

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?RCS:

?RCS: \$Log: d\_shmat.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 14:04:23 ram

?RCS: patch56: use findhdr to find <sys/shm.h>, to get the right one (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:18:56 ram

?RCS: patch27: added new symbol HAS\_SHMAT\_PROTOTYPE (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:54:18 ram

?RCS: patch23: new Shmat\_t symbol to declare return type of shmat()  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:18 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_shmat shmattype  
d\_shmatprototype: Inlibc cat +cc +ccflags \  
rm cppstdin cppflags cppminus Findhdr Setvar contains  
?MAKE: -pick add \$@ %<  
?S:d\_shmat:  
?S: This variable conditionally defines the HAS\_SHMAT symbol, which  
?S: indicates to the C program that the shmat() routine is available.  
?S:.  
?S:shmattype:  
?S: This symbol contains the type of pointer returned by shmat().  
?S: It can be 'void \*' or 'char \*'.  
?S:.  
?S:d\_shmatprototype:  
?S: This variable conditionally defines the HAS\_SHMAT\_PROTOTYPE  
?S: symbol, which indicates that sys/shm.h has a prototype for  
?S: shmat.  
?S:.  
?C:HAS\_SHMAT:  
?C: This symbol, if defined, indicates that the shmat() routine is  
?C: available to attach a shared memory segment to the process space.  
?C:.  
?C:Shmat\_t:  
?C: This symbol holds the return type of the shmat() system call.  
?C: Usually set to 'void \*' or 'char \*'.  
?C:.  
?C:HAS\_SHMAT\_PROTOTYPE:  
?C: This symbol, if defined, indicates that the sys/shm.h includes  
?C: a prototype for shmat(). Otherwise, it is up to the program  
?C: to  
?C: guess one. Shmat\_t shmat\_((int, Shmat\_t, int)) is a good guess,  
?C: but not always right so it should be emitted by the program only  
?C: when HAS\_SHMAT\_PROTOTYPE is not defined to avoid conflicting defs.  
?C:.  
?H:#\$d\_shmat HAS\_SHMAT /\*\*/  
?H:#define Shmat\_t \$shmattype /\*\*/  
?H:#\$d\_shmatprototype HAS\_SHMAT\_PROTOTYPE /\*\*/  
?H:.  
?LINT:set d\_shmat d\_shmatprototype  
?T:xxx  
: see if shmat exists  
set shmat d\_shmat  
eval \$inlibc  
: see what shmat returns

```

case "$d_shmat" in
"$define")
$cat >shmat.c <<'END'
#include <sys/shm.h>
void *shmat();
END
if $cc $ccflags -c shmat.c >/dev/null 2>&1; then
shmattype='void *'
else
shmattype='char *'
fi
echo "and it returns ($shmattype)." >&4
: see if a prototype for shmat is available
xxx=`./findhdr sys/shm.h`
$cppstdin $cppflags $cppminus < $xxx > shmat.c 2>/dev/null
if $contains 'shmat.*(' shmat.c >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
$rm -f shmat.[co]
;;
*)
val="$undef"
;;
esac
set d_shmatprototype
eval $setvar

```

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_shmat.U

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?RCS: \$Id: d\_mblen.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_mblen.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:40 ram  
 ?RCS: patch32: created by ADO  
 ?RCS:  
 ?MAKE:d\_mblen: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_mblen:  
 ?S: This variable conditionally defines the HAS\_MBLLEN symbol, which  
 ?S: indicates to the C program that the mblen() routine is available  
 ?S: to find the number of bytes in a multibyte character.  
 ?S:.  
 ?C:HAS\_MBLLEN:  
 ?C: This  
 symbol, if defined, indicates that the mblen routine is available  
 ?C: to find the number of bytes in a multibyte character.  
 ?C:.  
 ?H:#\$d\_mblen HAS\_MBLLEN /\*\*/  
 ?H:.  
 ?LINT:set d\_mblen  
 : see if mblen exists  
 set mblen d\_mblen  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mblen.U

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?RCS: \$Id: d\_getnetent\_r.U,v 0RCS:  
 ?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
 ?RCS:  
 ?MAKE:d\_getnetent\_r getnetent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_getnetent\_r:  
 ?S: This variable conditionally defines the HAS\_GETNETENT\_R symbol,  
 ?S: which indicates to the C program that the getnetent\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S:getnetent\_r\_proto:  
 ?S: This variable encodes the prototype of getnetent\_r.  
 ?S: It is zero if d\_getnetent\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetent\_r  
 ?S: is defined.

?S:.

?C:HAS\_GETNETENT\_R:

?C: This symbol, if defined, indicates that the getnetent\_r routine

?C: is

available to getnetent re-entrantly.

?C:.

?C:GETNETENT\_R\_PROTO:

?C: This symbol encodes the prototype of getnetent\_r.

?C: It is zero if d\_getnetent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetent\_r

?C: is defined.

?C:.

?H:#\$d\_getnetent\_r HAS\_GETNETENT\_R /\*\*/

?H:#define GETNETENT\_R\_PROTO \$getnetent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getnetent\_r\_proto

: see if getnetent\_r exists

set getnetent\_r d\_getnetent\_r

eval \$inlibc

case "\$d\_getnetent\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"

case "\$d\_getnetent\_r\_proto:\$usetthreads" in

":define") d\_getnetent\_r\_proto=define

set d\_getnetent\_r\_proto getnetent\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_getnetent\_r\_proto" in

define)

case "\$getnetent\_r\_proto" in

"|0) try='int getnetent\_r(struct netent\*, char\*, size\_t, struct netent\*\*, int\*);'

./protochk "\$extern\_C \$try" \$hdrs && getnetent\_r\_proto=I\_SBWRE ;;

esac

case "\$getnetent\_r\_proto" in

"|0) try='int getnetent\_r(struct

netent\*, char\*, int, int\*);'

./protochk "\$extern\_C \$try" \$hdrs && getnetent\_r\_proto=I\_SBIIE ;;

esac

case "\$getnetent\_r\_proto" in

"|0) try='struct netent\* getnetent\_r(struct netent\*, char\*, int, int\*);'

./protochk "\$extern\_C \$try" \$hdrs && getnetent\_r\_proto=S\_SBIIE ;;

esac

case "\$getnetent\_r\_proto" in

"|0) try='struct netent\* getnetent\_r(struct netent\*, char\*, int);'

./protochk "\$extern\_C \$try" \$hdrs && getnetent\_r\_proto=S\_SBI ;;

esac

case "\$getnetent\_r\_proto" in

```

"|0) try='int getnetent_r(struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SBI ;;
esac
case "$getnetent_r_proto" in
"|0) try='int getnetent_r(struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SD ;;
esac
case "$getnetent_r_proto" in
"|0) d_getnetent_r=undef
getnetent_r_proto=0
echo "Disabling getnetent_r, cannot determine prototype." >&4 ;;
*) case "$getnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetent_r_proto="REENTRANT_PROTO_$getnetent_r_proto"
;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getnetent_r has no prototype, not using it." >&4 ;;
esac
d_getnetent_r=undef
getnetent_r_proto=0
;;
esac
;;
*) getnetent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/threads/d_getnetent_r.U

```

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?RCS: \$Id: Config\_h.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Config\_h.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 14:57:43 ram



```

?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:10:49 ram
?RCS: patch59: commented the purpose of the #un-def directive
?RCS:
?RCS: Revision 3.0.1.3 1995/01/30 14:25:39 ram
?RCS: patch49: typo fixes in leading config.h comment (WED)
?RCS:
?RCS: Revision 3.0.1.2 1993/08/24 12:13:20 ram
?RCS: patch3: added TOP as a local shell temporary variable
?RCS:
?RCS:
Revision 3.0.1.1 1993/08/19 06:42:20 ram
?RCS: patch1: leading config.sh searching was not aborting properly
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This file ends up producing the config_h.SH script, which is run to produce
?X: the config.h file. The file ./Config_h below contains all the ?H: lines
?X: extracted out of all the units. Metaconfig itself adds the !GROK!THIS!.
?X: Note that this code isn't included into Configure, but must be shipped with.
?X:
?X: For those who wish to know why the file is config_h.SH instead of the more
?X: natural config.h.SH, well... it is to support systems like MS-DOG. Only one
?X: 'dot' is allowed within the file name, as it is part of the "extension" of
?X: the file. MS-DOG will not let you have two 'dots' because that would mean
?X: two "extensions".
?X:
?MAKE:Config_h: Id End Config_sh Obsol_h myuname cf_time cf_by package src
?MAKE: -pick c_h_weed $@ %<
?MAKE: -pick
c_h_weed $@ ./Config_h
?MAKE: -pick c_h_weed $@ ./Obsol_h
?T:PERL_CONFIG_SH TOP
?LINT:unclosed !GROK!THIS!
?LINT:extern CONFIG_H CONFIG_SH
?LINT:change CONFIG_H CONFIG_SH
?X:?LINT:nocomment
: Set up for generating config_h.SH
case "$CONFIG_SH" in
") CONFIG_SH=config.sh;;
esac
case "$CONFIG_H" in
") CONFIG_H=config.h;;
esac
case $PERL_CONFIG_SH in

```

```

")
if test -f $CONFIG_SH; then TOP=.;
elif test -f ../$CONFIG_SH; then TOP=..;
elif test -f ../../$CONFIG_SH; then TOP=../../.;
elif test -f ../../../$CONFIG_SH; then TOP=../../../.;
elif test -f ../../../../$CONFIG_SH; then TOP=../../../../.;
else
echo "Can't find $CONFIG_SH."; exit 1
fi
. $TOP/$CONFIG_SH
;;
esac
?X: Make sure we are in the directory where the .SH file is located.
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/\)'` ;;
esac
echo "Extracting $CONFIG_H (with variable substitutions)"
?X:
?X: Since we unconditionally translate leading #undef into /*#define, we're
?X: stuck when we really want to have a #undef in $CONFIG_H.
That's why there
?X: is provision here for #un-def, which is translated back into #undef after
?X: all original #undef have been processed.
?X:
?X: Previously, we changed all
?X: #undef FOO /**/
?X: into
?X: /*#define FOO /**/
?X: The xlc compiler (available on IBM's AIX) complains that this is
?X: an illegal attempt to write a nested comment, and warns against it.
?X: There's apparently no way to shut the compiler up, either.
?X: This sed command from Hallvard B Furuseth <h.b.furuseth@usit.uio.no>
?X: changes it to
?X: /*#define FOO /**/
sed <<!GROK!THIS!>$CONFIG_H -e 's!^#undef\(.*/\)*!\^/*#define\1 \!' -e 's!^#un-def!#undef!'
/* This file was produced by running the config_h.SH script, which
* gets its values from $CONFIG_SH, which is generally produced by
* running Configure.
*
* Feel free to modify any of this as the need arises. Note, however,
* that running config_h.SH again will wipe out any changes you've made.
* For a more permanent change edit $CONFIG_SH and
rerun config_h.SH.
*/

/* Package name : $package
* Source directory : $src
* Configuration time: $cf_time

```

```
* Configured by   : $cf_by
* Target system   : $myuname
*/
```

```
#ifndef _config_h_
#define _config_h_
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Config_h.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_times.U,v 3.0.1.2 1995/07/25 14:07:50 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
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```

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```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_times.U,v $
```

```
?RCS: Revision 3.0.1.2 1995/07/25 14:07:50 ram
```

```
?RCS: patch56: typo fix, sytem -> system
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/08/29 16:14:00 ram
```

```
?RCS: patch32: now uses new Typedef unit to compute type information
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:07:46 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: What is the type returned by times() ?
```

```
?X:
```

```
?X: Force inclusion of <sys/types.h>
```

```
?X:INC: i_systypes
```

```
?MAKE:d_times clocktype:
```

```
  Csym Myread Typedef i_systimes
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_times:
```

```
?S: This variable conditionally defines the HAS_TIMES symbol, which indicates
```

```
?S: that the times() routine exists. The times() routine is normally
```

```
?S: provided on UNIX systems. You may have to include <sys/times.h>.
```

```
?S:.
```

```
?S:clocktype:
```

```
?S: This variable holds the type returned by times(). It can be long,
```

```
?S: or clock_t on BSD sites (in which case <sys/types.h> should be
```

```

?S: included).
?S:.
?C:HAS_TIMES (TIMES):
?C: This symbol, if defined, indicates that the times() routine exists.
?C: Note that this became obsolete on some systems (SUNOS), which now
?C: use getrusage(). It may be necessary to include <sys/times.h>.
?C:.
?C:Clock_t (CLOCKTYPE):
?C: This symbol holds the type returned by times(). It can be long,
?C: or clock_t on BSD sites (in which case <sys/types.h> should be
?C: included).
?C:.
?H:#$d_times HAS_TIMES /**/
?H:#define Clock_t $clocktype /* Clock time */
?H:.
?T:val inc
: see if times exists
echo "
"
if set times val -f d_times; eval $csym; $val; then
echo 'times() found.' >&4
d_times="$define"
inc="
case "$i_systimes" in
"$define") inc='sys/times.h';
esac
rp="What is the type returned by times() on this system?"
set clock_t clocktype long stdio.h sys/types.h $inc
eval $typedef_ask
else
echo 'times() NOT found, hope that will do.' >&4
d_times="$undef"
?X: The following is needed for typedef (won't like an empty variable)
clocktype='int'
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/d_times.U

```

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?RCS:

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?RCS:

```

?MAKE:d_cmsg_hdr_s: Hasstruct i_systypes d_socket i_sysuio Setvar
?MAKE: -pick add $@ %<
?S:d_cmsg_hdr_s:
?S: This variable conditionally defines the HAS_STRUCT_CMSGHDR symbol,
?S: which indicates that the struct cmsghdr is supported.
?S:.
?C:HAS_STRUCT_CMSGHDR:
?C: This symbol, if defined, indicates that the struct cmsghdr
?C: is supported.
?C:.
?H:#$d_cmsg_hdr_s HAS_STRUCT_CMSGHDR /**/
?H:.
?LINT:set d_cmsg_hdr_s
: Check for cmsghdr support
echo " "
echo "Checking to see if your system supports struct cmsghdr..." >&4
set d_cmsg_hdr_s cmsghdr $i_systypes sys/types.h $d_socket sys/socket.h $i_sysuio sys/uio.h
eval $hasstruct
case "$d_cmsg_hdr_s" in
"$define") echo "Yes, it does." ;;
*) echo
"No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1-rc1/U/perl/d_cmsg_hdr_s.U

```

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?RCS:

?MAKE:d\_nearbyint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nearbyint:

?S: This variable conditionally defines HAS\_NEARBYINT if nearbyint()

?S: is available to return the integral value closest to (according to

?S: the current rounding mode) to x.

?S:.

?C:HAS\_NEARBYINT:

?C: This symbol, if defined, indicates that the nearbyint routine is

?C: available to return the integral value closest to (according to

?C: the current rounding mode) to x.

?C:.

?H:#\$d\_nearbyint HAS\_NEARBYINT /\*\*/

?H:.

?LINT:set d\_nearbyint

: see if nearbyint exists

```
set nearbyint d_nearbyint
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_nearbyint.U
```

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```
?RCS: $Id: i_locale.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_locale.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:48:23 ram
?RCS: patch61: created
?RCS:
?MAKE:i_locale: Inhdr
?MAKE: -pick add $@ %<
?S:i_locale:
?S: This variable conditionally defines the I_LOCALE symbol,
?S: and indicates whether a C program should include <locale.h>.
?S:
?C:I_LOCALE:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <locale.h>.
?C:
?H:#$i_locale I_LOCALE /**/
?H:
?LINT:set
i_locale
: see if locale.h is available
set locale.h i_locale
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_locale.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_db.U,v 3.0.1.3 1995/07/25 14:10:22 ram Exp $
?RCS:
```

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_db.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 14:10:22 ram

?RCS: patch56: conditionally use const in test programs (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1995/05/12 12:14:42 ram

?RCS: patch54: extended for more intimate DB probing (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:21:50 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:i\_db db\_hashtype db\_prefixtype \  
db\_version\_major  
db\_version\_minor db\_version\_patch : \  
Inhdr +cc +ccflags rm\_try contains cat \  
Compile libs sed run i\_stdlib

?MAKE: -pick add \$@ %<

?S:i\_db:

?S: This variable conditionally defines the I\_DB symbol, and indicates  
?S: whether a C program may include Berkeley's DB include file <db.h>.

?S:.

?S:db\_hashtype:

?S: This variable contains the type of the hash structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is u\_int32\_t.

?S:.

?S:db\_prefixtype:

?S: This variable contains the type of the prefix structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is size\_t.

?S:.

?S:db\_version\_major:

?S: This variable contains the major version number of  
?S: Berkeley DB found in the <db.h> header file.

?S:.

?S:db\_version\_minor:

?S: This variable contains the minor version number of  
?S: Berkeley DB found in the <db.h> header file.  
?S: For DB version 1 this is always 0.

?S:  
?S:db\_version\_patch:  
?S: This  
variable contains the patch version number of  
?S: Berkeley DB found in the <db.h> header file.  
?S: For DB version 1 this is always 0.  
?S:.  
?C:I\_DB:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include Berkeley's DB include file <db.h>.  
?C:.  
?C:DB\_Prefix\_t:  
?C: This symbol contains the type of the prefix structure element  
?C: in the <db.h> header file. In older versions of DB, it was  
?C: int, while in newer ones it is u\_int32\_t.  
?C:.  
?C:DB\_Hash\_t:  
?C: This symbol contains the type of the prefix structure element  
?C: in the <db.h> header file. In older versions of DB, it was  
?C: int, while in newer ones it is size\_t.  
?C:.  
?C:DB\_VERSION\_MAJOR\_CFG:  
?C: This symbol, if defined, defines the major version number of  
?C: Berkeley DB found in the <db.h> header when Perl was configured.  
?C:.  
?C:DB\_VERSION\_MINOR\_CFG:  
?C: This symbol, if defined, defines the minor version number of  
?C: Berkeley DB found in the <db.h> header when Perl was configured.  
?C: For  
DB version 1 this is always 0.  
?C:.  
?C:DB\_VERSION\_PATCH\_CFG:  
?C: This symbol, if defined, defines the patch version number of  
?C: Berkeley DB found in the <db.h> header when Perl was configured.  
?C: For DB version 1 this is always 0.  
?C:.  
?H:#\$i\_db I\_DB /\*\*/  
?H:#define DB\_Hash\_t \$db\_hashtype /\*\*/  
?H:#define DB\_Prefix\_t \$db\_prefixtype /\*\*/  
?H:#define DB\_VERSION\_MAJOR\_CFG \$db\_version\_major /\*\*/  
?H:#define DB\_VERSION\_MINOR\_CFG \$db\_version\_minor /\*\*/  
?H:#define DB\_VERSION\_PATCH\_CFG \$db\_version\_patch /\*\*/  
?H:.  
?F:!try  
?LINT:change libs  
: see if this is a db.h system  
set db.h i\_db  
eval \$inhdr



```

case "$i_db" in
$define)
: Check db version.
echo " "
echo "Checking Berkeley DB version ..." >&4
$cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <db.h>
int main(int argc, char *argv[])
{
#ifdef DB_VERSION_MAJOR /* DB version >= 2 */
int Major, Minor, Patch ;
unsigned long Version ;
(void)db_version(&Major,
&Minor, &Patch) ;
if (argc == 2) {
printf("%d %d %d %d %d %d\n",
DB_VERSION_MAJOR, DB_VERSION_MINOR, DB_VERSION_PATCH,
Major, Minor, Patch);
exit(0);
}
printf("You have Berkeley DB Version 2 or greater.\n");

printf("db.h is from Berkeley DB Version %d.%d.%d\n",
DB_VERSION_MAJOR, DB_VERSION_MINOR, DB_VERSION_PATCH);
printf("libdb is from Berkeley DB Version %d.%d.%d\n",
Major, Minor, Patch) ;

/* check that db.h & libdb are compatible */
if (DB_VERSION_MAJOR != Major || DB_VERSION_MINOR != Minor || DB_VERSION_PATCH != Patch) {
printf("db.h and libdb are incompatible.\n") ;
exit(3);
}

printf("db.h and libdb are compatible.\n") ;

Version = DB_VERSION_MAJOR * 1000000 + DB_VERSION_MINOR * 1000
+ DB_VERSION_PATCH ;

/* needs to be >= 2.3.4 */
if (Version < 2003004) {
/* if (DB_VERSION_MAJOR == 2 && DB_VERSION_MINOR == 0 && DB_VERSION_PATCH < 5) { */

```

```

printf("Perl needs
Berkeley DB 2.3.4 or greater.\n") ;
    exit(2);
}

exit(0);
#else
#if defined(_DB_H_) && defined(BTREEMAGIC) && defined(HASHMAGIC)
    if (argc == 2) {
        printf("1 0 0\n");
        exit(0);
    }
    printf("You have Berkeley DB Version 1.\n");
    exit(0); /* DB version < 2: the coast is clear. */
#else
    exit(1); /* <db.h> not Berkeley DB? */
#endif
#endif
}
EOCP
set try
if eval $compile_ok && $run ./try; then
    echo 'Looks OK.' >&4
    set ` $run ./try 1 `
    db_version_major=$1
    db_version_minor=$2
    db_version_patch=$3
else
    echo "I can't use Berkeley DB with your <db.h>. I'll disable Berkeley DB." >&4
    i_db=$undef
    case " $libs " in
    *"-ldb" *)
        : Remove db from list of libraries to use
        echo "Removing unusable -ldb from library list" >&4
        set `echo X $libs | $sed -e 's/-ldb / /' -e 's/-ldb$/'^
        shift
        libs="$*"
        echo "libs = $libs" >&4
        ;;
    esac
fi
$rm_try
;;
esac

@if DB_Hash_t
case "$i_db" in
define)

```

```

: Check the return type needed
for hash
echo " "
echo "Checking return type needed for hash for Berkeley DB ..." >&4
$cat >try.c <<EOCP
#include <sys/types.h>
#include <db.h>

#ifdef DB_VERSION_MAJOR
u_int32_t hash_cb (const void* ptr, size_t size)
{
return 0;
}
HASHINFO info;
int main()
{
info.hash = hash_cb;
}
#endif
EOCP
if $cc $cflags -c try.c >try.out 2>&1 ; then
if $contains warning try.out >>/dev/null 2>&1 ; then
db_hashtype='int'
else
db_hashtype='u_int32_t'
fi
else
: XXX Maybe we should just give up here.
db_hashtype=u_int32_t
$cat try.out >&4
echo "Help: I can't seem to compile the db test program." >&4
echo "Something's wrong, but I'll assume you use $db_hashtype." >&4
fi
$rm_try
echo "Your version of Berkeley DB uses $db_hashtype for hash."
;;
*) db_hashtype=u_int32_t
;;
esac
@end
@if DB_Prefix_t
case "$i_db" in
define)
: Check the return type needed for prefix
echo " "
echo "Checking return type needed for prefix for Berkeley DB ..." >&4
cat >try.c <<EOCP
#include

```

```

<sys/types.h>
#include <db.h>

#ifdef DB_VERSION_MAJOR
size_t prefix_cb (const DBT *key1, const DBT *key2)
{
    return 0;
}
BTREEINFO info;
int main()
{
    info.prefix = prefix_cb;
}
#endif
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
if $contains warning try.out >>/dev/null 2>&1 ; then
    db_prefixtype='int'
else
    db_prefixtype='size_t'
fi
else
    db_prefixtype='size_t'
: XXX Maybe we should just give up here.
$cat try.out >&4
echo "Help: I can't seem to compile the db test program." >&4
echo "Something's wrong, but I'll assume you use $db_prefixtype." >&4
fi
$rm_try
echo "Your version of Berkeley DB uses $db_prefixtype for prefix."
;;
*) db_prefixtype='size_t'
;;
esac
@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_db.U

```

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?RCS: \$Id: d\_munmap.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: d\_munmap.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:19:22 ram

?RCS: patch15: created

?RCS:

?MAKE:d\_munmap: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_munmap:

?S: This variable conditionally defines HAS\_MUNMAP if munmap() is

?S: available to unmap a region mapped by mmap().

?S:.

?C:HAS\_MUNMAP:

?C: This symbol, if defined, indicates that the munmap system call is

?C: available to unmap a region, usually mapped by mmap().

?C:.

?H:#\$d\_munmap HAS\_MUNMAP /\*\*/

?H:.

?LINT:set

d\_munmap

: see if munmap exists

set munmap d\_munmap

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_munmap.U

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?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_mkstemp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkstemp:

?S: This variable conditionally defines the HAS\_MKSTEMPS symbol, which

?S: indicates to the C program that the mkstemp() routine is available

?S: to exclusively create and open a uniquely named (with a suffix)

?S: temporary file.

?S:.

?C:HAS\_MKSTEMPS :

?C: This symbol, if defined, indicates that the mkstemp routine is

?C: available to exclusively create and open a uniquely named

?C: (with a suffix) temporary file.

?C:.

?H:#\$d\_mkstemp HAS\_MKSTEMPS /\*\*/

?H:.

?LINT:set d\_mkstemp

: see if mkstemp exists

set mkstemp d\_mkstemp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_mkstemp.U

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strlcpy: Inlibc Hasproto d\_gnulibc

?MAKE: -pick add \$@ %<

?S:d\_strlcpy:

?S: This variable conditionally defines the HAS\_STRLCPY symbol, which

?S: indicates to the C program that the strlcpy () routine is available.

?S:.

?C:HAS\_STRLCPY:

?C: This symbol, if defined, indicates that the strlcpy () routine is

?C: available to do string copying.

?C:.

?H:#\$d\_strlcpy HAS\_STRLCPY /\*\*/

?H:.

?T:d\_strlcpy\_proto xx1 xx2 xx3 xx4

?LINT:set d\_strlcpy

: see if strlcpy exists

: We need both a prototype in string.h and the symbol in libc.

echo " "

d\_strlcpy\_proto="

xx1="#\$d\_gnulibc HAS\_GNULIBC"

xx2='#if defined(HAS\_GNULIBC) && !defined(\_GNU\_SOURCE)'

xx3='# define \_GNU\_SOURCE'

xx4='#endif'

set d\_strlcpy\_proto strlcpy

literal "\$xx1" literal "\$xx2" literal "\$xx3" literal "\$xx4" define string.h

eval \$hasproto

case "\$d\_strlcpy\_proto" in

define) # see if strlcpy exists

```
set strlcpy d_strlcpy
eval $inlibc
;;
*) val=$undef
set d_strlcpy
eval $setvar
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_strlcpy.U
```

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strerror.U,v \$

?RCS: Revision 3.0.1.3 1994/05/13 15:20:27 ram

?RCS: patch27: now uses new macro support for cleaner Strerror def

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 14:58:26 ram

?RCS: patch23: renamed strerror into Strerror to protect name space (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:56 ram

?RCS: patch16: protected code looking for sys\_errnolist[] with @if

?RCS: patch16: added default value for d\_syserrlst

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:35 ram

?RCS: Baseline

for dist 3.0 netwide release.

?RCS:

?MAKE:d\_strerror d\_syserrlst d\_syserrlst d\_strerror: contains Csym Findhdr

?MAKE: -pick add \$@ %<

?S:d\_strerror:

?S: This variable conditionally defines HAS\_STRERROR if strerror() is

?S: available to translate error numbers to strings.

?S:.

?S:d\_syserrlst:

?S: This variable conditionally defines HAS\_SYS\_ERRLIST if sys\_errlist[] is

?S: available to translate error numbers to strings.

?S:  
?S:d\_syserrlst:  
?S: This variable conditionally defines HAS\_SYS\_ERRNOLIST if sys\_errnolist[]  
?S: is available to translate error numbers to the symbolic name.  
?S:  
?S:d\_strerror:  
?S: This variable holds what Strerror is defined as to translate an error  
?S: code condition into an error message string. It could be 'strerror'  
?S: or a more complex macro emulating strerror with sys\_errlist[], or the  
?S: "unknown" string when both strerror and sys\_errlist are missing.  
?S:  
?C:HAS\_STRERROR (STRERROR):  
?C: This symbol, if defined, indicates that the strerror routine is  
?C: available  
to translate error numbers to strings. See the writeup  
?C: of Strerror() in this file before you try to define your own.  
?C:  
?C:HAS\_SYS\_ERRLIST (SYSERRLIST):  
?C: This symbol, if defined, indicates that the sys\_errlist array is  
?C: available to translate error numbers to strings. The extern int  
?C: sys\_nerr gives the size of that table.  
?C:  
?C:HAS\_SYS\_ERRNOLIST (SYSERRNOLIST):  
?C: This symbol, if defined, indicates that the sys\_errnolist array is  
?C: available to translate an errno code into its symbolic name (e.g.  
?C: ENOENT). The extern int sys\_nerrno gives the size of that table.  
?C:  
?C:Strerror:  
?C: This preprocessor symbol is defined as a macro if strerror() is  
?C: not available to translate error numbers to strings but sys\_errlist[]  
?C: array is there.  
?C:  
?H:#\$d\_strerror HAS\_STRERROR /\*\*/  
?H:#\$d\_syserrlst HAS\_SYS\_ERRLIST /\*\*/  
?H:#\$d\_syserrlst HAS\_SYS\_ERRNOLIST /\*\*/  
?H:#define Strerror(e) \$d\_strerror  
?H:  
?D:d\_syserrlst="  
?T:xxx val  
: see if strerror and/or sys\_errlist[]  
exist  
echo " "  
if set strerror val -f d\_strerror; eval \$csym; \$val; then  
echo 'strerror() found.' >&4  
d\_strerror="\$define"  
d\_strerrorm='strerror(e)'  
if set sys\_errlist val -a d\_syserrlst; eval \$csym; \$val; then  
echo "(You also have sys\_errlist[], so we could roll our own strerror.)"



```

d_syserrlst="$define"
else
echo "(Since you don't have sys_errlist[], sterror() is welcome.)"
d_syserrlst="$undef"
fi
elif xxx=`./findhdr string.h`; test "$xxx" || xxx=`./findhdr strings.h`; \
$contains '#[ ]*define.*sterror' "$xxx" >/dev/null 2>&1; then
echo 'sterror() found in string header.' >&4
d_sterror="$define"
d_strerrm='sterror(e)'
if set sys_errlist val -a d_syserrlst; eval $csym; $val; then
echo "(Most probably, sterror() uses sys_errlist[] for descriptions.)"
d_syserrlst="$define"
else
echo "(You don't appear to have any sys_errlist[], how can this be?)"
d_syserrlst="$undef"
fi
elif set sys_errlist val -a d_syserrlst; eval $csym; $val; then
echo "sterror()
not found, but you have sys_errlist[] so we'll use that." >&4
d_sterror="$undef"
d_syserrlst="$define"
d_strerrm='((e)<0||(e)>=sys_nerr?"unknown":sys_errlist[e])'
else
echo 'sterror() and sys_errlist[] NOT found.' >&4
d_sterror="$undef"
d_syserrlst="$undef"
d_strerrm=""unknown""
fi
@if d_syserrlst || HAS_SYS_ERRNOLIST
if set sys_errnolist val -a d_syserrlst; eval $csym; $val; then
echo "(Symbolic error codes can be fetched via the sys_errnolist[] array.)"
d_syserrlst="$define"
else
echo "(However, I can't extract the symbolic error code out of errno.)"
d_syserrlst="$undef"
fi
@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sterror.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_rint: Inlibc

?MAKE: -pick add \$@ %<  
?S:d\_rint:  
?S: This variable conditionally defines the HAS\_RINT symbol, which  
?S: indicates to the C program that the rint() routine is available.  
?S:.  
?C:HAS\_RINT:  
?C: This symbol, if defined, indicates that the rint routine is  
?C: available to return the nearest integral value to x as double  
?C: using the current rounding mode.  
?C:.  
?H:#\$d\_rint HAS\_RINT /\*\*/  
?H:.  
?LINT:set d\_rint  
: see if rint exists  
set rint d\_rint  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_rint.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethname.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_gethname.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:13:00 ram  
?RCS: patch36: call ./xenix explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:11 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_gethname d\_uname d\_phostname ahostname: phostname cat \  
myhostname package d\_portable Loc echo n c +i\_whoami +usrinc \  
Myread Guess Oldconfig Csym  
?MAKE: -pick add \$@ %<  
?S:d\_gethname:  
?S: This variable conditionally  
defines the HAS\_GETHOSTNAME symbol, which  
?S: indicates to the C program that the gethostname() routine may be  
?S: used to derive the host name.

?S:.

?S:d\_uname:

?S: This variable conditionally defines the HAS\_UNAME symbol, which

?S: indicates to the C program that the uname() routine may be

?S: used to derive the host name.

?S:.

?S:d\_phostname:

?S: This variable conditionally defines the HAS\_PHOSTNAME symbol, which

?S: contains the shell command which, when fed to popen(), may be

?S: used to derive the host name.

?S:.

?S:aphostname:

?S: This variable contains the command which can be used to compute the

?S: host name. The command is fully qualified by its absolute path, to make

?S: it safe when used by a process with super-user privileges.

?S:.

?C:HAS\_GETHOSTNAME (GETHOSTNAME):

?C: This symbol, if defined, indicates that the C program may use the

?C: gethostname() routine to derive the host name. See also HAS\_UNAME

?C: and PHOSTNAME.

?C:.

?C:HAS\_UNAME (UNAME):

?C: This symbol,

if defined, indicates that the C program may use the

?C: uname() routine to derive the host name. See also HAS\_GETHOSTNAME

?C: and PHOSTNAME.

?C:.

?C:PHOSTNAME:

?C: This symbol, if defined, indicates the command to feed to the

?C: popen() routine to derive the host name. See also HAS\_GETHOSTNAME

?C: and HAS\_UNAME. Note that the command uses a fully qualified path,

?C: so that it is safe even if used by a process with super-user

?C: privileges.

?C:.

?C:HAS\_PHOSTNAME:

?C: This symbol, if defined, indicates that the C program may use the

?C: contents of PHOSTNAME as a command to feed to the popen() routine

?C: to derive the host name.

?C:.

?H:%<:#\$d\_gethname HAS\_GETHOSTNAME /\*\*/  
?H:%<:#\$d\_uname HAS\_UNAME /\*\*/  
?H:%<:#\$d\_phostname HAS\_PHOSTNAME /\*\*/  
?H:%<:#ifdef HAS\_PHOSTNAME  
?H:%<:#define PHOSTNAME "\$aphostname" /\* How to get the host name \*/  
?H:%<:#endif  
?H:.

?T:file val call

?LINT:change i\_whoami

```

: see how we will look up host name
echo " "
call="
@if HAS_GETHOSTNAME
if
set gethostname val -f d_gethname; eval $csym; $val; then
echo 'gethostname() found.' >&4
d_gethname="$define"
call=gethostname
fi
@end
@if HAS_UNAME
if set uname val -f d_uname; eval $csym; $val; then
if ./xenix; then
$cat <<'EOM'
uname() was found, but you're running xenix, and older versions of xenix
have a broken uname(). If you don't really know whether your xenix is old
enough to have a broken system call, use the default answer.

```

```

EOM
dflt=y
case "$d_uname" in
"$define") dflt=n;;
esac
rp='Is your uname() broken?'
./myread
case "$ans" in
n*) d_uname="$define"; call=uname;;
esac
else
echo 'uname() found.' >&4
d_uname="$define"
case "$call" in
") call=uname ;;
esac
fi
fi
@end
case "$d_gethname" in
") d_gethname="$undef";;
esac
case "$d_uname" in
") d_uname="$undef";;
esac
@if PHOSTNAME || MYHOSTNAME
case "$d_uname$d_gethname" in
*define*)
dflt=n

```

```
cat <<EOM
```

Every now and then someone has a \$call() that lies about the hostname but can't be fixed

for political or economic reasons. If you wish, I can

```
@if MYHOSTNAME && PHOSTNAME
```

pretend \$call() isn't there and maybe compile in the hostname or compute it from the '\$phostname' command at run-time.

```
@elsif MYHOSTNAME
```

pretend \$call() isn't there and maybe compile in the hostname.

```
@elsif PHOSTNAME
```

pretend \$call() isn't there and maybe compute hostname at run-time thanks to the '\$phostname' command.

```
@elsif WHOAMI
```

get the hostname from whomai.h (provided you have one).

```
@else
```

simply ignore your host name and use something like "noname" instead.

```
@end
```

```
EOM
```

```
rp="Shall I ignore $call() from now on?"
```

```
. ./myread
```

```
case "$ans" in
```

```
y*) d_uname="$undef" d_gethname="$undef"; $echo $n "Okay...$c";;
```

```
esac;;
```

```
esac
```

```
@end
```

```
@if PHOSTNAME || aphostname
```

?X: Compute the full path name for the command

```
case "$phostname" in
```

```
") aphostname="";;
```

```
*) case "$aphostname" in
```

```
/*) ;;
```

```
*) set X $phostname
```

```
shift
```

```
file=$1
```

```
shift
```

```
file=`./loc $file $file $pth`
```

```
aphostname=`echo $file $*`
```

```
::
```

```
esac
```

```
::
```

```
esac
```

```
@end
```

```
@if
```

```
PHOSTNAME && MYHOSTNAME
```

```
case "$d_uname$d_gethname" in
```

```
*define*) ;;
```

```

*)
case "$phostname" in
") ;;
*)
$cat <<EOT

```

There is no gethostname() or uname() on this system. You have two possibilities at this point:

- 1) You can have your host name (\$myhostname) compiled into \$package, which lets \$package start up faster, but makes your binaries non-portable, or
- 2) you can have \$package use a

```
popen("$aphostname","r")
```

which will start slower but be more portable.

```
@ if WHOAMI
```

Option 1 will give you the option of using whoami.h if you have one.

```
@ end
```

If you want option 2 but with a different command, you can edit config.sh at the end of this shell script.

```
EOT
```

```

case "$d_phostname" in
"$define") dflt=n;;
"$undef") dflt=y;;
")
case "$d_portable" in
"$define") dflt=n ;;
*) dflt=y ;;
esac;;
esac
rp="Do you want your host name compiled in?"
./myread
case "$ans" in
n*) d_phostname="$define" ;;
*) aphostname=""; d_phostname="$undef";;
esac;;
esac
case
"$aphostname" in
")
@ if WHOAMI
case "$i_whoami" in
"$define")
dflt=y
$cat <<EOM

```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```
rp="Use whoami.h to get hostname?"  
. ./myread  
case "$ans" in  
n*) i_whoami="$Sundef";;  
esac  
;;  
"$Sundef")  
$cat <<EOM
```

No hostname function and no whoami.h -- hardwiring "\$myhostname".

EOM

```
;;  
esac;;  
@ else  
echo 'No hostname function -- hardwiring "$myhostname"! '>&4;;  
@ end  
esac;;  
esac  
@elsif PHOSTNAME  
case "$d_uname$d_gethname" in  
*define*) ;;  
*)  
case "$phostname" in  
")  
@ if WHOAMI  
case "$i_whoami" in  
"$define")  
$cat <<EOM
```

No hostname function--we'll use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

EOM

```
;;  
*) echo "There will be no way for $package to get your hostname." >&4;;  
esac;;  
@ else  
echo "There will be no way  
for $package to get your hostname." >&4;;  
@ end  
*)
```

```

echo "I'll use 'popen(\"\"$aphostname\", \"r\")\" to get your hostname." >&4
;;
esac;;
esac
@elsif MYHOSTNAME
case "$d_underscore$d_gethostname" in
*define*) ;;
*)
@ if WHOAMI
case "$i_whoami" in
"$define")
dflt=y
$cat <<EOM

```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```

rp="Use whoami.h to get hostname?"
. ./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
echo 'No whoami.h--hardwiring "$myhostname".' >&4;;
esac;;
@ else
echo 'Hardwiring "$myhostname".' >&4;;
@ end
esac
@end
case "$d_phostname" in
") d_phostname="$undef";;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_gethostname.U
```

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?RCS:

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?RCS:

?MAKE:d\_frexp! Inlibc

?MAKE: -pick add \$@ %<

?S:d\_frexp!

?S: This variable conditionally defines the HAS\_FREXP! symbol, which

?S: indicates to the C program that the frexp() routine is available.

?S:.

?C:HAS\_FREXP!:

?C: This symbol, if defined, indicates that the frexp routine is

?C: available to break a long double floating-point number into

?C: a normalized fraction and an integral power of 2.

?C:.

?H:#\$d\_frexp! HAS\_FREXP! /\*\*/

?H:.

?LINT:set d\_frexp!

: see if frexp! exists

set frexp! d\_frexp!

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_frexp!.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: otherlibdirs.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: otherlibdirs.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?RCS: Revision 1.1 1999/07/08 18:20:26 doughera

?RCS: Initial revision

?RCS:

?RCS:

?MAKE:otherlibdirs d\_perl\_otherlibdirs: Myread cat sitelib sitearch \  
vendorarch vendorlib Setvar

?MAKE: -pick add \$@ %<

?Y:TOP

?S:otherlibdirs:

```

?S: This variable contains a colon-separated set of paths for the perl
?S: binary to search for additional library files
or modules.
?S: These directories will be tacked to the end of @INC.
?S: Perl will automatically search below each path for version-
?S: and architecture-specific directories. See inc_version_list
?S: for more details.
?S: A value of '' means 'none' and is used to preserve this value
?S: for the next run through Configure.
?S:.
?S:d_perl_otherlibdirs:
?S: This variable conditionally defines PERL_OTHERLIBDIRS, which
?S: contains a colon-separated set of paths for the perl binary to
?S: include in @INC. See also otherlibdirs.
?S:.
?C:PERL_OTHERLIBDIRS:
?C: This variable contains a colon-separated set of paths for the perl
?C: binary to search for additional library files or modules.
?C: These directories will be tacked to the end of @INC.
?C: Perl will automatically search below each path for version-
?C: and architecture-specific directories. See PERL_INC_VERSION_LIST
?C: for more details.
?C:.
?H:#$d_perl_otherlibdirs PERL_OTHERLIBDIRS "$otherlibdirs" /**/
?H:.
?LINT: set d_perl_otherlibdirs
:
Final catch-all directories to search
$cat <<EOM

```

Lastly, you can have perl look in other directories for extensions and modules in addition to those already specified.

These directories will be searched after

```

$sitearch
$sitelib

```

EOM

```

test X"$vendorlib" != "X" && echo ' ' $vendorlib
test X"$vendorarch" != "X" && echo ' ' $vendorarch
echo ' '
case "$otherlibdirs" in
'| ' ) dflt='none' ;;
*) dflt="$otherlibdirs" ;;
esac
$cat <<EOM

```

Enter a colon-separated set of extra paths to include in perl's @INC search path, or enter 'none' for no extra paths.

EOM

rp='Colon-separated list of additional directories for perl to search?'

```
./myread
case "$ans" in
'|"|none) otherlibdirs=' ' ' ;;
*) otherlibdirs="$ans" ;;
esac
case "$otherlibdirs" in
'|') val=$undef ;;
*) val=$define ;;
esac
set d_perl_otherlibdirs
eval $setvar
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/otherlibdirs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwent.U,v \$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_getpwent.U,v \$

?RCS:

?MAKE:d\_getpwent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getpwent:

?S: This variable conditionally defines the HAS\_GETPWENT symbol, which

?S: indicates to the C program that the getpwent() routine is available

?S: for sequential access of the passwd database.

?S:.

?C:HAS\_GETPWENT:

?C: This symbol, if defined, indicates that the getpwent routine is

?C: available for sequential access of the passwd database.

?C: If this is not available, the older getpw() function may be available.

?C:.

?H:#\$d\_getpwent HAS\_GETPWENT /\*\*/

?H:.

?LINT:set d\_getpwent

: see if getpwent exists

set getpwent d\_getpwent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getpwent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: usenm.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:26:40 ram

?RCS: patch61: don't use nm with the GNU C library

?RCS: patch61: added support for Linux shared libs

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:usenm runnm nm\_opt nm\_so\_opt: cat test Myread Oldconfig grep \  
d\_gnulibc nm egrep rsrc osname Guess

?MAKE: -pick add \$@ %<

?S:usenm:

?S: This variable contains 'true' or 'false' depending whether the

?S: nm extraction is wanted

or not.

?S:.

?S:runnm:

?S: This variable contains 'true' or 'false' depending whether the

?S: nm extraction should be performed or not, according to the value

?S: of usenm and the flags on the Configure command line.

?S:.

?S:nm\_opt:

?S: This variable holds the options that may be necessary for nm.

?S:.

?S:nm\_so\_opt:

?S: This variable holds the options that may be necessary for nm

?S: to work on a shared library but that can not be used on an

?S: archive library. Currently, this is only used by Linux, where

?S: nm --dynamic is \*required\* to get symbols from an ELF library which

?S: has been stripped, but nm --dynamic is \*fatal\* on an archive library.

?S: Maybe Linux should just always set usenm=false.

?S:.

: see if nm is to be used to determine whether a symbol is defined or not

?X: If there is enough inquiries, it might be worth to wait for the nm

?X: extraction. Otherwise, the C compilations might be a better deal.

?X:

?X: Don't bother if we're using GNU libc -- skimo

```
case "$usenm"
in
")
dflt="
case "$d_gnulibc" in
"$define")
echo " "
echo "$nm probably won't work on the GNU C Library." >&4
dflt=n
;;
esac
case "$dflt" in
")
if $test "$osname" = aix -a ! -f /lib/syscalls.exp; then
echo " "
echo "Whoops! This is an AIX system without /lib/syscalls.exp!" >&4
echo "'nm' won't be sufficient on this system." >&4
dflt=n
fi
;;
esac
case "$dflt" in
")
if ./gnu; then
echo " "
echo "Hmm... A GNU system without a GNU C Library? Weird..." >&4
dflt=n
else
dflt=`$grep 'inlibc|csym' $src/Configure | wc -l 2>/dev/null`
if $test $dflt -gt 20; then
dflt=y
else
dflt=n
fi
fi
;;
esac
*)
case "$usenm" in
true|$define) dflt=y;;
*) dflt=n;;
esac
;;
esac
```

\$cat <<EOM

I can use \$nm to extract the symbols from your C libraries. This is a time consuming task which may generate huge output on the disk (up to 3 megabytes) but that should make the symbols extraction faster. The alternative is to skip the 'nm' extraction part and to compile a small test program instead to determine whether each symbol is present. If you have a fast C compiler and/or if your 'nm' output cannot be parsed, this may be the best solution.

EOM

```
rp='Shall I use nm to extract C symbols from the libraries?'
```

```
./myread
```

```
case "$ans" in
```

```
[Nn]*) usenm=false;;
```

```
*) usenm=true;;
```

```
esac
```

?X: Name extraction is to be run if 'nm' usage is wanted and if no -r flag

?X: was provided to configure (in which case we simply re-use the previous

?X: values).

```
runnm=$usenm
```

```
case "$reusel" in
```

```
true) runnm=false;;
```

```
esac
```

: nm options which may be necessary

```
case "$nm_opt" in
```

```
") if $test -f /mach_boot; then
```

```
nm_opt=" # Mach
```

```
elif $test -d /usr/ccs/lib; then
```

```
nm_opt='-p' # Solaris (and SunOS?)
```

```
elif $test -f /dgux; then
```

```
nm_opt='-p' # DG-UX
```

```
elif $test -f /lib64/rld; then
```

```
nm_opt='-p' # 64-bit Irix
```

```
else
```

```
nm_opt="
```

```
fi;;
```

```
esac
```

?X: nm options which may be necessary for shared libraries but illegal

?X: for archive libraries. Thank you,

Linux.

```
case "$nm_so_opt" in
```

```
") case "$osname" in
```

```
*linux*)
```

```
if $nm --help | $grep 'dynamic' > /dev/null 2>&1; then
  nm_so_opt='--dynamic'
fi
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/usenm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_thread: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_thread:

?S: This variable conditionally defines the I\_PTHREAD symbol,

?S: and indicates whether a C program should include <pthread.h>.

?S:.

?C:I\_PTHREAD:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <pthread.h>.

?C:.

?H:#\$i\_thread I\_PTHREAD /\*\*/

?H:.

?LINT:set i\_thread

: see if POSIX threads are available

set pthread.h i\_thread

eval \$inhdr

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/i_thread.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mailer.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mailer.U,v $
?RCS: Revision 3.0.1.3 1995/01/11 15:32:11 ram
?RCS: patch45: can now use Loc variables since path stripping is deferred
?RCS:
?RCS: Revision 3.0.1.2 1994/05/06 15:10:04 ram
?RCS: patch23: ensure full path value is used for rmail also
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:14:18 ram
?RCS: patch16: now use _sendmail vars and friends for portability issues
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:10 ram
?RCS: Baseline for dist
3.0 netwide release.
?RCS:
?MAKE:mailer: test cat rmail mail smail sendmail Getfile Oldconfig
?MAKE: -pick add $@ %<
?S:mailer:
?S: This variable contains the full pathname of a reasonable mailer.
?S: By reasonable, we mean some program which can understand internet
?S: addresses or at least forward them to some internet router. This
?S: mailer should be invoked as "mailer [options] recipients <mail>".
?S:
: determine the name of a reasonable mailer
case "$mailer" in
")
if $test -f "$sendmail"; then
dflt="$sendmail"
elif $test -f "$smail"; then
dflt="$smail"
elif $test -f "$rmail"; then
dflt="$rmail"
elif $test -f /bin/mail; then
dflt=/bin/mail
else
dflt=$mail
fi
;;
*) dflt="$mailer";;
esac
$cat <<EOM

```



I need the full pathname of the program used to deliver mail on your system. A typical answer would be /usr/lib/sendmail or /bin/rmail, but you may choose any other program, as long as it can be fed from standard input and will honour any user-supplied headers.

EOM

fn=f

rp='Mail

transport agent to be used?'

./getfile

mailer="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/mailler.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setsent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_setsent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setsent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setsent:

?S: This variable conditionally defines HAS\_SETSERVENT if setservernt() is

?S: available.

?S:.

?C:HAS\_SETSERVENT:

?C: This symbol, if defined, indicates that the setservernt() routine is

?C: available.

?C:.

?H:#\$d\_setsent HAS\_SETSERVENT /\*\*/

?H:.

?LINT:set d\_setsent

: see if setservernt exists

set

setservernt d\_setsent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_setsent.U

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?RCS:

?RCS: \$Log: Guess.U,v \$

?RCS: Revision 3.0.1.5 1995/07/25 13:37:14 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.4 1994/10/29 15:53:55 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0.1.3 1993/12/15 08:14:35 ram

?RCS: patch15: variable d\_bsd was not always set properly

?RCS:

?RCS: Revision 3.0.1.2 1993/08/30 08:57:14 ram

?RCS: patch8: fixed comment which wrongly

attributed the usrinc symbol

?RCS: patch8: no more ugly messages when no /usr/include/ctype.h

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:37:37 ram

?RCS: patch7: added support for OSF/1 machines

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit hazards some guesses as to what the general nature of the system

?X: is. The information it collects here is used primarily to establish default

?X: answers to other questions.

?X:

?MAKE:Guess d\_eunice d\_xenix d\_bsd d\_linux d\_dos d\_os2: cat test echo n c \  
contains rm tr Loc eunicefix

?MAKE: -pick add \$@ %<

?S:d\_eunice:

?S: This variable conditionally defines the symbols EUNICE\_SYSTEM, which

?S: alerts the C program that it must deal with idiosyncracies of VMS.

?S:.

?S:d\_xenix:

?S: This variable conditionally defines the symbol XENIX\_SYSTEM, which alerts

?S: the C program that it runs under Xenix.

?S:.

?S:d\_dos:

?S: This symbol conditionally defines the symbol DOS\_SYSTEM

when running on

?S: DOS with DJGPP or Cygwin.

?S:.

?S:d\_os2:

?S: This symbol conditionally defines the symbol OS2\_SYSTEM when running on

?S: an OS/2 system.

?S:.

?S:d\_bsd:

?S: This symbol conditionally defines the symbol BSD\_SYSTEM when running on a

?S: BSD system.

?S:.

?S:d\_linux:

?S: This symbol conditionally defines the symbol LINUX\_SYSTEM when running

?S: on a Linux system.

?S:.

?C:EUNICE\_SYSTEM (EUNICE):

?C: This symbol, if defined, indicates that the program is being compiled

?C: under the EUNICE package under VMS. The program will need to handle

?C: things like files that don't go away the first time you unlink them,

?C: due to version numbering. It will also need to compensate for lack

?C: of a respectable link() command.

?C:.

?C:VMS\_SYSTEM (VMS):

?C: This symbol, if defined, indicates that the program is running under

?C: VMS. It is currently only set in conjunction with the EUNICE symbol.

?C:.

?C:XENIX\_SYSTEM (XENIX):

?C: This symbol, if defined, indicates that the program

is running under

?C: Xenix (at least 3.0 ?).

?C:.

?C:DOS\_SYSTEM:

?C: This symbol, if defined, indicates that the program is running under

?C: DOS with DJGPP.

?C:.

?C:OS2\_SYSTEM:

?C: This symbol, if defined, indicates that the program is running under

?C: an OS/2 system.

?C:.

?C:BSD\_SYSTEM:

```

?C: This symbol, if defined, indicates that the program is running under
?C: a BSD system.
?C:.
?C:LINUX_SYSTEM:
?C: This symbol, if defined, indicates that the program is running under
?C: a Linux system.
?C:.
?H:#$d_eunice EUNICE_SYSTEM /**/
?H:#$d_eunice VMS_SYSTEM /**/
?H:#$d_xenix XENIX_SYSTEM /**/
?H:#$d_dos DOS_SYSTEM /**/
?H:#$d_os2 OS2_SYSTEM /**/
?H:#$d_bsd BSD_SYSTEM /**/
?H:#$d_linux LINUX_SYSTEM /**/
?H:.
?F:./bsd ./usg ./v7 ./osf1 ./eunice ./xenix ./venix ./dos ./os2 ./gnu ./linux
?T:xxx DJGPP MACHTYPE
: make some quick guesses about what we are up against
echo " "
$echo $n "Hmm... $c"
echo exit 1 >bsd
echo exit 1 >usg
echo exit 1 >v7
echo exit 1 >osf1
echo exit 1 >eunice
echo
  exit 1 >xenix
echo exit 1 >venix
echo exit 1 >os2
echo exit 1 >gnu
echo exit 1 >linux
echo exit 1 >dos
d_bsd="$undef"
d_linux="$undef"
d_dos="$undef"
d_os2="$undef"
?X:
?X: Do not use 'usrinc', or we get a circular dependency. because
?X: usrinc is defined in usrinc.U, which relies on us...
?X:
$cat /usr/include/signal.h /usr/include/sys/signal.h >foo 2>/dev/null
if test -f /osf_boot || $contains 'OSF/1' /usr/include/ctype.h >/dev/null 2>&1
then
  echo "Looks kind of like an OSF/1 system, but we'll see..."
  echo exit 0 >osf1
elif test `echo abc | $tr a-z A-Z` = Abc ; then
  xxx=`./loc addbib blurfl $pth`
  if $test -f $xxx; then

```

```

echo "Looks kind of like a USG system with BSD features, but we'll see..."
echo exit 0 >bsd
echo exit 0 >usg
else
if $contains SIGTSTP foo >/dev/null 2>&1 ; then
    echo "Looks kind of like an extended USG system, but we'll see..."
else
    echo "Looks kind of like a USG system, but we'll see..."
fi
echo exit 0 >usg
fi
elif $contains SIGTSTP foo >/dev/null
2>&1 ; then
echo "Looks kind of like a BSD system, but we'll see..."
d_bsd="$define"
echo exit 0 >bsd
elif
$rm --version 2>/dev/null >foo;
$contains "Free Software Foundation" foo >/dev/null
then
xxx=`uname`
echo exit 0 >gnu
echo "Looks kind of like a GNU/$xxx system, but we'll see..."
if $test X$xxx = XLinux; then
    d_linux="$define"
    echo exit 0 >linux
fi
else
echo "Looks kind of like a Version 7 system, but we'll see..."
echo exit 0 >v7
fi
case "$eunicefix" in
*unixtovms*)
$cat <<'EOI'
There is, however, a strange, musty smell in the air that reminds me of
something...hmm...yes...I've got it...there's a VMS nearby, or I'm a Blit.
EOI
echo exit 0 >eunice
d_eunice="$define"
: it so happens the Eunice I know will not run shell scripts in Unix format
;;
*)
echo " "
echo "Congratulations. You aren't running Eunice."
d_eunice="$undef"
;;
esac
case "$p_" in

```

```

:) ;;
*)
$cat <<'EOI'
I have the feeling something is not exactly right, however...don't tell me...
EOI
if
test -n "$DJGPP"; then
  case "X${MACHTYPE:-nonetheless}" in
  cygwin) echo "hah!... you're running under Cygwin!";;
  *) echo "got it... you're running DOS with DJGPP!";;
  esac
  echo exit 0 >dos
  d_dos="$define"
else
  $cat <<'EOI'
lemme think...does HAL ring a bell?...no, of course, you're only running OS/2!
EOI
  echo exit 0 >os2
  d_os2="$define"
fi
;;
esac
if test -f /xenix; then
  echo "Actually, this looks more like a XENIX system..."
  echo exit 0 >xenix
  d_xenix="$define"
else
  echo " "
  echo "It's not Xenix..."
  d_xenix="$undef"
fi
chmod +x xenix
$eunicefix xenix
if test -f /venix; then
  echo "Actually, this looks more like a VENIX system..."
  echo exit 0 >venix
else
  echo " "
  if ./xenix; then
    : null
  else
    echo "Nor is it Venix..."
  fi
fi
chmod +x bsd usg v7 osf1 eunice xenix venix dos os2 gnu linux
$eunicefix bsd usg v7 osf1 eunice xenix venix dos os2 gnu linux
$rm -f foo

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Guess.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: bin.U,v \$

?RCS: Revision 3.0.1.4 1995/09/25 09:15:32 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:32:40 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:05:28 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 15:56:51 ram

?RCS: patch10: made prompting more explicit (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18

12:05:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:bin binexp installbin: Prefixit Getfile Oldconfig afs cat test

?MAKE: -pick add \$@ %<

?Y:TOP

?S:bin:

?S: This variable holds the name of the directory in which the user wants

?S: to put publicly executable images for the package in question. It

?S: is most often a local directory such as /usr/local/bin. Programs using

?S: this variable must be prepared to deal with ~name substitution.

?S:.

?S:binexp:

?S: This is the same as the bin variable, but is filename expanded at

?S: configuration time, for use in your makefiles.

?S:.

?S:installbin:

?S: This variable is the same as binexp unless AFS is running in which case

?S: the user is explicitly prompted for it. This variable should always

?S: be used in your makefiles for maximum portability.

?S:.

?C:BIN:

?C: This symbol holds the path of the bin directory where the package will

?C: be installed. Program must be prepared to deal with ~name substitution.

?C:.

?C:BIN\_EXP:

?C: This

symbol is the filename expanded version of the BIN symbol, for

?C: programs that do not want to deal with that at run-time.

?C:.

?H:#define BIN "\$bin" /\*\*/

?H:#define BIN\_EXP "\$binexp" /\*\*/

?H:.

?D:bin='/usr/local/bin'

: determine where public executables go

echo " "

set dflt bin bin

eval \$prefixit

fn=d~

rp='Pathname where the public executables will reside?'

./getfile

if \$test "X\$sansexp" != "X\$binexp"; then

installbin="

fi

bin="\$ans"

binexp="\$sansexp"

if \$afs; then

\$cat <<EOM

Since you are running AFS, I need to distinguish the directory in which executables reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

case "\$installbin" in

) dflt=`echo \$binexp | sed 's#^/afs/#/afs/.#`;;

\*) dflt="\$installbin";;

esac

fn=de~

rp='Where will public executables be installed?'

./getfile

installbin="\$ans"

else

installbin="\$binexp"

fi

Found in path(s):



```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/bin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: gidtype.U,v 3.0.1.3 1994/08/29 16:21:44 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: gidtype.U,v $
?RCS: Revision 3.0.1.3 1994/08/29 16:21:44 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS: patch32: removed useless usage of Setvar (for now)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:21:07 ram
?RCS: patch27: added lint hint
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:01:51 ram
?RCS: patch23: protected gidtype setting via setvar (ADO)
?RCS: patch23: made Gid_t comment more explicit (ADO)
?RCS:
?RCS: Revision
3.0 1993/08/18 12:08:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:gidtype: Myread Typedef Findhdr
?MAKE: -pick add $@ %<
?S:gidtype:
?S: This variable defines Gid_t to be something like gid_t, int,
?S: ushort, or whatever type is used to declare the return type
?S: of getgid(). Typically, it is the type of group ids in the kernel.
?S:.
?C:Gid_t (GIDTYPE):
?C: This symbol holds the return type of getgid() and the type of
?C: argument to setrgid() and related functions. Typically,
?C: it is the type of group ids in the kernel. It can be int, ushort,
?C: gid_t, etc... It may be necessary to include <sys/types.h> to get
?C: any typedef'ed information.
?C:.
?H:#define Gid_t $gidtype /* Type for getgid(), etc... */
?H:.
?T:xxx
: see what type gids are declared as in the kernel
```

```

echo " "
echo "Looking for the type for group ids returned by getgid()."
set gid_t gidtype xxx stdio.h sys/types.h
eval $typedef
case "$gidtype" in
xxx)
xxx=`./findhdr sys/user.h`
set `grep
'groups\[\NGROUPS\];' "$xxx" 2>/dev/null` unsigned short
case $1 in
unsigned) dflt="$1 $2" ;;
*) dflt="$1" ;;
esac
;;
*) dflt="$gidtype";;
esac
case "$gidtype" in
gid_t) echo "gid_t found." ;;
*) rp="What is the type for group ids returned by getgid()?"
./myread
gidtype="$ans"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/typedefs/gidtype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Myread.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Myread.U,v \$

?RCS: Revision 3.0.1.6 1997/02/28 15:05:39 ram

?RCS: patch61: myread script now starts with a "startsh"

?RCS: patch61: miscellaneous fixes

?RCS:

?RCS: Revision 3.0.1.5 1995/01/11 15:14:22 ram

?RCS: patch45: added & escape allowing user to turn on -d from the prompt

?RCS:

?RCS: Revision 3.0.1.4 1994/10/31 09:48:04 ram

?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U

?RCS:

?RCS: Revision 3.0.1.3 1994/10/29  
15:56:20 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.2 1993/08/30 08:57:59 ram

?RCS: patch8: added new visible 'nostick' symbol, mainly for Finish.U

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:39:20 ram

?RCS: patch7: now sticks to the question when no default and empty answer

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a bit of shell code that must be dotted in in order  
?X: to do a read. It allows for shell escapes, default assignment and  
?X: parameter evaluation.

?X:

?X: To use this unit, \$rp and \$dflt must hold the question and the  
?X: default answer. The question will be printed by the script itself.

?X: Neither \$rp nor \$dflt is altered by the script.

?X:

?X: The myread script will stick to the question if no default is proposed  
?X: and the user answer is empty, which prevents mistakes. However, at the  
?X: end of Configure, there is an exception  
to this rule (Finish.U) where we  
?X: set nostick to a non-empty value to allow the Return key to play its role!

?X:

?MAKE:Myread: Options startsh n c trnl

?MAKE: -pick add \$@ %<

?V:ans:dflt rp nostick

?F:./myread

?T:COLUMNS xxxm rp dflt answ aok myecho

?LINT:change fastread

?X: Some shells (Ultrix) do not understand \${COLUMNS:-80}, sigh!  
: compute the number of columns on the terminal for proper question formatting  
case "\$COLUMNS" in  
") COLUMNS='80';;  
esac

: set up the echo used in my read

?X:

?X: This variable is intended to be eval'ed. It will echo the two  
?X: variables \$rp and \$dflt (provided this latter has a non null value).  
?X: It is mainly used by the myread script to echo the questions.

?X:

?X: The \$n and \$c below are substituted before Loc does its silly echo check

?X: so don't put a \$ on the echo below so we get builtin, even if \$echo is

?X: pointing to /bin/echo.

?X:

```
myecho="case \"\$xxm\" in
```

```
) echo $n \"\$rp $c\" >&4;;
```

```
*) case \"\$rp\" in
```

```
) echo $n \"[\$xxm] $c\";;
```

```
*)
```

```
if
```

```
test `echo \"\$rp [\$xxm] \" | wc -c` -ge $COLUMNS; then
```

```
echo \"\$rp\" >&4
```

```
echo $n \"[\$xxm] $c\" >&4
```

```
else
```

```
echo $n \"\$rp [\$xxm] $c\" >&4
```

```
fi
```

```
::
```

```
esac;;
```

```
esac"
```

: now set up to do reads with possible shell escape and default assignment

```
cat <<EOSC >myread
```

```
$startsh
```

?X:

?X: Save value of default -- do not alter original in case of eval

?X:

```
xxm=\$dflt
```

```
$myecho
```

?X:

?X: If there is no default, then stop, regardless of the value in fastread.

?X: In silent mode, no new-line is to be echoed if the question is empty,

?X: since this is used to wait for the "return" key.

?X:

```
ans=''
```

```
case \"\$fastread\" in
```

```
yes) case \"\$dflt\" in
```

```
) ;;
```

```
*) ans=";
```

```
case \"\$silent-\$rp\" in
```

```
true-) ;;
```

```
*) echo " " >&4;;
```

```
esac;;
```

```
esac;;
```

```
*) case \"\$silent\" in
```

```
true) case \"\$rp\" in
```

```
) ans=";;
```

```
esac;;
```

```
esac;;
```

```

esac
while expr "X\$ans" : "X!" >/dev/null; do
  read answ
?X:
?X: Run 'eval' on the answer, in order to do variable substitution, in case
?X: the user types $HOME or $WHATEVER.
  Variables must be evaluated now.
?X: Typing '\$HOME' won't currently prevent from substitution -- use '\\$HOME'
?X: The $1 .. $9 and $*, as well as $@, are available to refer to the
?X: default value.
?X:
  set x \$xxxm
  shift
  aok="; eval "ans=\\\"\$answ\\\" && aok=y
  case "\$answ" in
?X:
?X: Use "!" and not a plain ! because of a bug in BSD 4.4 shell
?X: (reported by Wayne Davison)
?X: We must handle the shell escapes before dealing with possible variable
?X: substitution, since the shell we're launching in that case will be able
?X: to do it as well as we can -- RAM, 15/03/96
?X
"!")
  sh 1>&4
  echo " "
  $myecho
  ;;
!*)
  set x `expr "X\$ans" : "X!(.*)\$" `
  shift
  sh 1>&4 -c "\$*"
  echo " "
  $myecho
  ;;
"\$ans")
  case "\$ans" in
?X:
?X: Answers starting with & are hooks allowing to dynamically turn on/off
?X: some Configure options. That's for the future. -- RAM, 09/01/95
?X: Today, we only recognize '& -d' to mean 'go on as if Configure -d, which
?X: is a hardwired
  behaviour compatible with our general scheme.
?X:
  \\&*)
  set x `expr "X\$ans" : "X&(.*?)\$" `
  shift
  case "\$1" in
  -d)

```

```

fastread=yes
echo "(OK, I'll run with -d after this question.)" >&4
;;
-*)
echo "*** Sorry, \${1} not supported yet." >&4
;;
esac
$myecho
ans=!
;;
esac;;
*)
case "\$aok" in
y)
echo "*** Substitution done -- please confirm."
xxxm="\$ans"
ans=\`echo $n "\$ans$c" | tr ' $trnl' ' '\`
xxxm="\$ans"
ans=!
;;
*)
echo "*** Error -- try again."
ans=!
;;
esac
$myecho
;;
esac
?X: Stick in myread if no default answer and nothing was answered
case "\$ans\$xxxm\$nostick" in
")
ans=!
$myecho
;;
esac
done
case "\$ans" in
") ans="\$xxxm";;
esac
EOSC

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Myread.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: installstyle.U,v 1.2 1999/07/13 14:56:06 doughera Exp \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: installstyle.U,v \$  
?RCS: Revision 1.2 1999/07/13 14:56:06 doughera  
?RCS: Fix dependencies. Add more comments.  
?RCS:  
?RCS: Revision 1.1 1999/07/12 17:30:41 doughera  
?RCS: Initial revision  
?RCS:  
?RCS:  
?MAKE:installstyle: prefix Myread  
?MAKE: -pick add \$@ %<  
?X: Myread dependence is for dflt.  
?S:installstyle:  
?S: This variable describes the "style" of the perl installation.  
?S: This is intended to be useful for tools that need to  
?S: manipulate entire perl  
distributions. Perl itself doesn't use  
?S: this to find its libraries -- the library directories are  
?S: stored directly in Config.pm. Currently, there are only two  
?S: styles: "lib" and "lib/perl5". The default library locations  
?S: (e.g. privlib, sitelib) are either \$prefix/lib or  
?S: \$prefix/lib/perl5. The former is useful if \$prefix is a  
?S: directory dedicated to perl (e.g. /opt/perl), while the latter  
?S: is useful if \$prefix is shared by many packages, e.g. if  
?S: \$prefix=/usr/local.  
?S:  
?S: Unfortunately, while this "style" variable is used to set  
?S: defaults for all three directory hierarchies (core, vendor, and  
?S: site), there is no guarantee that the same style is actually  
?S: appropriate for all those directories. For example, \$prefix  
?S: might be /opt/perl, but \$siteprefix might be /usr/local.  
?S: (Perhaps, in retrospect, the "lib" style should never have been  
?S: supported, but it did seem like a nice idea at the time.)  
?S:  
?S: The situation is even less clear for  
tools such as MakeMaker  
?S: that can be used to install additional modules into  
?S: non-standard places. For example, if a user intends to install  
?S: a module into a private directory (perhaps by setting PREFIX on  
?S: the Makefile.PL command line), then there is no reason to  
?S: assume that the Configure-time \$installstyle setting will be

?S: relevant for that PREFIX.

?S:

?S: This may later be extended to include other information, so

?S: be careful with pattern-matching on the results.

?S:

?S: For compatibility with perl5.005 and earlier, the default

?S: setting is based on whether or not \$prefix contains the string

?S: "perl".

?S:.

: determine installation style

: For now, try to deduce it from prefix unless it is already set.

: Reproduce behavior of 5.005 and earlier, maybe drop that in 5.7.

case "\$installstyle" in

) case "\$prefix" in

\*perl\*) dflt='lib';;

\*) dflt='lib/perl5' ;;

esac

::

\*) dflt="\$installstyle" ;;

esac

: Probably not worth prompting for this since we prompt

for all

: the directories individually, and the prompt would be too long and

: confusing anyway.

installstyle=\$dflt

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/installstyle.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017-2018, H.Merijn Brand

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_accept4: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_accept4:

?S: This variable conditionally defines HAS\_ACCEPT4 if accept4() is

?S: available to accept socket connections.

?S:.

?C:HAS\_ACCEPT4:

?C: This symbol, if defined, indicates that the accept4 routine is

?C: available to accept socket connections.



```
?C:.
?H:#$d_accept4 HAS_ACCEPT4 /**/
?H:.
?LINT:set d_accept4
: see if accept4 exists
set accept4 d_accept4
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_accept4.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_alarm.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_alarm.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:06:58 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_alarm: Inlibc
?MAKE: -pick add $@ %<
?S:d_alarm:
?S: This variable conditionally defines the HAS_ALARM symbol, which
?S: indicates to the C program that the alarm() routine is available.
?S:.
?C:HAS_ALARM :
?C: This symbol, if defined, indicates that the alarm routine is
?C: available.
?C:.
?H:#$d_alarm
HAS_ALARM /**/
?H:.
?LINT:set d_alarm
: see if alarm exists
set alarm d_alarm
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_alarm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_math.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_math.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:21:59 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:i\_math: Inhdr

?MAKE: -pick add \$@ %<

?X: Are there really systems that \*DON'T\* have math.h?

?S:i\_math:

?S: This variable conditionally defines the I\_MATH symbol, and indicates

?S: whether a C program may include <math.h>.

?S:.

?C:I\_MATH:

?C: This symbol, if defined, indicates

to the C program that it should

?C: include <math.h>.

?C:.

?H:#\$i\_math I\_MATH /\*\*/

?H:.

?LINT:set i\_math

: see if this is a math.h system

set math.h i\_math

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_math.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_syscall.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_syscall.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:42 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_syscall: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_syscall:  
?S: This variable conditionally defines HAS\_SYSCALL if syscall() is  
?S: available call arbitrary system calls.  
?S:.  
?C:HAS\_SYSCALL (SYSCALL):  
?C: This symbol, if defined, indicates that the syscall routine is  
?C: available to call arbitrary system calls. If undefined, that's tough.  
?C:.  
?H:#\$d\_syscall  
HAS\_SYSCALL /\*\*/  
?H:.  
?LINT:set d\_syscall  
: see if syscall exists  
set syscall d\_syscall  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_syscall.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: startsh.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: startsh.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 16:25:31 ram  
?RCS: patch61: avoid needless chatter since this is now done very early  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:51 ram

```

?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:startsh: sh sharpbang eunicefix
?MAKE: -pick add $@ %<
?S:startsh:
?S: This variable contains the string to put on the front of a shell
?S: script to make sure (hopefully) that it runs with sh and not some
?S: other
    shell.
?S:.
?F:!sharp
: figure out how to guarantee sh startup
?X: Avoid needless chatter since this is now done very early.
?X: echo " "
?X: echo "Checking out how to guarantee sh startup..." >&2
case "$startsh" in
*) startsh=${sharpbang}${sh} ;;
*)
?X: echo "Let's see if '$startsh' works..." ;;
esac
cat >sharp <<EOSS
$startsh
set abc
test "$?abc" != 1
EOSS

chmod +x sharp
$eunicefix sharp
if ./sharp; then
: echo "Yup, it does."
else
echo "Hmm... '$startsh' does not guarantee sh startup..."
echo "You may have to fix up the shell scripts to make sure $sh runs them."
fi
rm -f sharp

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/startsh.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$

```

```

?RCS:

```

```

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

```

```

?RCS:

```

```

?RCS: You may distribute under the terms of either the GNU General Public

```

```

?RCS: License or the Artistic License, as specified in the README file.

```

```

?RCS:

```

```

?MAKE:uidformat: uidsize uidsign ivsize uvsize longsize intsize shortsize \
ivdformat uvuformat test echo
?MAKE: -pick add $@ %<
?S:uidformat:
?S: This variable contains the format string used for printing a Uid_t.
?S:.
?C:Uid_t_f:
?C: This symbol defines the format string used for printing a Uid_t.
?C:.
?H:#define Uid_t_f $uidformat /**/
?H:.
: Check format string for UID
echo " "
$echo "Checking the format string to be used for uids..." >&4

case "$uidsign" in
-1) if $test X"$uidsize" = X"$ivsize"; then
    uidformat="$ivdformat"
    else
    if $test X"$uidsize" = X"$longsize"; then
        uidformat="ld"
    else
    if $test X"$uidsize" = X"$intsize"; then
        uidformat="d"
    else
    if $test X"$uidsize"
= X"$shortsize"; then
        uidformat="hd"
    fi
    fi
    fi
    fi
;;
*) if $test X"$uidsize" = X"$uvsize"; then
    uidformat="$uvuformat"
    else
    if $test X"$uidsize" = X"$longsize"; then
        uidformat="lu"
    else
    if $test X"$uidsize" = X"$intsize"; then
        uidformat="u"
    else
    if $test X"$uidsize" = X"$shortsize"; then
        uidformat="hu"
    fi
    fi
    fi
    fi

```

```
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/uidf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setpwent_r.U,v 0RCS:
```

```
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
```

```
?RCS:
```

```
?MAKE:d_setpwent_r setpwent_r_proto: Inlibc Protochk Hasproto i_systypes \  
  usethreads i_pwd extern_C
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_setpwent_r:
```

```
?S: This variable conditionally defines the HAS_SETPWENT_R symbol,
```

```
?S: which indicates to the C program that the setpwent_r()
```

```
?S: routine is available.
```

```
?S:.
```

```
?S:setpwent_r_proto:
```

```
?S: This variable encodes the prototype of setpwent_r.
```

```
?S: It is zero if d_setpwent_r is undef, and one of the
```

```
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setpwent_r
```

```
?S: is defined.
```

```
?S:.
```

```
?C:HAS_SETPWENT_R:
```

```
?C: This symbol, if defined, indicates that the setpwent_r routine
```

```
?C: is available to
```

```
  setpwent re-entrantly.
```

```
?C:.
```

```
?C:SETPWENT_R_PROTO:
```

```
?C: This symbol encodes the prototype of setpwent_r.
```

```
?C: It is zero if d_setpwent_r is undef, and one of the
```

```
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setpwent_r
```

```
?C: is defined.
```

```
?C:.
```

```
?H:#$d_setpwent_r HAS_SETPWENT_R /**/
```

```
?H:#define SETPWENT_R_PROTO $setpwent_r_proto /**/
```

```
?H:.
```

```
?T:try hdrs d_setpwent_r_proto
```

```
: see if setpwent_r exists
```

```
set setpwent_r d_setpwent_r
```

```
eval $inlibc
```

```

case "$d_setpwent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_pwd pwd.h"
case "$d_setpwent_r_proto:$usethreads" in
":define") d_setpwent_r_proto=define
set d_setpwent_r_proto setpwent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setpwent_r_proto" in
define)
case "$setpwent_r_proto" in
"|0) try='int setpwent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && setpwent_r_proto=I_H ;;
esac
case "$setpwent_r_proto" in
"|0) try='void setpwent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && setpwent_r_proto=V_H ;;
esac
case "$setpwent_r_proto"
in
"|0) d_setpwent_r=undef
setpwent_r_proto=0
echo "Disabling setpwent_r, cannot determine prototype." >&4 ;;
* ) case "$setpwent_r_proto" in
REENTRANT_PROTO*) ;;
*) setpwent_r_proto="REENTRANT_PROTO_$setpwent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setpwent_r has no prototype, not using it." >&4 ;;
esac
d_setpwent_r=undef
setpwent_r_proto=0
;;
esac
;;
*) setpwent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_setpwent\_r.U

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2001 Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_usleepproto: Hasproto i_unistd
?MAKE: -pick add $@ %<
?S:d_usleepproto:
?S: This variable conditionally defines the HAS_USLEEP_PROTO symbol,
?S: which indicates to the C program that the system provides
?S: a prototype for the usleep() function. Otherwise, it is
?S: up to the program to supply one.
?S:.
?C:HAS_USLEEP_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the usleep() function. Otherwise, it is up
?C: to the program to supply one. A good guess is
?C: extern int
?C:     usleep(useconds_t);
?C:.
?H:#$d_usleepproto HAS_USLEEP_PROTO /**/
?H:.
?LINT:set d_usleepproto
: see if prototype for usleep is available
echo " "
set d_usleepproto usleep $i_unistd unistd.h
eval $hasproto

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_usleepproto.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:

```



?RCS: \$Log: libc.U,v \$

?RCS: Revision 3.0.1.10 1997/02/28 15:56:48 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: added support for HPUX-10 nm output

?RCS:

?RCS: Revision 3.0.1.9 1995/07/25 14:11:56 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.8 1995/05/12 12:20:47 ram

?RCS: patch54: made sure only most recent version of shared lib is picked

?RCS: patch54: final "nm -p" check now uses xscan and xrun like everybody

?RCS: patch54: can now grok  
linux nm output with lead \_\_IO (ADO)

?RCS: patch54: added support for linux ELF output, using 'W' for alias (ADO)

?RCS:

?RCS: Revision 3.0.1.7 1994/10/29 16:23:40 ram

?RCS: patch36: now looks for shared libraries before anything else (ADO)

?RCS: patch36: added new nm output format (ADO)

?RCS:

?RCS: Revision 3.0.1.6 1994/08/29 16:28:10 ram

?RCS: patch32: added I-type symbols for nm output parsing on Linux

?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 07:03:24 ram

?RCS: patch30: checks are now presented by succession of if/elif

?RCS: patch30: uniformized checks for shared objects with new so symbol

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 15:06:33 ram

?RCS: patch23: added shared library knowledge (ADO and WED)

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:12:17 ram

?RCS: patch16: can now export nm\_extract as an internal-use only variable

?RCS:

?RCS: Revision 3.0.1.2 1993/09/13 16:09:03 ram

?RCS: patch10: added special handling for Apollo systems (WAD)

?RCS:

?RCS: Revision 3.0.1.1  
1993/08/27 14:40:03 ram

?RCS: patch7: added entry for /usr/shlib/libc.so (OSF/1 machines)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libc libnames +nm\_extract: echo n c rm test grep Getfile Myread \  
Oldconfig Loc sed libs incpath libpth ar runnm nm nm\_opt nm\_so\_opt \  
contains xlibpth so osname trnl tr sort uniq \_o \_a

?MAKE: -pick add \$@ %<

?S:libc:

?S: This variable contains the location of the C library.

```

?S:.
?S:libnames:
?S: The constructed list of library names. Normally empty, but hint files
?S: may set this for later perusal by Configure.
?S:.
?S:nm_extract:
?S: This variable holds the name of the extraction command used to process
?S: the output of nm and yield the list of defined symbols. It is used
?S: internally by Configure.
?S:.
?T:thislib try libnames xxx xscan xrun thisname com tans file
?F:!libnames !libc.tmp !tmp.imp
?LINT:change nm_opt runnm
?INIT:libnames=""
: Figure out where the libc is located
case
"$runnm" in
true)
?X: indentation is wrong on purpose--RAM
: get list of predefined functions in a handy place
echo " "
case "$libc" in
") libc=unknown
case "$libs" in
*-lc_*) libc=`./loc libc_s$_a $libc $libpth`
esac
;;
esac
case "$libs" in
") ;;
*) for thislib in $libs; do
case "$thislib" in
-|lc|lc_s)
: Handle C library specially below.
;;
-|*)
thislib=`echo $thislib | $sed -e 's/^-|/'`
if try=`./loc lib$thislib.$so.*' X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib.$so X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib X $libpth`; $test -f "$try"; then

```

```

:
elif try=`./loc $lib$thislib$_a X $xlibpth`; $test -f "$stry"; then
:
else
  try=""
fi
libnames="$libnames $stry"
;;
*) libnames="$libnames $thislib"
;;
esac
done
;;
esac
?X:
?X: Some systems (e.g. DG/UX) use "environmental" links, which make the test
?X: -f fail. Ditto for symbolic links. So in order to reliably check the
?X: existence of a file, we use test -r. It will still fail with DG/UX links
?X: though, but at least it will detect symbolic links. At some strategic
?X: points, we make use of (test -h), using a sub-shell in case builtin test
?X: does not implement the -h check for symbolic links. This makes it
?X: possible to preset libc in a hint file for instance and have it show up
?X: as-is in the question.
?X:
xxx=normal
case "$libc" in
unknown)
?X:
?X: The sed below transforms .so.9 .so.12 into something like .so.0009 .so.0012,
?X: then sorts on it to allow keeping .so.12 instead of .so.9 as the latest
?X: up-to-date library. The initial filename (before sed munging, saved in hold
?X: space via 'h') is appended via 'G' before sorting, then the leading munged
?X: part is removed after sorting. Nice efficient work
?X: from Tye McQueen.
?X: The initial blurfl is here to prevent the trailing pipe from producing an
?X: empty string, causing Configure to output all its set variables!
?X:
set /lib/libc.$so
for xxx in $libpth; do
  $test -r $1 || set $xxx/libc.$so
: The messy sed command sorts on library version numbers.
  $test -r $1 || \
  set `echo blurfl; echo $xxx/libc.$so.[0-9]* | \
  tr ' ' $trnl | egrep -v \.[A-Za-z]*$' | $sed -e '
  h
  s/[0-9][0-9]*0000&/g
  s/0*\([0-9][0-9][0-9][0-9][0-9]\)\^1/g
  G

```

```

s/\n/'|\ \
$sort | $sed -e 's/^.*/'^
eval set \$$#
done
$test -r $1 || set /usr/ccs/lib/libc.$so
$test -r $1 || set /lib/libsys_s$_a
;;
*)
?X: ensure the test below for the (shared) C library will fail
set blurfl
;;
esac
if $test -r "$1"; then
echo "Your (shared) C library seems to be in $1."
libc="$1"
elif $test -r /lib/libc && $test -r /lib/clib; then
?X:
?X: Apollo has its C library in /lib/clib AND /lib/libc
?X: not to mention its math library in /lib/syslib...
?X:
echo
"Your C library seems to be in both /lib/clib and /lib/libc."
xxx=apollo
libc='/lib/clib /lib/libc'
if $test -r /lib/syslib; then
echo "(Your math library is in /lib/syslib.)"
?X: Put syslib in libc -- not quite right, but won't hurt
libc="$libc /lib/syslib"
fi
elif $test -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
echo "Your C library seems to be in $libc, as you said before."
?X: For mips, and...
elif $test -r $incpath/usr/lib/libc$_a; then
libc=$incpath/usr/lib/libc$_a;
echo "Your C library seems to be in $libc. That's fine."
elif $test -r /lib/libc$_a; then
libc=/lib/libc$_a;
echo "Your C library seems to be in $libc. You're normal."
else
if tans=`./loc libc$_a blurfl/dyick $libpth`; $test -r "$Stans"; then
:
elif tans=`./loc libc blurfl/dyick $libpth`; $test -r "$Stans"; then
libnames="$libnames "`./loc clib blurfl/dyick $libpth`
elif tans=`./loc clib blurfl/dyick $libpth`; $test -r "$Stans"; then
:
elif tans=`./loc Slibc$_a blurfl/dyick
$plibpth`; $test -r "$Stans"; then
:

```

```

elif tans=`./loc Mlibc$_a blurfl/dyick $xlibpth`; $test -r "$tans"; then
:
else
tans=`./loc Llibc$_a blurfl/dyick $xlibpth`
fi
if $test -r "$tans"; then
echo "Your C library seems to be in $tans, of all places."
libc=$tans
else
libc='blurfl'
fi
fi
if $test $xxx = apollo -o -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
dflt="$libc"
cat <<EOM

```

If the guess above is wrong (which it might be if you're using a strange compiler, or your machine supports multiple models), you can override it here.

```

EOM
else
dflt=""
echo $libpth | $tr ' ' $trnl | $sort | $uniq > libpath
cat >&4 <<EOM

```

I can't seem to find your C library. I've looked in the following places:

```

EOM
$sed 's/^/ /' libpath
cat <<EOM

```

None of these seems to contain your C library. I need to get its name...

```

EOM
fi
fn=f
rp='Where is your C library?'
./getfile
libc="$ans"

echo " "
echo $libc $libnames | $tr ' ' $trnl | $sort | $uniq > libnames
set X `cat libnames`
shift
xxx=files
case
$# in 1) xxx=file; esac
echo "Extracting names from the following $xxx for later perusal:" >&4
echo " "

```

```
$sed 's/^/' libnames >&4
echo " "
$echo $n "This may take a while...$c" >&4
```

?X:

?X: Linux may need the special Dynamic option to nm for shared libraries.

?X: In general, this is stored in the nm\_so\_opt variable.

?X: Unfortunately, that option may be fatal on non-shared libraries.

?X:

```
for file in $*; do
case $file in
*$so*) $nm $nm_so_opt $nm_opt $file 2>/dev/null;;
*) $nm $nm_opt $file 2>/dev/null;;
esac
done >libc.tmp
```

```
$echo $n ".$c"
```

?X:

?X: To accelerate processing, we look at the correct 'sed' command

?X: by using a small subset of libc.tmp, i.e. fprintf function.

?X: When we know which sed command to use, do the name extraction

?X:

```
$grep fprintf libc.tmp > libc.ptf
```

?X:

?X: In order to enhance readability and save some space, we define

?X: some variables that will be "eval"ed.

?X:

```
xscan='eval "<libc.ptf $com >libc.list"; $echo $n ".$c" >&4'
```

```
xrun='eval
```

```
"<libc.tmp $com >libc.list"; echo "done." >&4'
```

?X: BSD-like output, I and W types added for Linux

?X: Some versions of Linux include a leading \_\_IO in the symbol name.

?X: HPUX10 reportedly has trailing spaces, though I'm surprised it has

?X: BSD-like output. (AD).

```
xxx='[ADTSIW]'
```

```
if com="$sed -n -e 's/__IO//' -e 's/^. * $xxx *[_.]*/p' -e 's/^. * $xxx */p";\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

?X: SYSV-like output

```
elif com="$sed -n -e 's/___*/' -e 's/^\([a-zA-Z_0-9$]*\).*xtern.*\1/p";\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e '/|UNDEF/d' -e '/FUNC..GL/s/^. *|_*/p";\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```

elif com="$sed -n -e 's/^.* D __*//p' -e 's/^.* D //p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^_/' -e 's/^\([a-zA-Z_0-9]*\).*xtern.*text.*\1/p'";\
eval
$xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|FUNC |GLOB .*//p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$grep '|' $sed -n -e '/|COMMON/d' -e '/|DATA/d' \
-e '/file/d' -e 's/^\([ ]*\).*\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|FUNC |GLOB .*//p' -e 's/^.*|FUNC |WEAK .*//p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: mips nm output (sysV)
elif com="$sed -n -e 's/^__/' -e '/|Undef/d' -e '/|Proc/s/ .*//p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|Proc .*|Text *| .*//p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e '/Def. Text/s/.* \([ ]*\)\$/\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null
2>&1; then
eval $xrun
?X: OS/2 nm output
elif com="$sed -n -e 's/^-0-9a-f ]*_(.*)=.*/\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/.*\.text n\ \ \ \./p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: AIX nm output
elif com="sed -n -e 's/^__.*// -e 's/[ ]*D[ ]*[0-9]*.*//p'";\
eval $xscan;\

```

```

$contains '^fprintf$' libc.list >/dev/null 2>&1; then
  eval $xrun
else
  $nm -p $* 2>/dev/null >libc.tmp
  $grep fprintf libc.tmp > libc.ptf
  if com="$sed -n -e 's/^. * [ADTSIW] *[_.]*/p' -e 's/^. * [ADTSIW] //p';\
  eval $xscan; $contains '^fprintf$' libc.list >/dev/null 2>&1
  then
    nm_opt='-p'
    eval $xrun
  else
    echo " "
    echo "$nm didn't seem to work right. Trying $ar instead..." >&4
    com="
  if $ar t $libc > libc.tmp && \
  $contains '^fprintf$' libc.tmp >/dev/null 2>&1
  then
    for thisname in $libnames $libc; do
      $ar t $thisname >>libc.tmp
    done
    $sed
  -e "s/\$_o\$/" < libc.tmp > libc.list
    echo "Ok." >&4
    elif test "X$osname" = "Xos2" && $ar tv $libc > libc.tmp; then
?X: Repeat libc to extract forwarders to DLL entries too
    for thisname in $libnames $libc; do
      $ar tv $thisname >>libc.tmp
?X: Revision 50 of EMX has bug in ar: it will not extract forwarders
?X: to DLL entries. Use emximp which will extract exactly them.
    emximp -o tmp.imp $thisname \
      2>/dev/null && \
      $sed -e 's/^\([_a-zA-Z0-9]*\) .*$/1/p' \
      < tmp.imp >>libc.tmp
    $rm -f tmp.imp
  done
  $sed -e "s/\$_o\$/" -e 's/^\|+/' < libc.tmp > libc.list
  echo "Ok." >&4
  else
    echo "$ar didn't seem to work right." >&4
    echo "Maybe this is a Cray...trying bld instead..." >&4
  if
    bld t $libc | \
      $sed -e 's/*\|/' -e "s/\$_o:.*\|/" > libc.list &&
    $test -s libc.list
  then
    for thisname in $libnames; do
      bld t $libnames | \
        $sed -e 's/*\|/' -e "s/\$_o:.*\|/" >>libc.list

```



```

    $ar t $thisname >>libc.tmp
done
echo
"Ok." >&4
else
echo "That didn't work either." >&4
echo "No problem, I'll be compiling test programs then..." >&4
runnm=false
fi
fi
fi
fi
nm_extract="$com"
if $test -f /lib/syscalls.exp; then
echo " "
echo "Also extracting names from /lib/syscalls.exp for good ole AIX..." >&4
$sed -n 's/^\([^ ]*\)[ ]*syscall[0-9]*[ ]*$/\1/p' \
/lib/syscalls.exp >>libc.list
fi
?X: remember, indentation is wrong on purpose--RAM
;;
esac
$rm -f libnames libpath

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1-rc1/dist/U/libc.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:Devel usedevel: Myread rsrc package

?MAKE: -pick wipe \$@ %<

?T:xversion

?X: waiver of rights

?S:usedevel:

?S: This variable indicates that Perl was configured with development

?S: features enabled. This should not be done for production builds.

?S:.

?C:PERL\_USE\_DEVEL:

```

?C: This symbol, if defined, indicates that Perl was configured with
?C: -Dusedevel, to enable development features. This should not be
?C: done for production builds.
?C:.
?H:#$usedevel PERL_USE_DEVEL /**/
?H:.
?LINT:extern versiononly
?LINT:extern
installusrbinperl
?LINT:change versiononly
?LINT:change installusrbinperl
: See if we are using a devel version and want that
xversion=`awk '/define[ ]+PERL_VERSION/ {print $3}' $src/patchlevel.h`
case "$usedevel" in
$define|true|[yY]*)
    usedevel="$define" ;;
*) case "$xversion" in
    *[13579])
        cat >&4 <<EOH
        *** WHOA THERE!!! ***

```

This is an UNSTABLE DEVELOPMENT release.  
The version of this \$package distribution is \$xversion, that is, odd,  
(as opposed to even) and that signifies a development release.  
If you want a maintenance release, you want an even-numbered version.

Do \*\*\*NOT\*\*\* install this into production use.  
Data corruption and crashes are possible.

It is most seriously suggested that you do not continue any further  
unless you want to help in developing and debugging Perl.

If you *still* want to build perl, you can answer 'y' now,  
or pass -Dusedevel to Configure.

```

EOH
rp='Do you really want to continue?'
dflt='n'
./myread
case
"$ans" in
[yY]) echo >&4 "Okay, continuing."
    usedevel="$define" ;;
*) echo >&4 "Okay, bye."
    exit 1
;;
esac
;;

```

```

    esac
    usedevel="$undef"
    ;;
esac
case "$usedevel" in
$define|true|[yY]*)
    case "$versiononly" in
    ") versiononly="$define" ;;
    esac
    case "$installusrbinperl" in
    ") installusrbinperl="$undef" ;;
    esac
    ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Devel.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_msgget.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgget.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_msgget: Inlibc
?MAKE: -pick add $@ %<
?S:d_msgget:
?S: This variable conditionally defines the HAS_MSGGET symbol, which
?S: indicates to the C program that the msgget() routine is available.
?S:.
?C:HAS_MSGGET:
?C: This symbol, if defined, indicates that the msgget() routine is
?C: available to get a new message queue.
?C:.
?H:#$d_msgget
HAS_MSGGET /**/
?H:.
?LINT:set d_msgget

```

```
: see if msgget exists
set msgget d_msgget
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_msgget.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_csh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:32:18 ram

?RCS: patch61: added full\_csh to preserve the full path even when portable

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_csh full\_csh: csh Setvar

?MAKE: -pick add \$@ %<

?S:d\_csh:

?S: This variable conditionally defines the CSH symbol, which

?S: indicates to the C program that the C-shell exists.

?S:.

?S:full\_csh:

?S: This variable contains the full pathname to 'csh', whether

or

?S: not the user has specified 'portability'. This is only used

?S: in the compiled C program, and we assume that all systems which

?S: can share this executable will have the same full pathname to

?S: 'csh.'

?S:.

?X: Yes, I know about the C symbol PORTABLE, but I think csh

?X: is unlikely to move, and I'm too lazy to add all the

?X: #ifdef PORTABLE sections to the perl source.

?X:

?C:HAS\_CSH:

?C: This symbol, if defined, indicates that the C-shell exists.

?C:.

?C:CSH:

?C: This symbol, if defined, contains the full pathname of csh.  
?C:.  
?X: Previously, I just did \$d\_csh CSH "\$full\_csh", but that caused  
?X: problems on VMS where the config.sh extraction program changes  
?X: \$undef to a real cpp undef, and they then had #undef CSH ""  
?X: which the compiler didn't like. It's easy to work around this,  
?X: so I did. --AD 3/1998.  
?X: And we don't want to define CSH if !HAS\_CSH, but we don't want  
?X: those lines in config.h if they don't need CSH, so protect with ?CSH  
?X: and not  
?%<. --RAM, 15/02/2004  
?H:?%<:#\$d\_csh HAS\_CSH /\*\*/  
?H:?CSH:#ifdef HAS\_CSH  
?H:?CSH:#define CSH "\$full\_csh" /\*\*/  
?H:?CSH:#endif  
?H:.  
?LINT:set d\_csh  
: get csh whereabouts  
case "\$csh" in  
'csh') val="\$undef" ;;  
\*) val="\$define" ;;  
esac  
set d\_csh  
eval \$setvar  
: Respect a hint or command line value for full\_csh.  
case "\$full\_csh" in  
") full\_csh=\$csh ;;  
esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_csh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Oldconfig.U,v 3.0.1.10 1997/02/28 15:06:39 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: Oldconfig.U,v \$  
?RCS: Revision 3.0.1.10 1997/02/28 15:06:39 ram  
?RCS: patch61: added support for src.U  
?RCS: patch61: new OSNAME define

?RCS: patch61: can now sense new OSes  
?RCS:  
?RCS: Revision 3.0.1.9 1995/07/25 13:40:51 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.8 1995/05/12 12:04:18 ram  
?RCS: patch54: config.sh reload logic now knows about new -K switch  
?RCS: patch54: cleaned up and extended osvers for DEC  
OSF/1 (ADO)  
?RCS: patch54: added MachTen detection (ADO)  
?RCS:  
?RCS: Revision 3.0.1.7 1995/02/15 14:13:41 ram  
?RCS: patch51: adapted osvers computation for AIX (ADO)  
?RCS:  
?RCS: Revision 3.0.1.6 1995/01/30 14:27:15 ram  
?RCS: patch49: unit Options.U now exports file optdef.sh, not a variable  
?RCS: patch49: update code for myuname changed (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:15:36 ram  
?RCS: patch45: added quotes around the INITPROG variable (ADO)  
?RCS: patch45: allows variable overriding after config file loading  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 15:57:05 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: merged with the version used for perl5's Configure (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:24:17 ram  
?RCS: patch23: added support for osf1 hints  
?RCS: patch23: new support for solaris and i386 systems (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:05:02 ram  
?RCS: patch16: added post-processing on myuname for Xenix targets  
?RCS:  
patch16: message proposing config.sh defaults made consistent  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:56:32 ram  
?RCS: patch10: force use of config.sh when -d option is used (WAD)  
?RCS: patch10: complain about non-existent hint files (WAD)  
?RCS: patch10: added Options dependency for fastread variable  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:12 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit tries to remember what we did last time we ran Configure, mostly  
?X: for the sake of setting defaults.  
?X:  
?MAKE:Oldconfig hint myuname osname osvers: Instruct Myread uname \

```

Checkcc Mksymlinks run \
sh awk sed test cat rm lns tr n c contains Loc Options Tr src trnl ln
?MAKE: -pick wipe $@ %<
?S:myuname:
?S: The output of 'uname -a' if available, otherwise the hostname.
?S: The whole thing is then lower-cased and slashes and single quotes are
?S: removed.
?S:.
?S:hint:
?S: Gives the type of hints used for previous answers. May be one of
?S: "default",
"recommended" or "previous".
?S:.
?S:osname:
?S: This variable contains the operating system name (e.g. sunos,
?S: solaris, hpux, etc.). It can be useful later on for setting
?S: defaults. Any spaces are replaced with underscores. It is set
?S: to a null string if we can't figure it out.
?S:.
?S:osvers:
?S: This variable contains the operating system version (e.g.
?S: 4.1.3, 5.2, etc.). It is primarily used for helping select
?S: an appropriate hints file, but might be useful elsewhere for
?S: setting defaults. It is set to " if we can't figure it out.
?S: We try to be flexible about how much of the version number
?S: to keep, e.g. if 4.1.1, 4.1.2, and 4.1.3 are essentially the
?S: same for this package, hints files might just be os_4.0 or
?S: os_4.1, etc., not keeping separate files for each little release.
?S:.
?C:OSNAME:
?C: This symbol contains the name of the operating system, as determined
?C: by Configure. You shouldn't rely on it too much; the specific
?C: feature tests
from Configure are generally more reliable.
?C:.
?C:OSVERS:
?C: This symbol contains the version of the operating system, as determined
?C: by Configure. You shouldn't rely on it too much; the specific
?C: feature tests from Configure are generally more reliable.
?C:.
?H:#define OSNAME "$osname" /**/
?H:#define OSVERS "$osvers" /**/
?H:.
?F:!config.sh
?T:tmp tmp_n tmp_c tmp_sh file
?T:xxxxfile xxxfile xxfile xfile hintfile newmyuname
?T:tans _ isesix INITPROG DJGPP
?D:osname="

```

```

?LINT:change n c sh
?LINT:extern targetarch
?LINT:extern hostarch
?LINT:change hostarch
?LINT:extern is_os2
: Try to determine whether config.sh was made on this system
case "$config_sh" in
")
?X: indentation wrong on purpose--RAM
?X: Leave a white space between first two '(' for ksh. The sub-shell is needed
?X: on some machines to avoid the error message when uname is not found; e.g.
?X: old SUN-OS 3.2 would not execute hostname in (uname -a || hostname). Sigh!
?X: Now not using a subshell but instead $test.
myuname=`$uname
-a 2>/dev/null`
$test -z "$myuname" && myuname=`hostname 2>/dev/null`
# Downcase everything to avoid ambiguity.
# Remove slashes and single quotes so we can use parts of this in
# directory and file names.
# Remove newlines so myuname is sane to use elsewhere.
# tr '[A-Z]' '[a-z]' would not work in EBCDIC
# because the A-Z/a-z are not consecutive.
myuname=`echo $myuname | $sed -e "s,[/],g" | \
./tr '[A-Z]' '[a-z]' | $tr $trnl ' '`
?X: Save the value we just computed to reset myuname after we get done here.
newmyuname="$myuname"
dflt=n
case "$knowitall" in
")
if test -f ../config.sh; then
if $contains myuname= ../config.sh >/dev/null 2>&1; then
eval "`grep myuname= ../config.sh`"
fi
if test "X$myuname" = "X$newmyuname"; then
dflt=y
fi
fi
;;
*) dflt=y;;
esac

@if {test -d ../hints}
: Get old answers from old config file if Configure was run on the
: same system, otherwise use the hints.
hint=default
cd ..
?X: Since we are now at the root of the source

```



```

tree, we must use $src
?X: to access the sources and not $rsrc. See src.U for details...
if test -f config.sh; then
echo " "
rp="I see a config.sh file. Shall I use it to set the defaults?"
. UU/myread
case "$ans" in
n*|N*) echo "OK, I'll ignore it."
mv config.sh config.sh.old
myuname="$newmyuname"
;;
*) echo "Fetching default answers from your old config.sh file..." >&4
tmp_n="$n"
tmp_c="$c"
tmp_sh="$sh"
. ./config.sh
cp config.sh UU
n="$tmp_n"
c="$tmp_c"
: Older versions did not always set $sh. Catch re-use of such
: an old config.sh.
case "$sh" in
") sh="$tmp_sh" ;;
esac
hint=previous
;;
esac
fi
. ./UU/checkcc
if test ! -f config.sh; then
$cat <<EOM

```

First time through, eh? I have some defaults handy for some systems that need some extra help getting the Configure answers right:

EOM

```

(cd $src/hints; ls -C *.sh) | $sed 's/\./ /g' >&4
dflt="
: Half the following guesses are probably wrong... If you have better
: tests or hints,
please send them to <MAINTLOC>
: The metaconfig authors would also appreciate a copy...
$test -f /irix && osname=irix
$test -f /xenix && osname=sco_xenix
$test -f /dynix && osname=dynix
$test -f /dnix && osname=dnix
$test -f /lynx.os && osname=lynxos
$test -f /unicos && osname=unicos && osvers=`$uname -r`

```

```

$test -f /unicosmk && osname=unicosmk && osvers=`$uname -r`
$test -f /unicosmk.ar && osname=unicosmk && osvers=`$uname -r`
$test -f /bin/mips && /bin/mips && osname=mips
$test -d /usr/apollo/bin && osname=apollo
$test -f /etc/saf/_sactab && osname=svr4
$test -d /usr/include/minix && osname=minix && osvers=`$uname -r`
$test -f /system/gnu_library/bin/ar.pm && osname=vos
$test -f /sys/utilities/MultiView && osname=amigaos
if $test -d /MachTen -o -d /MachTen_Folder; then
?X: MachTen uname -a output looks like
?X: xxx 4 0.0 Macintosh
?X: MachTen /sbin/version output looks like
?X: MachTen 4.0 Mon Aug 28 10:18:00 1995
?X: MachTen 3.x had the 'version' command in /usr/etc/version.
  osname=machten
  if
$test -x /sbin/version; then
  osvers=`/sbin/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//`
elif $test -x /usr/etc/version; then
  osvers=`/usr/etc/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//`
else
  osvers="$2.$3"
fi
fi

$test -f /sys/posix.dll &&
$test -f /usr/bin/what &&
set X `/usr/bin/what /sys/posix.dll` &&
$test "$3" = UWIN &&
osname=uwin &&
osvers="$5"

?X: If we have uname, we already computed a suitable uname -a output,
?X: and it lies in $myuname.
if $test -f $uname; then
set X $myuname
shift

case "$5" in
fps*) osname=fps ;;
mips*)
case "$4" in
umips) osname=umips ;;
*) osname=mips ;;
esac;;
[23]100) osname=mips ;;

```

?X: Interactive Unix.

i386\*)

```
tmp=`/bin/uname -X 2>/dev/null|awk '/3\.2v[45]/{ print $(NF) }`  
if $test "$tmp" != "" -a "$3" = "3.2" -a -f /etc/systemid; then  
  osname='sco'  
  osvers=$tmp  
elif $test -f /etc/kconfig; then  
  osname=isc  
  if  
test "$lns" = "$ln -s"; then  
  osvers=4  
  elif $contains _SYSV3 /usr/include/stdio.h > /dev/null 2>&1 ; then  
  osvers=3  
  elif $contains _POSIX_SOURCE /usr/include/stdio.h > /dev/null 2>&1 ; then  
  osvers=2  
  fi  
fi  
tmp=""  
;;
```

?X: MS-DOS djgpp uname -a output looks like:

?X: ms-dos xxx 6 22 pc

?X: \$1 is the "dos flavor" (need not be "ms-dos").

?X: \$2 is the node name

?X: \$3 and \$4 are version/subversion

?X: \$5 is always "pc", but that might not be unique to DJGPP.

?X: (e.g. Solaris\_x86 has \$5 = i86pc, which doesn't actually conflict,

?X: but it's close enough that I can easily imagine other vendors also

?X: using variants of pc\* in \$5.)

?X: The "DJGPP" environment variable is always set when djgpp is active.

pc\*)

```
if test -n "$DJGPP"; then  
  osname=dos  
  osvers=djgpp  
fi  
;;  
esac
```

```
case "$1" in
```

```
  aix) osname=aix
```

?X: aix 4.1 uname -a output looks like

?X: AIX foo 1 4 000123456789

?X: where \$4 is the major release number and \$3 is the (minor) version.

?X: More detail on the version is available with the oslevel command.

?X: in 3.2.x, it output a string (see case statements below). In 4.1,

?X: it puts out something like 4.1.1.0

```
  tmp=`( oslevel) 2>/dev/null || echo "not found") 2>&1`  
  case "$tmp" in
```

```

# oslevel can fail with:
# oslevel: Unable to acquire lock.
*not\ found) osvers="$4"."$3" ;;
'<3240'|<>3240') osvers=3.2.0 ;;
'=3240'|>3240'|<3250'|<>3250') osvers=3.2.4 ;;
'=3250'|>3250') osvers=3.2.5 ;;
*) osvers=$tmp;;
esac
;;
bitrig) osname=bitrig
osvers="$3"
;;
bsd386) osname=bsd386
osvers=`$uname -r`
;;
cygwin*) osname=cygwin
osvers="$3"
;;
*dc.osx) osname=dcosx
osvers="$3"
;;
dnix) osname=dnix
osvers="$3"
;;
domainos) osname=apollo
osvers="$3"
;;
dgux) osname=dgux
osvers="$3"
;;
dragonfly) osname=dragonfly
osvers="$3"
;;
?X: uname -a returns
?X: DYNIX/ptx xxx 4.0 V4.1.2 i386
dynixptx*) osname=dynixptx
osvers=`echo
"$4"|sed 's/^v//`
;;
freebsd) osname=freebsd
osvers="$3" ;;
genix) osname=genix ;;
?X: GNU/Hurd uname -a gives something like:
?X: GNU foo 0.3 GNU-Mach 1.4/Hurd-0.3 i386-AT386 GNU
?X: GNU gnu 0.3 GNUmach-1.2/Hurd-0.3 i386-AT386 GNU
?X: Note the hostname on the second one, which will fool Configure
?X: into using the SysV case!
gnu) osname=gnu

```

```

osvers="$3" ;;
?X: HP-UX uname -a gives something like
?X: HP-UX foobar B.10.20 A 9000/735 2016483812 two-user license
?X: Preserve the full 10.20 string instead of the previous plain '10'.
?X: Thanks to Graham Barr. --AD 6/30/1998
hp*) osname=hpx
osvers=`echo "$3" | $sed 's,.*\.[0-9]*\.[0-9]*\),1,`
;;
irix*) osname=irix
case "$3" in
4*) osvers=4 ;;
5*) osvers=5 ;;
*) osvers="$3" ;;
esac
;;
linux) osname=linux
case "$3" in
*) osvers="$3" ;;
esac
$test -f /system/lib/libandroid.so && osname=linux-android
;;
MiNT) osname=mint
;;
minix) osname=minix
osvers=`$uname -r`
;;
netbsd*)
osname=netbsd
osvers="$3"
;;
news-os) osvers="$3"
case "$3" in
4*) osname=newsos4 ;;
*) osname=newsos ;;
esac
;;
nonstop-ux) osname=nonstopux ;;
openbsd) osname=openbsd
osvers="$3"
;;
os2) osname=os2
osvers="$4"
;;
POSIX-BC | posix-bc ) osname=posix-bc
osvers="$3"
;;
powerux | power_ux | powermax_os | powermaxos | \
powerunix | power_unix) osname=powerux

```

```

osvers="$3"
;;
qnx) osname=qnx
osvers="$4"
;;
solaris) osname=solaris
case "$3" in
5*) osvers=`echo $3 | $sed 's/^5/2/g` ;;
*) osvers="$3" ;;
esac
;;
sunos) osname=sunos
case "$3" in
5*) osname=solaris
osvers=`echo $3 | $sed 's/^5/2/g` ;;
*) osvers="$3" ;;
esac
;;
titanos) osname=titanos
case "$3" in
1*) osvers=1 ;;
2*) osvers=2 ;;
3*) osvers=3 ;;
4*) osvers=4 ;;
*) osvers="$3" ;;
esac
;;
ultrix) osname=ultrix
osvers="$3"
;;
osf1|mips+) case "$5" in
alpha)
?X: DEC OSF/1 myuname
-a output looks like: osf1 xxxx t3.2 123.4 alpha
?X: where the version number can be something like [xvt]n.n
osname=dec_osf
?X: sizer knows the minor minor version: the letter
osvers=`sizer -v | awk -FUNIX '{print $2}' | awk '{print $1}' | tr '[A-Z]' '[a-z]' | sed 's/^[xvt]//`
case "$osvers" in
[1-9].[0-9]*) ;;
*) osvers=`echo "$3" | sed 's/^[xvt]//` ;;
esac
;;
hp*) osname=hp_osf1 ;;
mips) osname=mips_osf1 ;;
?X: hp and mips were unsupported Technology Releases -- ADO, 24/10/94
esac
;;

```

```

# UnixWare 7.1.2 is known as Open UNIX 8
openunix|unixware) osname=svr5
osvers="$4"
;;
uts) osname=uts
osvers="$3"
;;
vos) osvers="$3"
;;
$2) case "$osname" in
*isc*) ;;
*freebsd*) ;;
svr*)
: svr4.x or possibly later
case "svr$3" in
${osname}*)
osname=svr$3
osvers=$4
;;
esac
case "$osname" in
svr4.0)
: Check for ESIX
if test -f /stand/boot ; then
eval `grep '^INITPROG=[a-z/0-9]*$'
/stand/boot`
if test -n "$INITPROG" -a -f "$INITPROG"; then
isesix=`strings -a $INITPROG|grep 'ESIX SYSTEM V/386 Release 4.0`
if test -n "$isesix"; then
osname=esix4
fi
fi
fi
;;
esac
;;
*) if test -f /etc/systemid; then
osname=sco
set `echo $3 | $sed 's/\./ /g` $4
if $test -f $src/hints/sco_$1_$2_$3.sh; then
osvers=$1.$2.$3
elif $test -f $src/hints/sco_$1_$2.sh; then
osvers=$1.$2
elif $test -f $src/hints/sco_$1.sh; then
osvers=$1
fi
else
case "$osname" in

```

```

") : Still unknown. Probably a generic Sys V.
osname="sysv"
osvers="$3"
;;
esac
fi
;;
esac
;;
*) case "$osname" in
") : Still unknown. Probably a generic BSD.
osname="$1"
osvers="$3"
;;
esac
;;
esac
else
?X: Try to identify sony's NEWS-OS (BSD unix)
if test -f /vmunix -a -f $src/hints/news_os.sh; then
(what /vmunix | UU/tr '[A-Z]'
'[a-z]') > UU/kernel.what 2>&1
if $contains news-os UU/kernel.what >/dev/null 2>&1; then
osname=news_os
fi
$rm -f UU/kernel.what
?X: Maybe it's OS/2 or DOS or something similar
elif test -d c:/ -o -n "$is_os2" ; then
set X $myuname
osname=os2
osvers="$5"
fi
fi

case "$targetarch" in
") ;;
*) hostarch=$osname
case "$targetarch" in
nto*|*-nto-*)
# Will load qnx.sh, which should change osname to nto
osname=qnx
osvers=""
;;
*linux-android*)
# Catch arm-linux-androideabi, mipsel-linux-android,
# and i686-linux-android
osname=linux-android
osvers=""

```



```

;;
*linux*)
  # Something like arm-linux-gnueabi is really just
  # plain linux.
  osname=linux

  osvers=""
;;
*solaris*|*sunos*)
  osname=solaris
  # XXX perhaps we should just assume
  # osvers to be 2, or maybe take the value
  # from targetarch. Using $run before the
  # hints are run is somewhat icky.
  set X ` $run $uname -a 2>/dev/null `
  shift
  case "$3" in
    5*) osvers=`echo $3 | $sed 's/^5/2/g'` ;;
    *) osvers="$3" ;;
  esac
;;
*)
  osname=`echo $targetarch|sed 's,^[^-]*-,`
  osvers=""
;;
esac
;;
esac

```

: Now look for a hint file osname\_osvers, unless one has been  
: specified already.

```

case "$hintfile" in
  "|' )
  file=`echo "${osname}_${osvers}" | $sed -e 's%\.%_%g' -e 's%_$$%'`

```

: Also try without trailing minor version  
numbers.

```

xfile=`echo $file | $sed -e 's%_[^_]*$%%`
xxfile=`echo $xfile | $sed -e 's%_[^_]*$%%`
xxxfile=`echo $xxfile | $sed -e 's%_[^_]*$%%`
xxxxfile=`echo $xxxfile | $sed -e 's%_[^_]*$%%`

```

```

case "$file" in
  ") dflt=none ;;
*) case "$osvers" in
  ") dflt=$file
;;
*) if $test -f $src/hints/$file.sh ; then
  dflt=$file
elif $test -f $src/hints/$xfile.sh ; then

```

```

dflt=$xfile
elif $test -f $src/hints/$xxfile.sh ; then
dflt=$xxfile
elif $test -f $src/hints/$xxxfile.sh ; then
dflt=$xxxfile
elif $test -f $src/hints/$xxxxfile.sh ; then
dflt=$xxxxfile
elif $test -f "$src/hints/${osname}.sh" ; then
dflt="${osname}"
else
dflt=none
fi
;;
esac
;;
esac
if $test -f Policy.sh ; then
case "$dflt" in
*Policy*) ;;
none) dflt="Policy" ;;
*) dflt="Policy $dflt" ;;
esac
fi
;;
*)
dflt=`echo $hintfile | $sed 's/\,sh$//'`
;;
esac

```

```

if $test -f Policy.sh ; then
$cat <<EOM

```

There's also

a Policy hint file available, which should make the site-specific (policy) questions easier to answer.

EOM

```

fi

```

```

$cat <<EOM

```

You may give one or more space-separated answers, or "none" if appropriate.

If you have a handcrafted Policy.sh file or a Policy.sh file generated by a previous run of Configure, you may specify it as well as or instead of OS-specific hints. If hints are provided for your OS, you should use them: although Perl can probably be built without hints on many platforms, using hints often improve performance and may enable features that Configure can't set up on its own. If there are no hints that match your OS, specify "none";

DO NOT give a wrong version or a wrong OS.

EOM

```
rp="Which of these apply, if any?"
. UU/myread
tans=$ans
for file in $tans; do
if $test X$file = XPolicy -a -f Policy.sh; then
. Policy.sh
$cat Policy.sh >> UU/config.sh
elif $test -f $src/hints/$file.sh; then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif
$test X"$tans" = X -o X"$tans" = Xnone ; then
: nothing
else
: Give one chance to correct a possible typo.
echo "$file.sh does not exist"
dflt=$file
rp="hint to use instead?"
. UU/myread
for file in $ans; do
if $test -f "$src/hints/$file.sh"; then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif $test X$ans = X -o X$ans = Xnone ; then
: nothing
else
echo "$file.sh does not exist -- ignored."
fi
done
fi
done

hint=recommended
: Remember our hint file for later.
if $test -f "$src/hints/$file.sh" ; then
hintfile="$file"
else
hintfile=""
fi
fi
cd UU
?X: From here on, we must use $src instead of $src
@else
: Get old answers, if there is a config file out there
```

```

hint=default
hintfile=""
if test -f ../config.sh; then
  echo " "
  rp="I see a config.sh file. Shall I use it to set the defaults?"
  . ./myread
  case "$ans" in
  n*|N*) echo "OK, I'll ignore it.";;
  *) echo "Fetching default answers from
your old config.sh file..." >&4
  tmp_n="$n"
  tmp_c="$c"
  ../config.sh
  cp ../config.sh .
  n="$tmp_n"
  c="$tmp_c"
  hint=previous
  ;;
  esac
fi
@end
?X: remember, indentation is wrong--RAM
;;
*)
  echo " "
  echo "Fetching default answers from $config_sh..." >&4
  tmp_n="$n"
  tmp_c="$c"
  cd ..
  ?X: preserve symbolic links, if any
  cp $config_sh config.sh 2>/dev/null
  chmod +w config.sh
  . ./config.sh
  cd UU
  cp ../config.sh .
  n="$tmp_n"
  c="$tmp_c"
  hint=previous
  ;;
  esac
  . ./optdef.sh

: Restore computed paths
for file in $loclist $strylist; do
  eval $file="\$_$file"
done

@if osname || osvers

```

```
cat << EOM
```

Configure uses the operating system name and version to set some defaults. The default value is probably right if the name rings a bell. Otherwise, since spelling matters for me, either accept the default or answer "none" to leave it blank.

```
EOM
@end
@if osname
case "$osname" in
'|' )
case "$hintfile" in
'|' |none) dflt=none ;;
*) dflt=`echo $hintfile | $sed -e 's/\.sh$//'
-e 's/_.*$//'^` ;;
esac
;;
*) dflt="$osname" ;;
esac
rp="Operating system name?"
./myread
case "$ans" in
none) osname="" ;;
*) osname=`echo "$ans" | $sed -e 's/[ ][ ]*/_/' | ./tr '[A-Z]' '[a-z]'^` ;;
esac
@end
@if osvers
@if osname
echo " "
@end
case "$osvers" in
'|' )
case "$hintfile" in
'|' |none) dflt=none ;;
*) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/^[^_]*//'^
dflt=`echo $dflt | $sed -e 's/_/' -e 's/_./g'^`
case "$dflt" in
'|' ) dflt=none ;;
esac
;;
esac
;;
*) dflt="$osvers" ;;
esac
rp="Operating system version?"
./myread
case "$ans" in
```

```
none) osvers=" ;;
*) osvers="$ans" ;;
esac
```

```
@end
```

```
../posthint.sh
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Oldconfig.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endnetent_r.U,v 0RCS:
```

```
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
```

```
?RCS:
```

```
?MAKE:d_endnetent_r endnetent_r_proto: Inlibc Protochk Hasproto i_systypes \  
  usethreads i_netdb extern_C
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_endnetent_r:
```

```
?S: This variable conditionally defines the HAS_ENDNETENT_R symbol,
```

```
?S: which indicates to the C program that the endnetent_r()
```

```
?S: routine is available.
```

```
?S:.
```

```
?S:endnetent_r_proto:
```

```
?S: This variable encodes the prototype of endnetent_r.
```

```
?S: It is zero if d_endnetent_r is undef, and one of the
```

```
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endnetent_r
```

```
?S: is defined.
```

```
?S:.
```

```
?C:HAS_ENDNETENT_R:
```

```
?C: This symbol, if defined, indicates that the endnetent_r routine
```

```
?C: is
```

```
  available to endnetent re-entrantly.
```

```
?C:.
```

```
?C:ENDNETENT_R_PROTO:
```

```
?C: This symbol encodes the prototype of endnetent_r.
```

```
?C: It is zero if d_endnetent_r is undef, and one of the
```

```
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endnetent_r
```

```
?C: is defined.
```

```
?C:.
```

```
?H:#$d_endnetent_r HAS_ENDNETENT_R /**/
```

```
?H:#define ENDNETENT_R_PROTO $endnetent_r_proto /**/
```

```

?H:
?T:try hdrs d_endnetent_r_proto
: see if endnetent_r exists
set endnetent_r d_endnetent_r
eval $inlibc
case "$d_endnetent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_endnetent_r_proto:$usethreads" in
":define") d_endnetent_r_proto=define
set d_endnetent_r_proto endnetent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_endnetent_r_proto" in
define)
case "$endnetent_r_proto" in
"|0) try='int endnetent_r(struct netent_data*);'
./protochk "$xtern_C $try" $hdrs && endnetent_r_proto=I_D ;;
esac
case "$endnetent_r_proto" in
"|0) try='void endnetent_r(struct netent_data*);'
./protochk
"$xtern_C $try" $hdrs && endnetent_r_proto=V_D ;;
esac
case "$endnetent_r_proto" in
"|0) d_endnetent_r=undef
endnetent_r_proto=0
echo "Disabling endnetent_r, cannot determine prototype." >&4 ;;
*) case "$endnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) endnetent_r_proto="REENTRANT_PROTO_$endnetent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endnetent_r has no prototype, not using it." >&4 ;;
esac
d_endnetent_r=undef
endnetent_r_proto=0
;;
esac
;;
*) endnetent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_endnetent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sitearch.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:21:30 ram

?RCS: patch61: created

?RCS:

?MAKE:sitearch sitearchexp installsitearch: afs cat Getfile \

Oldconfig Prefixit prefix test archname sitelib

?MAKE: -pick add \$@ %<

?Y:TOP

?S:sitearch:

?S: This variable contains the eventual value of the SITEARCH symbol,

?S: which is the name of the private library for this package. It may

?S: have a ~ on the front. It is up to the makefile to eventually create

?S: this

directory while performing installation (with ~ substitution).

?S:.

?S:sitearchexp:

?S: This variable is the ~name expanded version of sitearch, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?S:installsitearch:

?S: This variable is really the same as sitearchexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?C:SITEARCH:

?C: This symbol contains the name of the private library for this package.

?C: The library is private in the sense that it needn't be in anyone's

?C: execution path, but it should be accessible by the world. The program

?C: should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: Individual sites may place their own extensions and modules in

?C: this directory.



```

?C:.
?C:SITEARCH_EXP:
?C: This symbol contains the ~name expanded version of SITEARCH, to be used
?C: in programs that are not prepared to deal
with ~ expansion at run-time.
?C:.
?H:#define SITEARCH "$sitearch" /**/
?H:#define SITEARCH_EXP "$sitearchexp" /**/
?H:.
?T:xxx
: determine where site specific architecture-dependent libraries go.
xxx=`echo $sitelib/$sarchname | sed 's!^$prefix!!`
: xxx is usually lib/site_perl/archname.
set sitearch sitearch none
eval $prefixit
case "$sitearch" in
") dflt="$sitelib/$sarchname" ;;
*) dflt="$sitearch" ;;
esac
$cat <<EOM

```

The installation process will also create a directory for architecture-dependent site-specific extensions and modules.

```

EOM
fn=nd~+
rp='Pathname for the site-specific architecture-dependent library files?'
./getfile
if $test "X$sitearchexp" != "X$sansexp"; then
installsitearch="
fi
sitearch="$sans"
sitearchexp="$sansexp"
if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case
"$installsitearch" in
") dflt=`echo $sitearchexp | sed 's#^/afs/#afs/.#` ;;
*) dflt="$installsitearch";;
esac
fn=de~
rp='Where will private files be installed?'

```

```
./getfile
installsitearch="$ans"
else
installsitearch="$sitearchexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sitearch.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_arpainet.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_arpainet.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:15 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_arpainet: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_arpainet:
```

```
?S: This variable conditionally defines the I_ARPA_INET symbol,
```

```
?S: and indicates whether a C program should include <arpa/inet.h>.
```

```
?S:.
```

```
?C:I_ARPA_INET:
```

```
?C: This symbol, if defined, indicates to the C program that it should
```

```
?C: include <arpa/inet.h> to get inet_addr and friends
```

```
declarations.
```

```
?C:.
```

```
?H:#$i_arpainet I_ARPA_INET /**/
```

```
?H:.
```

```
?LINT:set i_arpainet
```

```
: see if arpa/inet.h has to be included
```

```
set arpa/inet.h i_arpainet
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_arpainet.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Csym.U,v \$

?RCS: Revision 3.0.1.4 1995/07/25 13:36:29 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS: patch56: added quotes for OS/2 support

?RCS:

?RCS: Revision 3.0.1.3 1995/05/12 12:00:33 ram

?RCS: patch54: fixed C test program to bypass gcc builtin type checks (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/10/31 09:34:13 ram

?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:00:05 ram

?RCS:

patch6: added ldflags as a conditional dependency and to compile line

?RCS: patch6: a final double quote was missing in csym variable after eval

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:Csym: Options contains libc libs runnm +cc +ccflags +ldflags rm

?MAKE: -pick add \$@ %<

?LINT:define csym

?LINT:use libc

?S:csym:

?S: This shell variable is used internally by Configure to check  
?S: wether a given C symbol is defined or not. A typical use is:

?S: set symbol result [-fva] [previous]

?S: eval \$csym

?S: That will set result to 'true' if the function [-f], variable [-v]  
?S: or array [-a] is defined, 'false' otherwise. If a previous value is  
?S: given and the -r flag was provided on the command line, that value  
?S: is reused without questioning.

?S:.

?V:csym

?T:tval tx tlook tf tdc tc

: is a C symbol defined?

csym='tlook=\$1;

case "\$3" in

```

-v) tf=libc.tmp; tc=""; tdc="";;
-a) tf=libc.tmp; tc="[0]"; tdc="[]";;
*) tlook="^$1\$";
   tf=libc.list; tc=""; tdc="()";;
esac;
tx=yes;
case "$reuseval-$4" in
true-) ;;
true-*) tx=no; eval "tval=\$$4"; case "$tval" in "") tx=yes;; esac;;
esac;
case "$tx" in
yes)
case "$runnm" in
true)
if $contains $tlook $tf >/dev/null 2>&1;
then tval=true;
else tval=false;
fi;;
*)
?X:
?X: We use 'char' instead of 'int' to try to circumvent overzealous
?X: optimizing compilers using built-in prototypes for commonly used
?X: routines to complain when seeing a different external declaration. For
?X: instance, gcc 2.6.3 fails if we use 'int' and we attempt a test against
?X: memcpy() on machines where sizeof(int) == sizeof(char *) (the usual return
?X: type), the compiler assuming it's a built-in declaration given that the
?X: returned size matches. At least with 'char' we are safe! -- RAM, for ADO
?X:
?X: Let's thank GNU cc for making our lifes so easy! :-)
?X: (An alternative for the future would be to use our knowledge about gcc
?X: to force a -fno-builtin option in the
?X: compile test, in case the 'char'
?X: trick is obsoleted by future gcc releases). -- RAM
?X:
?X: Lastly, gcc 3.4 otimizes &missing == 0 away, so we use + 2 instead now.
?X: The GNU folks like to do weird things, don't they? -- RAM, 2004-06-05
?X:
echo "extern char $1$tdc; int main() { return &$1$tc + 2; }" > t.c;
if $cc $ccflags $ldflags -o t t.c $libs >/dev/null 2>&1;
then tval=true;
else tval=false;
fi;
$rm -f t t.c;;
esac;;
*)
case "$tval" in
$define) tval=true;;
*) tval=false;;

```

```
esac;;
esac;
eval "$2=$tval"
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Csym.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: mailfile.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mailfile.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:24:57 ram
?RCS: patch36: the Loc unit was missing from the dependency line
?RCS:
?RCS: Revision 3.0.1.1 1993/12/15 08:22:08 ram
?RCS: patch15: now also looks under /var/mail for BSD/386
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mailfile: Myread Oldconfig Filexp Loc
?MAKE: -pick add $@ %<
?S:mailfile:
?S: This variable contains
the eventual value of the MAILFILE symbol,
?S: which contains an interpretable name of the mail spool file for the
?S: current user.
?S:.
?C:MAILFILE:
?C: This symbol contains the interpretable name of the mail spool file
?C: for the current user. The program must be prepared to substitute
?C: the HOME directory for %~, and the login id for %L.
?C:.
?H:#define MAILFILE "$mailfile" /**/
?H:.
: determine where mail is spooled
case "$mailfile" in
")
dflt=`./loc . XXX /usr/spool/mail /usr/mail /var/mail`
```

```

case "$dflt" in
XXX) dflt='%~/mailbox';;
*) dflt="$dflt/%L";;
esac
;;
*) dflt="$mailfile"
;;
esac
cat <<'EOM'

```

In the following question, you may use %~ to represent the user's home directory, and %L to represent a users name.

EOM

```

rp='In which file is yet-to-be-read mail spooled? (~name ok)'
. ./myread
mailfile=`./filexp "$ans"`

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/mailfile.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_speedopt.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_speedopt.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:15:51 ram

?RCS: patch36: call ./Cpplib explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:27 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_speedopt: Myread Cpplib Oldconfig cat models Setvar

?MAKE: -pick add \$@ %<

?S:d\_speedopt:

?S: This variable conditionally defines the SPEED\_OVER\_MEM symbol, which

?S: indicates to the C program that it can

burn memory in order to save

?S: CPU time.

?S:.

?C:SPEED\_OVER\_MEM (SPEEDOVERMEM):

?C: This symbol, if defined, indicates that the program can use more

?C: memory in order to reduce CPU time. The symbol doesn't say whether

?C: we are more interested in saving text space or data space.

?C:.

?H:#\$d\_speedopt SPEED\_OVER\_MEM /\*\*/

?H:.

?LINT:set d\_speedopt

: do we want speed at the expense of memory

\$cat <<'EOM'

I can try to optimize this package for either speed or memory. If you have limited address space you may wish to optimize for memory. Otherwise you should probably optimize for speed.

EOM

```
case "$d_speedopt" in
```

```
) if ./Cpplib $smallmach; then
```

```
case "$models" in
```

```
*large|*huge*) dflt=speed;;
```

```
*) dflt=memory;;
```

```
esac
```

```
else
```

```
dflt=speed
```

```
fi
```

```
::
```

```
*define*) dflt=speed;;
```

```
*) dflt=memory;;
```

```
esac
```

```
rp="What to optimize for?"
```

```
./myread
```

```
case "$ans" in
```

```
mem*) val="$undef";;
```

```
*) val="$define";;
```

```
esac
```

```
set d_speedopt
```

```
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d_speedopt.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Warn\_v7EXT.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Warn_v7EXT.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:01:42 ram
?RCS: patch36: call ./v7 explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit issues warnings to V7 sites that they are living dangerously.
?X: This unit needs to get mentioned in End.U to get included.
?X:
?MAKE:Warn_v7EXT: package Guess
?MAKE: -pick add $@ %<
: Warnings
if ./v7;
then
cat <<EOM

```

NOTE: the V7 compiler may ignore some #undefs that \$package uses. If so, you may get messages about redefining EXT. Some V7 compilers also have difficulties with #defines near buffer boundaries, so beware. You may have to play with the spacing in some .h files, believe it or not.

```

EOM
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Warn_v7EXT.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: Ins.U,v $

```



```

?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:issymlink: lns test rm
?MAKE: -pick add $@ %<
?S:issymlink:
?S: This variable holds the test command to test for a symbolic link
?S: (if they are supported). Typical values include 'test -h' and
?S: 'test -L'.
?S:.
?T:pth p
?LINT:change PATH test
?LINT:extern newsh
: determine whether symbolic links are supported
echo
" "
case "$lns" in
*"ln"* -s")
echo "Checking how to test for symbolic links..." >&4
$lns blurfl sym
if $test "X$sissymlink" = X; then
?X:
?X: In some AIX 4 versions the (ksh) builtin test (-h) is broken.
?X:
case "$newsh" in
") sh -c "PATH= test -h sym" >/dev/null 2>&1 ;;
*) $newsh -c "PATH= test -h sym" >/dev/null 2>&1 ;;
esac
if test $? = 0; then
issymlink="test -h"
else
echo "Your builtin 'test -h' may be broken." >&4
case "$stest" in
/*) ;;
*) pth=`echo $PATH | sed -e "s/$p_/ /g"`
for p in $pth
do
if test -f "$p/$stest"; then
test="$p/$stest"
break
fi
done
;;
esac
case "$stest" in
/*)
echo "Trying external '$stest -h'." >&4
issymlink="$stest -h"

```

```

if $test ! -h sym >/dev/null 2>&1; then
  echo "External '$test -h' is broken, too." >&4
  issymlink=""
fi
;;
*) issymlink="" ;;
esac
fi
fi
if $test "X$issymlink" = X; then
  if $test -L sym 2>/dev/null; then
    issymlink="$test
-L"
    echo "The builtin '$test -L' worked." >&4
  fi
fi
if $test "X$issymlink" != X; then
  echo "You can test for symbolic links with '$issymlink'." >&4
else
  echo "I do not know how you can test for symbolic links." >&4
fi
$rm -f blurfl sym
;;
*) echo "No symbolic links, so not testing for their testing..." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/issymlink.U

```

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?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:siteman3dir siteman3direxp installsiteman3dir: Getfile \

Setprefixvar prefix siteprefix man3dir sed

?MAKE: -pick add \$@ %<

?Y:TOP

?D:siteman3dir="

?S:siteman3dir:

?S: This variable contains the name of the directory in which site-specific  
?S: library man source pages are to be put. It is the responsibility of the  
?S: Makefile.SH to get the value of this into the proper command.  
?S: You must be prepared to do the ~name expansion yourself.  
?S: The standard distribution will put nothing in this directory.

?S: After

perl has been installed, users may install their own local

?S: man3 pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:siteman3direxp="

?S:siteman3direxp:

?S: This variable is the same as the siteman3dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsiteman3dir="

?S:installsiteman3dir:

?S: This variable is really the same as siteman3direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: man3direxp only points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installsiteman3dir

?LINT:set siteman3dir

?LINT:set siteman3direxp

: determine where add-on library man pages go

case "\$siteman3dir" in

") dflt=`echo \$man3dir | \$sed "s#^\$prefix#\$siteprefix#"` ;;

\*) dflt=\$siteman3dir ;;

esac

case "\$dflt" in

"| ") dflt=none ;;

esac

fn=dn+~

rp=Pathname

where the site-specific library manual pages should be installed?

./getfile

prefixvar=siteman3dir

./setprefixvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/siteman3dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setnetent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_setnetent\_r setnetent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_setnetent\_r:

?S: This variable conditionally defines the HAS\_SETNETENT\_R symbol,

?S: which indicates to the C program that the setnetent\_r()

?S: routine is available.

?S:.

?S:setnetent\_r\_proto:

?S: This variable encodes the prototype of setnetent\_r.

?S: It is zero if d\_setnetent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setnetent\_r

?S: is defined.

?S:.

?C:HAS\_SETNETENT\_R:

?C: This symbol, if defined, indicates that the setnetent\_r routine

?C: is

available to setnetent re-entrantly.

?C:.

?C:SETNETENT\_R\_PROTO:

?C: This symbol encodes the prototype of setnetent\_r.

?C: It is zero if d\_setnetent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setnetent\_r

?C: is defined.

?C:.

?H:#\$d\_setnetent\_r HAS\_SETNETENT\_R /\*\*/  
 ?H:#define SETNETENT\_R\_PROTO \$setnetent\_r\_proto /\*\*/  
 ?H:.

?T:try hdrs d\_setnetent\_r\_proto  
 : see if setnetent\_r exists  
 set setnetent\_r d\_setnetent\_r  
 eval \$inlibc  
 case "\$d\_setnetent\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
 case "\$d\_setnetent\_r\_proto:\$usethreads" in  
 ":define") d\_setnetent\_r\_proto=define  
 set d\_setnetent\_r\_proto setnetent\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac

```

case "$d_setnetent_r_proto" in
define)
case "$setnetent_r_proto" in
"|0) try='int setnetent_r(int, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && setnetent_r_proto=I_ID ;;
esac
case "$setnetent_r_proto" in
"|0) try='void setnetent_r(int, struct netent_data*);'
./protochk
"$extern_C $try" $hdrs && setnetent_r_proto=V_ID ;;
esac
case "$setnetent_r_proto" in
"|0) d_setnetent_r=undef
setnetent_r_proto=0
echo "Disabling setnetent_r, cannot determine prototype." >&4 ;;
*) case "$setnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) setnetent_r_proto="REENTRANT_PROTO_$setnetent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "setnetent_r has no prototype, not using it." >&4 ;;
esac
d_setnetent_r=undef
setnetent_r_proto=0
;;
esac
;;
*) setnetent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_setnetent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

?MAKE:d\_eaccess: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_eaccess:

?S: This variable conditionally defines the HAS\_EACCESS symbol, which

?S: indicates to the C program that the eaccess() routine is available.

?S:.

?C:HAS\_EACCESS :

?C: This symbol, if defined, indicates that the eaccess routine is

?C: available to do extended access checks.

?C:.

?H:#\$d\_eaccess HAS\_EACCESS /\*\*/

?H:.

?LINT:set d\_eaccess

: see if eaccess exists

set eaccess d\_eaccess

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/acl/d\_eaccess.U

No license file was found, but licenses were detected in source scan.

/\*

\* \$Id: scandir.C,v 3.0.1.1 1994/01/24 13:58:45 ram Exp ram \$

\*

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\*

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\* of the source tree for dist 4.0.

\*

\* \$Log: scandir.C,v \$

\* Revision 3.0.1.1 1994/01/24 13:58:45 ram

\* patch16: created

\*

\*/

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/C/fake/scandir.C

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Unix.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:06 ram

?RCS: patch61: created

?RCS:

?X:

?X: The purpose of this unit is to define things that are common across all

?X: known UNIX platforms. If Configure is ported/used on a non-UNIX

?X: environment, then some of the following variables can be redefined in hint

?X: files.

?X:

?MAKE:Unix \_a \_o firstmakefile archobjs: Oldconfig

?MAKE: -pick add \$@ %<

?S:\_a (lib\_ext):

?S: This variable defines the extension

used for ordinary libraries.

?S: For unix, it is '.a'. The '.' is included. Other possible

?S: values include '.lib'.

?S:.

?S:\_o (obj\_ext):

?S: This variable defines the extension used for object files.

?S: For unix, it is '.o'. The '.' is included. Other possible

?S: values include '.obj'.

?S:.

?S:firstmakefile:

?S: This variable defines the first file searched by make. On unix,

?S: it is makefile (then Makefile). On case-insensitive systems,

?S: it might be something else. This is only used to deal with

?S: convoluted make depend tricks.

?S:.

?S:archobjs:

?S: This variable defines any additional objects that must be linked

?S: in with the program on this architecture. On unix, it is usually

?S: empty. It is typically used to include emulations of unix calls

?S: or other facilities. For perl on OS/2, for example, this would

?S: include os2/os2.obj.

?S:.

?INIT:: Extra object files, if any, needed on this platform.

?INIT:archobjs="

: Define several unixisms.

: Hints files

or command line option can be used to override them.

case "\$\_a" in

") \_a='.a';;

```
esac
case "$_o" in
") _o='.o';;
esac
```

```
@if firstmakefile
: Which makefile gets called first. This is used by make depend.
case "$firstmakefile" in
") firstmakefile='makefile';;
esac
```

```
@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Unix.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_getmnt: Inlibc
```

```
?MAKE:-pick add $@ %<
```

```
?S:d_getmnt:
```

```
?S: This variable conditionally defines the HAS_GETMNT symbol, which
```

```
?S: indicates to the C program that the getmnt() routine is available
```

```
?S: to retrieve one or more mount info blocks by filename.
```

```
?S:.
```

```
?C:HAS_GETMNT:
```

```
?C: This symbol, if defined, indicates that the getmnt routine is
```

```
?C: available to get filesystem mount info by filename.
```

```
?C:.
```

```
?H:#$d_getmnt HAS_GETMNT /**/
```

```
?H:.
```

```
?LINT:set d_getmnt
```

```
: see if getmnt exists
```

```
set getmnt d_getmnt
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_getmnt.U
```

No license file was found, but licenses were detected in source scan.



?RCS: \$Id\$

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: cf\_who.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:28:50 ram

?RCS: patch61: new computation method avoiding use of temporary file

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:42:34 ram

?RCS: patch23: login name now computed the hard way

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Oldconfig dependency is there to ensure computation occurs after old values  
?X: from config.sh have been loaded, so that we can supersede them.

?X:

?MAKE:cf\_time

cf\_by: date Oldconfig

?MAKE: -pick add \$@ %<

?S:cf\_time:

?S: Holds the output of the "date" command when the configuration file was  
?S: produced. This is used to tag both config.sh and config\_h.SH.

?S:.

?S:cf\_by:

?S: Login name of the person who ran the Configure script and answered the  
?S: questions. This is used to tag both config.sh and config\_h.SH.

?S:.

?LINT:change LC\_ALL LANGUAGE

: who configured the system

?X: Ensure English date -- Jarkko Hietaniemi

cf\_time=`LC\_ALL=C; LANGUAGE=C; export LC\_ALL; export LANGUAGE; \$date 2>&1`

?X:

?X: Leave a white space between first two '(' for ksh. The sub-shell is needed  
?X: on some machines to avoid the error message when logname is not found; e.g.  
?X: on SUN-OS 3.2, (logname || whoami) would not execute whoami if logname was  
?X: not found. Sigh!

?X:

?X: Convex had a broken logname executable which returned a non-zero status,  
?X: and that broke the previous:

?X: cf\_by=`(logname) 2>/dev/null || whoami) 2>&1`

```

?X: Switch to emergency
mode... -- RAM, 19/04/94
?X:
?X: Parentheses needed to avoid error message if the program does not exist.
?X: Uses case instead of $test so it can be put before $test is defined.
?X: Don't redirect to a file because on Ultrix (under script?) logname
?X: outputs a blank line first. This method will apparently work.
case "$cf_by" in
"" )
cf_by=`(logname) 2>/dev/null`
case "$cf_by" in
"" )
cf_by=`(whoami) 2>/dev/null`
case "$cf_by" in
"" ) cf_by=unknown ;;
esac ;;
esac ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cf_who.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_varhdr.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_varhdr.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:54:42 ram
?RCS: patch61: varargs script now starts with leading "startsh"
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:21:02 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0.1.1 1994/05/13 15:26:05 ram
?RCS: patch27: this unit now supersedes old i_stdarg.U and i_varargs.U
?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)
?RCS:
?RCS: Revision 3.0
1993/08/18 12:08:49 ram
?RCS: Baseline for dist 3.0 netwide release.

```

```

?RCS:
?MAKE:i_stdarg i_varargs i_varhdr: cat +cc +ccflags rm test Setvar \
  Findhdr startsh _o
?MAKE: -pick add $@ %<
?S:i_stdarg:
?S: This variable conditionally defines the I_STDARG symbol, which
?S: indicates to the C program that <stdarg.h> exists and should
?S: be included.
?S:.
?S:i_varargs:
?S: This variable conditionally defines I_VARARGS, which indicates
?S: to the C program that it should include <varargs.h>.
?S:.
?S:i_varhdr:
?S: Contains the name of the header to be included to get va_dcl definition.
?S: Typically one of varargs.h or stdarg.h.
?S:.
?C:I_STDARG:
?C: This symbol, if defined, indicates that <stdarg.h> exists and should
?C: be included.
?C:.
?C:I_VARARGS:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <varargs.h>.
?C:.
?H:#$i_stdarg I_STDARG /**/
?H:#$i_varargs I_VARARGS /**/
?H:.
?W:%<:va_dcl
?F:!varargs
?T:valstd
?LINT:set i_stdarg i_varargs
?X:
?X:
  Don't use setvar because the varargs test below might override these.
?X: Actually, the messages here are just informative. We don't wish to set
?X: i_varargs or i_stdarg to their final value before knowing which of the
?X: two we'll include.
?X:
: see if stdarg is available
echo " "
if $test `./findhdr stdarg.h`; then
  echo "<stdarg.h> found." >&4
  valstd="$define"
else
  echo "<stdarg.h> NOT found." >&4
  valstd="$undef"
fi

```

```

: see if varargs is available
echo " "
if $test `./findhdr varargs.h`; then
echo "<varargs.h> found." >&4
else
echo "<varargs.h> NOT found, but that's ok (I hope)." >&4
fi

```

?X:

?X: if you have stdarg.h, you need to support prototypes to actually use it;

?X: but if stdarg.h exists and the compiler doesn't support prototypes (for some

?X: bizarre reason), we'll fall back to varargs.h anyway so it's not so bad.

?X:

: set up the varargs testing programs

```
$cat > varargs.c <<EOP
```

```
#ifdef I_STDARG
```

```
#include <stdarg.h>
```

```
#endif
```

```
#ifdef I_VARARGS
```

```
#include <varargs.h>
```

```
#endif
```

```
#ifdef
```

```
  I_STDARG
```

```
  int f(char *p, ...)
```

```
  #else
```

```
  int f(va_alist)
```

```
  va_dcl
```

```
  #endif
```

```
  {
```

```
    va_list ap;
```

```
  #ifndef I_STDARG
```

```
    char *p;
```

```
  #endif
```

```
  #ifdef I_STDARG
```

```
    va_start(ap,p);
```

```
  #else
```

```
    va_start(ap);
```

```
    p = va_arg(ap, char *);
```

```
  #endif
```

```
    va_end(ap);
```

```
    return 0;
```

```
  }
```

```
EOP
```

```
$cat > varargs <<EOP
```

```
$startsh
```

```
if $cc -c $ccflags -D\${1} varargs.c >/dev/null 2>&1; then
```

```

echo "true"
else
echo "false"
fi
$rm -f varargs$_o
EOP
chmod +x varargs

: now check which varargs header should be included
echo " "
i_varhdr="
val="
case "$valstd" in
"$define")
if `./varargs I_STDARG`; then
val='stdarg.h'
elif `./varargs I_VARARGS`; then
val='varargs.h'
fi
;;
*)
if `./varargs I_VARARGS`; then
val='varargs.h'
fi
;;
esac
case "$val" in
")
echo " "
echo "*** WHOA THERE!!! ***" >&4
echo " Your C compiler \"$cc\" doesn't seem to support stdarg or varargs!" >&4
case "$knowitall" in
")
echo " I'm giving up; maybe you can try again with a different compiler?" >&4
exit 1
;;
esac
echo "I could not find the definition for va_dcl...
You have problems..." >&4
val="$undef"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
*)
set i_varhdr
eval $setvar
case "$i_varhdr" in
stdarg.h)
val="$define"; set i_stdarg; eval $setvar

```

```

val="$undef"; set i_varargs; eval $setvar
;;
varargs.h)
val="$undef"; set i_stdarg; eval $setvar
val="$define"; set i_varargs; eval $setvar
;;
esac
echo "We'll include <$i_varhdr> to get va_dcl definition." >&4;;
esac
$rm -f varargs*

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_varhdr.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_sigvec.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_sigvec.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:45:37 ram
?RCS: patch61: there is now a separate routine for sigaction()
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:24 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X: d_sigvec.U, from d_ftime.U 1.0
?X:
?MAKE:d_sigvec d_sigvectr d_sigintrp: Csym Inlibc Setvar
?MAKE: -pick add $@ %<
?S:d_sigvec:
?S: This variable conditionally defines the HAS_SIGVEC symbol, which indicates
?S: that BSD
reliable signals are supported.
?S:.
?S:d_sigvectr:
?S: This variable conditionally defines the HAS_SIGVECTOR symbol, which
?S: indicates that the sigvec() routine is called sigvector() instead, for
?S: reasons known only to Hewlett-Packard.
?S:.
?S:d_sigintrp:

```

?S: This variable conditionally defines the HAS\_SIGINTRP symbol, which  
?S: indicates that the siginterrupt() routine is available.  
?S:.  
?C:HAS\_SIGVEC (SIGVEC):  
?C: This symbol, if defined, indicates that BSD reliable signals are  
?C: supported.  
?C:.  
?C:HAS\_SIGVECTOR (SIGVECTOR):  
?C: This symbol, if defined, indicates that the sigvec() routine is called  
?C: sigvector() instead, and that sigspace() is provided instead of  
?C: sigstack(). This is probably only true for HP-UX.  
?C:.  
?C:HAS\_SIGINTRP (SIGINTRP):  
?C: This symbol, if defined, indicates that the siginterrupt() routine  
?C: is available.  
?C:.  
?H:#\$d\_sigvec HAS\_SIGVEC /\*\*/  
?H:#\$d\_sigvectr HAS\_SIGVECTOR /\*\*/  
?H:#\$d\_sigintrp HAS\_SIGINTRP /\*\*/  
?H:.  
?T:val  
?LINT:set d\_sigvec d\_sigintrp  
@if  
d\_sigvectr || d\_sigvec || HAS\_SIGVEC || HAS\_SIGVECTOR  
: see if sigvector exists -- since sigvec will match the substring  
echo " "  
if set sigvector val -f d\_sigvectr; eval \$csym; \$val; then  
echo 'sigvector() found--you must be running HP-UX.' >&4  
val="\$define"; set d\_sigvectr; eval \$setvar  
val="\$define"; set d\_sigvec; eval \$setvar  
else  
: try the original name  
d\_sigvectr="\$undef"  
if set sigvec val -f d\_sigvec; eval \$csym; \$val; then  
echo 'sigvec() found.' >&4  
val="\$define"; set d\_sigvec; eval \$setvar  
else  
echo 'sigvec() not found--race conditions with signals may occur.' >&4  
val="\$undef"; set d\_sigvec; eval \$setvar  
fi  
fi  
  
@end  
@if d\_sigintrp || HAS\_SIGINTRP  
: see if we have siginterrupt  
set siginterrupt d\_sigintrp  
eval \$inlibc

@end

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_sigvec.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lchown.U,v 3.0.1.1 1994/08/29 16:07:14 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_lchown.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:14 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_lchown: Compile Setvar cat echo i\_unistd rm\_try  
?MAKE: -pick add \$@ %<  
?S:d\_lchown:  
?S: This variable conditionally defines the HAS\_LCHOWN symbol, which  
?S: indicates to the C program that the lchown() routine is available  
?S: to operate on a symbolic link (instead of following  
the link).  
?S:.  
?C:HAS\_LCHOWN :  
?C: This symbol, if defined, indicates that the lchown routine is  
?C: available to operate on a symbolic link (instead of following the  
?C: link).  
?C:.  
?H:#\$d\_lchown HAS\_LCHOWN /\*\*/  
?H:.  
?F:!try  
?LINT:set d\_lchown  
: see if lchown exists  
echo " "  
?X: Some functions (such as lchown()) are present in libc, but are  
?X: unimplemented. That is, they always fail and set errno=ENOSYS.  
?X:  
?X: Thomas Bushnell provided the following sample code and the explanation  
?X: that follows.  
?X:



?X: The choice of <assert.h> is essentially arbitrary. The GNU libc  
?X: macros are found in <gnu/stubs.h>. You can include that file instead  
?X: of <assert.h> (which itself includes <gnu/stubs.h>) if you test for  
?X: its existence first. <assert.h> is assumed to exist on every system,  
?X: which is why it's used here. Any GNU libc header file will include  
?X: the stubs macros. If either \_\_stub\_NAME or \_\_stub\_\_NAME is defined,  
?X: then the function doesn't actually exist.

Tests using <assert.h> work

?X: on every system around.

?X:

?X: The declaration of FOO is there to override builtin prototypes for

?X: ANSI C functions.

?X:

?X: I really ought to enhance the inlibc test to check for this, but

?X: I don't have time now. --A.D. 5/1998

?X:

?X: Unfortunately, this trick fails under clang++-7. Apparently to

?X: cover both the stub issue and clang's requirements, we need to do

?X: a compile and run test. -- A.D. 8/2019

?X:

```
$cat > try.c <<EOCP
```

```
#include <pwd.h>
```

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#$i_unistd I_UNISTD
```

```
#ifdef I_UNISTD
```

```
# include <unistd.h>
```

```
#endif
```

```
int main(int argc, char *argv[])
```

```
{
```

```
  if (lchown("./try.c", -1, getgid()) == -1) {
```

```
    exit(EXIT_FAILURE);
```

```
  }
```

```
  exit(EXIT_SUCCESS);
```

```
}
```

```
EOCP
```

```
set try
```

```
if eval $compile && ./try; then
```

```
  $echo "lchown() found." >&4
```

```
  val="$define"
```

```
else
```

```
  $echo "lchown() NOT found." >&4
```

```
  val="$undef"
```

```
fi
```

```
set d_lchown
```

```
eval $setvar
```

```
$rm_try
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_lchown.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pwrite.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_pwrite.U,v \$

?RCS:

?MAKE:d\_pwrite: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_pwrite:

?S: This variable conditionally defines the HAS\_PWRITE symbol, which

?S: indicates to the C program that the pwrite() routine is available.

?S:.

?C:HAS\_PWRITE :

?C: This symbol, if defined, indicates that the pwrite routine is

?C: available to perform writes on a file descriptor at a given offset.

?C:.

?H:#\$d\_pwrite HAS\_PWRITE /\*\*/

?H:.

?LINT:set d\_pwrite

: see if pwrite

exists

set pwrite d\_pwrite

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_pwrite.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetbyaddr\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

```

?MAKE:d_getnetbyaddr_r getnetbyaddr_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_getnetbyaddr_r:
?S: This variable conditionally defines the HAS_GETNETBYADDR_R symbol,
?S: which indicates to the C program that the getnetbyaddr_r()
?S: routine is available.
?S:.
?S:getnetbyaddr_r_proto:
?S: This variable encodes the prototype of getnetbyaddr_r.
?S: It is zero if d_getnetbyaddr_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getnetbyaddr_r
?S: is defined.
?S:.
?C:HAS_GETNETBYADDR_R:
?C: This symbol, if defined, indicates that
the getnetbyaddr_r routine
?C: is available to getnetbyaddr re-entrantly.
?C:.
?C:GETNETBYADDR_R_PROTO:
?C: This symbol encodes the prototype of getnetbyaddr_r.
?C: It is zero if d_getnetbyaddr_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getnetbyaddr_r
?C: is defined.
?C:.
?H:#$d_getnetbyaddr_r HAS_GETNETBYADDR_R /**/
?H:#define GETNETBYADDR_R_PROTO $getnetbyaddr_r_proto /**/
?H:.
?T:try hdrs d_getnetbyaddr_r_proto
: see if getnetbyaddr_r exists
set getnetbyaddr_r d_getnetbyaddr_r
eval $inlibc
case "$d_getnetbyaddr_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getnetbyaddr_r_proto:$usethreads" in
":define") d_getnetbyaddr_r_proto=define
set d_getnetbyaddr_r_proto getnetbyaddr_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getnetbyaddr_r_proto" in
define)
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(unsigned long, int, struct netent*, char*, size_t, struct netent**, int*);'
./protochk
"$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_UISBWRE ;;
esac

```

```

case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(long, int, struct netent*, char*, int);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=I_LISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='struct netent* getnetbyaddr_r(in_addr_t, int, struct netent*, char*, int);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=S_TISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='struct netent* getnetbyaddr_r(long, int, struct netent*, char*, int);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=S_LISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(in_addr_t, int, struct netent*, struct netent_data*);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=I_TISD ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(long, int, struct netent*, struct netent_data*);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=I_LISD
;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(int, int, struct netent*, struct netent_data*);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=I_IISD ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(uint32_t, int, struct netent*, char*, size_t, struct netent**, int*);'
./protochk "$Sextern_C $try" $hdrs && getnetbyaddr_r_proto=I_uISBWRE ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) d_getnetbyaddr_r=undef
getnetbyaddr_r_proto=0
echo "Disabling getnetbyaddr_r, cannot determine prototype." >&4 ;;
*) case "$getnetbyaddr_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetbyaddr_r_proto="REENTRANT_PROTO_$getnetbyaddr_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getnetbyaddr_r has no prototype, not using it." >&4 ;;
esac
d_getnetbyaddr_r=undef
getnetbyaddr_r_proto=0
;;
esac
;;

```

```
*) getnetbyaddr_r_proto=0
```

```
::
```

```
esac
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getnetbyaddr_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: html3dir.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: html3dir.U,v $
```

```
?RCS:
```

```
?MAKE:html3dir html3direxp installhtml3dir: cat sed Loc Myread \
```

```
package test Getfile Setprefixvar Prefixit Prefixup html1 dir
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?D:html3dir="
```

```
?S:html3dir:
```

```
?S: This variable contains the name of the directory in which html
```

```
?S: source pages are to be put. This directory is for pages
```

```
?S: that describe libraries or modules. It is intended to
```

```
?S: correspond roughly to section 3 of the Unix manuals.
```

```
?S:.
```

```
?D:html3direxp="
```

```
?S:html3direxp:
```

```
?S: This variable
```

```
is the same as the html3dir variable, but is filename
```

```
?S: expanded at configuration time, for convenient use in makefiles.
```

```
?S:.
```

```
?D:installhtml3dir="
```

```
?S:installhtml3dir:
```

```
?S: This variable is really the same as html3direxp, unless you are
```

```
?S: using a different installprefix. For extra portability, you
```

```
?S: should only use this variable within your makefiles.
```

```
?S:.
```

```
?LINT:change prefixvar
```

```
?LINT:set html3direxp
```

```
?LINT:set installhtml3dir
```

```
: determine where html pages for libraries and modules go
```

```
set html3dir html3dir none
eval $prefixit
$cat <<EOM
```

If you wish to install html files for modules associated with \$spackage, indicate the appropriate directory here. To skip installing html files, answer "none".

EOM

: There is no obvious default. If they have specified html1dir, then  
: try to key off that, possibly changing ../html1 into ../html3.

```
case "$html3dir" in
```

```
) html3dir=`echo "$html1dir" | $sed 's/1$/3$/'` ;;
```

```
*) dflt=$html3dir ;;
```

```
esac
```

```
fn=dn+~
```

```
rp="Directory for the $spackage module  
html pages?"
```

```
./getfile
```

```
prefixvar=html3dir
```

```
./setprefixvar
```

: Use ' ' for none so value is preserved next time through Configure

```
$test X"$html3dir" = "X" && html3dir=' '
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/html3dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_crypt\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_crypt\_r crypt\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_crypt extern\_C

?MAKE: -pick add \$@ %<

?S:d\_crypt\_r:

?S: This variable conditionally defines the HAS\_CRYPT\_R symbol,

?S: which indicates to the C program that the crypt\_r()

?S: routine is available.

?S:.

?S:crypt\_r\_proto:

?S: This variable encodes the prototype of crypt\_r.

?S: It is zero if d\_crypt\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_crypt\_r

?S: is defined.

?S:.

?C:HAS\_CRYPT\_R:

?C: This symbol, if defined, indicates that the crypt\_r routine

?C: is available to crypt re-entrantly.

?C:.

?C:CRYPT\_R\_PROTO:

?C: This

symbol encodes the prototype of crypt\_r.

?C: It is zero if d\_crypt\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_crypt\_r

?C: is defined.

?C:.

?H:#\$d\_crypt\_r HAS\_CRYPT\_R /\*\*/

?H:#define CRYPT\_R\_PROTO \$crypt\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_crypt\_r\_proto

: see if crypt\_r exists

set crypt\_r d\_crypt\_r

eval \$inlibc

case "\$d\_crypt\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_crypt crypt.h"

case "\$d\_crypt\_r\_proto:\$usethreads" in

":define") d\_crypt\_r\_proto=define

set d\_crypt\_r\_proto crypt\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_crypt\_r\_proto" in

define)

case "\$crypt\_r\_proto" in

"|0) try='char\* crypt\_r(const char\*, const char\*, struct crypt\_data\*);'

./protochk "\$extern\_C \$try" \$hdrs && crypt\_r\_proto=B\_CCS ;;

esac

case "\$crypt\_r\_proto" in

"|0) try='char\* crypt\_r(const char\*, const char\*, CRYPTD\*);'

./protochk "\$extern\_C \$try" \$hdrs && crypt\_r\_proto=B\_CCD ;;

esac

case "\$crypt\_r\_proto" in

"|0) d\_crypt\_r=undef

crypt\_r\_proto=0

echo

"Disabling crypt\_r, cannot determine prototype." >&4 ;;

\*) case "\$crypt\_r\_proto" in

REENTRANT\_PROTO\*) ;;

\*) crypt\_r\_proto="REENTRANT\_PROTO\_\$crypt\_r\_proto" ;;

esac

```

echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "crypt_r has no prototype, not using it." >&4 ;;
esac
d_crypt_r=undef
crypt_r_proto=0
;;
esac
;;
*) crypt_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_crypt_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Ins.U,v 3.0.1.1 1994/06/20 07:05:52 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: Ins.U,v \$

?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram

?RCS: patch30: created by ADO

?RCS:

?X:

?X: This unit checks whether symbolic links are really supported.

?X: We can't rely on d\_symlink because that may be listed in the

?X: C library but unimplemented.

?X:

?MAKE:lns: ln rm touch

?MAKE:-pick add \$@ %<

?S:lns:

?S: This variable holds the name of the command to make

?S: symbolic

links (if they are supported). It can be used

?S: in the Makefile. It is either 'ln -s' or 'ln'



```
?S:
: determine whether symbolic links are supported
echo " "
$touch blurfl
if $ln -s blurfl sym > /dev/null 2>&1 ; then
echo "Symbolic links are supported." >&4
lns="$ln -s"
else
echo "Symbolic links are NOT supported." >&4
lns="$ln"
fi
$rm -f blurfl sym
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/lns.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_mmap.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:19:12 ram

?RCS: patch15: created

?RCS:

?MAKE:d\_mmap: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mmap:

?S: This variable conditionally defines HAS\_MMAP if mmap() is

?S: available to map a file into memory.

?S:.

?C:HAS\_MMAP:

?C: This symbol, if defined, indicates that the mmap system call is

?C: available to map a file into memory.

?C:.

?H:#\$d\_mmap HAS\_MMAP /\*\*/

?H:.

?LINT:set d\_mmap

: see if mmap exists

set mmap d\_mmap

eval \$inlibc

Found in path(s):

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mmap.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_flock.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_flock.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:05 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_flock: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_flock:

?S: This variable conditionally defines HAS\_FLOCK if flock() is

?S: available to do file locking.

?S:.

?C:HAS\_FLOCK (FLOCK):

?C: This symbol, if defined, indicates that the flock routine is

?C: available to do file locking.

?C:.

?H:#\$d\_flock HAS\_FLOCK /\*\*/

?H:.

?LINT:set d\_flock

: see

if flock exists

set flock d\_flock

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_flock.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Signal.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Signal.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 15:20:01 ram  
?RCS: patch61: created  
?RCS:  
?X:  
?X: This unit produces three files:  
?X: 1- A signal.c file, which, when compiled and run, produces an output like:  
?X:  
?X: HUP 1  
?X: INT 2  
?X: QUIT 3  
?X: etc...  
?X:  
?X: 2- A signal.awk script to parse the output of signal.c, fill  
?X: in gaps (up to NSIG) and move duplicates to the end.  
?X: 3- A signal\_cmd script to compile signal.c and run it  
?X: through  
sort -n -k 2 | uniq | awk -f signal.awk.  
?X: (we try also sort -n +1 since some old hosts don't grok sort -k)  
?X: (This is called signal\_cmd to avoid OS/2 confusion with  
?X: signal.cmd vs. signal.  
?X: The signal\_cmd script also falls back on checking signals one at a  
?X: time in case the signal.c program fails. On at least one version of  
?X: Linux 2.1.x, the header file #define'd SIGRTMAX to a symbol that  
?X: is not defined by the compiler/linker. :-(. Further, on that same  
?X: version of Linux, the user had a defective C-shell that gave an  
?X: incorrect list for kill -l, so the fall-back didn't work.  
?X:  
?X: This unit is then used by sig\_name.U.  
?X:  
?MAKE:Signal: test tr rm awk cat grep startsh eunicefix sed sort uniq \  
Findhdr cppstdin +cppflags cppminus Compile \_o \_exe trnl run i\_stdlib \  
sysroot  
?MAKE: -pick add \$@ %<  
?X:all files declared as "public" since they're used from other units  
?F:signal.c signal\_cmd signal.lst signal signal.awk  
?T: xx xxx xxxfiles  
?LINT:use rm run  
\_o \_exe  
?LINT:extern sig\_num\_init  
: Trace out the files included by signal.h, then look for SIGxxx names.  
?X: Remove SIGARRAYSIZE used by HPUX.

```

?X: Remove SIGSTKSIZE used by Linux.
?X: Remove SIGSTKSZ used by POSIX.
?X: Remove SIGTYP void lines used by OS2.
?X: Some cpps, like os390, do not give the file name anywhere
case "$sig_num_init" in
")
if [ "X$fieldn" = X ]; then
: Just make some guesses. We check them later.
xxx="$sysroot/usr/include/signal.h $sysroot/usr/include/sys/signal.h"
else
xxx=`echo '#include <signal.h>' |
$cppstdin $cppminus $cppflags 2>/dev/null |
$grep '^[ ]*#.*include' |
$awk '{print \\$fieldn}' | $sed 's!'!g' \\
$sed 's!\\\\\\\\\\\\\\\\!g' | $sort | $uniq`
fi
?X: Check this list of files to be sure we have parsed the cpp output ok.
?X: This will also avoid potentially non-existent files, such
?X: as ../foo/bar.h
xxxfiles=""
?X: Add /dev/null in case the $xxx list is empty.
for xx in $xxx /dev/null ; do
$test -f "$xx" && xxxfiles="$xxxfiles $xx"
done
?X:
If we have found no files, at least try signal.h
case "$xxxfiles" in
") xxxfiles=`./findhdr signal.h` ;;
esac
xxx=`awk '
$1 ~ /^#define$/ && $2 ~ /^SIG[A-Z0-9]*$/ && $2 !~ /SIGARRAYSIZE/ && $2 !~ /SIGSTKSIZE/ && $2 !~
/SIGSTKSZ/ && $3 !~ /void/ {
print substr($2, 4, 20)
}
$1 == "#" && $2 ~ /^define$/ && $3 ~ /^SIG[A-Z0-9]*$/ && $3 !~ /SIGARRAYSIZE/ && $4 !~ /void/ {
print substr($3, 4, 20)
}' $xxxfiles`
: Append some common names just in case the awk scan failed.
xxx="$xxx ABRT ALRM BUS CANCEL CHLD CLD CONT DIL EMT FPE"
xxx="$xxx FREEZE HUP ILL INT IO IOT KILL LOST LWP PHONE"
xxx="$xxx PIPE POLL PROF PWR QUIT RTMAX RTMIN SEGV STKFLT STOP"
xxx="$xxx SYS TERM THAW TRAP TSTP TTIN TTOU URG USR1 USR2"
xxx="$xxx USR3 USR4 VTALRM WAITING WINCH WIND WINDOW XCPU XFSZ"

: generate a few handy files for later
$cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>

```

```

#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
int main() {

/* Strange style to avoid
  deeply-nested #if/#else/#endif */
#ifdef NSIG
# ifdef _NSIG
#  define NSIG (_NSIG)
# endif
#endif

#ifdef NSIG
# ifdef SIGMAX
#  define NSIG (SIGMAX+1)
# endif
#endif

#ifdef NSIG
# ifdef SIG_MAX
#  define NSIG (SIG_MAX+1)
# endif
#endif

#ifdef NSIG
# ifdef _SIG_MAX
#  define NSIG (_SIG_MAX+1)
# endif
#endif

#ifdef NSIG
# ifdef MAXSIG
#  define NSIG (MAXSIG+1)
# endif
#endif

#ifdef NSIG
# ifdef MAX_SIG
#  define NSIG (MAX_SIG+1)
# endif
#endif

#ifdef NSIG
# ifdef SIGARRAYSIZE
#  define NSIG SIGARRAYSIZE /* Assume ary[SIGARRAYSIZE] */

```

```

# endif
#endif

#ifndef NSIG
# ifdef _sys_nsig
#  define NSIG (_sys_nsig) /* Solaris 2.5 */
# endif
#endif

/* Default to some arbitrary number that's big enough to get most
of the common signals.
*/
#ifndef NSIG
# define NSIG 50
#endif

printf("NSIG %d\n", NSIG);

#ifndef JUST_NSIG

EOCP

echo $xxx | $tr ' ' $trnl | $sort | $uniq | $awk '
{
printf "#ifdef SIG"; printf $1; printf "\n"
printf "printf(\"";
printf $1; printf " %%d\n\",SIG";
printf $1; printf ");\n"
printf "#endif\n"
}
END {
printf "#endif /* JUST_NSIG *\n";
printf "exit(0);\n}\n";
}
' >>signal.c
$cat >signal.awk <<'EOP'
BEGIN { ndups = 0 }
$1 ~ /^NSIG$/ { nsig = $2 }
($1 !~ /^NSIG$/) && (NF == 2) && ($2 ~ /^[0-9][0-9]*$/) {
if ($2 > maxsig) { maxsig = $2 }
if (sig_name[$2]) {
dup_name[ndups] = $1
dup_num[ndups] = $2
ndups++
}
else {
sig_name[$2] = $1
sig_num[$2] = $2
}
}
}

```

```

    }
}
END {
    if (nsig == 0) {
        nsig = maxsig + 1
    }
    printf("NSIG %d\n", nsig);
    for (n = 1; n < nsig; n++) {
if (sig_name[n]) {
        printf("%s %d\n", sig_name[n], sig_num[n])
    }
    else {
        printf("NUM%d %d\n", n, n)
    }
    }
    for (n = 0; n < ndups; n++) {
printf("%s %d\n", dup_name[n], dup_num[n])
    }
}
EOP
$cat >signal_cmd <<EOS
$startsh
if $test -s signal.lst; then
    echo "Using your existing signal.lst file"
    exit 0
fi
xxx="$xxx"
EOS
?X: Avoid variable interpolation problems, especially with
?X:
    xxx, which contains newlines.
$cat >>signal_cmd <<'EOS'

set signal
if eval $compile_ok; then
    $run ./signal$_exe | ($sort -n -k 2 2>/dev/null || $sort -n +1) |\
    $uniq | $awk -f signal.awk >signal.lst
else
    echo "(I can't seem be able to compile the whole test program)" >&4
    echo "(I'll try it in little pieces.)" >&4
    set signal -DJUST_NSIG
    if eval $compile_ok; then
        $run ./signal$_exe > signal.nsg
        $cat signal.nsg
    else
        echo "I can't seem to figure out how many signals you have." >&4
        echo "Guessing 50." >&4
        echo 'NSIG 50' > signal.nsg

```

```

fi
: Now look at all the signal names, one at a time.
for xx in `echo $xxx | $tr ' ' $trnl | $sort | $uniq`; do
  $cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
int main() {
printf("$xx %d\n", SIG${xx});
return 0;
}
EOCP
set signal
if eval $compile; then
echo "SIG${xx} found."
$run ./signal$_exe >> signal.ls1
else
echo "SIG${xx} NOT found."
fi
done
if $test -s signal.ls1; then
$cat
signal.nsg signal.ls1 |
$sort -n | $uniq | $awk -f signal.awk >signal.lst
fi

fi
if $test -s signal.lst; then
:
else
echo "(AAK! I can't compile the test programs -- Guessing)" >&4
echo 'kill -l' >signal
set X `csh -f <signal`
$rm -f signal
shift
case $# in
0) set HUP INT QUIT ILL TRAP ABRT EMT FPE KILL BUS SEGV SYS PIPE ALRM TERM;;
esac
echo $@ | $tr ' ' $trnl | \
  $awk '{ printf "%s %d\n", $1, ++s; }
  END { printf "NSIG %d\n", ++s }' >signal.lst
fi
$rm -f signal.c signal$_exe signal$_o signal.nsg signal.ls1
EOS
chmod a+x signal_cmd
$seunicefix signal_cmd
;;
esac

```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Signal.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mktime.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_mktime.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:44 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_mktime: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mktime:

?S: This variable conditionally defines the HAS\_MKTIME symbol, which

?S: indicates to the C program that the mktime() routine is available.

?S:.

?C:HAS\_MKTIME :

?C: This symbol, if defined, indicates that the mktime routine

is

?C: available.

?C:.

?H:#\$d\_mktime HAS\_MKTIME /\*\*/

?H:.

?LINT:set d\_mktime

: see if mktime exists

set mktime d\_mktime

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mktime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: nis.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 16:17:38 ram
?RCS: patch61: ensure suitable defaults for hostcat and friends
?RCS:
?RCS: Revision 3.0.1.2 1995/03/21 08:48:34 ram
?RCS: patch52: continued fix for NeXT NIS/NetInfo handling
?RCS:
?RCS: Revision 3.0.1.1 1995/02/15 14:16:23 ram
?RCS: patch51: now correctly handles NeXT using NIS rather than NetInfo
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:24 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:passcat groupcat hostcat:
Myread Oldconfig test contains
?MAKE: -pick add $@ %<
?S:passcat:
?S: This variable contains a command that produces the text of the
?S: /etc/passwd file. This is normally "cat /etc/passwd", but can be
?S: "ypcat passwd" when NIS is used.
?S:.
?S:groupcat:
?S: This variable contains a command that produces the text of the
?S: /etc/group file. This is normally "cat /etc/group", but can be
?S: "ypcat group" when NIS is used.
?S:.
?S:hostcat:
?S: This variable contains a command that produces the text of the
?S: /etc/hosts file. This is normally "cat /etc/hosts", but can be
?S: "ypcat hosts" when NIS is used.
?S:.
: see if we have to deal with yellow pages, now NIS.
?X: NeXT gives us some fun here, as always, by having both NIS (former YP)
?X: and NetInfo. But since it has both, it's ok to put the test inside the if.
?X: Contributed by Thomas Neumann <tom@smart.bo.open.de>.
if $test -d /usr/etc/yp || $test -d /etc/yp || $test -d /usr/lib/yp; then
if $test -f /usr/etc/nibindd; then
echo
" "
echo "I'm fairly confident you're on a NeXT."
@if passcat || groupcat

```

```

echo " "
rp='Do you get the passwd file via NetInfo?'
dflt=y
case "$passcat" in
nidump*) ;;
") ;;
*) dflt=n;;
esac
. ./myread
case "$ans" in
y*) passcat='nidump passwd .'
@if groupcat
echo "(Assuming /etc/group is also distributed.)"
groupcat='nidump group .'
@end
;;
*) echo "You told me, so don't blame me."
case "$passcat" in
nidump*) passcat="
@if groupcat
groupcat="";;
@end
esac
@if groupcat
echo "(Assuming /etc/group is handled the same way.)"
@end
;;
esac
@end
@if hostcat
echo " "
rp='Do you get the hosts file via NetInfo?'
dflt=y
case "$hostcat" in
nidump*) ;;
") ;;
*) dflt=n;;
esac
. ./myread
case "$ans" in
y*) hostcat='nidump hosts .';;
*) case "$hostcat" in
nidump*) hostcat="";;
esac
;;
esac
@end
fi

```

```

@if passcat || groupcat
case "$passcat" in
nidump*) ;;
*)
case "$passcat" in
*yecat*) dflt=y;;
")
if $contains '\+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the passwd file via yellow pages?'
./myread
case "$ans" in
y*) passcat='yecat passwd'
@if groupcat
echo "(Assuming /etc/group is also distributed.)"
groupcat='yecat group'
@end
;;
*) passcat='cat /etc/passwd'
@if groupcat
echo "(Assuming /etc/group is also local.)"
groupcat='cat /etc/group'
@end
;;
esac
;;
esac
@end
@if hostcat
case "$hostcat" in
nidump*) ;;
*)
case "$hostcat" in
*yecat*) dflt=y;;
") if $contains '\+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "

```

rp='Are you getting the hosts file via yellow pages?'

```
./myread
case "$ans" in
y*) hostcat='ypcat hosts';;
*) hostcat='cat /etc/hosts';;
esac
;;
esac
@end
fi
?X: Ensure suitable default -- Manoj Srivastava
case "$hostcat" in
") hostcat=':
$test -f /etc/hosts && hostcat='cat
/etc/hosts';;
esac
case "$groupcat" in
") groupcat=':
$test -f /etc/group && groupcat='cat /etc/group';;
esac
case "$passcat" in
") passcat=':
$test -f /etc/passwd && passcat='cat /etc/passwd';;
esac
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/nis.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: randfunc.U,v 3.0 1993/08/18 12:09:39 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: randfunc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This is the new unit that should be used when random

?X: functions are to be used. It thus makes randbits.U obsolete.

?X:

?X: This unit gives a simple #define for Drand01, which produces  
?X: doubles in the range [0,1) using the "best" random number  
?X: generator available. The source should just call Drand01  
?X: and not worry about the underlying  
implementation.

?X: Andy Dougherty July 1998

?X:

?MAKE:randfunc drand01 seedfunc randbits randseedtype: \  
Compile Myread Csym ccflags  
?MAKE: -pick add \$@ %<  
?S:randfunc:  
?S: Indicates the name of the random number function to use.  
?S: Values include drand48, random, and rand. In C programs,  
?S: the 'Drand01' macro is defined to generate uniformly distributed  
?S: random numbers over the range [0., 1.[ (see drand01 and nrand).  
?S:.  
?S:drand01:  
?S: Indicates the macro to be used to generate normalized  
?S: random numbers. Uses randfunc, often divided by  
?S: (double) (((unsigned long) 1 << randbits)) in order to  
?S: normalize the result.  
?S: In C programs, the macro 'Drand01' is mapped to drand01.  
?S:.  
?S:randseedtype:  
?S: Indicates the type of the argument of the seedfunc.  
?S:.  
?S:seedfunc:  
?S: Indicates the random number generating seed function.  
?S: Values include srand48, srandom, and srand.  
?S:.  
?S:randbits:  
?S: Indicates how many bits are produced by the function used to  
?S: generate  
normalized random numbers.  
?S:.  
?C:RANDFUNC:  
?C: This symbol defines the random function used to define Drand01().  
?C:.  
?C:Drand01:  
?C: This macro is to be used to generate uniformly distributed  
?C: random numbers over the range [0., 1.[. You may have to supply  
?C: an 'extern double drand48();' in your program since SunOS 4.1.3  
?C: doesn't provide you with anything relevant in its headers.  
?C: See HAS\_DRAND48\_PROTO.  
?C:.  
?C:Rand\_seed\_t:  
?C: This symbol defines the type of the argument of the  
?C: random seed function.

?C:.

?C:seedDrand01:

?C: This symbol defines the macro to be used in seeding the

?C: random number generator (see Drand01).

?C:.

?C:RANDBITS:

?C: This symbol indicates how many bits are produced by the

?C: function used to generate normalized random numbers.

?C: Values include 15, 16, 31, and 48.

?C:.

?H:#define RANDFUNC \$randfunc /\*\*/

?H:#define Drand01() \$drand01 /\*\*/

?H:#define Rand\_seed\_t \$randseedtype /\*\*/

?H:#define seedDrand01(x) \$seedfunc((Rand\_seed\_t)x) /\*\*/

?H:#define

RANDBITS \$randbits /\*\*/

?H:.

?LINT:change ccflags

?LINT:unclosed \$randbits))"

: How can we generate normalized random numbers ?

echo " "

echo "Using our internal random number implementation..." >&4

case "\$ccflags" in

\*-Dmy\_rand=|\*-Dmy\_srand=\*)

echo "Removing obsolete -Dmy\_rand, -Dmy\_srand, and -Drandbits from ccflags." >&4

ccflags="`echo \$ccflags | sed -e 's/-Dmy\_rand=random/ /'"

ccflags="`echo \$ccflags | sed -e 's/-Dmy\_srand=srandom/ /'"

ccflags="`echo \$ccflags | sed -e 's/-Drandbits=[0-9][0-9]\*/ /'"

::

esac

randfunc=Perl\_drand48

drand01="Perl\_drand48()"

seedfunc="Perl\_drand48\_init"

randbits=48

randseedtype=U32

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/randfunc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorhtml1dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorhtml1dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorhtml1dir vendorhtml1direxp installvendorhtml1dir: html1dir Getfile \  
 Setprefixvar Oldconfig Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorhtml1dir:

?S: This variable contains the name of the directory for html

?S: pages. It may have a ~ on the front.

?S: The standard distribution will put nothing in this

directory.

?S: Vendors who distribute perl may wish to place their own

?S: html pages in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorhtml1direxp:

?S: This variable is the ~name expanded version of vendorhtml1dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorhtml1dir="

?S:installvendorhtml1dir:

?S: This variable is really the same as vendorhtml1direxp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installvendorhtml1dir

: Set the vendorhtml1dir variables

case "\$vendorprefix" in

) vendorhtml1dir="

vendorhtml1direxp="

;;

\*) : determine where vendor-supplied html pages go.

: There is no standard location, so try to copy the previously-selected

: directory structure for the core html pages.

: XXX Better default suggestions would be welcome.

case "\$vendorhtml1dir"

in

) dflt=`echo "\$html1dir" | \$sed "s#^\$prefix#\$vendorprefix#" ` ;

\*) dflt=\$vendorhtml1dir ;;



```

esac
case "$dflt" in
'|' ) dflt=none ;;
esac
fn=dn+~
rp='Pathname for the vendor-supplied html pages?'
./getfile
vendorhtml1dir="$ans"
vendorhtml1direxp="$sansexp"
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorhtml1dir" = "X" && vendorhtml1dir=' '
prefixvar=vendorhtml1dir
./installprefix

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorhtml1dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: siteprefix.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: siteprefix.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:siteprefix siteprefixexp +oldsiteprefix: Getfile Loc Oldconfig cat package prefix

?MAKE: -pick add \$@ %<

?S:siteprefix:

?S: This variable holds the full absolute path of the directory below

?S: which the user will install add-on packages.

?S: See INSTALL for usage and examples.

?S:.

?S:siteprefixexp:

?S: This variable holds the full absolute path of the

directory below

?S: which the user will install add-on packages. Derived from siteprefix.

?S:.

?S:oldsiteprefix:

?S: This variable is set non-null if the siteprefix was previously defined  
?S: and gets set to a new value. Used internally by Configure only.  
?S:.  
: Set the siteprefix variables  
\$cat <<EOM

After \$package is installed, you may wish to install various add-on modules and utilities. Typically, these add-ons will be installed under \$prefix with the rest of this package. However, you may wish to install such add-ons elsewhere under a different prefix.

If you do not wish to put everything under a single prefix, that's ok. You will be prompted for the individual locations; this siteprefix is only used to suggest the defaults.

The default should be fine for most people.

```
EOM
fn=d~+
rp='Installation prefix to use for add-on modules and utilities?'
: XXX Here might be another good place for an installstyle setting.
case "$siteprefix" in
") dflt=$prefix ;;
*) dflt=$siteprefix
;;
esac
./getfile
: XXX Prefixit unit does not yet support siteprefix and vendorprefix
oldsiteprefix="
case "$siteprefix" in
") ;;
*) case "$ans" in
"$prefix") ;;
*) oldsiteprefix="$prefix";;
esac
;;
esac
siteprefix="$ans"
siteprefixexp="$ansexp"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/siteprefix.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_strtoq: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtoq:  
?S: This variable conditionally defines the HAS\_STRTOQ symbol, which  
?S: indicates to the C program that the strtouq() routine is available.  
?S:.  
?C:HAS\_STRTOQ:  
?C: This symbol, if defined, indicates that the strtouq routine is  
?C: available to convert strings to long longs (quads).  
?C:.  
?H:#\$d\_strtoq HAS\_STRTOQ /\*\*/  
?H:.  
?LINT:set d\_strtoq  
: see if strtouq exists  
set strtouq d\_strtoq  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_strtoq.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sitelib.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$  
?RCS:  
?RCS: Copyright (c) 1996-1998, Andy Dougherty  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: sitelib.U,v \$  
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera  
?RCS: Initial revision  
?RCS:  
?RCS: Revision 3.0.1.1 1997/02/28 16:21:35 ram  
?RCS: patch61: created  
?RCS:  
?MAKE:sitelib sitelibexp installsitelib sitelib\_stem: cat Getfile Oldconfig \  
Setprefixvar Prefixit package version sed installstyle siteprefix  
?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitelib="

?S:sitelib:

?S: This variable contains the eventual value of the SITELIB symbol,

?S: which is the name of the private library for this package. It may

?S: have a ~ on the front. It is up to the makefile to eventually create

?S: this directory while performing installation (with ~ substitution).

?S: The standard distribution will put nothing in this directory.

?S: After perl has been installed, users may install their own local

?S: architecture-independent modules in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitelibexp="

?S:sitelibexp:

?S: This variable is the ~name expanded version of sitelib, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installsitelib="

?S:installsitelib:

?S: This variable is really the same as sitelibexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?S:sitelib\_stem:

?S: This variable is \$sitelibexp with any trailing version-specific component

?S: removed.

The elements in inc\_version\_list (inc\_version\_list.U) can

?S: be tacked onto this variable to generate a list of directories to search.

?S:.

?C:SITELIB:

?C: This symbol contains the name of the private library for this package.

?C: The library is private in the sense that it needn't be in anyone's

?C: execution path, but it should be accessible by the world. The program

?C: should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: After perl has been installed, users may install their own local

?C: architecture-independent modules in this directory with

?C: MakeMaker Makefile.PL

?C: or equivalent. See INSTALL for details.

?C:.

?C:SITELIB\_EXP:

?C: This symbol contains the ~name expanded version of SITELIB, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?C:SITELIB\_STEM:

?C: This define is SITELIB\_EXP with any trailing version-specific component

```

?C: removed. The elements in
inc_version_list (inc_version_list.U) can
?C: be tacked onto this variable to generate a list of directories to search.
?C:.
?H:#define SITELIB "$sitelib" /**/
?H:#define SITELIB_EXP "$sitelibexp" /**/
?H:#define SITELIB_STEM "$sitelib_stem" /**/
?H:.
?T:prog
?LINT:change prefixvar
?LINT:set installsitelib
?LINT:set sitelib
?LINT:set sitelibexp
: determine where site specific libraries go.
: Usual default is /usr/local/lib/perl5/site_perl/$version
: The default "style" setting is made in installstyle.U
: XXX No longer works with Prefixit stuff.
?X: remove any trailing -3.0 or other version identification
prog=`echo $package | $sed 's/-*[0-9.]*$//`
case "$sitelib" in
") case "$installstyle" in
*lib/perl5*) dflt=$siteprefix/lib/$package/site_$prog/$version ;;
*) dflt=$siteprefix/lib/site_$prog/$version ;;
esac
;;
*) dflt="$sitelib"
;;
esac
$cat <<EOM

```

The installation process will create a directory for site-specific extensions and modules. Most users find it convenient to place all site-specific files in this directory rather than in the main distribution directory.

```

EOM
fn=d~+
rp='Pathname for the site-specific library files?'
./getfile
prefixvar=sitelib
./setprefixvar
sitelib_stem=`echo "$sitelibexp" | sed "s,/$version$,,"`

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/sitelib.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: uidtype.U,v $
?RCS: Revision 3.0.1.3 1994/08/29 16:33:25 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0.1.2 1994/06/20 07:09:36 ram
?RCS: patch30: comment for uidtype referred to the obsoleted symbol
?RCS:
?RCS: Revision 3.0.1.1 1994/05/13 15:28:27 ram
?RCS: patch27: made conform to its gidtype.U companion
?RCS: patch27: question now explicitly mentions getuid()
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:56 ram
?RCS: Baseline for dist
3.0 netwide release.
?RCS:
?MAKE:uidtype: Myread Typedef Findhdr
?MAKE: -pick add $@ %<
?S:uidtype:
?S: This variable defines Uid_t to be something like uid_t, int,
?S: ushort, or whatever type is used to declare user ids in the kernel.
?S:.
?C:Uid_t (UIDTYPE):
?C: This symbol holds the type used to declare user ids in the kernel.
?C: It can be int, ushort, uid_t, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Uid_t $uidtype /* UID type */
?H:.
?T:xxx
: see what type uids are declared as in the kernel
set uid_t uidtype xxx stdio.h sys/types.h
eval $typedef
case "$uidtype" in
xxx)
xxx=`./findhdr sys/user.h`
set `grep '_ruid;' "$xxx" 2>/dev/null` unsigned short
```

```

case $1 in
unsigned) dflt="$1 $2" ;;
*) dflt="$1" ;;
esac
;;
*) dflt="$uidtype";;
esac
echo " "
rp="What is the type for user ids returned by getuid()?"
./myread
uidtype="$ans"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/uidtype.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: prefix.U,v \$

?RCS: Revision 3.0.1.2 1995/01/30 14:44:05 ram

?RCS: patch49: new prefixexp variable holding a fully expanded prefix

?RCS: patch49: save off previous prefix value in oldprefix if changed (WED)

?RCS: patch49: added the INSTALLPREFIX define for C programs to use (WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:31:34 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:prefix prefixexp +oldprefix: Getfile Loc Oldconfig

cat package

?MAKE: -pick add \$@ %<

?S:prefix:

?S: This variable holds the name of the directory below which the

?S: user will install the package. Usually, this is /usr/local, and

?S: executables go in /usr/local/bin, library stuff in /usr/local/lib,

?S: man pages in /usr/local/man, etc. It is only used to set defaults

?S: for things in bin.U, mansrc.U, privlib.U, or scriptdir.U.

?S:.

```

?S:prefixexp:
?S: This variable holds the full absolute path of the directory below
?S: which the user will install the package. Derived from prefix.
?S:.
?S:oldprefix:
?S: This variable is set non-null if the prefix was previously defined
?S: and gets set to a new value. Used internally by Configure only.
?S:.
?C:INSTALLPREFIX:
?C: This symbol contains the name of the install prefix for this package.
?C:.
?H:#define INSTALLPREFIX "$prefix" /**/
?H:.
: determine root of directory hierarchy where package will be installed.
case "$prefix" in
")
dflt=`./loc . /usr/local /usr/local /local /opt
/usr`
;;
*)
dflt="$prefix"
;;
esac
$cat <<EOM

```

By default, \$package will be installed in \$dflt/bin, manual pages under \$dflt/man, etc..., i.e. with \$dflt as prefix for all installation directories. Typically set to /usr/local, but you may choose /usr if you wish to install \$package among your system binaries. If you wish to have binaries under /bin but manual pages under /usr/local/man, that's ok: you will be prompted separately for each of the installation directories, the prefix being only used to set the defaults.

```

EOM
fn=d~
rp='Installation prefix to use?'
./getfile
oldprefix=""
case "$prefix" in
") ;;
*)
case "$ans" in
"$prefix") ;;
*) oldprefix="$prefix";;
esac
;;
esac

```



```
prefix="$ans"
prefixexp="$ansexp"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/prefix.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_xdrs.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_xdrs.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:04 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_xdrs: cat Csym Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_xdrs:
```

```
?S: This symbol conditionally defines HAS_XDRS which indicates to the C
```

```
?S: program that XDR serialization routines are available.
```

```
?S:.
```

```
?C:HAS_XDRS (XDRS):
```

```
?C: This symbol if defined indicates to the C program that the XDR
```

```
?C: serialization routines are available to transfer data
```

```
across
```

```
?C: various architectures.
```

```
?C:.
```

```
?H:#$d_xdrs HAS_XDRS /**/
```

```
?H:.
```

```
?LINT:set d_xdrs
```

```
: see if XDR is available
```

```
echo " "
```

```
if set xdr_int val -f d_xdrs; eval $csym; $val; then
```

```
echo "Ahh! You have XDR routines for network communications." >&4
```

```
val="$define"
```

```
else
```

```
$cat >&4 <<EOM
```

```
Sigh! You do not have XDR routines -- Network communications may be hazardous.
```

```
EOM
```

```
val="$undef"
```

```
fi
```

```
set d_xdrs
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_xdrs.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorbin.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999, Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: vendorbin.U,v $
```

```
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
```

```
?RCS: Initial revision
```

```
?RCS:
```

```
?MAKE:d_vendorbin vendorbin vendorbinexp installvendorbin: Getfile \
Setprefixvar Oldconfig Prefixit vendorprefix
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:vendorbin:
```

```
?S: This variable contains the eventual value of the VENDORBIN symbol.
```

```
?S: It may have a ~ on the front.
```

```
?S: The standard distribution will put nothing in this directory.
```

```
?S: Vendors who distribute perl
```

```
may wish to place additional
```

```
?S: binaries in this directory with
```

```
?S: MakeMaker Makefile.PL INSTALLDIRS=vendor
```

```
?S: or equivalent. See INSTALL for details.
```

```
?S:.
```

```
?S:vendorbinexp:
```

```
?S: This variable is the ~name expanded version of vendorbin, so that you
```

```
?S: may use it directly in Makefiles or shell scripts.
```

```
?S:.
```

```
?D:installvendorbin="
```

```
?S:installvendorbin:
```

```
?S: This variable is really the same as vendorbinexp but may differ on
```

```
?S: those systems using AFS. For extra portability, only this variable
```

```
?S: should be used in makefiles.
```

```
?S:.
```

```
?S:d_vendorbin:
```

```
?S: This variable conditionally defines PERL_VENDORBIN.
```

?S:.

?C:PERL\_VENDORBIN:

?C: If defined, this symbol contains the name of a directory

?C: for holding vendor-supplied executables.

?C: It may have a ~ on the front.

?C: The standard distribution will put nothing in this directory.

?C: Vendors who distribute perl may wish to place additional

?C: binaries in this directory with

?C: MakeMaker Makefile.PL INSTALLDIRS=vendor

?C: or equivalent.

See INSTALL for details.

?C:.

?C:PERL\_VENDORBIN\_EXP:

?C: This symbol contains the ~name expanded version of VENDORBIN, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?H:#\$d\_vendorbin PERL\_VENDORBIN "\$vendorbin" /\*\*/

?H:#\$d\_vendorbin PERL\_VENDORBIN\_EXP "\$vendorbinexp" /\*\*/

?H:.

?LINT:change prefixvar

?LINT:set installvendorbin

: Set the vendorbin variables

case "\$vendorprefix" in

) d\_vendorbin="\$undef"

vendorbin="

vendorbinexp="

;;

\*) d\_vendorbin="\$define"

: determine where vendor-supplied executables go.

case "\$vendorbin" in

) dflt=\$vendorprefix/bin ;;

\*) dflt="\$vendorbin" ;;

esac

fn=d~+

rp='Pathname for the vendor-supplied executables directory?'

./getfile

vendorbin="\$ans"

vendorbinexp="\$ansexp"

;;

esac

prefixvar=vendorbin

./installprefix

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorbin.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_systwgcf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_systwgcf.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_systwgcf: Inhdr
?MAKE: -pick add $@ %<
?S:i_systwgcf:
?S: This variable conditionally defines the I_SYS_TWG_CF symbol, and
?S: indicates whether a C program should include sys/twg_config.h.
?S:.
?C:I_SYS_TWG_CF:
?C: This symbol, if defined, indicates to the C program that it should
?C: include sys/twg_config.h.
?C:.
?H:#$i_systwgcf
I_SYS_TWG_CF /**/
?H:.
?LINT:set i_systwgcf
: see if this is a sys/twg_config.h system
set sys/twg_config.h i_systwgcf
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_systwgcf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endprotoent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_endprotoent_r endprotoent_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
```

?S:d\_endprotoent\_r:  
 ?S: This variable conditionally defines the HAS\_ENDPROTOENT\_R symbol,  
 ?S: which indicates to the C program that the endprotoent\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S:endprotoent\_r\_proto:  
 ?S: This variable encodes the prototype of endprotoent\_r.  
 ?S: It is zero if d\_endprotoent\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endprotoent\_r  
 ?S: is defined.  
 ?S:.  
 ?C:HAS\_ENDPROTOENT\_R:  
 ?C: This symbol, if defined, indicates that the endprotoent\_r  
 routine  
 ?C: is available to endprotoent re-entrantly.  
 ?C:.  
 ?C:ENDPROTOENT\_R\_PROTO:  
 ?C: This symbol encodes the prototype of endprotoent\_r.  
 ?C: It is zero if d\_endprotoent\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endprotoent\_r  
 ?C: is defined.  
 ?C:.  
 ?H:#\$d\_endprotoent\_r HAS\_ENDPROTOENT\_R /\*\*/  
 ?H:#define ENDPROTOENT\_R\_PROTO \$endprotoent\_r\_proto /\*\*/  
 ?H:.  
 ?T:try hdrs d\_endprotoent\_r\_proto  
 : see if endprotoent\_r exists  
 set endprotoent\_r d\_endprotoent\_r  
 eval \$inlibc  
 case "\$d\_endprotoent\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
 case "\$d\_endprotoent\_r\_proto:\$susetheads" in  
 ":define") d\_endprotoent\_r\_proto=define  
 set d\_endprotoent\_r\_proto endprotoent\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_endprotoent\_r\_proto" in  
 define)  
 case "\$endprotoent\_r\_proto" in  
 "|0) try='int endprotoent\_r(struct protoent\_data\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && endprotoent\_r\_proto=I\_D ;;  
 esac  
 case "\$endprotoent\_r\_proto"  
 in  
 "|0) try='void endprotoent\_r(struct protoent\_data\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && endprotoent\_r\_proto=V\_D ;;

```

esac
case "$endprotoent_r_proto" in
"|0) d_endprotoent_r=undef
endprotoent_r_proto=0
echo "Disabling endprotoent_r, cannot determine prototype." >&4 ;;
*) case "$endprotoent_r_proto" in
REENTRANT_PROTO*) ;;
*) endprotoent_r_proto="REENTRANT_PROTO_$endprotoent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endprotoent_r has no prototype, not using it." >&4 ;;
esac
d_endprotoent_r=undef
endprotoent_r_proto=0
;;
esac
;;
*) endprotoent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/threads/d\_endprotoent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sigsetmk.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sigsetmk.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:23 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sigsetmk: Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_sigsetmk:

?S: This variable conditionally defines the HAS\_SIGSETMASK symbol, which

?S: indicates to the C program that the sigsetmask() routine is available

```

?S: to set current signal mask.
?S:.
?C:HAS_SIGSETPMASK (SIGSETPMASK):
?C: This symbol, if defined, indicates that the sigsetmask()
    routine is
?C: available to set current signal mask. Otherwise, you should probably
?C: emulate this by using signal(), but fear race conditions...
?C:.
?H:#$d_sigsetmk HAS_SIGSETPMASK /**/
?H:.
?LINT:set d_sigsetmk
: see if sigsetmask exists
echo " "
if set sigsetmask val -f d_sigsetmk; eval $csym; $val; then
echo 'sigsetmask() found.' >&4
val="$define"
else
echo "sigsetmask() not found -- We'll use signal()." >&4
val="$undef"
fi
set d_sigsetmk
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_sigsetmk.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Typedef.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 13:42:07 ram

?RCS: patch56: added backslash escapes within evals to prevent space problems

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:01:16 ram

?RCS: patch36: don't clobber visible 'val' variable, use 'varval' instead

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:05:14 ram

?RCS: patch32: created

?RCS:

?X:

?X: This unit checks for the definition of a given typedef.

?X:

?X: To use it, say:

?X: set typedef val\_t default [includes]

?X: eval \$typedef

?X:

?MAKE:Typedef:

```
cppstdin cppminus cppflags rm contains Oldconfig
```

?MAKE: -pick add \$@ %<

?F:!temp.c

?LINT:define typedef

?V:typedef

?S:typedef:

?S: This shell variable is used internally by Configure to check

?S: whether a given typedef is defined or not. A typical use is:

?S: set typedef val\_t default [includes]

?S: eval \$typedef

?S: That will return val\_t set to default if the typedef was not found,

?S: to typedef otherwise. If no includes are specified, look in sys/types.h.

?S:.

?T:type var def inclist varval inc

: define an is-a-typedef? function

```
typedef='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;
```

```
case "$inclist" in
```

```
"" ) inclist="sys/types.h";;
```

```
esac;
```

```
eval "varval=\$$var";
```

```
case "$varval" in
```

```
"" )
```

```
  $rm -f temp.c;
```

```
  for inc in $inclist; do
```

```
    echo "#include <$inc>" >>temp.c;
```

```
  done;
```

```
  $cppstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;
```

```
  if $contains $type temp.E >/dev/null 2>&1; then
```

```
    eval "$var=\$type";
```

```
  else
```

```
    eval "$var=\$def";
```

```
  fi;
```

```
  $rm -f temp.?.;
```

```
*) eval
```

```
  "$var=\$varval";;
```

```
esac'
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/dist/U/Typedef.U



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sysconf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_sysconf.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:15:57 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_sysconf: Inlibc
?MAKE: -pick add $@ %<
?S:d_sysconf:
?S: This variable conditionally defines the HAS_SYSCONF symbol, which
?S: indicates to the C program that the sysconf() routine is available
?S: to determine system related limits and options.
?S:.
?C:HAS_SYSCONF:
?C: This
symbol, if defined, indicates that sysconf() is available
?C: to determine system related limits and options.
?C:.
?H:#$d_sysconf HAS_SYSCONF /**/
?H:.
?LINT:set d_sysconf
: see if sysconf exists
set sysconf d_sysconf
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sysconf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_hypot: Inlibc
?MAKE: -pick add $@ %<
?S:d_hypot:
```

?S: This variable conditionally defines HAS\_HYPOT if hypot is available

?S: for numerically stable hypotenuse function.

?S:.

?C:HAS\_HYPOT:

?C: This symbol, if defined, indicates that the hypot routine is

?C: available to do the hypotenuse function.

?C:.

?H:#\$d\_hypot HAS\_HYPOT /\*\*/

?H:.

?LINT:set d\_hypot

: see if hypot exists

set hypot d\_hypot

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_hypot.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_ilogbl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ilogbl:

?S: This variable conditionally defines the HAS\_ILOGBL symbol, which

?S: indicates to the C program that the ilogbl() routine is available

?S: for extracting the exponent of long double x as a signed integer.

?S: If scalbnl is also present we can emulate frexpl.

?S:.

?C:HAS\_ILOGBL:

?C: This symbol, if defined, indicates that the ilogbl routine is

?C: available. If scalbnl is also present we can emulate frexpl.

?C:.

?H:#\$d\_ilogbl HAS\_ILOGBL /\*\*/

?H:.

?LINT:set d\_ilogbl

: see if ilogbl exists

set ilogbl d\_ilogbl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_ilogbl.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_msgctl.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgctl.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:38 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_msgctl: Inlibc
?MAKE: -pick add $@ %<
?S:d_msgctl:
?S: This variable conditionally defines the HAS_MSGCTL symbol, which
?S: indicates to the C program that the msgctl() routine is available.
?S:.
?C:HAS_MSGCTL:
?C: This symbol, if defined, indicates that the msgctl() routine is
?C: available to perform message control operations.
?C:.
?H:#$d_msgctl
HAS_MSGCTL /**/
?H:.
?LINT:set d_msgctl
: see if msgctl exists
set msgctl d_msgctl
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_msgctl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setpgrp2.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
```

?RCS:  
?RCS: \$Log: d\_setpgrp2.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:10 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setpgrp2: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setpgrp2:  
?S: This variable conditionally defines the HAS\_SETPGRP2 symbol, which  
?S: indicates to the C program that the setpgrp2() (as in DG/UX) routine  
?S: is available to set the current process group.  
?S:.  
?C:HAS\_SETPGRP2 (SETPGRP2):  
?C: This symbol, if defined, indicates that the  
setpgrp2() (as in DG/UX)  
?C: routine is available to set the current process group.  
?C:.  
?H:#\$d\_setpgrp2 HAS\_SETPGRP2 /\*\*/  
?H:.  
?LINT:set d\_setpgrp2  
: see if setpgrp2 exists  
set setpgrp2 d\_setpgrp2  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setpgrp2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Filexp.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 15:52:53 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: added HOME to the ?T: line since metalint now checks \${HOME}  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:03:00 ram  
?RCS: patch23: made sure error status from csh is propagated (WED)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which will expand filenames beginning

?X:

with tildes. The script is deleted at the end of Configure.

?X:

?MAKE:Filexp: startsh sed test expr eunicefix

?MAKE: -pick add \$@ %<

?F:./filexp

?T:HOME LOGDIR dir me name failed

: set up shell script to do ~ expansion

cat >filexp <<EOSS

\$startsh

: expand filename

?X:

?X: The case entries below escape the ~ as some shells have shown expansion

?X: of the ~ during here-doc processing.

?X:

case "\$1" in

\~/\*\(\~)

echo \ \$1 | \$sed "s|\~||\${HOME-\\$LOGDIR}|"

;;

\~\*)

if \$test -f /bin/csh; then

/bin/csh -f -c "glob \ \$1"

failed=\ \$?

echo ""

exit \ \$failed

else

name=\ \$expr x \ \$1 : '.\*\([^\~]\*\)^\`

dir=\ \$sed -n -e "/^\\${name} :/{s/^\[^:]\*:[^\:]\*:[^\:]\*:[^\:]\*:[^\:]\*:\([^\:]\*\).\*/\\$/1/" -e p -e q -e '}' </etc/passwd\`

if \$test ! -d "\ \$dir"; then

me=\ `basename \ \$0\`

echo "\ \$me: can't locate home directory for: \ \$name" >&2

exit 1

fi

case "\$1" in

\*/\*)

echo \ \$dir/\ \$expr x \ \$1 : '.\*\([^\~]\*\)^\`

;;

\*)

echo \ \$dir

;;

esac

fi

;;

\*)

```
echo \$1
;;
esac
EOSS
chmod
+x filexp
$eunicefix filexp
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Filexp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_vfork.U,v 3.0.1.6 1994/08/29 16:18:21 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_vfork.U,v $
?RCS: Revision 3.0.1.6 1994/08/29 16:18:21 ram
?RCS: patch32: set default to 'y' the first time
?RCS:
?RCS: Revision 3.0.1.5 1994/06/20 06:59:14 ram
?RCS: patch30: usevfork was not always properly set
?RCS:
?RCS: Revision 3.0.1.4 1994/05/13 15:20:56 ram
?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/05/06 14:59:09 ram
?RCS: patch23: now explicitly ask whether vfork() should be used
(ADO)
?RCS:
?RCS: Revision 3.0.1.2 1993/10/16 13:49:39 ram
?RCS: patch12: added magic for vfork()
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:06:57 ram
?RCS: patch10: removed automatic remapping of vfork on fork (WAD)
?RCS: patch10: added compatibility code for older config.sh (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:55 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_vfork usevfork d_pseudofork: Inlibc Myread Oldconfig Setvar
```

```

?MAKE: -pick add $@ %<
?S:d_vfork:
?S: This variable conditionally defines the HAS_VFORK symbol, which
?S: indicates the vfork() routine is available.
?S:.
?S:usevfork:
?S: This variable is set to true when the user accepts to use vfork.
?S: It is set to false when no vfork is available or when the user
?S: explicitly requests not to use vfork.
?S:.
?S:d_pseudofork:
?S: This variable conditionally defines the HAS_PSEUDOFORK symbol,
?S: which indicates that an emulation of the fork routine is available.
?S:.
?C:HAS_VFORK (VFORK):
?C: This
symbol, if defined, indicates that vfork() exists.
?C:.
?H:#$d_vfork HAS_VFORK /**/
?H:.
?C:HAS_PSEUDOFORK:
?C: This symbol, if defined, indicates that an emulation of the
?C: fork routine is available.
?C:.
?H:#$d_pseudofork HAS_PSEUDOFORK /**/
?H:.
?M:vfork: HAS_VFORK
?M:#ifndef HAS_VFORK
?M:#define vfork fork
?M:#endif
?M:.
?T:d_hvfork
: backward compatibility for d_hvfork
if test X$d_hvfork != X; then
d_vfork="$d_hvfork"
d_hvfork="
fi
?X:=====
: see if there is a vfork
val="
set vfork val
eval $inlibc

d_pseudofork=$undef

: Ok, but do we want to use it. vfork is reportedly unreliable in
: perl on Solaris 2.x, and probably elsewhere.
case "$val" in

```

```

$define)
echo " "
case "$usevfork" in
false) dflt='n';
*) dflt='y';;
esac
cat <<'EOM'

```

Perl can only use a vfork() that doesn't suffer from strict restrictions on calling functions or modifying global data in the child. For example, glibc-2.1 contains such a vfork() that is unsuitable. If your system provides a proper fork() call, chances are that you do NOT want perl to use vfork().

EOM

```

rp="Do you still want to use vfork()?"
. ./myread
case "$ans" in
y|Y) ;;
*)
echo "Ok, we won't use vfork()."
val="$undef"
;;
esac
;;
esac
?X:
?X: Only set it when final value is known to avoid spurious Whoa's
?X: Then set usevfork accordingly to the current value, for next run
?X:
set d_vfork
eval $setvar
case "$d_vfork" in
$define) usevfork='true';;
*) usevfork='false';;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/d_vfork.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public



```

?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_quad quadtype uquadtype quadkind: \
longsize intsize d_longlong longlongsize d_int64_t \
Inhdr Setvar
?MAKE: -pick add $@ %<
?S:d_quad:
?S: This variable, if defined, tells that there's a 64-bit integer type,
?S: quadtype.
?S:.
?S:quadtype:
?S: This variable defines Quad_t to be something like long, int,
?S: long long, int64_t, or whatever type is used for 64-bit integers.
?S:.
?S:quadkind:
?S: This variable, if defined, encodes the type of a quad:
?S: 1 = int, 2 = long, 3 = long long, 4 = int64_t.
?S:.
?S:uquadtype:
?S: This variable defines Uquad_t to be something like unsigned long,
?S: unsigned int, unsigned long long, uint64_t, or whatever type is
?S: used for 64-bit integers.
?S:.
?C:HAS_QUAD:
?C: This
symbol, if defined, tells that there's a 64-bit integer type,
?C: Quad_t, and its unsigned counterpart, Uquad_t. QUADKIND will be one
?C: of QUAD_IS_INT, QUAD_IS_LONG, QUAD_IS_LONG_LONG, QUAD_IS_INT64_T,
?C: or QUAD_IS___INT64.
?C:.
?H:#$d_quad HAS_QUAD /**/
?H:%<:#ifdef HAS_QUAD
?H:%<:# define Quad_t $quadtype /**/
?H:%<:# define Uquad_t $uquadtype /**/
?H:%<:# define QUADKIND $quadkind /**/
?H:%<:# define QUAD_IS_INT 1
?H:%<:# define QUAD_IS_LONG 2
?H:%<:# define QUAD_IS_LONG_LONG 3
?H:%<:# define QUAD_IS_INT64_T 4
?H:%<:# define QUAD_IS___INT64 5
?H:%<:#endif
?H:.
?LINT:set quadtype
?LINT:set uquadtype
: Check if 64bit ints have a quad type
echo " "
echo "Checking which 64-bit integer type we could use..." >&4
?X: We prefer quad types in order of int, long, long long, int64_t.

```

```

case "$intsize" in
8) val=int
  set quadtype
  eval $setvar
  val="unsigned int"
  set uquadtype
  eval $setvar
  quadkind=1
  ;;
*) case "$longsize" in
8)
val=long
  set quadtype
  eval $setvar
  val="unsigned long"
  set uquadtype
  eval $setvar
  quadkind=2
  ;;
*) case "$d_longlong:$longlongsize" in
define:8)
  val="long long"
  set quadtype
  eval $setvar
  val="unsigned long long"
  set uquadtype
  eval $setvar
  quadkind=3
  ;;
*) case "$d_int64_t" in
define)
  val=int64_t
  set quadtype
  eval $setvar
  val=uint64_t
  set uquadtype
  eval $setvar
  quadkind=4
  ;;
esac
;;
esac
;;
esac
;;
esac

```

```
case "$quadtype" in
") echo "Alas, no 64-bit integer types in sight." >&4
d_quad="$undef"
;;
*) echo "We could use '$quadtype' for 64-bit integers." >&4
d_quad="$define"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/a_dvisory/quadtype.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: h_sysfile.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

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?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

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?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: h_sysfile.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:13 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:h_sysfile: Nothing
```

```
?MAKE: -pick add $@ %<
```

```
?S:h_sysfile:
```

```
?S: This is variable gets set in various places to tell i_sys_file that
```

```
?S: <sys/file.h> should be included.
```

```
?S:.
```

```
: Initialize h_sysfile
```

```
h_sysfile=false
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/h_sysfile.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

?RCS:  
?MAKE:d\_sqrtl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_sqrtl:  
?S: This variable conditionally defines the HAS\_SQRTL symbol, which  
?S: indicates to the C program that the sqrtl() routine is available.  
?S:.  
?C:HAS\_SQRTL:  
?C: This symbol, if defined, indicates that the sqrtl routine is  
?C: available to do long double square roots.  
?C:.  
?H:#\$d\_sqrtl HAS\_SQRTL /\*\*/  
?H:.  
?LINT:set d\_sqrtl  
: see if sqrtl exists  
set sqrtl d\_sqrtl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_sqrtl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_copysign: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_copysign:

?S: This variable conditionally defines the HAS\_COPYSIGN symbol, which

?S: indicates to the C program that the copysign() routine is available.

?S:.

?C:HAS\_COPYSIGN:

?C: This symbol, if defined, indicates that the copysign routine is

?C: available to do the copysign function.

?C:.

?H:#\$d\_copysign HAS\_COPYSIGN /\*\*/  
?H:.

?LINT:set d\_copysign

: see if copysign exists

set copysign d\_copysign

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_copysign.U

No license file was found, but licenses were detected in source scan.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_closedir.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:31:26 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:11:18 ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:21 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_closedir d\_void\_closedir: Inlibc i\_dirent i\_sysdir i\_sysndir \  
cc ccflags ldflags libs Setvar rm

?MAKE: -pick

add \$@ %<

?S:d\_closedir:

?S: This variable conditionally defines HAS\_CLOSEDIR if closedir() is

?S: available.

?S:.

?C:HAS\_CLOSEDIR:

?C: This symbol, if defined, indicates that the closedir() routine is

?C: available.

?C:.

?H:#\$d\_closedir HAS\_CLOSEDIR /\*\*/

?H:.

?S:d\_void\_closedir:

?S: This variable conditionally defines VOID\_CLOSEDIR if closedir()

?S: does not return a value.

?S:.

?C:VOID\_CLOSEDIR:

?C: This symbol, if defined, indicates that the closedir() routine

?C: does not return a value.

?C:.

```

?H:#$d_void_closedir VOID_CLOSEDIR /**/
?H:.
?F:!closedir
?LINT:set d_closedir d_void_closedir
: see if closedir exists
set closedir d_closedir
eval $inlibc

@if VOID_CLOSEDIR || d_void_closedir
?X: The following contortions are designed so we can call closedir()
?X: and check whether it returns a value. The contortions are designed
?X: to portably pick up the correct directory header, for those
?X: systems that support various mutually incompatible directory functions.
?X: This
is from perl5's perl.h
case "$d_closedir" in
"$define")
echo " "
echo "Checking whether closedir() returns a status..." >&4
cat > closedir.c <<EOM
#$i_dirent I_DIRENT /**/
#$i_sysdir I_SYS_DIR /**/
#$i_sysndir I_SYS_NDIR /**/

#if defined(I_DIRENT)
#include <dirent.h>
#if defined(NeXT) && defined(I_SYS_DIR) /* NeXT needs dirent + sys/dir.h */
#include <sys/dir.h>
#endif
#else
#ifdef I_SYS_NDIR
#include <sys/ndir.h>
#else
#ifdef I_SYS_DIR
#ifdef hp9000s500
#include <ndir.h> /* may be wrong in the future */
#else
#include <sys/dir.h>
#endif
#endif
#endif
#endif
int main() { return closedir(opendir(".")); }
EOM
if $cc $cflags $ldflags -o closedir closedir.c $libs > /dev/null 2>&1; then
if ./closedir > /dev/null 2>&1 ; then
echo "Yes, it does."
val="$undef"

```

```

else
  echo "No, it doesn't."
  val="$define"
fi
else
  echo "(I can't seem to compile the test program--assuming it doesn't)"
  val="$define"
fi
;;
*)
val="$undef";
;;
esac
set d_void_closedir
eval $setvar
$rm
-f closedir*
@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_void_closedir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_ndbm.U,v 3.0.1.1 1995/05/12 12:16:53 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: i\_ndbm.U,v \$

?RCS: Revision 3.0.1.1 1995/05/12 12:16:53 ram

?RCS: patch54: made more robust by checking both header and lib (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:23 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_ndbm i\_gdbmndbm i\_gdbm\_ndbm d\_ndbm d\_ndbm\_h\_uses\_prototypes \

d\_gdbmndbm\_h\_uses\_prototypes d\_gdbm\_ndbm\_h\_uses\_prototypes: \

Inhdr Inlibc Setvar test d\_cplusplus extern\_C echo Protochk

?MAKE: -pick add \$@ %<

?S:i\_ndbm:

?S: This

variable conditionally defines the I\_NDBM symbol, which

?S: indicates to the C program that <ndbm.h> exists and should  
?S: be included.

?S:.

?C:I\_NDBM:

?C: This symbol, if defined, indicates that <ndbm.h> exists and should  
?C: be included.

?C:.

?S:i\_gdbmndbm:

?S: This variable conditionally defines the I\_GDBMNDBM symbol, which

?S: indicates to the C program that <gdbm/ndbm.h> exists and should  
?S: be included. This was the location of the ndbm.h compatibility file  
?S: in RedHat 7.1.

?S:.

?C:I\_GDBMNDBM:

?C: This symbol, if defined, indicates that <gdbm/ndbm.h> exists and should  
?C: be included. This was the location of the ndbm.h compatibility file  
?C: in RedHat 7.1.

?C:.

?S:i\_gdbm\_ndbm:

?S: This variable conditionally defines the I\_GDBM\_NDBM symbol, which

?S: indicates to the C program that <gdbm-ndbm.h> exists and should  
?S: be included. This is the location of the ndbm.h compatibility file  
?S: in Debian 4.0.

?S:.

?C:I\_GDBM\_NDBM:

?C: This symbol, if defined, indicates  
that <gdbm-ndbm.h> exists and should  
?C: be included. This is the location of the ndbm.h compatibility file  
?C: in Debian 4.0.

?C:.

?S:d\_ndbm:

?S: This variable conditionally defines the HAS\_NDBM symbol, which

?S: indicates that both the ndbm.h include file and an appropriate ndbm  
?S: library exist. Consult the different i\_\*ndbm variables  
?S: to find out the actual include location. Sometimes, a system has the  
?S: header file but not the library. This variable will only be set if  
?S: the system has both.

?S:.

?C:HAS\_NDBM:

?C: This symbol, if defined, indicates that some form of ndbm.h or compatibility  
?C: include exists, along with the appropriate library.

?C:.

?S:d\_ndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the NDBM\_H\_USES\_PROTOTYPES symbol,  
?S: which indicates that the ndbm.h include file uses real ANSI C  
?S: prototypes instead of K&R style function declarations. K&R style  
?S: declarations are unsupported in C++, so the include file requires



?S: special handling  
when using a C++ compiler and this variable is

?S: undefined. Consult the different `d_*ndbm_h_uses_prototypes` variables

?S: to get the same information for alternative `ndbm.h` include files.

?S:.

?C:NDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that `<ndbm.h>` uses real ANSI C  
?C: prototypes instead of K&R style function declarations without any  
?C: parameter information. While ANSI C prototypes are supported in C++,  
?C: K&R style function declarations will yield errors.

?C:.

?S:d\_gdbmndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the `NDBM_H_USES_PROTOTYPES` symbol,  
?S: which indicates that the `gdbm/ndbm.h` include file uses real ANSI C  
?S: prototypes instead of K&R style function declarations. K&R style  
?S: declarations are unsupported in C++, so the include file requires  
?S: special handling when using a C++ compiler and this variable is  
?S: undefined. Consult the different `d_*ndbm_h_uses_prototypes` variables  
?S: to get the same information for alternative  
`ndbm.h` include files.

?S:.

?C:GDBMNDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that `<gdbm/ndbm.h>` uses real ANSI C  
?C: prototypes instead of K&R style function declarations without any  
?C: parameter information. While ANSI C prototypes are supported in C++,  
?C: K&R style function declarations will yield errors.

?C:.

?S:d\_gdbm\_ndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the `NDBM_H_USES_PROTOTYPES` symbol,  
?S: which indicates that the `gdbm-ndbm.h` include file uses real ANSI C  
?S: prototypes instead of K&R style function declarations. K&R style  
?S: declarations are unsupported in C++, so the include file requires  
?S: special handling when using a C++ compiler and this variable is  
?S: undefined. Consult the different `d_*ndbm_h_uses_prototypes` variables  
?S: to get the same information for alternative `ndbm.h` include files.

?S:.

?C:GDBM\_NDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that `<gdbm-ndbm.h>` uses real ANSI C  
?C: prototypes  
instead of K&R style function declarations without any  
?C: parameter information. While ANSI C prototypes are supported in C++,  
?C: K&R style function declarations will yield errors.

?C:.

?H:#\$i\_ndbm I\_NDBM /\*\*/  
?H:#\$i\_gdbmndbm I\_GDBMNDBM /\*\*/  
?H:#\$i\_gdbm\_ndbm I\_GDBM\_NDBM /\*\*/  
?H:#\$d\_ndbm HAS\_NDBM /\*\*/  
?H:#\$d\_ndbm\_h\_uses\_prototypes NDBM\_H\_USES\_PROTOTYPES /\*\*/

```

?H:#$d_gdbmndbm_h_uses_prototypes GDBMNDBM_H_USES_PROTOTYPES /**/
?H:#$d_gdbm_ndbm_h_uses_prototypes GDBM_NDBM_H_USES_PROTOTYPES /**/
?H:
?T:d_dbm_open name hdr ihdr ndbm_hdr_protochk
?LINT:set d_ndbm d_gdbmndbm_h_uses_prototypes d_gdbm_ndbm_h_uses_prototypes
d_ndbm_h_uses_prototypes
: see if ndbm.h is available
set ndbm.h i_ndbm
eval $inhdr
: Compatibility location for RedHat 7.1
set gdbm/ndbm.h i_gdbmndbm
eval $inhdr
: Compatibility location for Debian 4.0
set gdbm-ndbm.h i_gdbm_ndbm
eval $inhdr

val="$undef"
if $test "$i_ndbm" = "$define" -o "$i_gdbmndbm" = "$define" -o "$i_gdbm_ndbm" = "$define"; then
: see if dbm_open exists
set
dbm_open d_dbm_open
eval $inlibc
case "$d_dbm_open" in
$undef)
i_ndbm="$undef"
i_gdbmndbm="$undef"
i_gdbm_ndbm="$undef"
echo "We won't be including <ndbm.h>"
val="$undef"
;;
*) val="$define"
;;
esac
fi
set d_ndbm
eval $setvar

ndbm_hdr_protochk='name=$1; hdr=$2;
eval "ihdr=\${i}_$name";
val="$undef";
if $test "$ihdr" = "$define"; then
$echo "Checking if your <$hdr> uses prototypes..." >&4;
case "$d_cplusplus" in
$define) ./protochk "$extern_C void dbm_close(DBM *);" literal "extern \"C\" { \"$ihdr $hdr literal }" &&
val="$define" ;;
*) ./protochk "$extern_C void dbm_close(int, int);" $ihdr $hdr || val="$define" ;;
esac;
case "$val" in

```

```
$define) $echo "Your <$hdr> seems to have prototypes";;
*) $echo "Your <$hdr> does not seem to have prototypes";;
esac;
fi;
set "d_{$name}_h_uses_prototypes";
eval $setvar'
```

```
set ndbm ndbm.h
eval $ndbm_hdr_protochk
set gdbmndbm gdbm/ndbm.h
eval $ndbm_hdr_protochk
set gdbm_ndbm gdbm-ndbm.h
eval $ndbm_hdr_protochk
```

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_ndbm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Instruct.U,v 3.0.1.3 1997/02/28 15:02:55 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Instruct.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:02:55 ram

?RCS: patch61: logname / whoami sequence rewritten to use case

?RCS:

?RCS: Revision 3.0.1.2 1995/02/15 14:11:34 ram

?RCS: patch51: author name now appears at the end of the paragraph (WED)

?RCS:

?RCS: Revision 3.0.1.1 1995/01/11 15:12:05 ram

?RCS: patch45: now documents the & escape to turn -d on at the read prompt

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:04 ram

?RCS: Baseline for

dist 3.0 netwide release.

?RCS:

?X:

?X: This unit spew out the directions that we want everyone to read. I try to

?X: keep the first "pagefull" much less than a page since they don't know it

?X: isn't going to go shooting off the top of the screen, and we don't want

```

?X: to panic them yet.
?X:
?MAKE:Instruct: Myread Configdir Devel contains
?MAKE: -pick wipe $@ %<
?T:user needman firsttime
: general instructions
needman=true
firsttime=true
user=`(logname) 2>/dev/null`
case "$user" in
") user=`whoami 2>&1`;;
esac
if $contains "^$user$" ../.config/instruct >/dev/null 2>&1; then
firsttime=false
echo " "
rp='Would you like to see the instructions?'
dflt=n
. ./myread
case "$ans" in
[yY]*) ;;
*) needman=false;;
esac
fi
if $needman; then
cat <<EOH

```

This installation shell script will examine your system and ask you questions to determine how the <PACKAGENAME> package should be installed. If you get stuck on a question, you may use a ! shell escape to start a subshell or execute a command. Many of the questions will have default answers in square brackets; typing carriage return will give you the default.

On some of the questions which ask for file or directory names you are allowed to use the ~name construct to specify the login directory belonging to "name", even if you don't have a shell which knows about that. Questions where this is allowed will be marked "(~name ok)".

```

EOH
rp="
dflt='Type carriage return to continue'
. ./myread
cat <<'EOH'

```

The prompter used in this script allows you to use shell variables and backticks in your answers. You may use \$1, \$2, etc... to refer to the words in the default answer, as if the default line was a set of arguments given to a script shell. This means you may also use \$\* to repeat the whole default line,

so you do not have to re-type everything to add something to the default.

Every time there is a substitution, you will have to confirm. If there is an error (e.g. an unmatched backtick), the default answer will remain unchanged and you will be prompted again.

If you are in a hurry, you may run 'Configure -d'. This will bypass nearly all the questions and use the computed defaults (or the previous answers if there was already a config.sh file). Type 'Configure -h' for a list of options. You may also start interactively and then answer '& -d' at any prompt to turn on the non-interactive behaviour for the remainder of the execution.

EOH

```
./myread
cat <<EOH
```

Much effort has been expended to ensure that this shell script will run on any Unix system. If despite that it blows up on yours, your best bet is to edit Configure and run it again. If you can't run Configure for some reason, you'll have to generate a config.sh file by hand. Whatever problems you have, let me (<MAINTLOC>) know how I blew it.

This installation script affects things in two ways:

- 1) it may do direct variable substitutions on some of the files included in this kit.
- 2) it builds a config.h file for inclusion in C programs. You may edit any of these files as the need arises after running this script.

If you make a mistake on a question, there is no easy way to back up to it currently. The easiest thing to do is to edit config.sh and rerun all the SH files. Configure will offer to let you do this before it runs the SH files.

EOH

```
?X: In case they played with the prompter...
dflt='Type carriage return to continue'
./myread
case "$firsttime" in
true) echo $user >>../config/instruct;;
esac
fi
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Instruct.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysstat.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysstat.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:48:30 ram
?RCS: patch61: created
?RCS:
?MAKE:i_sysstat: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysstat:
?S: This variable conditionally defines the I_SYS_STAT symbol,
?S: and indicates whether a C program should include <sys/stat.h>.
?S:.
?C:I_SYS_STAT (I_SYSSTAT):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/stat.h>.
?C:.
?H:#$i_sysstat I_SYS_STAT /**/
?H:.
?LINT:set
i_sysstat
: see if sys/stat.h is available
set sys/stat.h i_sysstat
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_sysstat.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: sig_name.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
```

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sig\_name.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 16:21:25 ram

?RCS: patch61: brand new algorithm for sig\_name and (new!) sig\_num

?RCS:

?RCS: Revision 3.0.1.4 1995/07/25 14:14:54 ram

?RCS: patch56: added <asm/signal.h> lookup for Linux

?RCS:

?RCS: Revision 3.0.1.3 1995/05/12 12:24:11 ram

?RCS: patch54: now looks for <linux/signal.h> too (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/06/20 07:06:57 ram

?RCS: patch30: final echo was missing to close  
awk-printed string

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:17:55 ram

?RCS: patch23: signal list now formatted to avoid scroll-ups (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:47 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:sig\_name sig\_name\_init sig\_num sig\_num\_init sig\_count sig\_size: \  
awk Signal Oldconfig rm

?MAKE: -pick add \$@ %<

?S:sig\_name:

?S: This variable holds the signal names, space separated. The leading  
?S: SIG in signal name is removed. A ZERO is prepended to the list.

?S: This is currently not used, sig\_name\_init is used instead.

?S:.

?S:sig\_name\_init:

?S: This variable holds the signal names, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NAME definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0. The leading SIG in signal names  
?S: is removed. See sig\_num.

?S:.

?S:sig\_num:

?S: This variable holds the signal numbers, space separated. A ZERO is  
?S: prepended  
?S: to the list (corresponding to the fake SIGZERO).

?S: Those numbers correspond to the value of the signal listed  
?S: in the same place within the sig\_name list.

?S: This is currently not used, sig\_num\_init is used instead.

?S:.

?S:sig\_num\_init:

?S: This variable holds the signal numbers, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NUM definition

?S: below. A "ZERO" is prepended to the list, and the list is terminated with a plain 0.

?S:.

?S:sig\_count (sig\_name.U):

?S: This variable holds a number larger than the largest valid signal number. This is usually the same as the NSIG macro.

?S:.

?S:sig\_size:

?S: This variable contains the number of elements of the sig\_name and sig\_num arrays.

?S:.

?C:SIG\_NAME:

?C: This symbol contains a list of signal names in order of signal number. This is intended to be used as a static array initialization, like this:

?C: char \*sig\_name[] = { SIG\_NAME };

?C: The signals in the list are separated with commas, and each signal is surrounded by double quotes. There is no leading SIG in the signal name, i.e. SIGQUIT is known as "QUIT".

?C: Gaps in the signal numbers (up to NSIG) are filled in with NUMnn, etc., where nn is the actual signal number (e.g. NUM37).

?C: The signal number for sig\_name[i] is stored in sig\_num[i].

?C: The last element is 0 to terminate the list with a NULL. This corresponds to the 0 at the end of the sig\_name\_init list.

?C: Note that this variable is initialized from the sig\_name\_init, not from sig\_name (which is unused).

?C:.

?C:SIG\_NUM:

?C: This symbol contains a list of signal numbers, in the same order as the SIG\_NAME list. It is suitable for static array initialization, as in:

?C: int sig\_num[] = { SIG\_NUM };

?C: The signals in the list are separated with commas, and the indices within that list and the SIG\_NAME list match, so it's easy to compute the signal name from a number or vice versa at the price of a small dynamic linear lookup.

?C: Duplicates are allowed, but are moved to the end of the list.

?C: The signal number corresponding to sig\_name[i] is sig\_number[i].

?C: if (i < NSIG) then sig\_number[i] == i.

?C: The last element is 0, corresponding to the 0 at the end of the sig\_name\_init list.

?C: Note that this variable is initialized from the sig\_num\_init, not from sig\_num (which is unused).

?C:.

?C:SIG\_COUNT:

?C: This variable contains a number larger than the largest signal number. This is usually the same as the NSIG macro.



```

?C:.
?C:SIG_SIZE:
?C: This variable contains the number of elements of the SIG_NAME
?C: and SIG_NUM arrays, excluding the final NULL entry.
?C:.
?H:#define SIG_NAME $sig_name_init /**/
?H:#define SIG_NUM $sig_num_init /**/
?H:#define SIG_COUNT $sig_count /**/
?H:#define SIG_SIZE $sig_size /**/
?H:.
?T:i doinit
?F:!= !signal_cmd
?X: signal.cmd creates a file signal.lst which has two columns:
?X: NAME number, e.g.
?X: HUP 1
?X: The list is
sorted on signal number, with duplicates moved to
?X: the end..
: generate list of signal names
case "$sig_num_init" in
")
echo " "
case "$sig_name_init" in
") doinit=yes ;;
*) case "$sig_num_init" in
"|*,*) doinit=yes ;;
esac ;;
esac
case "$doinit" in
yes)
echo "Generating a list of signal names and numbers..." >&4
./signal_cmd
sig_count=`$awk '/^NSIG/ { printf "%d", $2 }' signal.lst`
sig_name=`$awk 'BEGIN { printf "ZERO " }
!/^NSIG/ { printf "%s ", $1 }' signal.lst`
sig_num=`$awk 'BEGIN { printf "0 " }
!/^NSIG/ { printf "%d ", $2 }' signal.lst`
sig_name_init=`$awk 'BEGIN { printf "\"ZERO\", " }
!/^NSIG/ { printf "\"%s\", ", $1 }
END { printf "0\n" }' signal.lst`
sig_num_init=`$awk 'BEGIN { printf "0, " }
!/^NSIG/ { printf "%d, ", $2 }
END { printf "0\n" }' signal.lst`
;;
esac
echo "The following $sig_count signals are available:"
echo " "
echo $sig_name | $awk \

```

```
'BEGIN { linelen = 0 }
{
for (i = 1; i <= NF; i++) {
name
= "SIG" $i " "
linelen = linelen + length(name)
if (linelen > 70) {
printf "\n"
linelen = length(name)
}
printf "%s", name
}
printf "\n"
}'
sig_size=`echo $sig_name | awk '{print NF}'`
$rm -f signal signal.c signal.awk signal.lst signal_cmd
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/sig_name.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_preadv.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_preadv.U,v \$

?RCS:

?MAKE:d\_preadv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_preadv:

?S: This variable conditionally defines the HAS\_PREADV symbol, which

?S: indicates to the C program that the preadv() routine is available.

?S:.

?C:HAS\_PREADV :

?C: This symbol, if defined, indicates that the preadv routine is

?C: available to perform vectored reads on a file descriptor at a

?C: given offset.

?C:.

?H:#\$d\_preadv HAS\_PREADV /\*\*/

```
?H:
?LINT:set d_preadv
:
  see if preadv exists
set preadv d_preadv
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_preadv.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_grp.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:20 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_grp: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_grp:
```

```
?S: This variable conditionally defines the I_GRP symbol, and indicates
```

```
?S: whether a C program should include <grp.h>.
```

```
?S:.
```

```
?C:I_GRP:
```

```
?C: This symbol, if defined, indicates to the C program that it should
```

```
?C: include <grp.h>.
```

```
?C:.
```

```
?H:#$i_grp I_GRP /**/
```

```
?H:.
```

```
?LINT:set i_grp
```

```
: see if this is an grp system
```

```
set grp.h i_grp
```

```
eval $inhdr
```

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_grp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: cf_name.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: cf_name.U,v $
?RCS: Revision 3.0.1.2 1994/05/06 14:29:36 ram
?RCS: patch23: fixed user name computation from /etc/passwd in bsd systems
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:05:11 ram
?RCS: patch16: created
?RCS:
?RCS:
?MAKE:+cf_name: cf_by passcat Filexp nametype cat test
?MAKE: -pick add $@ %<
?S:cf_name:
?S: Full name of the person who ran the Configure script and
answered the
?S: questions. This can be used by units that require the user's full name.
?S: This variable is for internal use only.
?S:.
?T:xxx fn NAME
: figure out their full name
case "$NAME" in
") case "$nametype" in
other)
fn=`./filexp ~/.fullname`
xxx=usg
$test -f $fn && xxx=other
;;
*)
xxx="$nametype"
;;
esac

case "$xxx" in
bsd)
cf_name=`$passcat | grep "^$cf_by:" | \
sed -e 's/^[^:]*:[^:]*:[^:]*:[^:]*\([^:]*\):.*\1/' \
```

```

-e 's/.*//'^
;;
usg)
cf_name=`$passcat | grep "^$cf_by:" | \
sed -e 's/^[^:]*:[^:]*:[^:]*:[^:]*\([^:]*\)::*\1/' \
-e 's/[^-]*-\(.*\)(.*)\1/'
;;
*)
cf_name=`$cat $fn`
;;
esac
;;
*)
cf_name="$NAME"
;;
esac

```

?X:

?X: In the original unit, Graham asked for the user name, in case the above  
?X: code was unable to figure it out correctly. Since now cf\_name has been  
?X: made an internal variable only (i.e. it is not saved in config.sh), letting  
?X: the user override the computed default each time would be a pain.

?X:

Therefore, I have decided to trust the above code to get it right, and for  
?X: those rare cases where it will fail, too bad :-)--RAM.

?X:

echo " "

echo "Pleased to meet you, \$cf\_name."

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cf\_name.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: basicshell.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: basicshell.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:25 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:basicshell: Getfile Oldconfig bash csh ksh sh

```

?MAKE: -pick add $@ %<
?S:basicshell:
?S: This variable contains the eventual value of the BASICSHELL symbol,
?S: which contains the full name of the basic script shell on this
?S: system. Usual values are /bin/sh, /bin/ksh, /bin/csh.
?S:.
?C:BASICSHELL:
?C: This symbol contains the
full name of the basic script shell on this
?C: system. Usual values are /bin/sh, /bin/ksh, /bin/csh.
?C:.
?H:#define BASICSHELL "$basicshell" /**/
?H:.
: find the most basic shell for scripts
echo " "
case "$basicshell" in
")
case "$sh $bash $csh $ksh" in
*/sh*) dflt="$sh" ;;
*/ksh*) dflt="$ksh" ;;
*/csh*) dflt="$csh" ;;
*/bash*) dflt="$bash" ;;
*) dflt='/bin/sh' ;;
esac
;;
*)
dflt="$basicshell";;
esac
fn=f
rp="Give the full path name of the most basic shell used on your system"
./getfile
basicshell=$ans

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/basicshell.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 3.0.

?RCS:

```

?MAKE:sitehtml3dir sitehtml3direxp installsitehtml3dir: Getfile \
Setprefixvar prefix siteprefix html3dir sed
?MAKE: -pick add $@ %<
?Y:TOP
?D:sitehtml3dir="
?S:sitehtml3dir:
?S: This variable contains the name of the directory in which site-specific
?S: library html source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S: The standard distribution will put nothing in this directory.
?S: After
perl has been installed, users may install their own local
?S: library html pages in this directory with
?S: MakeMaker Makefile.PL
?S: or equivalent. See INSTALL for details.
?S:.
?D:sitehtml3direxp="
?S:sitehtml3direxp:
?S: This variable is the same as the sitehtml3dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installsitehtml3dir="
?S:installsitehtml3dir:
?S: This variable is really the same as sitehtml3direxp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: html3direxp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set installsitehtml3dir
?LINT:set sitehtml3dir
?LINT:set sitehtml3direxp
: determine where add-on library html pages go
: There is no standard location, so try to copy the previously-selected
: directory structure for the core html pages.
case
"$sitehtml3dir" in
") dflt=`echo "$html3dir" | $sed "s#^$prefix#siteprefix#"` ;;
*) dflt=$sitehtml3dir ;;
esac
case "$dflt" in
"| ") dflt=none ;;
esac
fn=dn+~
rp='Pathname where the site-specific library html pages should be installed?'
./getfile
prefixvar=sitehtml3dir

```

./setprefixvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/sitehtml3dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memmove.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memmove.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_memmove: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memmove:

?S: This variable conditionally defines the HAS\_MEMMOVE symbol, which

?S: indicates to the C program that the memmove() routine is available

?S: to copy potentially overlapping blocks of memory.

?S:.

?C:HAS\_MEMMOVE:

?C: This symbol, if defined, indicates that the memmove routine  
is available

?C: to copy potentially overlapping blocks of memory. This should be used

?C: only when HAS\_SAFE\_BCOPY is not defined. If neither is there, roll your

?C: own version.

?C:.

?H:#\$d\_memmove HAS\_MEMMOVE /\*\*/

?H:.

?LINT:set d\_memmove

: see if memmove exists

set memmove d\_memmove

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_memmove.U

No license file was found, but licenses were detected in source scan.

/\*



```
* $Id: dup2.C,v 3.0.1.1 1994/01/24 13:58:37 ram Exp ram $
*
* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
*
* You may redistribute only under the terms of the Artistic Licence,
* as specified in the README file that comes with the distribution.
* You may reuse parts of this distribution only within the terms of
* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*
* Original Author: Larry Wall <lwall@netlabs.com>
*
* $Log: dup2.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:37 ram
* patch16: created
*
*/
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/lib/C/fake/dup2.C
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sigsetjmp.U,v 3.0.1.1 1997/02/28 15:44:33 ram Exp $
?RCS:
?RCS: Copyright (c) 1996,1998 Andy Dougherty
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_sigsetjmp.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:44:33 ram
?RCS: patch61: created
?RCS:
?MAKE:d_sigsetjmp: Compile Setvar cat rm_try run i_stdlib
?MAKE: -pick add $@ %<
?S:d_sigsetjmp:
?S: This variable conditionally defines the HAS_SIGSETJMP symbol,
?S: which
indicates that the sigsetjmp() routine is available to
?S: call setjmp() and optionally save the process's signal mask.
```

?S:.

?C:HAS\_SIGSETJMP:

?C: This variable indicates to the C program that the sigsetjmp()

?C: routine is available to save the calling process's registers

?C: and stack environment for later use by siglongjmp(), and

?C: to optionally save the process's signal mask. See

?C: Sigjmp\_buf, Sigsetjmp, and Siglongjmp.

?C:.

?C:Sigjmp\_buf:

?C: This is the buffer type to be used with Sigsetjmp and Siglongjmp.

?C:.

?C:Sigsetjmp:

?C: This macro is used in the same way as sigsetjmp(), but will invoke

?C: traditional setjmp() if sigsetjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?C:Siglongjmp:

?C: This macro is used in the same way as siglongjmp(), but will invoke

?C: traditional longjmp() if siglongjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?H:%<:#\$d\_sigsetjmp HAS\_SIGSETJMP /\*\*/

?H:%<:#ifdef HAS\_SIGSETJMP

?H:%<:#define Sigjmp\_buf sigjmp\_buf

?H:%<:#define Sigsetjmp(buf,save\_mask)

sigsetjmp((buf),(save\_mask))

?H:%<:#define Siglongjmp(buf,retval) siglongjmp((buf),(retval))

?H:%<:#else

?H:%<:#define Sigjmp\_buf jmp\_buf

?H:%<:#define Sigsetjmp(buf,save\_mask) setjmp((buf))

?H:%<:#define Siglongjmp(buf,retval) longjmp((buf),(retval))

?H:%<:#endif

?H:.

?W:%<:Sigjmp\_buf Sigsetjmp Siglongjmp

?F:!try

?LINT:set d\_sigsetjmp

: see if sigsetjmp exists

?X: We can't check for these symbols with Inlibc because sigsetjmp

?X: is (sometimes? always?) a macro under GCC

echo " "

case "\$d\_sigsetjmp" in

")

\$cat >try.c <<EOP

#include <setjmp.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

```
sigjmp_buf env;
int set = 1;
int main()
{
  if (sigsetjmp(env,1))
    exit(set);
  set = 0;
  siglongjmp(env, 1);
  exit(1);
}
```

EOP

```
set try
if eval $compile; then
  if $run ./try >/dev/null 2>&1; then
    echo "POSIX sigsetjmp found." >&4
    val="$define"
  else
    $cat >&4 <<EOM
```

Uh-Oh! You have POSIX sigsetjmp and siglongjmp, but they do not work properly!!

I'll

ignore them.

EOM

```
  val="$undef"
fi
else
  echo "sigsetjmp not found." >&4
  val="$undef"
fi
;;
*) val="$d_sigsetjmp"
case "$d_sigsetjmp" in
  $define) echo "POSIX sigsetjmp found." >&4;;
  $undef) echo "sigsetjmp not found." >&4;;
esac
;;
esac
set d_sigsetjmp
eval $setvar
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_sigsetjmp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getopt.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_getopt.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:13 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_getopt: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getopt:  
?S: This variable conditionally defines the HAS\_GETOPT symbol, which  
?S: indicates that the getopt() routine exists. The getopt() routine  
?S: parses command line options in a standard fashion.  
?S:.  
?C:HAS\_GETOPT (GETOPT):  
?C: This symbol, if defined, indicates that the getopt() routine  
exists.  
?C:.  
?H:#\$d\_getopt HAS\_GETOPT /\*\*/  
?H:.  
?LINT:set d\_getopt  
: see if getopt exists  
set getopt d\_getopt  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getopt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Tye McQueen <tye@metronet.com>  
?RCS:  
?RCS: \$Log: d\_stdstdio.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:46:32 ram

?RCS: patch61: merged with perl5's unit

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 14:06:54 ram

?RCS: patch56: typo fix on ?C: line for FILE\_bufsiz

?RCS: patch56: fixed unbalanced parenthesis (ADO)

?RCS: patch56: check whether FILE\_cnt and FILE\_ptr can be assigned to (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1995/05/12 12:12:11 ram

?RCS: patch54: complete rewrite by Tye McQueen  
to fit modern systems

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_stdstdio d\_stdiobase stdio\_ptr stdio\_cnt stdio\_base \  
stdio\_bufsiz d\_stdio\_cnt\_lval d\_stdio\_ptr\_lval stdio\_filbuf: cat \  
+cc +ccflags contains +ldflags +libs rm\_try \  
Setvar Findhdr Oldconfig

?MAKE: -pick add \$@ %<

?S:d\_stdstdio:

?S: This variable conditionally defines USE\_STDIO\_PTR if this system  
?S: has a FILE structure declaring usable \_ptr and \_cnt fields (or  
?S: equivalent) in stdio.h.

?S:.

?S:stdio\_ptr:

?S: This variable defines how, given a FILE pointer, fp, to access the  
?S: \_ptr field (or equivalent) of stdio.h's FILE structure. This will  
?S: be used to define the macro FILE\_ptr(fp).

?S:.

?S:d\_stdio\_ptr\_lval:

?S: This variable conditionally defines STDIO\_PTR\_LVALUE if the  
?S: FILE\_ptr macro can be used as an lvalue.

?S:.

?S:stdio\_cnt:

?S: This variable defines how, given a FILE pointer, fp, to access the  
?S: \_cnt field (or equivalent) of  
stdio.h's FILE structure. This will  
?S: be used to define the macro FILE\_cnt(fp).

?S:.

?S:d\_stdio\_cnt\_lval:

?S: This variable conditionally defines STDIO\_CNT\_LVALUE if the  
?S: FILE\_cnt macro can be used as an lvalue.

?S:.

?S:stdio\_filbuf:

?S: This variable defines how, given a FILE pointer, fp, to tell  
?S: stdio to refill it's internal buffers (?). This will  
?S: be used to define the macro FILE\_filbuf(fp).

?S:.

?S:d\_stdiobase:

?S: This variable conditionally defines USE\_STDIO\_BASE if this system

?S: has a FILE structure declaring a usable \_base field (or equivalent)

?S: in stdio.h.

?S:.

?S:stdio\_base:

?S: This variable defines how, given a FILE pointer, fp, to access the

?S: \_base field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_base(fp).

?S:.

?S:stdio\_bufsiz:

?S: This variable defines how, given a FILE pointer, fp, to determine

?S: the number of bytes store in the I/O buffer pointer to by the

?S: \_base field (or equivalent) of stdio.h's

FILE structure. This will

?S: be used to define the macro FILE\_bufsiz(fp).

?S:.

?C:USE\_STDIO\_PTR ~ d\_stdstdio (USE\_STD\_STDIO STDSTDIO):

?C: This symbol is defined if the \_ptr and \_cnt fields (or similar)

?C: of the stdio FILE structure can be used to access the stdio buffer

?C: for a file handle. If this is defined, then the FILE\_ptr(fp)

?C: and FILE\_cnt(fp) macros will also be defined and should be used

?C: to access these fields.

?C:.

?C:FILE\_ptr:

?C: This macro is used to access the \_ptr field (or equivalent) of the

?C: FILE structure pointed to by its argument. This macro will always be

?C: defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_PTR\_LVALUE:

?C: This symbol is defined if the FILE\_ptr macro can be used as an

?C: lvalue.

?C:.

?C:FILE\_cnt:

?C: This macro is used to access the \_cnt field (or equivalent) of the

?C: FILE structure pointed to by its argument. This macro will always be

?C: defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_CNT\_LVALUE:

?C: This symbol is defined

if the FILE\_cnt macro can be used as an

?C: lvalue.

?C:.

?C:FILE\_filbuf:

?C: This macro is used to access the internal stdio \_filbuf function

?C: (or equivalent), if STDIO\_CNT\_LVALUE and STDIO\_PTR\_LVALUE

?C: are defined. It is typically either \_filbuf or \_\_filbuf.

?C: This macro will only be defined if both STDIO\_CNT\_LVALUE and

```

?C: STDIO_PTR_LVALUE are defined.
?C:.
?H:?d_stdstdio:#$d_stdstdio USE_STDIO_PTR /**/
?H:?d_stdstdio:#ifdef USE_STDIO_PTR
?H:#define FILE_ptr(fp) $stdio_ptr
?H:#$d_stdstdio_ptr_lval STDIO_PTR_LVALUE /**/
?H:#define FILE_cnt(fp) $stdio_cnt
?H:#$d_stdstdio_cnt_lval STDIO_CNT_LVALUE /**/
?H:?d_stdstdio:#if defined(STDIO_PTR_LVALUE) && defined(STDIO_CNT_LVALUE)
?H:#define FILE_filbuf(fp) $stdio_filbuf /**/
?H:?d_stdstdio:#endif
?H:?d_stdstdio:#endif
?H:.
?W:d_stdstdio:FILE_ptr FILE_cnt FILE_filbuf
?C:USE_STDIO_BASE ~ d_stdiobase:
?C: This symbol is defined if the _base field (or similar) of the
?C: stdio FILE structure can be used to access the stdio buffer
?C: for
?C: a file handle. If this is defined, then the FILE_base(fp) macro
?C: will also be defined and should be used to access this field.
?C: Also, the FILE_bufsiz(fp) macro will be defined and should be used
?C: to determine the number of bytes in the buffer. USE_STDIO_BASE
?C: will never be defined unless USE_STDIO_PTR is.
?C:.
?C:FILE_base:
?C: This macro is used to access the _base field (or equivalent) of the
?C: FILE structure pointed to by its argument. This macro will always be
?C: defined if USE_STDIO_BASE is defined.
?C:.
?C:FILE_bufsiz:
?C: This macro is used to determine the number of bytes in the I/O
?C: buffer pointed to by _base field (or equivalent) of the FILE
?C: structure pointed to its argument. This macro will always be defined
?C: if USE_STDIO_BASE is defined.
?C:.
?H:?d_stdiobase:#$d_stdiobase USE_STDIO_BASE /**/
?H:?d_stdiobase:#ifdef USE_STDIO_BASE
?H:#define FILE_base(fp) $stdio_base
?H:#define FILE_bufsiz(fp) $stdio_bufsiz
?H:?d_stdiobase:#endif
?H:.
?W:d_stdiobase:FILE_base
FILE_bufsiz
?LINT:set d_stdstdio d_stdiobase
?T:ptr_lval cnt_lval filbuf xxx
?F:!try
: see if _ptr and _cnt from stdio act std
echo " "

```

```

if $contains '_IO_fpos_t' `./findhdr stdio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from Linux.)"
case "$stdio_ptr" in
") stdio_ptr='((fp)->_IO_read_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_IO_read_end - (fp)->_IO_read_ptr)'
cnt_lval=$undef
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_IO_read_base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_IO_read_end - (fp)->_IO_read_base)';;
esac
else
case "$stdio_ptr" in
") stdio_ptr='((fp)->_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_cnt)'
cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_base)';;
esac
case
"$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_cnt + (fp)->_ptr - (fp)->_base)';;
esac
fi
: test whether _ptr and _cnt really work
echo "Checking how std your stdio is..." >&4
$cat >try.c <<EOP
#include <stdio.h>
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
int main() {

```



```

FILE *fp = fopen("try.c", "r");
char c =getc(fp);
if (
  18 <= FILE_cnt(fp) &&
  strncmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
)
  exit(0);
exit(1);
}
EOP
val="$undef"
if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1; then
  if ./try; then
    echo "Your stdio acts pretty std."
    val="$define"
  else
    echo "Your stdio isn't very std."
  fi
else
  echo "Your stdio doesn't appear very std."
fi
$rm_try
set d_stdstdio
eval $setvar

@if STDIO_PTR_LVALUE || d_stdio_ptr_lval
: Can _ptr be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$ptr_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_ptr_lval
eval
$setvar

@end

@if STDIO_CNT_LVALUE || d_stdio_cnt_lval
: Can _cnt be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$cnt_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_cnt_lval
eval $setvar

@end

```

```

@if FILE_filbuf
: How to access the stdio _filbuf or __filbuf function.
: If this fails, check how the getc macro in stdio.h works.
case "${d_stdio_ptr_lval}${d_stdio_cnt_lval}" in
${define})${define})
: Try hint value, if any, then _filbuf, __filbuf, _fill, then punt.
: _fill is for OS/2.
xxx='notok'
for filbuf in $stdio_filbuf '_filbuf(fp)' '__filbuf(fp)' '_fill(fp)'; do
$cat >try.c <<EOP
#include <stdio.h>
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#define FILE_filbuf(fp) $filbuf
int main() {
FILE *fp = fopen("try.c", "r");
int c;
c = getc(fp);
c = FILE_filbuf(fp); /* Just looking for linker errors.*/
exit(0);
}
EOP
if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1 &&
./try; then
echo "Your stdio appears to use $filbuf"
stdio_filbuf="$filbuf"
xxx='ok'
break
else
echo "Hmm. $filbuf doesn't seem to work."
fi
$rm_try
done
case "$xxx" in
notok) echo "I can't figure out how to access _filbuf"
echo "I'll just have to work around it."
d_stdio_ptr_lval="$undef"
d_stdio_cnt_lval="$undef"
;;
esac
;;
esac
@end
@if d_stdibase || USE_STDIO_BASE || FILE_base || FILE_bufsiz
: see if _base is also standard
val="$undef"
case "$d_stdstdio" in
$define)

```

```

$cat >try.c <<EOP
#include <stdio.h>
#define FILE_base(fp) $stdio_base
#define FILE_bufsiz(fp) $stdio_bufsiz
int main() {
FILE *fp = fopen("try.c", "r");
char c = getc(fp);
if (
19 <= FILE_bufsiz(fp) &&
strncmp(FILE_base(fp), "#include <stdio.h>\n", 19) == 0
)
exit(0);
exit(1);
}
EOP
if $cc $ccflags $ldflags -o try try.c $libs > /dev/null 2>&1; then
if ./try; then
echo "And its _base field acts std."
val="$define"
else
echo "But its _base field isn't std."
fi
else
echo
"However, it seems to be lacking the _base field."
fi
$rm_try
;;
esac
set d_stdibase
eval $setvar

@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_stdstdio.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getlogin.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_getlogin.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:41 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_getlogin: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getlogin:  
?S: This variable conditionally defines the HAS\_GETLOGIN symbol, which  
?S: indicates to the C program that the getlogin() routine is available  
?S: to get the login name.  
?S:.  
?C:HAS\_GETLOGIN :  
?C: This symbol,  
if defined, indicates that the getlogin routine is  
?C: available to get the login name.  
?C:.  
?H:#\$d\_getlogin HAS\_GETLOGIN /\*\*/  
?H:.  
?LINT:set d\_getlogin  
: see if getlogin exists  
set getlogin d\_getlogin  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getlogin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wait4.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_wait4.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:01 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_wait4: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wait4:

?S: This variable conditionally defines the HAS\_WAIT4 symbol, which

?S: indicates the wait4() routine is available.

?S:.

?C:HAS\_WAIT4 (WAIT4):

?C: This symbol, if defined, indicates that wait4() exists.

?C:.

?H:#\$d\_wait4 HAS\_WAIT4 /\*\*/

?H:.

?LINT:set d\_wait4

: see if there is a wait4

set

wait4 d\_wait4

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_wait4.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2008 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_ctime64 d\_localtime64 d\_gmtime64 d\_mktime64 d\_difftime64 d\_asctime64: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ctime64:

?S: This variable conditionally defines the HAS\_CTIME64 symbol, which

?S: indicates to the C program that the ctime64 () routine is available.

?S:.

?S:d\_localtime64:

?S: This variable conditionally defines the HAS\_LOCALTIME64 symbol, which

?S: indicates to the C program that the localtime64 () routine is available.

?S:.

?S:d\_gmtime64:

?S: This variable conditionally defines the HAS\_GMTIME64 symbol, which

?S: indicates to the C program that the gmtime64 () routine is available.

?S:.

?S:d\_mktime64:

?S: This variable conditionally defines the HAS\_MKTIME64 symbol, which

?S: indicates to the

C program that the mktime64 () routine is available.

?S:.

?S:d\_difftime64:

?S: This variable conditionally defines the HAS\_DIFFTIME64 symbol, which

?S: indicates to the C program that the difftime64 () routine is available.

?S:  
?S:d\_asctime64:  
?S: This variable conditionally defines the HAS\_ASCTIME64 symbol, which  
?S: indicates to the C program that the asctime64 () routine is available.  
?S:  
?C:HAS\_CTIME64:  
?C: This symbol, if defined, indicates that the ctime64 () routine is  
?C: available to do the 64bit variant of ctime ()  
?C:  
?C:HAS\_LOCALTIME64:  
?C: This symbol, if defined, indicates that the localtime64 () routine is  
?C: available to do the 64bit variant of localtime ()  
?C:  
?C:HAS\_GMTIME64:  
?C: This symbol, if defined, indicates that the gmtime64 () routine is  
?C: available to do the 64bit variant of gmtime ()  
?C:  
?C:HAS\_MKTIME64:  
?C: This symbol, if defined, indicates that the mktime64 () routine is  
?C: available to do the 64bit variant of mktime ()  
?C:  
?C:HAS\_DIFFTIME64:  
?C: This  
symbol, if defined, indicates that the difftime64 () routine is  
?C: available to do the 64bit variant of difftime ()  
?C:  
?C:HAS\_ASCTIME64:  
?C: This symbol, if defined, indicates that the asctime64 () routine is  
?C: available to do the 64bit variant of asctime ()  
?C:  
?H:#\$d\_ctime64 HAS\_CTIME64 /\*\*/  
?H:#\$d\_localtime64 HAS\_LOCALTIME64 /\*\*/  
?H:#\$d\_gmtime64 HAS\_GMTIME64 /\*\*/  
?H:#\$d\_mktime64 HAS\_MKTIME64 /\*\*/  
?H:#\$d\_difftime64 HAS\_DIFFTIME64 /\*\*/  
?H:#\$d\_asctime64 HAS\_ASCTIME64 /\*\*/  
?H:  
?LINT:set d\_ctime64 d\_localtime64 d\_gmtime64 d\_mktime64 d\_difftime64 d\_asctime64  
: see if 64bit time functions exists  
  
set ctime64 d\_ctime64  
eval \$inlibc  
  
set localtime64 d\_localtime64  
eval \$inlibc  
  
set gmtime64 d\_gmtime64  
eval \$inlibc

```
set mkttime64 d_mkttime64
eval $inlibc
```

```
set difftime64 d_difftime64
eval $inlibc
```

```
set asctime64 d_asctime64
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_timefuncs64.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_string.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_string.U,v $
```

```
?RCS: Revision 3.0.1.2 1993/10/16 13:50:12 ram
```

```
?RCS: patch12: special units Loc and Guess were missing from dependencies
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/09/13 16:07:26 ram
```

```
?RCS: patch10: removed "(Actually, this looks more like...)" messages (WAD)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:08:28 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: See if we should include <string.h> or <strings.h>
```

```
?X:
```

```
?MAKE:i_string strings:
```

```
test Setvar Findhdr Warn
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_string:
```

```
?S: This variable conditionally defines the I_STRING symbol, which
```

```
?S: indicates that <string.h> should be included rather than <strings.h>.
```

```
?S:.
```

```
?S:strings:
```

```
?S: This variable holds the full path of the string header that will be
```

```
?S: used. Typically /usr/include/string.h or /usr/include/strings.h.
```

```

?S:.
?C:I_STRING:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <string.h> (USG systems) instead of <strings.h> (BSD systems).
?C:.
?H:#$i_string I_STRING /**/
?H:.
?LINT:set i_string
: see which of string.h or strings.h is needed
echo " "
strings=`./findhdr string.h`
if $test "$strings" && $test -r "$strings"; then
echo "Using <string.h> instead of <strings.h>." >&4
val="$define"
else
val="$undef"
strings=`./findhdr strings.h`
if $test "$strings" && $test -r "$strings"; then
echo "Using <strings.h> instead of <string.h>." >&4
else
./warn "No string header found -- You'll surely
have problems."
fi
fi
set i_string
eval $setvar
case "$i_string" in
"$undef") strings=`./findhdr strings.h`;;
*) strings=`./findhdr string.h`;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/i_string.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2017, 2019, Karl Williamson

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_wctype: Inhdr

?MAKE: -pick add \$@ %<



?S:i\_wctype:  
?S: This variable conditionally defines the I\_WCTYPE symbol,  
?S: that indicates whether a C program may include <wctype.h>.  
?S:.  
?C:I\_WCTYPE:  
?C: This symbol, if defined, indicates that <wctype.h> exists.  
?C:.  
?H:#\$i\_wctype I\_WCTYPE /\*\*/  
?H:.  
?LINT:set i\_wctype  
: see if this system has wctype.h  
set wctype.h i\_wctype  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_wctype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_waitpid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_waitpid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:02 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_waitpid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_waitpid:  
?S: This variable conditionally defines HAS\_WAITPID if waitpid() is  
?S: available to wait for child process.  
?S:.  
?C:HAS\_WAITPID (WAITPID):  
?C: This symbol, if defined, indicates that the waitpid routine is  
?C: available to wait for child process.  
?C:.  
?H:#\$d\_waitpid HAS\_WAITPID /\*\*/  
?H:.  
?LINT:set  
d\_waitpid  
: see if waitpid exists

```
set waitpid d_waitpid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_waitpid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setpent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_setpent.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_setpent: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_setpent:
```

```
?S: This variable conditionally defines HAS_SETPROTOENT if setprotoent() is
```

```
?S: available.
```

```
?S:.
```

```
?C:HAS_SETPROTOENT:
```

```
?C: This symbol, if defined, indicates that the setprotoent() routine is
```

```
?C: available.
```

```
?C:.
```

```
?H:#$d_setpent HAS_SETPROTOENT /**/
```

```
?H:.
```

```
?LINT:set d_setpent
```

```
: see if setprotoent
```

```
exists
```

```
set setprotoent d_setpent
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_setpent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_isfinitel: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_isfinitel:  
?S: This variable conditionally defines the HAS\_ISFINITEL symbol, which  
?S: indicates to the C program that the isfinitel() routine is available.  
?S:.  
?C:HAS\_ISFINITEL:  
?C: This symbol, if defined, indicates that the isfinitel routine is  
?C: available to check whether a long double is finite.  
?C: (non-infinity non-NaN).  
?C:.  
?H:#\$d\_isfinitel HAS\_ISFINITEL /\*\*/  
?H:.  
?LINT:set d\_isfinitel  
: see if isfinitel exists  
set isfinitel d\_isfinitel  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_isfinitel.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mbtowc.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_mbtowc.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:30 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_mbtowc: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mbtowc:  
?S: This variable conditionally defines the HAS\_MBTOWC symbol, which  
?S: indicates to the C program that the mbtowc() routine is available  
?S: to convert multibyte to a wide character.  
?S:.

?C:HAS\_MBTOWC (MBTOWC):

?C: This symbol, if defined, indicates that the mbtowc routine is available

?C: to

convert a multibyte to a wide character.

?C:.

?H:#\$d\_mbtowc HAS\_MBTOWC /\*\*/

?H:.

?LINT:set d\_mbtowc

: see if mbtowc exists

set mbtowc d\_mbtowc

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mbtowc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mkstemp.U,v 3.0.1.1 1994/08/29 16:11:57 ram Exp \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_mkstemp.U,v \$

?RCS:

?MAKE:d\_mkstemp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkstemp:

?S: This variable conditionally defines the HAS\_MKSTEMP symbol, which

?S: indicates to the C program that the mkstemp() routine is available

?S: to exclusively create and open a uniquely named temporary file.

?S:.

?C:HAS\_MKSTEMP :

?C: This symbol, if defined, indicates that the mkstemp routine is

?C: available to exclusively create and open a uniquely named

?C: temporary file.

?C:.

?H:#\$d\_mkstemp HAS\_MKSTEMP /\*\*/

?H:.

?LINT:set d\_mkstemp

: see if mkstemp exists

set mkstemp d\_mkstemp

eval

\$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_mkstemp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysioctl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysioctl.U,v \$

?RCS: Revision 3.0.1.2 1994/05/06 15:04:57 ram

?RCS: patch23: added knowledge for <sys/filio.h> (WED)

?RCS: patch23: optimized amount of findhdr calls

?RCS:

?RCS: Revision 3.0.1.1 1993/11/10 17:36:09 ram

?RCS: patch14: now use a compiler check for TIOCNOTTY because of HP-UX 9.x

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_sysioctl i\_bsdioclt i\_sysfilio i\_syssockio

d\_voidtty: test contains \

cat i\_termio i\_termios i\_sgtty Setvar Findhdr +cc rm Inhdr

?MAKE: -pick add \$@ %<

?S:i\_sysioctl:

?S: This variable conditionally defines the I\_SYS\_IOCTL symbol, which

?S: indicates to the C program that <sys/ioctl.h> exists and should

?S: be included.

?S:.

?S:i\_sysfilio:

?S: This variable conditionally defines the I\_SYS\_FILIO symbol, which

?S: indicates to the C program that <sys/filio.h> exists and should

?S: be included in preference to <sys/ioctl.h>.

?S:.

?S:i\_bsdioclt:

?S: This variable conditionally defines the I\_SYS\_BSDIOCTL symbol, which

?S: indicates to the C program that <sys/bsdioclt.h> exists and should

?S: be included.

?S:.

?S:i\_syssockio:

?S: This variable conditionally defines I\_SYS SOCKIO to indicate to the

?S: C program that socket ioctl codes may be found in <sys/sockio.h>

?S: instead of <sys/ioctl.h>.

?S:.

?S:d\_voidtty:

?S: This variable conditionally defines USE\_IOCTLTY to indicate that the

?S: ioctl() call with TIOCNOTTY should be used

to void tty association.

?S: Otherwise (on USG probably), it is enough to close the standard file

?S: descriptors and do a setpgrp().

?S:.

?C:I\_SYS\_IOCTL (I\_SYS\_IOCTL):

?C: This symbol, if defined, indicates that <sys/ioctl.h> exists and should

?C: be included. Otherwise, include <sgtty.h> or <termio.h>.

?C:.

?C:I\_SYS\_FILIO:

?C: This symbol, if defined, indicates that <sys/filio.h> exists and

?C: should be included instead of <sys/ioctl.h>.

?C:.

?C:I\_SYS\_BSDIOCTL (I\_BSDIOCTL):

?C: This symbol, if defined, indicates that <sys/bsdioc.h> exists and should

?C: be included. Otherwise, try <sys/ioctl.h>. This is primarily intended for

?C: definitions of sockets options, like SIOCATMARK.

?C:.

?C:I\_SYS\_SOCKIO (I\_SYSSOCKIO):

?C: This symbol, if defined, indicates the <sys/sockio.h> should be included

?C: to get socket ioctl options, like SIOCATMARK.

?C:.

?C:USE\_IOCTLTY (VOIDTTY):

?C: This symbol, if defined indicate to the C program that the ioctl()

?C: call with TIOCNOTTY should be used

to void tty association.

?C: Otherwise (on USG probably), it is enough to close the standard file

?C: descriptors and do a setpgrp().

?C:.

?H:#\$i\_sysioctl I\_SYS\_IOCTL /\*\*/

?H:#\$i\_sysfilio I\_SYS\_FILIO /\*\*/

?H:#\$i\_bsdioc I\_SYS\_BSDIOCTL /\*\*/

?H:#\$i\_syssockio I\_SYS\_SOCKIO /\*\*/

?H:#\$d\_voidtty USE\_IOCTLTY /\*\*/

?H:.

?T:xxx

: see if ioctl defs are in sgtty, termio, sys/filio or sys/ioctl

?LINT:set i\_sysfilio

set sys/filio.h i\_sysfilio

eval \$inhdr

echo " "

if \$test `./findhdr sys/ioctl.h`; then

val="\$define"

echo '<sys/ioctl.h> found.' >&4

```

else
val="$undef"
if $test $i_sysfilio = "$define"; then
    echo '<sys/ioctl.h> NOT found.' >&4
else
    $test $i_sgty = "$define" && xxx="sgtty.h"
    $test $i_termio = "$define" && xxx="termio.h"
    $test $i_termios = "$define" && xxx="termios.h"
echo "No <sys/ioctl.h> found, assuming ioctl args are defined in <$xxx>." >&4
fi
fi
?LINT:set i_sysioctl
set i_sysioctl
eval $setvar

```

```

@if I_BSDIOCTL || i_bsdioclt
?X:
?X: The only machine I know where this
inclusion was necessary is a
?X: BULL DPX 5000 (a French machine).
?X:
: see if socket ioctl defs are in sys/bsdioclt or sys/ioctl
echo " "
xxx=`./findhdr sys/bsdioclt.h`
if $test "$xxx"; then
if $contains SIOCATMARK $xxx >/dev/null 2>&1; then
    val="$define"
    echo "You have socket ioctls defined in <sys/bsdioclt.h>." >&4
else
    val="$undef"
    echo "No socket ioctls found in <sys/bsdioclt.h>." >&4
fi
else
    val="$undef"
    echo "<sys/bsdioclt.h> not found, but that's ok." >&4
fi
?LINT:set i_bsdioclt
set i_bsdioclt
eval $setvar

```

```

@end
@if I_SYSSOCKIO || i_syssockio
: see if socket ioctl defs are in sys/sockio.h
echo " "
xxx=`./findhdr sys/sockio.h`
if $test "$xxx"; then
if $contains SIOCATMARK $xxx >/dev/null 2>&1; then
    val="$define"

```

```

echo "You have socket ioctls defined in <sys/sockio.h>." >&4
else
val="$undef"
echo "No socket ioctls found in <sys/sockio.h>." >&4
fi
else
val="$undef"
@if I_BSDIOCTL
case "$i_bsdiocntl" in
"$define") $cat <<EOM
<sys/sockio.h> not found, using
ioctls from <sys/bsdiocntl.h>.
EOM
;;
*) $cat <<EOM
<sys/sockio.h> not found, assuming socket ioctls are in <sys/ioctl.h>.
EOM
;;
esac
@else
$cat <<EOM
<sys/sockio.h> not found, assuming socket ioctls are in <sys/ioctl.h>.
EOM
@end
fi
?LINT:set i_syssockio
set i_syssockio
eval $setvar

@end
@if VOIDTTY || d_voidtty
: check how to void tty association
echo " "
case "$i_sysiocntl" in
"$define") xxx='sys/ioctl.h';
?X: otherwise $xxx was set during the determination of i_sysiocntl, above.
esac
?X:
?X: Can't use $contains here since HP-UX 9.x has TIOCNOTTY between a pair
?X: of #ifdef/#endif and is never actually defined. Oh well...
?X:
$cat > tcio.c <<EOM
#include <sys/types.h> /* Just in case */
#include <$xxx>

int main()
{
#ifdef TIOCNOTTY

```



```

exit(0);
#else
exit(1);
#endif
}
EOM
if ($cc -o tcio tcio.c && ./tcio) >/dev/null 2>&1; then
val="$define"
echo "TIOCNOTTY found in <$xxx>." >&4
echo "Using ioctl() call on /dev/tty to void tty association." >&4
else
val="$undef"
echo "Closing
standard file descriptors should void tty association." >&4
fi
?LINT:set d_voidtty
set d_voidtty
eval $setvar
$rm -f tcio tcio.? core

@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_sysioctl.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_fmod.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_fmod.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:12:46 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_fmod: Inlibc
?MAKE: -pick add $@ %<
?S:d_fmod:
?S: This variable conditionally defines the HAS_FMOD symbol, which
?S: indicates to the C program that the fmod() routine is available.

```

?S: See also d\_drem for the drem() routine which does roughly the same.

?S:.

?C:HAS\_FMOD

:

?C: This symbol, if defined, indicates that the fmod routine is

?C: available to compute the remainder  $r=x-n*y$  where  $n=\text{trunc}(x/y)$ .

?C:.

?H:#\$d\_fmod HAS\_FMOD /\*\*/

?H:.

?LINT:set d\_fmod

: see if fmod exists

set fmod d\_fmod

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fmod.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Protochk.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a ./protochk script that is used internally

?X: by Configure to check if this system will accept a particular

?X: prototype.

?X:

?X: To use it, say something like:

?X: hdrs="\$define sys/types.h

?X: \$i\_systime sys/time.h

?X: \$i\_sysselect sys/select.h

?X: \$d\_socket sys/socket.h"

?X: \$xxx='fd\_set \*'

?X: try='extern int select \_((int, \$xxx, \$xxx, \$xxx, struct timeval \*));'

?X: if ./protochk "\$try" \$hdrs; then

?X: echo "Your system accepts \$xxx for the arguments to select."

?X: fi

?X: (Of course select is harder, since the first arg can be int,

?X: size\_t, or unsigned long, and the last arg may or may not have a

?X: 'const' before the 'struct timeval' :-(. Also SunOS

4.1.3 doesn't

?X: provide a select prototype so the compiler accepts anything :-).

?X:

?X: The C compiler on QNX warns about invalid pointer types, but

?X: still exits with a 0 exit status, so it's not much help here.

?X: (It does correctly detect incorrect non-pointer arguments).

?X: Still, since QNX is a POSIX-ish system, just make your first

?X: a POSIX-ish one, and QNX will probably accept it.

?X:

?X: For determining argument types, your compiler must support

?X: prototypes, and the header files must use them. Determining

?X: return types, however, is easier. Just give an ridiculous

?X: return type, something like

?X: ./protochk 'extern int atof\_((void));' \$i\_stdlib stdlib.h

?X: that should surely fail if atof() is defined in <stdlib.h>

?X:

?X: There is also an 'escape' hatch built in. If you have a pair

?X: of args 'literal 'stuff' then 'stuff' gets included literally

?X: into the test program. This could be useful for doing something

?X: like

?X: hdrs="\$define stdio.h

?X: \$define

sys/types.h"

?X: ./protochk 'extern int fsetpos(FILE \*, Fpos\_t);' \$args \

?X: 'literal' '#define Fpos\_t long long'

?X: but you have to be really careful about the spaces in "literal".

?X:

?X: Andy Dougherty Feb. 1998

?MAKE:Protochk: cat rm\_try startsh eunicefix +cc +optimize +ccflags \

i\_pthread usethreads

?MAKE: -pick add \$@ %<

?F:./protochk

?X: Comfort metalint. All these are actually used in the protochk script.

?T:foo status pthread\_h\_done

?LINT: change cc optimize ccflags define rm\_try

?LINT: extern pthread\_h\_first

?LINT: change pthread\_h\_first

?LINT: change usethreads

?LINT: change i\_pthread

: define a function to check prototypes

\$cat > protochk <<EOSH

\$startsh

cc="\$cc"

optimize="\$optimize"

ccflags="\$ccflags"

define="\$define"

rm\_try="\$rm\_try"

usethreads=\$usethreads

i\_pthread=\$i\_pthread

pthread\_h\_first=\$pthread\_h\_first

EOSH

\$cat >> protochk <<'EOSH'

```

$rm_try
foo="$1"
shift
while test $# -ge 2; do
case "$1" in
  $define) echo "#include <$2>" >> try.c ;;
  literal)
echo "$2" >> try.c ;;
esac

# Extra magic for the benefit of systems that need pthread.h
# to be included early to correctly detect threadsafe functions.
# Such functions must guarantee themselves, though, that the usethreads
# and i_pthread have been defined, before calling protochk.
if test "$usethreads" = "$define" -a "$i_pthread" = "$define" -a "$pthread_h_first" = "$define" -a
"$pthread_h_done" = ""; then
echo "#include <pthread.h>" >> try.c
pthread_h_done=yes
fi
shift 2
done
cat >> try.c <<'EOCP'
#define _(args) args
EOCP
echo "$foo" >> try.c
?X: Just so we have something to compile.
echo 'int no_real_function_has_this_name _((void)) { return 0; }' >> try.c
$cc $optimize $ccflags -c try.c > /dev/null 2>&1
status=$?
$rm_try
exit $status
EOSH
chmod +x protochk
$unicefix protochk

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/protos/Protochk.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_newlocale d\_freelocale d\_uselocale d\_duplocale d\_querylocale i\_xlocale: Inlibc Inhdr

?MAKE: -pick add \$@ %<

?S:d\_newlocale:

?S: This variable conditionally defines the HAS\_NEWLOCALE symbol, which

?S: indicates to the C program that the newlocale() routine is available

?S: to return a new locale object or modify an existing locale object.

?S:.

?S:d\_freelocale:

?S: This variable conditionally defines the HAS\_FREELOCALE symbol, which

?S: indicates to the C program that the freelocale() routine is available

?S: to deallocate the resources associated with a locale object.

?S:.

?S:d\_uselocale:

?S: This variable conditionally defines the HAS\_USELOCALE symbol, which

?S: indicates to the C program that the uselocale() routine is available

?S: to set the current locale  
for the calling thread.

?S:.

?S:d\_duplocale:

?S: This variable conditionally defines the HAS\_DUPLOCALE symbol, which

?S: indicates to the C program that the duplocale() routine is available

?S: to duplicate a locale object.

?S:.

?S:d\_querylocale:

?S: This variable conditionally defines the HAS\_QUERYLOCALE symbol, which

?S: indicates to the C program that the querylocale() routine is available

?S: to return the name of the locale for a category mask.

?S:.

?S:i\_xlocale:

?S: This symbol, if defined, indicates to the C program that it should

?S: include <xlocale.h> to get uselocale() and its friends

?S:.

?C:HAS\_NEWLOCALE:

?C: This symbol, if defined, indicates that the newlocale routine is

?C: available to return a new locale object or modify an existing

?C: locale object.

?C:.

?C:HAS\_FREELOCALE:

?C: This symbol, if defined, indicates that the freelocale routine is

?C: available to deallocate the resources associated with a locale object.

?C:.

?C:HAS\_USELOCALE:

?C: This symbol, if defined,  
indicates that the uselocale routine is

?C: available to set the current locale for the calling thread.

?C:.

?C:HAS\_DUPLOCALE:

?C: This symbol, if defined, indicates that the duplocale routine is

?C: available to duplicate a locale object.

?C:.

?C:HAS\_QUERYLOCALE:

?C: This symbol, if defined, indicates that the querylocale routine is

?C: available to return the name of the locale for a category mask.

?C:  
?C:I\_XLOCALE:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <xlocale.h> to get uselocale() and its friends.

?C:  
?H:#\$d\_newlocale HAS\_NEWLOCALE /\*\*/  
?H:#\$d\_freelocale HAS\_FREELOCALE /\*\*/  
?H:#\$d\_uselocale HAS\_USELOCALE /\*\*/  
?H:#\$d\_duplocale HAS\_DUPLOCALE /\*\*/  
?H:#\$d\_querylocale HAS\_QUERYLOCALE /\*\*/  
?H:#\$i\_xlocale I\_XLOCALE /\*\*/

?H:  
?LINT:set i\_xlocale  
?LINT:set d\_newlocale  
?LINT:set d\_freelocale  
?LINT:set d\_uselocale  
?LINT:set d\_duplocale  
?LINT:set d\_querylocale  
: see if this is an xlocale.h system  
set xlocale.h i\_xlocale  
eval \$inhdr

:  
see if newlocale exists  
set newlocale d\_newlocale  
eval \$inlibc

: see if freelocale exists  
set freelocale d\_freelocale  
eval \$inlibc

: see if uselocale exists  
set uselocale d\_uselocale  
eval \$inlibc

: see if duplocale exists  
set duplocale d\_duplocale  
eval \$inlibc

: see if querylocale exists  
set querylocale d\_querylocale  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_newlocale.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_finite: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_finite:  
?S: This variable conditionally defines the HAS\_FINITE symbol, which  
?S: indicates to the C program that the finite() routine is available.  
?S:.  
?C:HAS\_FINITE:  
?C: This symbol, if defined, indicates that the finite routine is  
?C: available to check whether a double is finite (non-infinity non-NaN).  
?C:.  
?H:#\$d\_finite HAS\_FINITE /\*\*/  
?H:.  
?LINT:set d\_finite  
: see if finite exists  
set finite d\_finite  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_finite.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: MailList.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>  
?RCS:  
?RCS: \$Log: MailList.U,v \$  
?RCS: Revision 3.0.1.1 1994/01/24 14:01:49 ram  
?RCS: patch16: created  
?RCS:  
?RCS:  
?X:  
?X: This unit offers the user the option of subscribing to the mailing

?X: list. To force inclusion of this unit, you must add it's name to the  
 ?X: dependancies on the MAKE line in your private copy of End.U.  
 ?X: The address of the mailing list server must be set via a "list\_request=..."  
 ?X:  
 entry in the .package file. This is usually done by running packinit and  
 ?X: answering the proper questions.  
 ?X:  
 ?MAKE:MailList: cat mailer package Myread cf\_name cf\_email  
 ?MAKE: -pick wipe \$@ %<  
 ?T:list\_request list\_sub list\_unsub list\_name  
 ?X:  
 ?X: The cf\_name dependency is used through list\_sub when the mailing list  
 ?X: manager happens to be listserv, whereas cf\_email is used whith majordomo  
 ?X: or when the mailing list request address is scanned by a human. Since  
 ?X: they do not appear within the unit itself, we need a lint hint.  
 ?X:  
 ?LINT:use cf\_name cf\_email  
 : offer to join the mailing list  
 list\_request='<\$list\_request>'  
 list\_sub="<\$list\_sub>"  
 list\_unsub="<\$list\_unsub>"  
 list\_name="<\$list\_name>"  
 \$cat <<EOM

There is a mailing list for discussion about \$package and related issues.  
 This is the preferred place to ask questions about the program and discuss  
 modifications and additions with the author and other users. If you are able  
 to send mail to the Internet, you  
 are encouraged to subscribe. You need only  
 ever subscribe once, and you can unsubscribe automatically at any time in the  
 future. If you have already subscribed and you wish to unsubscribe now, you  
 may do so by answering "unsubscribe". Answer "subscribe" to subscribe to the  
 list.

EOM  
 rp="Subscribe to or unsubscribe from the \$list\_name mailing list?"  
 dflt=neither  
 ./myread  
 case "\$ans" in  
 [sS]\*) \$cat <<EOM

You will be sent a message from the list server to let you know when your  
 subscription has been successful and telling you how to submit articles and  
 how to unsubscribe again when necessary. You may also unsubscribe by running  
 this script again and asking it to do so for you.

EOM  
 echo "Sending mail to subscribe you to the \$list\_name list..." >&4



\$mailer \$list\_request <<EOM >/dev/null 2>&1

Precedence: junk

To: \$list\_request

\$list\_sub

EOM

::

[uU]\*) echo "Sending mail to unsubscribe you from the \$list\_name list..." >&4

\$mailer \$list\_request <<EOM >/dev/null 2>&1

Precedence: junk

To:

\$list\_request

\$list\_unsub

EOM

::

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/MailList.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endhostent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_endhostent\_r endhostent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_endhostent\_r:

?S: This variable conditionally defines the HAS\_ENDHOSTENT\_R symbol,

?S: which indicates to the C program that the endhostent\_r()

?S: routine is available.

?S:.

?S:endhostent\_r\_proto:

?S: This variable encodes the prototype of endhostent\_r.

?S: It is zero if d\_endhostent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endhostent\_r

?S: is defined.

?S:.

?C:HAS\_ENDHOSTENT\_R:

?C: This symbol, if defined, indicates that the endhostent\_r routine

?C: is

```

available to endhostent re-entrantly.
?C:.
?C:ENDHOSTENT_R_PROTO:
?C: This symbol encodes the prototype of endhostent_r.
?C: It is zero if d_endhostent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endhostent_r
?C: is defined.
?C:.
?H:#$d_endhostent_r HAS_ENDHOSTENT_R /**/
?H:#define ENDHOSTENT_R_PROTO $endhostent_r_proto /**/
?H:.
?T:try hdrs d_endhostent_r_proto
: see if endhostent_r exists
set endhostent_r d_endhostent_r
eval $inlibc
case "$d_endhostent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_endhostent_r_proto:$usethreads" in
":define") d_endhostent_r_proto=define
set d_endhostent_r_proto endhostent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_endhostent_r_proto" in
define)
case "$endhostent_r_proto" in
"|0) try='int endhostent_r(struct hostent_data*);'
./prochck "$extern_C $try" $hdrs && endhostent_r_proto=I_D ;;
esac
case "$endhostent_r_proto" in
"|0) try='void endhostent_r(struct
hostent_data*);'
./prochck "$extern_C $try" $hdrs && endhostent_r_proto=V_D ;;
esac
case "$endhostent_r_proto" in
"|0) d_endhostent_r=undef
endhostent_r_proto=0
echo "Disabling endhostent_r, cannot determine prototype." >&4 ;;
* ) case "$endhostent_r_proto" in
REENTRANT_PROTO*) ;;
*) endhostent_r_proto="REENTRANT_PROTO_$endhostent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endhostent_r has no prototype, not using it." >&4 ;;

```

```
esac
d_endhostent_r=undef
endhostent_r_proto=0
;;
esac
;;
*) endhostent_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_endhostent_r.U
```

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```
?RCS: $Id: d_byacc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_byacc.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:31:14 ram
?RCS: patch61: created
?RCS:
?MAKE:d_byacc: byacc Setvar
?MAKE: -pick add $@ %<
?S:d_byacc:
?S: This variable indicates whether byacc is available.
?S: If the user has specified 'portability', then Makefile.SH
?S: sees $byacc='byacc' whether or not the user actually has
?S: byacc. This variable allows us to determine in a makefile
?S: if we really
?S: have byacc.
?S:
?LINT:set d_byacc
: Check if we really have byacc
case "$byacc" in
|"byacc") val="$sundef" ;;
*) val="$define" ;;
esac
set d_byacc
eval $setvar
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_byacc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_linuxstd.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_linuxstd.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:14:05 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_linuxstd: d\_stdstdio cppstdin cppflags cppminus \

contains rm Setvar Findhdr

?MAKE: -pick add \$@ %<

?S:d\_linuxstd:

?S: This variable conditionally defines USE\_LINUX\_STDIO if this system

?S: has a FILE structure declaring \_IO\_read\_base, \_IO\_read\_ptr,

?S: and \_IO\_read\_end

in stdio.h.

?S:.

?C:USE\_LINUX\_STDIO:

?C: This symbol is defined if this system has a FILE structure declaring

?C: \_IO\_read\_base, \_IO\_read\_ptr, and \_IO\_read\_end in stdio.h.

?C:.

?H:#\$d\_linuxstd USE\_LINUX\_STDIO /\*\*/

?H:.

?T:xxx

?LINT:set d\_linuxstd

: see if stdio is like that in linux

case "\$d\_stdstdio" in

"\$undef")

echo " "

xxx=`./findhdr stdio.h`

\$cppstdin \$cppflags \$cppminus < "\$xxx" > stdio.E

if \$contains 'char.\*\_IO\_read\_base' stdio.E >/dev/null 2>&1 && \

\$contains '\_IO\_read\_ptr' stdio.E >/dev/null 2>&1 && \

\$contains '\_IO\_read\_end' stdio.E >/dev/null 2>&1 ; then

```

echo "Your stdio looks like linux." >&4
val="$define"
else
echo "You don't have linux stdio, either." >&4
val="$undef"
fi
$rm -f stdio.E
;;
*) val="$undef" ;;
esac

set d_linuxstd
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_linuxstd.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: n.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: n.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:n c: contains
?MAKE: -pick add $@ %<
?S:n:
?S: This variable contains the -n flag if that is what causes the echo
?S: command to suppress newline. Otherwise it is null. Correct usage is
?S: $echo $n "prompt for a question: $c".
?S:.
?S:c:
?S: This variable contains the \c string if that is what causes the echo
?S: command to suppress newline.
    Otherwise it is null. Correct usage is
?S: $echo $n "prompt for a question: $c".
?S:.
: first determine how to suppress newline on echo command
echo " "

```

```
echo "Checking echo to see how to suppress newlines..."
```

```
(echo "hi there\c" ; echo " ") >.echotmp
```

```
if $contains c .echotmp >/dev/null 2>&1 ; then
```

```
echo "...using -n."
```

```
n='-n'
```

```
c=""
```

```
else
```

```
cat <<'EOM'
```

```
...using \c
```

```
EOM
```

```
n=""
```

```
c='\c'
```

```
fi
```

```
echo $n "The star should be here-->$c"
```

```
echo '*'
```

```
rm -f .echotmp
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/n.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: sizetype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:32:10 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:sizetype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:sizetype:

?S: This variable defines sizetype to be something like size\_t,

?S: unsigned long, or whatever type is used to declare length

?S: parameters for string functions.

?S:.

?C:Size\_t:

?C: This symbol holds the type used to declare length parameters

?C: for string

```

functions. It is usually size_t, but may be
?C: unsigned long, int, etc. It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Size_t $sizetype /* length paramater for string functions */
?H:.
: see what type is used for size_t
set size_t sizetype 'unsigned int' stdio.h sys/types.h
eval $typedef
dflt="$sizetype"
echo " "
rp="What type is used for the length parameter for string functions?"
./myread
sizetype="$ans"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/sizetype.U

```

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```

?RCS: $Id: d_sitecustomize.U,v $
?RCS:
?RCS: Copyright (c) 2005-2006 H.Merijn Brand
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_sitecustomize.U,v $
?RCS:
?MAKE:usesitecustomize: Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:usesitecustomize:
?S: This variable is set to true when the user requires a mechanism that
?S: allows the sysadmin to add entries to @INC at runtime. This variable
?S: being set, makes perl run '$sitelib/sitecustomize.pl' at startup.
?S:.
?C:USE_SITECUSTOMIZE:
?C: This symbol, if defined, indicates that sitecustomize should
?C: be used.
?C:.
?H:??<:@if USE_SITECUSTOMIZE
?H:??<:#ifndef USE_SITECUSTOMIZE
?H:??<:#$usesitecustomize USE_SITECUSTOMIZE /**/
?H:??<:#endif
?H:??<:@end
?H:.
: Check if site customization support was requested
case "$usesitecustomize" in

```

```

$define|true|[Yy]*)
usesitecustomize="$define"
;;
*)
usesitecustomize="$undef"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_sitecustomize.U

```

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```

?RCS: $Id: d_tcgetpgrp.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_tcgetpgrp.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:12:08 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_tcgetpgrp: Inlibc
?MAKE: -pick add $@ %<
?S:d_tcgetpgrp:
?S: This variable conditionally defines the HAS_TCGETPGRP symbol, which
?S: indicates to the C program that the tcgetpgrp() routine is available.
?S: to get foreground process group ID.
?S:.
?C:HAS_TCGETPGRP
:
?C: This symbol, if defined, indicates that the tcgetpgrp routine is
?C: available to get foreground process group ID.
?C:.
?H:#$d_tcgetpgrp HAS_TCGETPGRP /**/
?H:.
?LINT:set d_tcgetpgrp
: see if tcgetpgrp exists
set tcgetpgrp d_tcgetpgrp
eval $inlibc

```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_tcgtprp.U

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?RCS:

?MAKE:d\_getfsstat : Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getfsstat:

?S: This variable conditionally defines the HAS\_GETFSSTAT symbol, which

?S: indicates to the C program that the getfsstat() routine is available.

?S:.

?C:HAS\_GETFSSTAT:

?C: This symbol, if defined, indicates that the getfsstat routine is

?C: available to stat filesystems in bulk.

?C:.

?H:#\$d\_getfsstat HAS\_GETFSSTAT /\*\*/

?H:.

?LINT:set d\_getfsstat

: see if getfsstat exists

set getfsstat d\_getfsstat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getfsstat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Getfile.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Getfile.U,v \$

?RCS: Revision 3.0.1.7 1997/02/28 15:01:06 ram

?RCS: patch61: getfile script now begins with "startsh"

?RCS:

?RCS: Revision 3.0.1.6 1995/02/15 14:11:00 ram  
?RCS: patch51: was not working if ~'s allowed with d\_portable on (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:11:25 ram  
?RCS: patch45: added support for escaping answers to skip various checks  
?RCS: patch45: modified message issued after file expansion  
?RCS:  
?RCS: Revision  
3.0.1.4 1994/10/29 15:53:19 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:23:36 ram  
?RCS: patch23: getfile could be confused by file name in "locate" requests  
?RCS: patch23: new 'p' directive to assume file is in people's path (WED)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:01:31 ram  
?RCS: patch16: added metalint hint on changed 'ans' variable  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:46:27 ram  
?RCS: patch10: minor format problems and misspellings fixed  
?RCS: patch10: now performs from package dir and not from UU subdir  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:56 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a bit of shell code that must be dotted in in order  
?X: to get a file name and make some sanity checks. Optionally, a ~name  
?X: expansion is performed.  
?X:  
?X: To use this unit, \$rp and \$dflt must hold the question and the  
?X: default answer, which will be passed as-is  
to the myread script.  
?X: The \$fn variable must hold the file type (f or d, for file/directory).  
?X: If \$gfpth is set to a list of space-separated list of directories,  
?X: those are prefixes for the filename. Unless \$gfpthkeep is set to 'y',  
?X: gfpth is cleared on return from Getfile.  
?X:  
?X: If it is followed by a ~, then ~name substitution will occur. Upon return,  
?X: \$ans is set with the filename value. If a / is specified, then only a full  
?X: path name is accepted (but ~ substitution occurs before, if needed). The  
?X: expanded path name is returned in that case.  
?X:  
?X: If a + is specified, the existence checks are skipped. This usually means  
?X: the file/directory is under the full control of the program.  
?X:  
?X: If the 'n' (none) type is used, then the user may answer none.  
?X: The 'e' (expand) switch may be used to bypass d\_portable, expanding ~name.

?X:

?X: If the 'l' (locate) type is used, then it must end with a ':' and then a  
?X: file name. If the answer is a directory,  
the file name will be appended  
?X: before testing for file existence. This is useful in locate-style  
?X: questions like "where is the active file?". In that case, one should  
?X: use:

?X:

?X: dflt='~news/lib'

?X: fn='l~:active'

?X: rp='Where is the active file?'

?X: . ./getfile

?X: active="\$ans"

?X:

?X: If the 'p' (path) letter is specified along with 'l', then an answer  
?X: without a leading / will be expected to be found in everyone's path.  
?X:

?X: It is also possible to include a comma-separated list of items within  
?X: parentheses to specify which items should be accepted as-is with no  
?X: further checks. This is useful when for instance a full path is expected  
?X: but the user may escape out via "magical" answers.  
?X:

?X: If the answer to the question is 'none', then the existence checks are  
?X: skipped and the empty string is returned.  
?X:

?MAKE:Getfile: d\_portable contains startsh Myread Filexp tr trnl  
?MAKE: -pick add \$@ %<  
?V:ansexp:fn gfpth gfpthkeep  
?F:./getfile  
?T:tilde  
type what orig\_rp orig\_dflt fullpath already redo skip none\_ok \  
value exp\_file nopath\_ok loc\_file fp pf dir direxp  
?LINT:change ans  
?LINT:change gfpth  
: now set up to get a file name  
cat <<EOS >getfile  
\$startsh  
EOS  
cat <<'EOSC' >>getfile  
tilde="  
fullpath="  
already="  
skip="  
none\_ok="  
exp\_file="  
nopath\_ok="  
orig\_rp="\$rp"  
orig\_dflt="\$dflt"

```

case "$gfpth" in
") gfpth='.' ;;
esac

```

?X: Begin by stripping out any (...) grouping.

```

case "$fn" in
*\(*)
: getfile will accept an answer from the comma-separated list
: enclosed in parentheses even if it does not meet other criteria.
expr "$fn" : '.*\(\(.*\)).*' | $tr ',' $trnl >getfile.ok
fn=`echo $fn | sed 's/(.*)/`
;;
esac

```

?X: Catch up 'locate' requests early, so that we may strip the file name

?X: before looking at the one-letter commands, in case the file name contains

?X: one of them. Reported by Wayne Davison <davison@borland.com>.

```

case "$fn" in
*.*)
loc_file=`expr $fn : '.*:\(.*\)^`
fn=`expr $fn : '\(.*\):.*`
;;
esac

```

```

case
"$fn" in
*~*) tilde=true;;
esac
case "$fn" in
*/*) fullpath=true;;
esac
case "$fn" in
*+*) skip=true;;
esac
case "$fn" in
*n*) none_ok=true;;
esac
case "$fn" in
*e*) exp_file=true;;
esac
case "$fn" in
*p*) nopath_ok=true;;
esac

```

```

case "$fn" in
*f*) type='File';;
*d*) type='Directory';;
*l*) type='Locate';;

```

```
esac
```

```
what="$stype"  
case "$what" in  
Locate) what='File';;  
esac
```

```
case "$exp_file" in  
)  
case "$d_portable" in  
"$define") ;;  
) exp_file=true;;  
esac  
;;  
esac
```

```
cd ..  
while test "$stype"; do  
redo="  
rp="$orig_rp"  
dflt="$orig_dflt"  
case "$stilde" in  
true) rp="$rp (~name ok)";;  
esac
```

```
. UU/myread
```

?X: check for allowed escape sequence which may be accepted verbatim.

```
if test -f UU/getfile.ok && \  
$contains "^$ans$" UU/getfile.ok >/dev/null 2>&1
```

```
then
```

```
value="$ans"  
ansexp="$ans"  
break
```

```
fi
```

```
case "$ans" in  
none)
```

```
value="  
ansexp="  
case "$none_ok" in  
true) type="";;  
esac
```

```
;;
```

```
*)
```

```
case "$stilde" in
```

```
) value="$ans"  
ansexp="$ans";;
```

```
*)
```

```
value=`UU/filexp $ans`
```

```
case
```

```

$? in
0)
if test "$ans" != "$value"; then
    echo "(That expands to $value on this system.)"
fi
;;
*) value="$ans";;
esac
ansexp="$value"
case "$exp_file" in
") value="$ans";;
esac
;;
esac
case "$fullpath" in
true)
?X: Perform all the checks on ansexp and not value since when d_portable
?X: is defined, the original un-expanded answer which is stored in value
?X: would lead to "non-existent" error messages whilst ansexp has been
?X: properly expanded. -- Fixed by Jan.Djarv@sa.erisoft.se (Jan Djarv)
?X: Always expand ~user if '/' was requested
    case "$sansexp" in
/*) value="$sansexp" ;;
?X: Allow for c:/some/path
[a-zA-Z]:/*) value="$sansexp" ;;
*)
redo=true
case "$already" in
true)
echo "I shall only accept a full path name, as in /bin/lis." >&4
echo "Use a ! shell escape if you wish to check pathnames." >&4
;;
*)
echo "Please give a full path name, starting with slash." >&4
case "$stilde"
in
true)
echo "Note that using ~name is ok provided it expands well." >&4
already=true
;;
esac
esac
;;
esac
;;
esac
case "$redo" in
")

```

```

case "$type" in
File)
for fp in $gfpth; do
if test "X$fp" = X.; then
pf="$ansexp"
else
pf="$fp/$ansexp"
fi
if test -f "$pf"; then
type="
elif test -r "$pf" || (test -h "$pf") >/dev/null 2>&1
then
echo "($value is not a plain file, but that's ok.)"
type="
fi
if test X"$type" = X; then
value="$pf"
break
fi
done
;;
Directory)
for fp in $gfpth; do
if test "X$fp" = X.; then
dir="$ans"
direxp="$ansexp"
else
dir="$fp/$ansexp"
direxp="$fp/$ansexp"
fi
if test -d "$direxp"; then
type="
value="$dir"
break
fi
done
;;
Locate)
if test -d "$ansexp"; then
echo "(Looking for $loc_file in directory
$value.)"
value="$value/$loc_file"
ansexp="$ansexp/$loc_file"
fi
if test -f "$ansexp"; then
type="
fi
case "$nopath_ok" in

```

```

true) case "$value" in
  */) ;;
  *) echo "Assuming $value will be in people's path."
     type="
     ;;
     esac
     ;;
     esac
     ;;
     esac

case "$skip" in
true) type=";
esac

case "$type" in
") ;;
*)
if test "$fastread" = yes; then
  dflt=y
else
  dflt=n
fi
rp="$what $value doesn't exist. Use that name anyway?"
. UU/myread
dflt="
case "$ans" in
y*) type=";;
*) echo " ";;
esac
;;
esac
;;
esac
;;
esac
done
cd UU
ans="$value"
rp="$orig_rp"
dflt="$orig_dflt"
rm -f getfile.ok
test "X$gfpthkeep" != Xy && gfpth=""
EOSC

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Getfile.U

```



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?RCS:

?MAKE:d\_malloc\_size d\_malloc\_good\_size d\_malloc\_usable\_size: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_malloc\_size:

?S: This symbol, if defined, indicates that the malloc\_size

?S: routine is available for use.

?S:.

?S:d\_malloc\_good\_size:

?S: This symbol, if defined, indicates that the malloc\_good\_size

?S: routine is available for use.

?S:.

?S:d\_malloc\_usable\_size:

?S: This symbol, if defined, indicates that the malloc\_usable\_size

?S: routine is available for use.

?S:.

?C:HAS\_MALLOC\_SIZE:

?C: This symbol, if defined, indicates that

the malloc\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_size HAS\_MALLOC\_SIZE /\*\*/

?H:.

?C:HAS\_MALLOC\_GOOD\_SIZE:

?C: This symbol, if defined, indicates that the malloc\_good\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_good\_size HAS\_MALLOC\_GOOD\_SIZE /\*\*/

?H:.

?C:HAS\_MALLOC\_USABLE\_SIZE:

?C: This symbol, if defined, indicates that the malloc\_usable\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_usable\_size HAS\_MALLOC\_USABLE\_SIZE /\*\*/

?H:.

?LINT:set d\_malloc\_size

?LINT:set d\_malloc\_good\_size

?LINT:set d\_malloc\_usable\_size

```
: see if malloc_size exists
set malloc_size d_malloc_size
eval $inlibc
```

```
: see if malloc_size_good exists
set malloc_good_size d_malloc_good_size
eval $inlibc
```

```
: see if malloc_usable_size exists
set malloc_usable_size d_malloc_usable_size
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_malloc_size.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_NOFILE.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:08:38 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:nofile d\_gettblsz tablesize: Myread Guess cat +cc +ccflags +libs \  
test rm Csym

?MAKE: -pick add \$@ %<

?S:nofile:

?S: This variable contains the number of file descriptors available to the

?S: process.

?S:.

?S:d\_gettblsz:

?S: This variable conditionally handles remapping  
of the getdtablesize()

?S: subroutine to ulimit(4,0), or the NOFILE manifest constant.

?S:.

?S:tablesize:

?S: This variable contains either the 'NOFILE' constant or 'ulimit(4, 0L)'

?S: and is used as the remapped value for the getdtablesize() macro.

?S:.

?C:getdtablesize:

?C: This catches use of the getdtablesize() subroutine, and remaps it

?C: to either ulimit(4,0) or NOFILE, if getdtablesize() isn't available.

?C:.

?C:VAL\_NOFILE:

?C: This symbol contains the number of file descriptors available to the

?C: process, as determined at configuration time. Unless a static constant

?C: is needed, you should rely on getdtablesize() to obtain that number.

?C:.

?H:#\$d\_gettblsz getdtablesize() \$tablesize /\*\*/

?H:#define VAL\_NOFILE \$nofile /\* Number of file descriptors \*/

?H:.

?F:!nofile

?T:d\_ulimit4 val

: see if getdtablesize exists

echo " "

?X: Revert logical value (d\_gettblsz is undef iff getdtablesize is present)

```

case "$d_gettblsz" in
$define) d_gettblsz="$undef";;
$undef) d_gettblsz="$define";;
esac
if
set getdtablesize val -f d_gettblsz; eval $csym; $val; then
echo 'getdtablesize() found.' >&4
d_gettblsz="$undef"
tablesize="
@if VAL_NOFILE || nofile
$cat >nofile.c <<'EOCP'
#include <stdio.h>
int main()
{
printf("%d\n", getdtablesize());
}
EOCP
nofile="
if $cc $ccflags -o nofile nofile.c $libs >/dev/null 2>&1; then
nofile=`./nofile 2>/dev/null`
fi
if $test "$nofile"; then
echo "(You have $nofile file descriptors available per process.)"
else
nofile='20'
if ./bsd; then
nofile='64'
fi
echo "(Hmm... Let's say you have $nofile file descriptors available.)"

```

```

fi
@end
else
echo 'getdtablesize() NOT found...' >&4
if set ulimit val -f; eval $sym; $val; then
echo 'Maybe ulimit(4,0) will work...'
$cat >nofile.c <<'EOCP'
#include <stdio.h>
#ifdef GETPARAM_H
#include <sys/param.h>
#endif
int main()
{
printf("%d %d\n",
#ifdef NOFILE
NOFILE,
#else
0,
#endif
ulimit(4,0));
exit(0);
}
EOCP
if $cc $cflags -DGETPARAM_H -o nofile nofile.c $libs
>/dev/null 2>&1 \
|| $cc $cflags -o nofile nofile.c $libs >/dev/null 2>&1 ; then
set `./nofile`
d_gettblsz=$1
d_ulimit4=$2
if $test "$d_ulimit4" -lt 0; then
echo "Your ulimit() call doesn't tell me what I want to know."
echo "We'll just use NOFILE in this case."
nofile=$d_gettblsz
d_gettblsz="$define"
tablesize='NOFILE'
else
if $test "$d_gettblsz" -gt 0; then
echo "Your system defines NOFILE to be $d_gettblsz, and" >&4
else
echo "I had trouble getting NOFILE from your system, but" >&4
fi
echo "ulimit returns $d_ulimit4 as the number of available file descriptors." >&4
dflt='y';
echo " "
rp='Should I use ulimit to get the number of available file descriptors?'
./myread
case "$ans" in
y*)

```

```

nfile=$d_ulimit4
d_gettblsz="$define"
tablesize='ulimit(4, 0L)'
echo "Using ulimit(4,0)."
;;
*)
nfile=$d_gettblsz
d_gettblsz="$define"
tablesize='NOFILE'
echo "Using NOFILE."
;;
esac
fi
else
echo
"Strange, I couldn't get my test program to compile."
echo "We'll just use NOFILE in this case."
d_gettblsz="$define"
tablesize='NOFILE'
nfile=""
fi
else
echo 'Using NOFILE instead.'
d_gettblsz="$define"
tablesize='NOFILE'
nfile=""
fi
fi
@if VAL_NOFILE || nfile
case "$nfile" in
")
$cat >nfile.c <<'EOCP'
#include <stdio.h>
#ifdef GETPARAM_H
#include <sys/param.h>
#endif
int main()
{
printf("%d\n",
#ifdef NOFILE
NOFILE,
#else
0,
#endif
);
exit(0);
}
EOCP

```

```

if $cc $cflags -DGETPARAM_H -o nofile nofile.c $libs >/dev/null 2>&1 \
|| $cc $cflags -o nofile nofile.c $libs >/dev/null 2>&1 ; then
nofile=`./nofile 2>/dev/null`
fi
if $test "$nofile"; then
echo "(You have $nofile file descriptors available per process.)"
else
nofile='20'
if ./bsd; then
nofile='64'
fi
echo "(Hmm... Let's say you have $nofile file descriptors available.)"
fi
;;
esac
@end
$rm -f nofile*

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d_NOFILE.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysmount.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysmount: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysmount:

?S: This variable conditionally defines the I\_SYSMOUNT symbol,

?S: and indicates whether a C program should include <sys/mount.h>.

?S:.

?C:I\_SYS\_MOUNT:

?C: This symbol, if defined, indicates that <sys/mount.h> exists and

?C: should be included.

?C:.

?H:#\$i\_sysmount I\_SYS\_MOUNT /\*\*/

?H:.

?LINT:set i\_sysmount

: see if this is a sys/mount.h system

set sys/mount.h i\_sysmount

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_sysmount.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_poll.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_poll: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_poll:

?S: This variable conditionally defines the I\_POLL symbol, and indicates

?S: whether a C program should include <poll.h>.

?S:.

?C:I\_POLL:

?C: This symbol, if defined, indicates that <poll.h> exists and

?C: should be included. (see also HAS\_POLL)

?C:.

?H:#\$i\_poll I\_POLL /\*\*/

?H:.

?LINT:set i\_poll

: see if this is a poll.h system

set poll.h i\_poll

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_poll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memchr.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_memchr: Inlibc

?MAKE: -pick add \$@ %<  
?S:d\_memchr:  
?S: This variable conditionally defines the HAS\_MEMCHR symbol, which  
?S: indicates to the C program that the memchr() routine is available  
?S: to scan a block of memory for a character.  
?S:.  
?C:HAS\_MEMCHR:  
?C: This symbol, if defined, indicates that the memchr routine is available  
?C: to scan a block of memory for a character.  
If undefined, roll your own.  
?C:.  
?H:#\$d\_memchr HAS\_MEMCHR /\*\*/  
?H:.  
?LINT:set d\_memchr  
: see if memchr exists  
set memchr d\_memchr  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_memchr.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_nextafter: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nextafter:

?S: This variable conditionally defines HAS\_NEXTAFTER if nextafter()

?S: is available to return the next machine representable double from

?S: x in direction y.

?S:.

?C:HAS\_NEXTAFTER:

?C: This symbol, if defined, indicates that the nextafter routine is

?C: available to return the next machine representable double from

?C: x in direction y.

?C:.

?H:#\$d\_nextafter HAS\_NEXTAFTER /\*\*/  
?H:.

?LINT:set d\_nextafter

: see if nextafter exists

set nextafter d\_nextafter

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_nextafter.U



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strtok.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_strtok.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:38 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: The strtok routine now appears to be a standard one, but it was
?X: missing in early BSD systems.
?X:
?MAKE:d_strtok: Inlibc
?MAKE: -pick add $@ %<
?S:d_strtok:
?S: This variable conditionally defines HAS_STRTOK if strtok() is
?S: available to scan strings for tokens.
?S:.
?C:HAS_STRTOK (STRTOK):
?C: This symbol, if defined, indicates
?C: that the strtok routine is
?C: available to scan strings for tokens.
?C:.
?H:#$d_strtok HAS_STRTOK /**/
?H:.
?LINT:set d_strtok
: see if strtok exists
set strtok d_strtok
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_strtok.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_time.U,v 3.0 1993/08/18 12:08:45 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
```

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: i\_time.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit finds which "time" include to use. If 'timezone' is used by the

?X: program, we also try to find which header should be included. Eventually,

?X: we look for <sys/select.h> if I\_SYSSSELECT is used, to get struct timeval.

?X:

?MAKE:i\_time i\_systime i\_systimek timeincl d\_tm\_tm\_zone d\_tm\_tm\_gmtoff: \  
 Compile cat \  
 contains rm\_try echo n  
 c +i\_sysselect Findhdr Hasfield i\_stdlib

?MAKE: -pick add \$@ %<

?S:i\_time:

?S: This variable unconditionally defines I\_TIME, which indicates

?S: to the C program that it should include <time.h>.

?S:.

?S:i\_systime:

?S: This variable conditionally defines I\_SYS\_TIME, which indicates

?S: to the C program that it should include <sys/time.h>.

?S:.

?S:i\_systimek:

?S: This variable conditionally defines I\_SYS\_TIME\_KERNEL, which

?S: indicates to the C program that it should include <sys/time.h>

?S: with KERNEL defined.

?S:.

?S:timeincl:

?S: This variable holds the full path of the included time header(s).

?S:.

?S:d\_tm\_tm\_zone:

?S: This variable conditionally defines HAS\_TM\_TM\_ZONE, which indicates

?S: to the C program that the struct tm has the tm\_zone field.

?S:.

?S:d\_tm\_tm\_gmtoff:

?S: This variable conditionally defines HAS\_TM\_TM\_GMTOFF, which indicates

?S: to the C program that the struct tm has the tm\_gmtoff field.

?S:.

?C:I\_TIME (USE\_TIME\_H):

?C: This symbol is always defined, and indicates

to the C program that

?C: it should include <time.h>.

?C:.

?C:I\_SYS\_TIME (I\_SYSTIME USE\_SYS\_TIME\_H NO\_TIME\_WITH\_SYS\_TIME):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/time.h>.

?C:.

?C:I\_SYS\_TIME\_KERNEL (I\_SYSTIMEKERNEL):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/time.h> with KERNEL defined.

?C:.

?C:HAS\_TM\_TM\_ZONE:

?C: This symbol, if defined, indicates to the C program that

?C: the struct tm has a tm\_zone field.

?C:.

?C:HAS\_TM\_TM\_GMTOFF:

?C: This symbol, if defined, indicates to the C program that

?C: the struct tm has a tm\_gmtoff field.

?C:.

?H:#\$i\_time I\_TIME /\*\*/

?H:#\$i\_systime I\_SYS\_TIME /\*\*/

?H:#\$i\_systimek I\_SYS\_TIME\_KERNEL /\*\*/

?H:#\$d\_tm\_tm\_zone HAS\_TM\_TM\_ZONE /\*\*/

?H:#\$d\_tm\_tm\_gmtoff HAS\_TM\_TM\_GMTOFF /\*\*/

?H:.

?W::timezone

?T:xselect flags sysselect s\_timeval s\_timezone

?LINT:change i\_sysselect

?LINT:set d\_tm\_tm\_zone

?LINT:set d\_tm\_tm\_gmtoff

: see if we should include sys/time.h

echo

" "

i\_time='define'

if test "X\$timeincl" = X; then

echo "Testing to see if we should include <sys/time.h>." >&4

\$echo \$n "I'm now running the test program...\$c"

\$cat >try.c <<EOCP

#include <sys/types.h>

#include <time.h>

#ifdef I\_SYSTIME

#ifdef SYSTIMEKERNEL

#define KERNEL

#endif

#include <sys/time.h>

#endif

#ifdef I\_SYSSELECT

#include <sys/select.h>

#endif

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

```

#include <stdlib.h>
#endif
int main()
{
    struct tm foo;
#ifdef S_TIMEVAL
    struct timeval bar;
#endif
#ifdef S_TIMEZONE
    struct timezone tzp;
#endif
    if (foo.tm_sec == foo.tm_sec)
        exit(0);
#ifdef S_TIMEVAL
    if (bar.tv_sec == bar.tv_sec)
        exit(0);
#endif
    exit(1);
}
EOCP
flags="
@if I_SYSSSELECT
if $contains 'timeval.*{'`./findhdr sys/select.h` >/dev/null 2>&1; then
    xselect='-DI_SYSSSELECT'
else
    xselect="
fi
@end
@if timezone
for s_timezone in '-DS_TIMEZONE' "; do
@else
s_timezone="
@end
?X: Every package is given a try with 'struct timeval'
@if I_SYSSSELECT
for sysselect in $xselect
"; do
@else
sysselect="
@end
for s_timeval in '-DS_TIMEVAL' "; do
for i_systimek in " '-DSYSTIMEKERNEL'; do
for i_systime in '-DI_SYSTIME' "; do
case "$flags" in
") $echo $n ".$.c"
set try $i_systime $i_systimek $sysselect $s_timeval $s_timezone
if eval $compile; then
set X $i_systime $i_systimek $sysselect $s_timeval

```

```

    shift
    flags="$*"
    echo " "
    $echo $n "Succeeded with $flags$c"
fi
;;
esac
done
done
done
@if I_SYSSELECT
done
@end
@if timezone
done
@end
timeincl="
echo " "
case "$flags" in
*SYSTIMEKERNEL*) i_systimek="$define"
timeincl=`./findhdr sys/time.h`
echo "We'll include <sys/time.h> with KERNEL defined." >&4;;
*) i_systimek="$undef";;
esac
case "$flags" in
*_SYSTIME*) i_systime="$define"
timeincl=`./findhdr sys/time.h` $timeincl"
echo "We'll include <sys/time.h>." >&4;;
*) i_systime="$undef";;
esac
@if I_SYSSELECT
case "$flags" in
*_SYSSELECT*) i_syssselct="$define"
timeincl=`./findhdr sys/select.h`"
$timeincl"
echo "We'll also include <sys/select.h> to get struct timeval." >&4;;
*) case "$i_syssselct" in
") i_syssselct="$undef";;
esac
esac
@end
$rm_try
fi
: see if struct tm knows about tm_zone
case "$i_systime$i_time" in
*$define*)
    echo " "
    echo "Checking to see if your struct tm has tm_zone field..." >&4

```

```

    set d_tm_tm_zone tm tm_zone $i_systime sys/time.h $i_time time.h
    eval $hasfield
    ;;
*)    val="$undef"
    set d_tm_tm_zone
    eval $setvar
    ;;
esac
case "$d_tm_tm_zone" in
"$define")    echo "Yes, it does." ;;
*)           echo "No, it doesn't." ;;
esac
: see if struct tm knows about tm_gmtoff
case "$i_systime$i_time" in
*$define*)
    echo " "
    echo "Checking to see if your struct tm has tm_gmtoff field..." >&4
    set d_tm_tm_gmtoff tm tm_gmtoff $i_systime sys/time.h $i_time time.h
    eval $hasfield
    ;;
*)    val="$undef"
    set d_tm_tm_gmtoff
    eval $setvar

    ;;
esac
case "$d_tm_tm_gmtoff" in
"$define")    echo "Yes, it does." ;;
*)           echo "No, it doesn't." ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/i_time.U
```

No license file was found, but licenses were detected in source scan.

### Perl5 Metaconfig Units

Copyright (c) 1996-1998, Andy Dougherty

Copyright (c) 1999-2011, H.Merijn Brand

All rights reserved.

These units are the ones used to build Configure and config\_h.SH in the Perl5 distribution.

metaconfig will first look in its standard locations (specified when you installed dist). It will then recurse through the 'U' subdirectory and find any additional "private" units. Private units override

standard ones supplied with metaconfig.

Files in this directory:

README

This file.

Glossary.patch

The standard dist units contain some strings that make pod2man complain. This patch silences those warnings. As new units are added and Configure is regenerated, this patch may need more and more 'fuzz' to be applied. It should be freshly regenerated every once in a while. See also mkgloss.pl

In-all.pl

Re-generate the all/ folder

mkglossary

A script

to regenerate Porting/Glossary. You have to manually edit the top of the script to point the location of your metaconfig units. It is called automatically by 'mksample'. See also mkgloss.pl

mkgloss.pl

A perl script that calls U/mkglossary from the perl source tree, sorts the list of symbols, and applies the patch mentioned in Glossary.patch. When called on its own, redirect the output to a temporary file, and compare that file to Porting/Glossary before applying.

mksample

A script to regenerate Porting/config.sh and Porting/config.H. It also calls mkglossary, if necessary.

Subdirectories:

The units and other related files have been broken up into the following directories.

a\_dvisory/

These are units that have to go first in the generated config\_h.SH. A word of explanation: Configure and config\_h.SH are generated from 'Units' (the \*.U files). Files indicate dependencies (using make(1)), and Configure is built to follow those dependencies.

However, config\_h.SH

is simply built by putting all the units in alphabetical order and extracting the relevant lines. (This could be fixed, I suppose, but it wasn't trivial the one time I looked.)

The a\_dvisory/ directory, then, is a place to put units that need

to be early in config\_h.SH. (Most units are self-contained and ought to be able to go anywhere. However, some things, like byteorder, need to have the #defines from multiarch available.)

#### acl/

This is an old patch to begin to detect and use ACL (access control list) file protection schemes.

#### all/

A folder that conveniently holds symbolic links to all the modules that are used to build the current Configure and config\_h.SH.

#### compline/

These are similar to the standard units, but I have modified them to have a more uniform compile command line, usually using the new Compile.U unit. (The cflags.U unit is perl-specific since it mentions -DDEBUGGING and -DPOSIX\_SOURCE, but that's the only place it is perl-specific.)

#### dist\_patches/

These are patches to dist that must be applied before it is built and installed. I have submitted these for inclusion in the regular dist distribution. They have already been applied to the ../dist-3.0at70b directory.

#### ebcdic/

These are units that had to be specially modified to work under either EBCDIC or ASCII.

#### installdirs/

These are units to handle perl's installation directories and related issues.

#### modified/

These are modified versions of the standard units. Also included in this directory are new units that are clearly derived from existing units. I have submitted these for inclusion in the regular dist distribution.

#### nullified/

These are null units that replace units in the standard distribution. Typically they are there because some part of the perl source accidentally uses a symbol that metaconfig thinks means we want the corresponding unit.

#### perl/



These are specific to perl. Some are heavily derived from original dist units, and are marked as such. Others are original.

#### perl\_patches/

These are patches to the perl source. This directory should ordinarily be empty, but there may have been drift between the standard version of perl and the one associated with these units.

#### protos/

These are units modified to use the new Hasproto.U or Protochk.U units to check for prototypes.

#### threads/

These are specific to threading perl.

#### typedefs/

These are standard units modified to use the modified Typedef.U unit to check for typedefs. (The modified Typdef.U includes a function to avoid unnecessary prompts if the typedef being searched for exists.)

Where appropriate, I submitted these units for inclusion into the regular dist distribution. However, since dist is no longer actively maintained, and the alternative is for \*me\* to actively maintain it, the units just sit here.

#### Copyright Information:

Unless otherwise indicated, the files contained in this distribution are:

Copyright (c) 1996-1998, Andy Dougherty

The following licensing terms apply to all files contained in this distribution:

You may distribute the files contained in this distribution under the terms of either

- a) the "Artistic License" which comes with Perl, or
- b) the "Artistic License" which comes with dist, or
- c) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any

later version (see the file "Copying" that comes with the Perl distribution).

Which one to use is your choice.

The units in the "modified" directory have been derived from units associated with the metaconfig program of Raphael Manfredi's "dist" distribution. These units list Raphael Manfredi as the Copyright holder. dist is distributed under a modified version of the Perl Artistic License. Clause 7 of this modified license as contained in dist-3.0-pl60 provides:

7. You may reuse parts of this Package in your own programs, provided that you explicitly state where you got them from, in the source code (and, left to your courtesy, in the documentation), duplicating all the associated copyright notices and disclaimers. Besides your changes, if any, must be clearly marked as such. Parts reused that way will no longer fall under this license if, and only if, the name of your program(s) have no immediate connection with the name of the Package itself or its associated programs. You may then apply whatever restrictions you wish on the reused parts or choose to place them in the Public Domain--this will apply only within the context of your package.

In accordance with this clause, the versions of these units contained here are made available under the same terms as the rest of the units.

If you have any questions about the use of these units or about the differences between these units and the standard versions, please feel free to ask.

Andy Dougherty [doughera@lafayette.edu](mailto:doughera@lafayette.edu)  
Dept. of Physics  
Lafayette College  
Easton, PA 18042-1782

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/README
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: lintlib.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: lintlib.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:05 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:lintlib lintlibexp: Getfile Loc Oldconfig

?MAKE: -pick add \$@ %<

?S:lintlib:

?S: This variable holds the name of the directory in which the user wants  
?S: to put public lint-library files for the package in question. It is  
?S: most often a local directory such as /usr/local/lib/lint. Programs using  
?S: this variable must be prepared to  
deal with ~name expansion.

?S:.

?S:lintlibexp:

?S: This variable is the same as the lintlib variable, but is filename  
?S: expanded at configuration time, for convenient use in your makefiles.  
?S:.

: determine where public lint libraries go

case "\$lintlib" in

") dflt=`./loc . ." /usr/local/lib/lint /usr/lib/lint /usr/lib`;;

\*) dflt="\$lintlib" ;;

esac

echo " "

fn=d~

rp='Where do you want to put the public lint libraries?'

./getfile

lintlib="\$ans"

lintlibexp="\$ansexp"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/lintlib.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fmin: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fmin:

?S: This variable conditionally defines the HAS\_FMIN symbol, which  
?S: indicates to the C program that the fmin() routine is available.

?S:.

?C:HAS\_FMIN:

?C: This symbol, if defined, indicates that the fmin routine is

?C: available to do the minimum function.

?C:.

?H:#\$d\_fmin HAS\_FMIN /\*\*/

?H:.

?LINT:set d\_fmin

: see if fmin exists

set fmin d\_fmin

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fmin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_sresgproto: Hasproto i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_sresgproto:

?S: This variable conditionally defines the HAS\_SETRESGID\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the setresgid() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SETRESGID\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the setresgid() function. Otherwise, it is up

?C: to the program to supply one. Good guesses are

?C: extern

int setresgid(uid\_t ruid, uid\_t euid, uid\_t suid);

?C:.

?H:#\$d\_sresgproto HAS\_SETRESGID\_PROTO /\*\*/

?H:.

?LINT:set d\_sresgproto

: see if prototype for setresgid is available

echo " "

set d\_sresgproto setresgid \$i\_unistd unistd.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_sresgproto.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sfio.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS:

?RCS: \$Log: i\_sfio.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:48:27 ram

?RCS: patch61: created

?RCS:

?MAKE:i\_sfio: Inhdr Setvar

?MAKE: -pick add \$@ %<

?S:i\_sfio:

?S: This variable conditionally defines the I\_SFIO symbol,

?S: and indicates whether a C program should include <sfio.h>.

?S:.

?C:I\_SFIO:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sfio.h>.

?C:.

?H:#\$i\_sfio I\_SFIO /\*\*/

?H:.

?LINT:set

i\_sfio

: see if sfio.h is available

set sfio.h i\_sfio

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_sfio.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Setprefixvar.U,v 3.0 2006/04/01 17:25:29 hmbrand \$

?RCS:

?RCS: Copyright (c) 2006-2006, H.Merijn Brand & Nicholas Clark

?RCS:

?RCS: This file is included with or a derivative work of a file included  
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.  
?RCS: In accordance with clause 7 of dist's modified Artistic License:  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?X:  
?X: This unit sets up the scripts installprefix and setprefixvar, so code  
?X: in other parts can be more simple and maintainable  
?X:  
?MAKE:Setprefixvar: Myread Getfile startsh eunicefix test \  
prefix prefixexp installprefix installprefixexp  
?MAKE: -pick add \$@ %<  
?LINT:extern prefixvar  
?X: metalint still sees "\\${prefixvar}exp`" as variable :(  
?T:prefixvarexp  
?F:./setprefixvar  
?F:./installprefix  
: Perform  
the prefixexp/installprefixexp correction if necessary  
cat <<EOS >installprefix  
\$startsh  
EOS  
cat <<'EOOSC' >>installprefix  
: Change installation prefix, if necessary.  
if \$test X"\$prefix" != X"\$installprefix"; then  
eval "install\${prefixvar}=\`echo \\${prefixvar}exp | sed \"s#^\\${prefixexp#\\$installprefixexp#\"`"  
else  
eval "install\${prefixvar}=\"\\${prefixvar}exp\""  
fi  
EOOSC  
chmod +x installprefix  
\$eunicefix installprefix  
  
: Set variables such as privlib and privlibexp from the output of ./getfile  
: performing the prefixexp/installprefixexp correction if necessary.  
cat <<EOS >setprefixvar  
\$startsh  
EOS  
cat <<'EOOSC' >>setprefixvar  
eval "\${prefixvar}=\"\\${ans}\""  
eval "\${prefixvar}exp=\"\\${ansexp}\""  
./installprefix  
EOOSC  
chmod +x setprefixvar  
\$eunicefix setprefixvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/Setprefixvar.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strstr.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: d\_strstr.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_strstr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strstr:

?S: This variable conditionally defines HAS\_STRSTR if strstr() is

?S: available to find substrings.

?S:.

?C:HAS\_STRSTR (STRSTR):

?C: This symbol, if defined, indicates that the strstr routine is

?C: available to find substrings.

?C:.

?H:#\$d\_strstr HAS\_STRSTR /\*\*/

?H:.

?LINT:set d\_strstr

:

see if strstr exists

set strstr d\_strstr

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strstr.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_malloc.U,v 3.5 2008/03/29 14:06:51 merijn Exp \$

?RCS:

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?RCS: of the source tree for dist 3.5.

?RCS:

?MAKE:i\_mallocmalloc: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_mallocmalloc:

?S: This variable conditionally defines the I\_MALLOCMALLOC symbol,

?S: and indicates whether a C program should include <malloc/malloc.h>.

?S:.

?C:I\_MALLOCMALLOC:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <malloc/malloc.h>.

?C:.

?H:#\$i\_mallocmalloc I\_MALLOCMALLOC /\*\*/

?H:.

?LINT:set i\_mallocmalloc

: see if malloc/malloc.h has to be included

set malloc/malloc.h i\_mallocmalloc

eval

\$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_mallocmalloc.U

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?RCS:

?RCS: \$Log: usrinc.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:27:12 ram

?RCS: patch61: don't ask for the include path unless they are on a MIPS

?RCS:

?RCS: Revision 3.0.1.2 1995/05/12 12:24:36 ram

?RCS: patch54: ensure that ./mips always exists (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:18:31 ram

?RCS: patch23: ensure usrinc value is preserved across sessions (WED)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:58 ram



```

?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:usrinc incpath mips_type:
test cat echo n c Getfile Guess \
Oldconfig eunicefix contains rm
?MAKE: -pick add $@ %<
?S:usrinc:
?S: This variable holds the path of the include files, which is
?S: usually /usr/include. It is mainly used by other Configure units.
?S:.
?S:incpath:
?S: This variable must precede the normal include path to get the
?S: right one, as in "$incpath/usr/include" or "$incpath/usr/lib".
?S: Value can be "" or "/bsd43" on mips.
?S:.
?S:mips_type:
?S: This variable holds the environment type for the mips system.
?S: Possible values are "BSD 4.3" and "System V".
?S:.
?D:usrinc='/usr/include'
?LINT:create mips
?T:xxx_prompt
?F:./mips
: What should the include directory be ?
echo " "
$echo $n "Hmm... $c"
dflt='/usr/include'
incpath=""
?X: mips_type is used later, to add -DSYSTYPE_BSD43 to cppflags if needed.
mips_type=""
?X:
?X: Cannot put the following in Guess, or we get a circular dependency.
?X:
if $test -f /bin/mips && /bin/mips; then
echo "Looks like a MIPS system..."
$cat >usr.c
<<'EOCP'
#ifdef SYSTYPE_BSD43
/bsd43
#endif
EOCP
if cc -E usr.c > usr.out && $contains /usr.out >/dev/null 2>&1; then
dflt='/bsd43/usr/include'
incpath='/bsd43'
mips_type='BSD 4.3'
else
mips_type='System V'
fi

```

```

$rm -f usr.c usr.out
echo "and you're compiling with the $mips_type compiler and libraries."
xxx_prompt=y
echo "exit 0" >mips
else
echo "Doesn't look like a MIPS system."
xxx_prompt=n
echo "exit 1" >mips
fi
chmod +x mips
$unicefix mips
case "$usrinc" in
") ;;
*) dflt="$usrinc";;
esac
case "$xxx_prompt" in
y) fn=d/
echo " "
rp='Where are the include files you want to use?'
./getfile
usrinc="$ans"
;;
*) usrinc="$dflt"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/usrinc.U

```

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?RCS:

?RCS: \$Log: d\_sem.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sem: test d\_semctl d\_semget d\_semop Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_sem:

?S: This variable conditionally defines the HAS\_SEM symbol, which

?S: indicates that the entire sem\*(2) library is present.

?S:.

?C:HAS\_SEM:

?C: This symbol, if defined, indicates that the entire sem\*(2) library is

?C: supported.

?C:.

?H:#\$d\_sem HAS\_SEM /\*\*/

?H:.

?T:h\_sem

?LINT:set d\_sem

:

see how much of the 'sem\*(2)' library is present.

h\_sem=true

echo " "

case "\$d\_semctl\$d\_semget\$d\_semop" in

\*\$undef"\*) h\_sem=false;;

esac

case "\$osname" in

freebsd)

case "`ipcs 2>&1`" in

"SVID messages"\*"not configured"\*)

echo "Your \$osname does not have the sem\*(2) configured." >&4

h\_sem=false

val="\$undef"

set semctl d\_semctl

eval \$setvar

set semget d\_semget

eval \$setvar

set semop d\_semop

eval \$setvar

::

esac

::

esac

: we could also check for sys/ipc.h ...

if \$h\_sem && \$test `./findhdr sys/sem.h`; then

echo "You have the full sem\*(2) library." >&4

val="\$define"

else

echo "You don't have the full sem\*(2) library." >&4

val="\$undef"

fi

set d\_sem

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/dist/U/d\_sem.U

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?RCS:

?RCS: \$Log: pidtype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:31:27 ram

?RCS: patch32: now uses new Typedef unit to compute type information

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:pidtype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:pidtype:

?S: This variable defines PIDTYPE to be something like pid\_t, int,

?S: ushort, or whatever type is used to declare process ids in the kernel.

?S:.

?C:Pid\_t (PIDTYPE):

?C: This symbol holds the type

used to declare process ids in the kernel.

?C: It can be int, uint, pid\_t, etc... It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Pid\_t \$pidtype /\* PID type \*/

?H:.

: see what type pids are declared as in the kernel

set pid\_t pidtype int stdio.h sys/types.h

eval \$typedef

dflt="\$pidtype"

echo " "

rp="What type are process ids on this system declared as?"

./myread

pidtype="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/dist/U/pidtype.U

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?RCS: \$Id\$

?RCS:

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?RCS:

?RCS: \$Log: package.U,v \$

?RCS: Revision 3.0.1.3 1994/10/29 16:27:21 ram

?RCS: patch36: beware of non-ascii character sets when translating case

?RCS:

?RCS: Revision 3.0.1.2 1993/11/10 17:37:02 ram

?RCS: patch14: skip definition of spackage if not otherwise used

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:11:10 ram

?RCS: patch10: added package, suitable for starting sentences

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:28 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:package spackage:  
Nothing

?MAKE: -pick wipe \$@ %<

?S:package:  
?S: This variable contains the name of the package being constructed.  
?S: It is primarily intended for the use of later Configure units.

?S:.

?S:spackage:  
?S: This variable contains the name of the package being constructed,  
?S: with the first letter uppercased, i.e. suitable for starting  
?S: sentences.

?S:.

?C:PACKAGE:  
?C: This variable contains the name of the package being built.

?C:.

?H:#define PACKAGE "\$package"

?H:.

?T:first last  
: set package name  
package='<PACKAGENAME>'  
@if spackage  
first=`echo \$package | sed -e 's/^(.).\*\1/'`  
last=`echo \$package | sed -e 's/^(.\*)\1/'`

?X:  
?X: So early in the Configure script, we don't have ./tr set up and can't

?X: include Tr in our dependency or that would create a cycle. Therefore,

?X: we have to somehow duplicate the work done in Tr. That's life.

?X:

```
case "echo AbyZ | tr '[:lower:]' '[:upper:]' 2>/dev/null" in
ABYZ) spackage=`echo $first | tr '[:lower:]' '[:upper:]'`$last;;
*) spackage=`echo
$first | tr '[a-z]' '[A-Z]'`$last;;
esac
@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/package.U
```

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```
?MAKE:d_statfs_f_flags: \
Hasfield i_sysparam i_sysmount i_systypes \
i_sysvfs i_sysstatfs Setvar d_statfs_s
```

?MAKE: -pick add \$@ %<

?S:d\_statfs\_f\_flags:

?S: This variable conditionally defines the HAS\_STRUCT\_STATFS\_F\_FLAGS

?S: symbol, which indicates to struct statfs from has f\_flags member.

?S: This kind of struct statfs is coming from sys/mount.h (BSD),

?S: not from sys/statfs.h (SYSV).

?S:.

?C:HAS\_STRUCT\_STATFS\_F\_FLAGS:

?C: This symbol, if defined, indicates that the struct statfs

?C: does have the f\_flags member containing the mount flags of

?C: the filesystem containing the file.

?C: This kind of struct statfs is coming from <sys/mount.h> (BSD 4.3),

?C: not from <sys/statfs.h> (SYSV). Older BSDs

(like Ultrix) do not

?C: have statfs() and struct statfs, they have ustat() and getmnt()

?C: with struct ustat and struct fs\_data.

?C:.

?H:#\$d\_statfs\_f\_flags HAS\_STRUCT\_STATFS\_F\_FLAGS /\*\*/

?H:.

?LINT:set d\_statfs\_f\_flags

: see if struct statfs knows about f\_flags

case "\$d\_statfs\_s" in

define)

```

echo " "
echo "Checking to see if your struct statfs has f_flags field..." >&4
set d_statfs_f_flags statfs f_flags $i_systypes sys/types.h $i_sysparam sys/param.h $i_sysmount sys/mount.h
$i_sysvfs sys/vfs.h $i_sysstatfs sys/statfs.h
eval $hasfield
;;
*) val="$undef"
set d_statfs_f_flags
eval $setvar
;;
esac
case "$d_statfs_f_flags" in
"$define") echo "Yes, it does." ;;
*) echo "No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_statfs_f_flags.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Extract.U,v 3.0.1.2 1997/02/28 14:58:52 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which can be doted in order to extract

?X: .SH files with variable substitutions.

?X:

?X: When running

Configure from a remote directory (\$src is not '.'),

?X: then the files will be created in that directory, so beware!

```

?X:
?MAKE:Extract: src
?MAKE: -pick add $@ %<
?F:./extract
?T:PERL_CONFIG_SH dir file name create mkdir_p
: script used to extract .SH files with variable substitutions
cat >extract <<'EOS'
PERL_CONFIG_SH=true
echo "Doing variable substitutions on .SH files..."
if test -f MANIFEST; then
  set x `awk '{print $1}' < MANIFEST | grep \.SH$`
else
  echo "(Looking for .SH files under the source directory.)"
  set x `(cd "$src"; find . -name "*.SH" -print)`
fi
shift
case $# in
0) set x `(cd "$src"; echo *.SH)`; shift;;
esac
if test ! -f "$src/$1"; then
  shift
fi
?X: script to emulate mkdir -p
mkdir_p='
name=$1;
create="";
while test $name; do
if test ! -d "$name"; then
  create="$name $create";
  name=`echo $name | sed -e "s|^[^/]*$||"`;
  name=`echo $name | sed -e "s|(.*).*/.*|1|"`;
else
  name="";
fi;
done;
for file in $create; do
  mkdir $file;
done
'
for file in $*;
do
case "$src" in
".")
case "$file" in
*/*)
  dir=`expr X$file : 'X\(.*)/'`
  file=`expr X$file : 'X.*\^(.*)'`
  (cd "$dir" && ./$file)

```



```

;;
*)
./$file
;;
esac
;;
*)
?X:
?X: When running Configure remotely ($src is not '.'), we cannot source
?X: the files directly, since that would wrongly cause the extraction
?X: where the source lie instead of withing the current directory. Therefore,
?X: we need to 'sh <file' then, which is okay since they will source the
?X: existing config.sh file. It's not possible to use:
?X: ../src/Configure -S -O -Dsomething
?X: unfortunately since no new config.sh with the -Dsomething override
?X: will be created before running the .SH files. A minor buglet.
?X:
?X: Note that we must create the directory hierarchy ourselves if it does
?X: not exist already, and that is done through a shell emulation of the
?X: 'mkdir -p' command. We don't want to use the $installdir metaconfig
?X: symbol here since that would require too much to
?X: be configured for
?X: this simple extraction task that may happen quickly with 'Configure -S'.
?X: -- RAM, 18/03/96
?X:
case "$file" in
*/*)
dir=`expr X$file : 'X\(.*)/'`
file=`expr X$file : 'X.*\^(.*)'`
(set x $dir; shift; eval $mkdir_p)
sh <"$src/$dir/$file"
;;
*)
sh <"$src/$file"
;;
esac
;;
esac
done
if test -f "$src/config_h.SH"; then
if test ! -f config.h; then
: oops, they left it out of MANIFEST, probably, so do it anyway.
."$src/config_h.SH"
fi
fi
EOS

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Extract.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_passwd.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_passwd.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:37:21 ram  
?RCS: patch61: useless unit dropped.  
?RCS:  
?RCS: Revision 3.0.1.1 1994/08/29 16:09:51 ram  
?RCS: patch32: created by ADO  
?RCS:  
?X:  
?X: Useless unit dropped.  
?X:  
?LINT:empty

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_passwd.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fork.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_fork.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:38 ram  
?RCS: patch32: created by ADO

?RCS:  
?MAKE:d\_fork: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fork:  
?S: This variable conditionally defines the HAS\_FORK symbol, which  
?S: indicates to the C program that the fork() routine is available.  
?S:.  
?C:HAS\_FORK :  
?C: This symbol, if defined, indicates that the fork routine is  
?C: available.  
?C:.  
?H:#\$d\_fork  
HAS\_FORK /\*\*/  
?H:.  
?LINT:set d\_fork  
: see if fork exists  
set fork d\_fork  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fork.U

No license file was found, but licenses were detected in source scan.

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.

?RCS:  
?MAKE:i\_fenv: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_fenv:  
?S: This variable conditionally defines the I\_FENV symbol, which  
?S: indicates to the C program that <fenv.h> exists and should  
?S: be included.  
?S:.  
?C:I\_FENV:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <fenv.h> to get the floating point environment definitions.  
?C:.  
?H:#\$i\_fenv I\_FENV /\*\*/  
?H:.  
?LINT:set i\_fenv  
: see if this is a fenv.h system  
set fenv.h i\_fenv  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_fenv.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_msgsnd.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgsnd.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:41 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_msgsnd: Inlibc
?MAKE: -pick add $@ %<
?S:d_msgsnd:
?S: This variable conditionally defines the HAS_MSGSND symbol, which
?S: indicates to the C program that the msgsnd() routine is available.
?S:.
?C:HAS_MSGSND:
?C: This symbol, if defined, indicates that the msgsnd() routine is
?C: available to send a message into the message queue.
?C:.
?H:#$d_msgsnd
HAS_MSGSND /**/
?H:.
?LINT:set d_msgsnd
: see if msgsnd exists
set msgsnd d_msgsnd
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_msgsnd.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2017 Dagfinn Ilmari Mannsåker
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_strnlen: Inlibc
?MAKE: -pick add $@ %<
```

?S:d\_strnlen:  
?S: This variable conditionally defines the HAS\_STRNLEN symbol, which  
?S: indicates to the C program that the strnlen () routine is available.  
?S:.  
?C:HAS\_STRNLEN:  
?C: This symbol, if defined, indicates that the strnlen () routine is  
?C: available to check the length of a string up to a maximum.  
?C:.  
?H:#\$d\_strnlen HAS\_STRNLEN /\*\*/  
?H:.  
?LINT:set d\_strnlen  
: see if strnlen exists  
set strnlen d\_strnlen  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_strnlen.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_tcstpgrp.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_tcstpgrp.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:12:11 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_tcsetpgrp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_tcsetpgrp:  
?S: This variable conditionally defines the HAS\_TCSETPGRP symbol, which  
?S: indicates to the C program that the tcsetpgrp() routine is available  
?S: to set foreground process group ID.  
?S:.  
?C:HAS\_TCSETPGRP  
:  
?C: This symbol, if defined, indicates that the tcsetpgrp routine is  
?C: available to set foreground process group ID.  
?C:.

?H:#\$d\_tcsetpgrp HAS\_TCSETPGRP /\*\*/

?H:.

?LINT:set d\_tcsetpgrp

: see if tcsetpgrp exists

set tcsetpgrp d\_tcsetpgrp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_tcsetpgrp.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_memmem: Hasproto Inlibc Setvar d\_gnulibc

?MAKE: -pick add \$@ %<

?S:d\_memmem:

?S: This variable conditionally defines the HAS\_MEMMEM symbol, which

?S: indicates to the C program that the memmem() routine is available

?S: to return a pointer to the start of the first occurrence of a

?S: substring in a memory area (or NULL if not found).

?S:.

?C:HAS\_MEMMEM:

?C: This symbol, if defined, indicates that the memmem routine is

?C: available to return a pointer to the start of the first occurrence

?C: of a substring in a memory area (or NULL if not found).

?C: In glibc, memmem is a GNU extension. The function is visible in

?C: libc, but the prototype is only visible if \_GNU\_SOURCE is #defined.

?C: Thus we only define this if both the prototype and symbol are found.

?C:.

?H:#\$d\_memmem

HAS\_MEMMEM /\*\*/

?H:.

?T:d\_memmem\_proto xx1 xx2 xx3 xx4

?LINT:set d\_memmem

: see if memmem exists

: We need both a prototype in string.h and the symbol in libc.

echo " "

d\_memmem\_proto="

xx1="#\$d\_gnulibc HAS\_GNULIBC"

xx2='#if defined(HAS\_GNULIBC) && !defined(\_GNU\_SOURCE)'

xx3='# define \_GNU\_SOURCE'

xx4='#endif'

set d\_memmem\_proto memmem literal "\$xx1" literal "\$xx2" literal "\$xx3" literal "\$xx4" define string.h

eval \$hasproto

case "\$d\_memmem\_proto" in

define) # see if memmem exists

```

set memmem d_membed
eval $inlibc
;;
*) val=$undef
set d_membed
eval $setvar
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_membed.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethostprotos.U,v \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_gethostprotos : Hasproto i\_netdb

?MAKE: -pick add \$@ %<

?S:d\_gethostprotos:

?S: This variable conditionally defines the HAS\_GETHOST\_PROTOS symbol,

?S: which indicates to the C program that <netdb.h> supplies

?S: prototypes for the various gethost\*() functions.

?S: See also netdbtype.U for probing for various netdb types.

?S:.

?C:HAS\_GETHOST\_PROTOS:

?C: This symbol, if defined, indicates that <netdb.h> includes

?C: prototypes for gethostent(), gethostbyname(), and

?C: gethostbyaddr(). Otherwise,

it is up to the program to guess

?C: them. See netdbtype.U for probing for various Netdb\_xxx\_t types.

?C:.

?H:#\$d\_gethostprotos HAS\_GETHOST\_PROTOS /\*\*/

?H:.

?LINT:set d\_gethostprotos

?X: This test actually only checks for gethostent() and assumes the

?X: others follow suit. This test fails for ChorusOS, which has

?X: gethostbyname and gethostbyaddr, but not gethostent.

: see if prototypes for various gethostxxx netdb.h functions are available

echo " "

set d\_gethostprotos gethostent \$i\_netdb netdb.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d\_gethostprotos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setnent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_setnent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setnent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setnent:

?S: This variable conditionally defines HAS\_SETNETENT if setnent() is

?S: available.

?S:.

?C:HAS\_SETNETENT:

?C: This symbol, if defined, indicates that the setnent() routine is

?C: available.

?C:.

?H:#\$d\_setnent HAS\_SETNETENT /\*\*/

?H:.

?LINT:set d\_setnent

: see if setnent exists

set

setnent d\_setnent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_setnent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:



?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_socketmark: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_socketmark:  
?S: This variable conditionally defines the HAS\_SOCKETMARK symbol, which  
?S: indicates to the C program that the socketmark() routine is available.  
?S:.  
?C:HAS\_SOCKETMARK:  
?C: This symbol, if defined, indicates that the socketmark routine is  
?C: available to test whether a socket is at the out-of-band mark.  
?C:.  
?H:#\$d\_socketmark HAS\_SOCKETMARK /\*\*/  
?H:.  
?LINT:set d\_socketmark  
: see if socketmark exists  
set socketmark d\_socketmark  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_socketmark.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endpwent.U,v \$  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: d\_endpwent.U,v \$  
?RCS:  
?MAKE:d\_endpwent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_endpwent:  
?S: This variable conditionally defines the HAS\_ENDPWENT symbol, which  
?S: indicates to the C program that the endpwent() routine is available  
?S: for sequential access of the passwd database.  
?S:.  
?C:HAS\_ENDPWENT:  
?C: This symbol, if defined, indicates that the getgrent routine is  
?C: available for finalizing sequential access of the passwd database.  
?C:.  
?H:#\$d\_endpwent HAS\_ENDPWENT /\*\*/  
?H:.  
?LINT:set d\_endpwent

```
: see if endpwent exists
set endpwent d_endpwent
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_endpwent.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```
?MAKE:ivdformat uvuformat uvoformat uvxformat uvXUformat \
nvEUformat nvFUformat nvGUformat \
nveformat nvfformat nvGformat: \
ivsize longsize intsize shortsize \
sPRId64 sPRIu64 sPRIo64 sPRIx64 sPRIXU64 \
uselongdouble d_longdbl usequadmath d_PRIgldbl \
sPRIEUldbl sPRIFUldbl sPRIGUldbl sPRIeldbl sPRIfldbl sPRIgldbl \
test echo
```

?MAKE: -pick add \$@ %<

?S:ivdformat:

?S: This variable contains the format string used for printing

?S: a Perl IV as a signed decimal integer.

?S:.

?S:uvuformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned decimal integer.

?S:.

?S:uvoformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned  
octal integer.

?S:.

?S:uvxformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned hexadecimal integer in lowercase abcdef.

?S:.

?S:uvXUformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned hexadecimal integer in uppercase ABCDEF.

?S:.

?S:nveformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %e-ish floating point format.  
?S:.  
?S:nvfformat:  
?S: This variable contains the format string used for printing  
?S: a Perl NV using %f-ish floating point format.  
?S:.  
?S:nvgformat:  
?S: This variable contains the format string used for printing  
?S: a Perl NV using %g-ish floating point format.  
?S:.  
?S:nvEUformat:  
?S: This variable contains the format string used for printing  
?S: a Perl NV using %E-ish floating point format.  
?S:.  
?S:nvFUformat:  
?S: This variable contains the format string used for printing  
?S: a Perl NV using %F-ish floating point format.  
?S:.  
?S:nvGUformat:  
?S: This  
variable contains the format string used for printing  
?S: a Perl NV using %G-ish floating point format.  
?S:.  
?C:IVdf:  
?C: This symbol defines the format string used for printing a Perl IV  
?C: as a signed decimal integer.  
?C:.  
?C:UVuf:  
?C: This symbol defines the format string used for printing a Perl UV  
?C: as an unsigned decimal integer.  
?C:.  
?C:UVof:  
?C: This symbol defines the format string used for printing a Perl UV  
?C: as an unsigned octal integer.  
?C:.  
?C:UVxf:  
?C: This symbol defines the format string used for printing a Perl UV  
?C: as an unsigned hexadecimal integer in lowercase abcdef.  
?C:.  
?C:UVXf:  
?C: This symbol defines the format string used for printing a Perl UV  
?C: as an unsigned hexadecimal integer in uppercase ABCDEF.  
?C:.  
?C:NVef:  
?C: This symbol defines the format string used for printing a Perl NV  
?C: using %e-ish floating point format.  
?C:.  
?C:NVff:

?C: This symbol defines the format string used for printing a Perl NV

?C: using %f-ish floating point

format.

?C:.

?C:NVgf:

?C: This symbol defines the format string used for printing a Perl NV

?C: using %g-ish floating point format.

?C:.

?C:NVEf:

?C: This symbol defines the format string used for printing a Perl NV

?C: using %E-ish floating point format.

?C:.

?C:NVFf:

?C: This symbol defines the format string used for printing a Perl NV

?C: using %F-ish floating point format.

?C:.

?C:NVGf:

?C: This symbol defines the format string used for printing a Perl NV

?C: using %G-ish floating point format.

?C:.

?H:#define IVdf \$ivdformat /\*\*/

?H:#define UVuf \$uvuformat /\*\*/

?H:#define UVof \$uvoformat /\*\*/

?H:#define UVxf \$uvxformat /\*\*/

?H:#define UVXf \$uvXUformat /\*\*/

?H:#define NVEf \$nveformat /\*\*/

?H:#define NVff \$nvffformat /\*\*/

?H:#define NVgf \$nvgformat /\*\*/

?H:#define NVEf \$nvEUformat /\*\*/

?H:#define NVFf \$nvFUformat /\*\*/

?H:#define NVGf \$nvGUformat /\*\*/

?H:.

: Check format strings for internal types

echo " "

\$echo "Checking the format strings to be used for Perl's  
internal types..." >&4

if \$test X"\$ivsize" = X8; then

ivdformat="\$sPRId64"

uvuformat="\$sPRIu64"

uvoformat="\$sPRIo64"

uvxformat="\$sPRIx64"

uvXUformat="\$sPRIXU64"

else

if \$test X"\$ivsize" = X"\$longsize"; then

ivdformat=""ld""

uvuformat=""lu""

uvoformat=""lo""

```

uvxformat="Ix"
uvXUformat="IX"
else
if $test X"$ivsize" = X"$intsize"; then
ivdformat="d"
uvuformat="u"
uvoformat="o"
uvxformat="x"
uvXUformat="X"
else
: far out
if $test X"$ivsize" = X"$shortsize"; then
ivdformat="hd"
uvuformat="hu"
uvoformat="ho"
uvxformat="hx"
uvXUformat="hX"
fi
fi
fi
fi

if $test X"$usequadmath" = X"$define"; then
nveformat="Qe"
nvffformat="Qf"
nvgformat="Qg"
nvEUformat="QE"
nvFUformat="QF"
nvGUformat="QG"
else
if $test X"$uselongsdouble" = X"$define" -a X"$d_longdbl" = X"$define" -a X"$d_PRIgldbl" = X"$define"; then
nveformat="$sPRIldbl"
nvffformat="$sPRIfldbl"
nvgformat="$sPRIGldbl"
nvEUformat="$sPRIEUldbl"
nvFUformat="$sPRIFUldbl"
nvGUformat="$sPRIGUldbl"
else
nveformat="e"
nvffformat="f"
nvgformat="g"
nvEUformat="E"
nvFUformat="F"
nvGUformat="G"
fi
fi

case "$ivdformat" in

```

```
) echo "$0: Fatal: failed to find format strings, cannot continue." >&4
  exit 1
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/perlxf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_dirent.U,v 3.0.1.4 1994/10/29 16:20:01 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: i_dirent.U,v $
?RCS: Revision 3.0.1.4 1994/10/29 16:20:01 ram
?RCS: patch36: failed scanning for 'd_namlen' with missing <dirent.h> (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/06/20 07:01:25 ram
?RCS: patch30: added direntrytype for hints, merely for NeXT (ADO)
?RCS: patch30: now checks for both struct dirent and direct (ADO)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:22:37 ram
?RCS: patch27: new variable direntrytype for proper type setting (ADO)
?RCS:
?RCS:
Revision 3.0.1.1 1994/01/24 14:11:15 ram
?RCS: patch16: added new Direntry_t pseudo-type for directory entries
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit looks whether there is a dirent system or not
?X:
?MAKE:i_dirent d_dirnamlen direntrytype: test contains Setvar \
Myread Findhdr cppstdin cppflags cppminus rm_try
?MAKE: -pick add $@ %<
?S:i_dirent:
?S: This variable conditionally defines I_DIRENT, which indicates
?S: to the C program that it should include <dirent.h>.
?S:.
```

?S:d\_dirnamlen:

?S: This variable conditionally defines DIRNAMLEN, which indicates

?S: to the C program that the length of directory entry names is

?S: provided by a d\_namelen field.

?S:.

?S:direntrytype:

?S: This symbol is set to 'struct direct' or 'struct dirent' depending on

?S: whether dirent is available or not. You should use this pseudo type to

?S: portably declare your directory entries.

?S:.

?C:I\_DIRENT:

?C: This symbol,

if defined, indicates to the C program that it should

?C: include <dirent.h>. Using this symbol also triggers the definition

?C: of the Direntry\_t define which ends up being 'struct dirent' or

?C: 'struct direct' depending on the availability of <dirent.h>.

?C:.

?C:DIRNAMLEN:

?C: This symbol, if defined, indicates to the C program that the length

?C: of directory entry names is provided by a d\_namlen field. Otherwise

?C: you need to do strlen() on the d\_name field.

?C:.

?C:Direntry\_t:

?C: This symbol is set to 'struct direct' or 'struct dirent' depending on

?C: whether dirent is available or not. You should use this pseudo type to

?C: portably declare your directory entries.

?C:.

?H:#\$i\_dirent I\_DIRENT /\*\*/

?H:#\$d\_dirnamlen DIRNAMLEN /\*\*/

?H:%<:@if I\_DIRENT && Direntry\_t

?H:%<:#define Direntry\_t \$direntrytype

?H:%<:@end

?H:.

?T:xinc guess1 guess2

?LINT:set i\_dirent d\_dirnamlen

: see if this is a dirent system

echo " "

if xinc=`./findhdr dirent.h`; \$test "\$xinc"; then

val="\$define"

echo

"<dirent.h> found." >&4

else

val="\$undef"

if xinc=`./findhdr sys/dir.h`; \$test "\$xinc"; then

echo "<sys/dir.h> found." >&4

echo " "

else

xinc=`./findhdr sys/ndir.h`

```

fi
echo "<dirent.h> NOT found." >&4
fi
set i_dirent
eval $setvar

?X: Use struct dirent or struct direct?  If we're using dirent.h,
?X: it's probably struct dirent, but apparently not always.
?X: Assume $xinc still contains the name of the header file we're using.
@if direntrytype || Direntry_t
: Look for type of directory structure.
echo " "
$ccpstdin $ccpflags $ccpminus < "$xinc" > try.c

case "$direntrytype" in
'|' )
case "$i_dirent" in
$define) guess1='struct dirent' ;;
*) guess1='struct direct' ;;
esac
;;
*) guess1="$direntrytype"
;;
esac

case "$guess1" in
'struct dirent') guess2='struct direct' ;;
*) guess2='struct dirent' ;;
esac

if $contains "$guess1" try.c >/dev/null 2>&1; then
direntrytype="$guess1"
echo "Your directory entries are $direntrytype." >&4
elif $contains "$guess2"
try.c >/dev/null 2>&1; then
direntrytype="$guess2"
echo "Your directory entries seem to be $direntrytype." >&4
else
echo "I don't recognize your system's directory entries." >&4
rp="What type is used for directory entries on this system?"
dflt="$guess1"
./myread
direntrytype="$ans"
fi
$rm_try

@end
@if d_dirnamlen || DIRNAMLEN

```



```

: see if the directory entry stores field length
echo " "
$cppstdin $cppflags $cppminus < "$xinc" > try.c
if $contains 'd_namlen' try.c >/dev/null 2>&1; then
echo "Good, your directory entry keeps length information in d_namlen." >&4
val="$define"
else
echo "Your directory entry does not know about the d_namlen field." >&4
val="$undef"
fi
set d_dirnamlen
eval $setvar
$rm_try

@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/i_dirent.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: orgname.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: orgname.U,v $
?RCS: Revision 3.0.1.1 1993/09/13 16:10:25 ram
?RCS: patch10: added support for /local/src to the search (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:orgname: sed cat Myread Loc Oldconfig
?MAKE: -pick add $@ %<
?S:orgname:
?S: This variable contains the eventual value of the ORGNAME symbol,
?S: which contains either the organization name or the full pathname
?S: of
a file containing the organization name.
?S:.
?C:ORGNAME:
?C: This symbol contains either the organization name or the full pathname

```

?C: of a file containing the organization name, which the program must

?C: be prepared to open and substitute the contents of.

?C:.

```
?H:#define ORGNAME "$orgname" /**/
```

?H:.

```
?T:longshots xxx
```

```
: get organization name
```

```
longshots='/local/src /usr/src/new /usr/src/local /usr/local/src'
```

```
case "$orgname" in
```

```
*) if xxx=`./loc news/src/defs.h x $longshots`; then
```

```
  dflt=`$sed -n 's/^.*MYORG[ ]*"(.*)"$.*/\1/p' $xxx`
```

```
else
```

```
  dflt="
```

```
fi
```

```
::
```

```
*) dflt="$orgname";;
```

```
esac
```

```
$cat << 'EOH'
```

Please type the name of your organization as you want it to appear on the Organization line of outgoing articles. (It's nice if this also specifies your location. Your city name is probably sufficient if well known.)

For example:

```
University of Southern North Dakota, Hoople
```

You may also put the name of a file, as long as it begins with a slash.

For example:

```
/etc/organization
```

```
EOH
```

```
orgname=""
```

```
while
```

```
test "X$orgname" = "X"; do
```

```
  rp='Organization:'
```

```
  ./myread
```

```
  orgname="$ans"
```

```
done
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/orgname.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: perl5.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Andrew Dougherty
```

```

?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: perl5.U,v $
?RCS:
?X:
?X: The purpose of this unit is to locate a previously installed
?X: version of perl5 suitable for running inc_version_list.U.
?X: We check for 5.005 and later because inc_version_list is
?X: irrelevant for earlier versions.
?X:
?MAKE:perl5: path_sep binexp test sed exe_ext
?MAKE: -pick add $@ %<
?Y:TOP
?S:perl5:
?S: This variable contains the full path (if any) to a previously
?S: installed perl5.005 or later suitable for running the script
?S: to determine inc_version_list.
?S:.
?T: tdir
: Find perl5.005 or later.
echo "Looking for a previously installed perl5.005 or later... "
case "$perl5" in
") for tdir in `echo "$binexp$path_sep$PATH" | $sed "s/$path_sep/
/g"; do
: Check if this perl is recent and can load a simple module
if $test -x $tdir/perl$exe_ext && $tdir/perl -Mless -e 'use 5.005;' >/dev/null 2>&1; then
perl5=$tdir/perl
break;
elif $test -x $tdir/perl5$exe_ext && $tdir/perl5 -Mless -e 'use 5.005;' >/dev/null 2>&1; then
perl5=$tdir/perl5
break;
fi
done
;;
*) perl5="$perl5"
;;
esac
case "$perl5" in
") echo "None found. That's ok.";;
*) echo "Using $perl5." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/installdirs/perl5.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: nametype.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: nametype.U,v \$  
?RCS: Revision 3.0.1.3 1994/10/29 16:26:09 ram  
?RCS: patch36: call ./usg and ./bsd explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0.1.2 1994/08/29 16:36:48 ram  
?RCS: patch32: fixed typo: /etc/password -> /etc/passwd (WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:10:09 ram  
?RCS: patch10: made questions more explicit for 'Configure -s' prompting (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:20 ram  
?RCS: Baseline  
for dist 3.0 netwide release.  
?RCS:  
?MAKE:nametype d\_passnames d\_berknames d\_usgnames: Myread Guess Oldconfig cat  
?MAKE: -pick add \$@ %<  
?S:nametype:  
?S: This variable indicates how full names are stored on this system.  
?S: Values are bsd, usg, and other.  
?S:.  
?S:d\_passnames:  
?S: This variable conditionally defines the PASSNAMES symbol,  
?S: which indicates to the C program that full names are stored in  
?S: the /etc/passwd file.  
?S:.  
?S:d\_berknames:  
?S: This variable conditionally defines the PASSNAMES symbol,  
?S: which indicates to the C program that full names are stored in  
?S: the /etc/passwd file in Berkeley format.  
?S:.  
?S:d\_usgnames:  
?S: This variable conditionally defines the PASSNAMES symbol,  
?S: which indicates to the C program that full names are stored in  
?S: the /etc/passwd file in USG format.  
?S:.  
?C:PASSNAMES:

```

?C: This symbol, if defined, indicates that full names are stored in
?C: the /etc/passwd file.
?C:.
?C:BERKNAMES:
?C: This symbol, if defined, indicates that full
names are stored in
?C: the /etc/passwd file in Berkeley format (name first thing, everything
?C: up to first comma, with & replaced by capitalized login id, yuck).
?C:.
?C:USGNAMES:
?C: This symbol, if defined, indicates that full names are stored in
?C: the /etc/passwd file in USG format (everything after - and before ( is
?C: the name).
?C:.
?H:#$d_passnames PASSNAMES /* (undef to take name from ~/.fullname) */
?H:#$d_berknames BERKNAMES /* (that is, ":name,stuff:") */
?H:#$d_usgnames USGNAMES /* (that is, ":stuff-name(stuff):") */
?H:.
: find out how to find out full name
case "$d_berknames" in
"$define")
dflt=y;;
"$undef")
dflt=n;;
*)
if ./bsd; then
dflt=y
elif ./xenix; then
dflt=y
else
dflt=n
fi
;;
esac
$cat <<'EOM'

```

Does your /etc/passwd file keep full names in Berkeley/V7 format (name first thing after ':' in GCOS field)? In that case, a typical entry in the password file looks like this:

```

guest:**password**:10:100:Mister Guest User:/usr/users:/bin/sh

```

```

^^^^^^^^^^^^^^^^^^^^^^

```

```

EOM
rp="Berkeley/V7 format for full name in /etc/passwd?"
./myread
case "$ans" in
y*) d_passnames="$define"

```

```

d_berknames="$define"
d_usgnames="$undef"
nametype=bsd
;;
*)
case "$d_usgnames" in
"$define") dflt=y;;
"$undef") dflt=n;;
*)
if ./usg; then
dflt=y
else
dflt=n
fi
;;
esac
$cat <<'EOM'

```

Does your passwd file keep full names in USG format (name sandwiched between a '-' and a '(')? In that case, a typical entry in the password file looks like this:

```

guest:**password**:10:100:000-Mister Guest User(000):usr/users:/bin/sh
          ^^^^^^^^^^^^^^^^^^^^^^^

```

EOM

```

rp="USG format for full name in /etc/passwd?"
./myread
case "$ans" in
n*) echo "Full name will be taken from ~/.fullname"
d_passnames="$undef"
d_berknames="$undef"
d_usgnames="$undef"
nametype=other
;;
*)
d_passnames="$define"
d_berknames="$undef"
d_usgnames="$define"
nametype=usg
;;
esac;;
esac

```

Found in path(s):

```

*
/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/nametype.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llroundl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llroundl:

?S: This variable conditionally defines the HAS\_LLROUNDL symbol, which

?S: indicates to the C program that the llroundl() routine is available

?S: to return the long long value nearest to x away from zero.

?S:.

?C:HAS\_LLROUNDL:

?C: This symbol, if defined, indicates that the llroundl routine is

?C: available to return the nearest long long value away from zero of

?C: the long double argument value.

?C:.

?H:#\$d\_llroundl HAS\_LLROUNDL /\*\*/

?H:.

?LINT:set d\_llroundl

: see if llroundl exists

set llroundl d\_llroundl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/U/perl/d\_llroundl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtold: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtold:

?S: This variable conditionally defines the HAS\_STRTOLD symbol, which

?S: indicates to the C program that the strtold() routine is available.

?S:.

?C:HAS\_STRTOLD:

?C: This symbol, if defined, indicates that the strtold routine is

?C: available to convert strings to long doubles.

?C:.

?H:#\$d\_strtold HAS\_STRTOLD /\*\*/

?H:.

```
?LINT:set d_strtold
: see if strtold exists
set strtold d_strtold
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_strtold.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_vfork.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_vfork.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/05/06 15:05:44 ram
```

```
?RCS: patch23: avoid inclusion of <vfork.h> if no vfork() used (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:08:50 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_vfork: Inhdr d_vfork
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_vfork:
```

```
?S: This variable conditionally defines the I_VFORK symbol, and indicates
```

```
?S: whether a C program should include vfork.h.
```

```
?S:.
```

```
?C:I_VFORK:
```

```
?C: This symbol,
```

```
if defined, indicates to the C program that it should
```

```
?C: include vfork.h.
```

```
?C:.
```

```
?H:#$i_vfork I_VFORK /**/
```

```
?H:.
```

```
: see if this is a vfork system
```

```
case "$d_vfork" in
```

```
"$define")
```

```
set vfork.h i_vfork
```

```
eval $inhdr
```

```
::
```

```
*)
```

```
i_vfork="$undef"
```



```
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_vfork.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Begin.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Begin.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 14:56:35 ram
```

```
?RCS: patch61: added Extractall dependency
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/01/30 14:25:08 ram
```

```
?RCS: patch49: avoid an empty rmlist: systems might choke on it (WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/31 09:32:20 ram
```

```
?RCS: patch44: created
```

```
?RCS:
```

```
?X:
```

```
?X: This file comes after option processing had been done and after all
```

```
?X: the default values have been set up. It marks the beginning
of questions.
```

```
?X: It is important that Options be listed *after* Myinit to ensure that the
```

```
?X: default initializations performed by Init and Myinit will not clobber
```

```
?X: any setting done on the command line via -D or -U.
```

```
?X:
```

```
?MAKE:Begin: Myinit Options package Extractall
```

```
?MAKE: -pick add $@ %<
```

```
: Eunice requires " " instead of "'", can you believe it
```

```
echo " "
```

```
: Here we go...
```

```
echo "Beginning of configuration questions for $package."
```

```
?X: Make sure the rm below is given a non-empty list for some systems.
```

```
?X: This is run only when within the UU directory, hence we can safely
```

```
?X: attempt to rm a non-existent 'X' file...
```

```
trap 'echo " "; test -d ../UU && rm -rf X $rmlist; exit 1' 1 2 3 15
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Begin.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fegetround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fegetround:

?S: This variable conditionally defines HAS\_FEGETROUND if fegetround() is

?S: available to get the floating point rounding mode.

?S:.

?C:HAS\_FEGETROUND:

?C: This symbol, if defined, indicates that the fegetround routine is

?C: available to return the macro corresponding to the current rounding

?C: mode.

?C:.

?H:#\$d\_fegetround HAS\_FEGETROUND /\*\*/

?H:.

?LINT:set d\_fegetround

: see if fegetround exists

set fegetround d\_fegetround

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fegetround.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmat.U,v 3.0.1.3 1995/07/25 14:04:23 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_shmat.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 14:04:23 ram

?RCS: patch56: use findhdr to find <sys/shm.h>, to get the right one (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:18:56 ram

?RCS: patch27: added new symbol HAS\_SHMAT\_PROTOTYPE (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:54:18 ram

?RCS: patch23: new Shmat\_t symbol to declare return type of shmat()

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:18 ram

?RCS: Baseline for dist 3.0 netwide  
release.

?RCS:

?MAKE:d\_shmat shmattype d\_shmatprototype: Inlibc cat +cc +ccflags \  
rm cppstdin cppflags cppminus Findhdr Setvar contains

?MAKE: -pick add \$@ %<

?S:d\_shmat:

?S: This variable conditionally defines the HAS\_SHMAT symbol, which  
?S: indicates to the C program that the shmat() routine is available.

?S:.

?S:shmattype:

?S: This symbol contains the type of pointer returned by shmat().  
?S: It can be 'void \*' or 'char \*'.

?S:.

?S:d\_shmatprototype:

?S: This variable conditionally defines the HAS\_SHMAT\_PROTOTYPE  
?S: symbol, which indicates that sys/shm.h has a prototype for  
?S: shmat.

?S:.

?C:HAS\_SHMAT:

?C: This symbol, if defined, indicates that the shmat() routine is  
?C: available to attach a shared memory segment to the process space.

?C:.

?C:Shmat\_t:

?C: This symbol holds the return type of the shmat() system call.  
?C: Usually set to 'void \*' or 'char \*'.

?C:.

?C:HAS\_SHMAT\_PROTOTYPE:

?C: This symbol, if defined, indicates that the sys/shm.h includes  
?C: a prototype for shmat().  
Otherwise, it is up to the program to  
?C: guess one. Shmat\_t shmat(int, Shmat\_t, int) is a good guess,  
?C: but not always right so it should be emitted by the program only  
?C: when HAS\_SHMAT\_PROTOTYPE is not defined to avoid conflicting defs.

?C:.

?H:#\$d\_shmat HAS\_SHMAT /\*\*/  
?H:#define Shmat\_t \$shmattype /\*\*/  
?H:#\$d\_shmatprototype HAS\_SHMAT\_PROTOTYPE /\*\*/  
?H:.

?LINT:set d\_shmat d\_shmatprototype

?T:xxx  
: see if shmat exists  
set shmat d\_shmat  
eval \$inlibc

```

: see what shmat returns
case "$d_shmat" in
"$define")
$cat >shmat.c <<'END'
#include <sys/shm.h>
void *shmat();
END
if $cc $ccflags -c shmat.c >/dev/null 2>&1; then
shmattype='void *'
else
shmattype='char *'
fi
echo "and it returns ($shmattype)." >&4
: see if a prototype for shmat is available
xxx=`./findhdr sys/shm.h`
$cppstdin $cppflags $cppminus < $xxx > shmat.c 2>/dev/null
if $contains 'shmat.*(' shmat.c >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
$rm -f shmat.[co]
;;
*)
val="$undef"
;;
esac
set
d_shmatprototype
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_shmat.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysstatfs.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysstatfs: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysstatfs:

?S: This variable conditionally defines the I\_SYSSTATFS symbol,

?S: and indicates whether a C program should include <sys/statfs.h>.

?S:  
?C:I\_SYS\_STATFS:  
?C: This symbol, if defined, indicates that <sys/statfs.h> exists.  
?C:.  
?H:#\$i\_sysstatfs I\_SYS\_STATFS /\*\*/  
?H:.  
?LINT:set i\_sysstatfs  
: see if this is a sys/statfs.h system  
set sys/statfs.h i\_sysstatfs  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_sysstatfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: inc\_version\_list.U,v \$  
?RCS:  
?RCS: Copyright (c) 2000 Andy Dougherty  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: inc\_version\_list.U,v \$  
?RCS:  
?MAKE:inc\_version\_list inc\_version\_list\_init d\_inc\_version\_list: cat sed \  
Getfile perl5 version api\_versionstring rm Myread archname \  
prefix sitelib\_stem exe\_ext  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:inc\_version\_list:  
?S: This variable specifies the list of subdirectories in over  
?S: which perl.c:incpush() and lib/lib.pm will automatically  
?S: search when adding directories to @INC. The elements in  
?S: the list are separated by spaces. This is only useful  
?S: if  
you have a perl library directory tree structured like the  
?S: default one. See INSTALL for how this works. The versioned  
?S: site\_perl directory was introduced in 5.005, so that is the  
?S: lowest possible value.  
?S:  
?S: This list includes architecture-dependent directories back to  
?S: version \$api\_versionstring (e.g. 5.5.640) and  
?S: architecture-independent directories all the way back to  
?S: 5.005.

?S:  
?S:inc\_version\_list\_init:  
?S: This variable holds the same list as inc\_version\_list, but  
?S: each item is enclosed in double quotes and separated by commas,  
?S: suitable for use in the PERL\_INC\_VERSION\_LIST initialization.  
?S:  
?S:d\_inc\_version\_list:  
?S: This variable conditionally defines PERL\_INC\_VERSION\_LIST.  
?S: It is set to undef when PERL\_INC\_VERSION\_LIST is empty.  
?S:  
?C:PERL\_INC\_VERSION\_LIST:  
?C: This variable specifies the list of subdirectories in over  
?C: which perl.c:incpush() and lib/lib.pm will automatically  
?C: search when adding directories to @INC, in a format suitable  
?C: for  
a C initialization string. See the inc\_version\_list entry  
?C: in Porting/Glossary for more details.  
?C:  
?H:#\$d\_inc\_version\_list PERL\_INC\_VERSION\_LIST \$inc\_version\_list\_init /\*\*/  
?H:  
?T:stem  
: Determine list of previous versions to include in @INC  
\$cat > getverlist <<EOPL  
#!/\$perl5 -w  
use File::Basename;  
\sapi\_versionstring = "\$sapi\_versionstring";  
\version = "\$version";  
\stem = "\$sitelib\_stem";  
\sarchname = "\$sarchname";  
EOPL  
\$cat >> getverlist <<'EOPL'  
# The list found is store twice for each entry: the original name, and  
# the binary broken down version as pack "sss", so sorting is easy and  
# unambiguous. This will work for all versions that have a maximum of  
# three digit groups, separate by '.'s or '\_'s. Names are extended with  
# ".0.0" to ensure at least three elements for the pack.  
# -- H.Merijn Brand (m)'06 23-10-2006  
  
# Can't have leading @ because metaconfig interprets it as a command!  
;@inc\_version\_list=();  
# XXX Redo to do opendir/readdir?  
if (-d \$stem)  
{  
chdir(\$stem);  
;@candidates = map {  
[ \$\_, pack "sss", split m/[.\_]/, "\$\_.0.0" ] } glob("5.\*");  
;@candidates = sort { \$a->[1] cmp \$b->[1]} @candidates;  
}

```

else {
    ;@candidates = ();
}

($pversion, $aversion, $vsn5005) = map {
    pack "sss", split m/[. _]/, "$_.0.0" } $version, $api_versionstring, "5.005";
foreach $d (@candidates) {
    if ($d->[1] lt $pversion) {
    if ($d->[1] ge $aversion) {
        unshift(@inc_version_list, grep { -d } $d->[0]."/$archname", $d->[0]);
    }
    elsif ($d->[1] ge $vsn5005) {
        unshift(@inc_version_list, grep { -d } $d->[0]);
    }
    }
    else {
# Skip newer version. I.e. don't look in
# 5.7.0 if we're installing 5.6.1.
    }
}

if (@inc_version_list) {
    print join(' ', @inc_version_list);
}
else {
    # Blank space to preserve value for next Configure run.
    print " ";
}
EOPL
chmod +x getverlist
case "$inc_version_list" in
") if test -x "$perl5$exe_ext"; then
    dflt=`$perl5 getverlist`
else
    dflt='none'
fi
;;
$undef) dflt='none'
;;
?X:  Configure -Dinc_version_list='5.6.0/$archname 5.6.0' ...
*) eval dflt="\$inc_version_list" ;;
esac
case "$dflt" in
'| ') dflt=none ;;
esac
case "$dflt" in
5.005) dflt=none ;;
esac

```

\$cat <<EOM

In order to ease the process of upgrading, this version of perl can be configured to use modules built and installed with earlier versions of perl that were installed under \$prefix. Specify here the list of earlier versions that this version of perl should check. If Configure detected no earlier versions of perl installed under \$prefix, then the list will be empty. Answer 'none' to tell perl to not search earlier versions.

The default should almost always be sensible, so if you're not sure, just accept the default.

EOM

```
rp='List of earlier versions to include in @INC?'
./myread
case "$ans" in
[Nn]one|"|"|$undef) inc_version_list=' ' ;;
*) inc_version_list="$ans" ;;
esac
case "$inc_version_list" in
"|'|')
inc_version_list_init='0'
d_inc_version_list="$undef"
;;
*) inc_version_list_init=`echo
$inc_version_list |
$sed -e 's/^\|/' -e 's/ /','/' -e 's/$/"/,0/'
d_inc_version_list="$define"
;;
esac
$rm -f getverlist
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/inc_version_list.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pread.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:



```

?RCS: $Log: d_pread.U,v $
?RCS:
?MAKE:d_pread: Inlibc
?MAKE: -pick add $@ %<
?S:d_pread:
?S: This variable conditionally defines the HAS_PREAD symbol, which
?S: indicates to the C program that the pread() routine is available.
?S:.
?C:HAS_PREAD :
?C: This symbol, if defined, indicates that the pread routine is
?C: available to perform reads on a file descriptor at a given offset.
?C:.
?H:#$d_pread HAS_PREAD /**/
?H:.
?LINT:set d_pread
: see if pread exists
set
  pread d_pread
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_pread.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getservbyport_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_getservbyport_r getservbyport_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_getservbyport_r:
?S: This variable conditionally defines the HAS_GETSERVBYPORTR symbol,
?S: which indicates to the C program that the getservbyport_r()
?S: routine is available.
?S:.
?S:getservbyport_r_proto:
?S: This variable encodes the prototype of getservbyport_r.
?S: It is zero if d_getservbyport_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getservbyport_r
?S: is defined.
?S:.
?C:HAS_GETSERVBYPORTR:

```

```

?C: This symbol, if defined, indicates
that the getservbyport_r routine
?C: is available to getservbyport re-entrantly.
?C:.
?C:GETSERVBYPORTR_PROTO:
?C: This symbol encodes the prototype of getservbyport_r.
?C: It is zero if d_getservbyport_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getservbyport_r
?C: is defined.
?C:.
?H:#$d_getservbyport_r HAS_GETSERVBYPORTR_R /**/
?H:#define GETSERVBYPORTR_PROTO $getservbyport_r_proto /**/
?H:.
?T:try hdrs d_getservbyport_r_proto
: see if getservbyport_r exists
set getservbyport_r d_getservbyport_r
eval $inlibc
case "$d_getservbyport_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getservbyport_r_proto:$usethreads" in
":define") d_getservbyport_r_proto=define
set d_getservbyport_r_proto getservbyport_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getservbyport_r_proto" in
define)
case "$getservbyport_r_proto" in
"|0) try='int getservbyport_r(int, const char*, struct servent*, char*, size_t,
struct servent**);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=I_ICSBWR ;;
esac
case "$getservbyport_r_proto" in
"|0) try='struct servent* getservbyport_r(int, const char*, struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=S_ICSBFI ;;
esac
case "$getservbyport_r_proto" in
"|0) try='int getservbyport_r(int, const char*, struct servent*, struct servent_data*);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=I_ICSD ;;
esac
case "$getservbyport_r_proto" in
"|0) d_getservbyport_r=undef
getservbyport_r_proto=0
echo "Disabling getservbyport_r, cannot determine prototype." >&4 ;;
*) case "$getservbyport_r_proto" in
REENTRANT_PROTO*) ;;
*) getservbyport_r_proto="REENTRANT_PROTO_$getservbyport_r_proto" ;;

```

```

esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getservbyport_r has no prototype, not using it." >&4 ;;
esac
d_getservbyport_r=undef
getservbyport_r_proto=0
;;
esac
;;
*) getservbyport_r_proto=0
;;
esac

```

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getservbyport_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Mkdirp.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which can be launched to create a

?X: directory path like "mkdir -p" would do.

?X:

?MAKE:Mkdirp:

```

eunicefix startsh
?MAKE: -pick add $@ %<
?F:./makedirs
?T:name create file
: script used to emulate mkdir -p
cat >makedirs <<EOS
$startsh
EOS
cat >>makedirs <<'EOS'
name=$1;
create="";
while test $name; do
if test ! -d "$name"; then
create="$name $create"
name=`echo $name | sed -e "s|^[^]*$||"``
name=`echo $name | sed -e "s|(.*).*\|1|"``
else
name=""
fi
done
for file in $create; do
mkdir $file
done
EOS
chmod +x makedirs
$eunicefix makedirs

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Makedirs.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_raster.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_raster.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:50 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_raster rasterlib: cat test Setvar Myread Oldconfig
?MAKE: -pick add $@ %<

```

```

?S:d_raster:
?S: Conditionally defines RASTER_TEK if this is a raster tech machine.
?S:.
?S:rasterlib (d_rasterlib):
?S: Set to the needed compile flag if this is a raster tech machine.
?S: It is up to the Makefile to use this variable.
?S:.
?C:RASTER_TEK:
?C: Defined
    if this is a rastertech machine.
?C:.
?H:#$d_raster RASTER_TEK /**/
?H:.
?LINT:set d_raster
: See if this is a raster tech machine.
val="$undef"
rasterlib=""
if $test -r /dev/mirage; then
$cat <<'EOM'

```

You seem to have a mirage device... this is normally associated with a raster technologies graphics workstation. If this is right, you may want to use raster tech in this program.

```

EOM
dflt=y
case "$d_raster" in
"$undef") dflt=n;;
esac
rp='Use raster tech?'
. ./myread
case "$ans" in
y*) val="$define";;
esac
fi
set d_raster
eval $setvar

case "$d_raster" in
"$define") rasterlib='-lphigs';;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_raster.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_endsent.U,v 3.0 1993/08/18 12:06:09 ram Exp $

```

```

?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_endsent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_endsent: Inlibc
?MAKE: -pick add $@ %<
?S:d_endsent:
?S: This variable conditionally defines HAS_ENDSERVENT if endservent() is
?S: available to close whatever was being used for service queries.
?S:.
?C:HAS_ENDSERVENT:
?C: This symbol, if defined, indicates that the endservent() routine is
?C: available to close whatever was being used for
service queries.
?C:.
?H:#$d_endsent HAS_ENDSERVENT /**/
?H:.
?LINT:set d_endsent
: see if endservent exists
set endservent d_endsent
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/d_endsent.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getgrgid_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_getgrgid_r getgrgid_r_proto: Inlibc Protochk Hasproto i_systypes \
usethreads i_grp extern_C
?MAKE: -pick add $@ %<
?S:d_getgrgid_r:

```

?S: This variable conditionally defines the HAS\_GETGRGID\_R symbol,

?S: which indicates to the C program that the getgrgid\_r()

?S: routine is available.

?S:.

?S:getgrgid\_r\_proto:

?S: This variable encodes the prototype of getgrgid\_r.

?S: It is zero if d\_getgrgid\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrgid\_r

?S: is defined.

?S:.

?C:HAS\_GETGRGID\_R:

?C: This symbol, if defined, indicates that the getgrgid\_r routine

?C: is available to

getgrgid re-entrantly.

?C:.

?C:GETGRGID\_R\_PROTO:

?C: This symbol encodes the prototype of getgrgid\_r.

?C: It is zero if d\_getgrgid\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrgid\_r

?C: is defined.

?C:.

?H:#\$d\_getgrgid\_r HAS\_GETGRGID\_R /\*\*/

?H:#define GETGRGID\_R\_PROTO \$getgrgid\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getgrgid\_r\_proto

: see if getgrgid\_r exists

set getgrgid\_r d\_getgrgid\_r

eval \$inlibc

case "\$d\_getgrgid\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_grp grp.h"

case "\$d\_getgrgid\_r\_proto:\$usetthreads" in

":define") d\_getgrgid\_r\_proto=define

set d\_getgrgid\_r\_proto getgrgid\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_getgrgid\_r\_proto" in

define)

case "\$getgrgid\_r\_proto" in

"|0) try='int getgrgid\_r(gid\_t, struct group\*, char\*, size\_t, struct group\*\*);'

./protochk "\$extern\_C \$try" \$hdrs && getgrgid\_r\_proto=I\_TSBWR ;;

esac

case "\$getgrgid\_r\_proto" in

"|0) try='int getgrgid\_r(gid\_t, struct group\*, char\*, int, struct

group\*\*);'

./protochk "\$extern\_C \$try" \$hdrs && getgrgid\_r\_proto=I\_TSBIR ;;

esac

```

case "$getgrgid_r_proto" in
"|0) try='int getgrgid_r(gid_t, struct group*, char*, int);'
./protochk "$xtern_C $try" $hdrs && getgrgid_r_proto=L_TSBI ;;
esac
case "$getgrgid_r_proto" in
"|0) try='struct group* getgrgid_r(gid_t, struct group*, char*, int);'
./protochk "$xtern_C $try" $hdrs && getgrgid_r_proto=S_TSBI ;;
esac
case "$getgrgid_r_proto" in
"|0) d_getgrgid_r=undef
getgrgid_r_proto=0
echo "Disabling getgrgid_r, cannot determine prototype." >&4 ;;
*) case "$getgrgid_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrgid_r_proto="REENTRANT_PROTO_$getgrgid_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getgrgid_r has no prototype, not using it." >&4 ;;
esac
d_getgrgid_r=undef
getgrgid_r_proto=0
;;
esac
;;
*) getgrgid_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getgrgid_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getaddrinfo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getaddrinfo:

?S: This variable conditionally defines the HAS\_GETADDRINFO symbol,

?S: which indicates to the C program that the getaddrinfo() function



?S: is available.  
?S:.  
?C:HAS\_GETADDRINFO:  
?C: This symbol, if defined, indicates that the getaddrinfo() function  
?C: is available for use.  
?C:.  
?H:#\$d\_getaddrinfo HAS\_GETADDRINFO /\*\*/  
?H:.  
?LINT:set d\_getaddrinfo  
: see if getaddrinfo exists  
set getaddrinfo d\_getaddrinfo  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getaddrinfo.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysutsname.U,v \$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_sysutsname: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_sysutsname:  
?S: This variable conditionally defines the I\_SYSUTSNAME symbol,  
?S: and indicates whether a C program should include <sys/utsname.h>.  
?S:.  
?C:I\_SYSUTSNAME:  
?C: This symbol, if defined, indicates that <sys/utsname.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_sysutsname I\_SYSUTSNAME /\*\*/  
?H:.  
?LINT:set i\_sysutsname  
: see if this is a sys/utsname.h system  
set sys/utsname.h i\_sysutsname  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_sysutsname.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_socks.U,v \$

?RCS:  
?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_socks: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_socks:  
?S: This variable conditionally defines the I\_SOCKS symbol, and indicates  
?S: whether a C program should include <socks.h>.  
?S:.  
?C:I\_SOCKS:  
?C: This symbol, if defined, indicates that <socks.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_socks I\_SOCKS /\*\*/  
?H:.  
?LINT:set i\_socks  
: see if this is a socks.h system  
set socks.h i\_socks  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_socks.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: scriptdir.U,v \$  
?RCS: Revision 3.0.1.3 1995/09/25 09:17:15 ram  
?RCS: patch59: unit is now forced to the top of Configure, if possible  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/30 14:46:13 ram  
?RCS: patch49: can now handle installation prefix changes (from WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/08/29 16:32:04 ram  
?RCS: patch32: now uses installation prefix  
?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:scriptdir scriptdirexp installscript:  
 afs cat test Getfile Loc \  
 Oldconfig +bin Prefixit prefixexp Prefixup

?MAKE: -pick add \$@ %<

?Y:TOP

?S:scriptdir:  
 ?S: This variable holds the name of the directory in which the user wants  
 ?S: to put publicly scripts for the package in question. It is either  
 ?S: the same directory as for binaries, or a special one that can be  
 ?S: mounted across different architectures, like /usr/share. Programs  
 ?S: must be prepared to deal with ~name expansion.

?S:.

?S:scriptdirexp:  
 ?S: This variable is the same as scriptdir, but is filename expanded  
 ?S: at configuration time, for programs not wanting to bother with it.

?S:.

?S:installscript:  
 ?S: This variable is usually the same as scriptdirexp, unless you are on  
 ?S: a system running AFS, in which case they may differ slightly. You  
 ?S: should always use this variable within your makefiles for portability.

?S:.

?C:SCRIPTDIR:  
 ?C: This symbol holds the name of the directory in which the user wants  
 ?C: to put publicly executable scripts for the  
 package in question. It  
 ?C: is often a directory that is mounted across diverse architectures.  
 ?C: Programs must be prepared to deal with ~name expansion.

?C:.

?C:SCRIPTDIR\_EXP:  
 ?C: This is the same as SCRIPTDIR, but is filename expanded at  
 ?C: configuration time, for use in programs not prepared to do  
 ?C: ~name substitutions at run-time.

?C:.

?H:#define SCRIPTDIR "\$scriptdir" /\*\*/  
 ?H:#define SCRIPTDIR\_EXP "\$scriptdirexp" /\*\*/  
 ?H:.

: determine where public executable scripts go  
 set scriptdir scriptdir  
 eval \$prefixit  
 case "\$scriptdir" in  
 ")  
 dflt="\$bin"  
 : guess some guesses  
 \$test -d /usr/share/scripts && dflt=/usr/share/scripts  
 \$test -d /usr/share/bin && dflt=/usr/share/bin

```

$test -d /usr/local/script && dflt=/usr/local/script
$test -d $prefixexp/script && dflt=$prefixexp/script
set dflt
eval $prefixup
;;
*) dflt="$scriptdir"
;;
esac
$cat <<EOM

```

Some installations have a separate directory just for executable scripts so that they can mount it across multiple architectures but keep the scripts in one spot. You might, for example, have a subdirectory of /usr/share for this. Or you might just lump your scripts in with all your other executables.

```

EOM
fn=d~
rp='Where do you keep publicly executable scripts?'
./getfile
if $test "X$ansexp" != "X$scriptdirexp"; then
installscript="
fi
scriptdir="$ans"
scriptdirexp="$ansexp"
if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which scripts reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installscript" in
") dflt=`echo $scriptdirexp | sed 's#^/afs/#/afs/#'`;
*) dflt="$installscript";
esac
fn=de~
rp='Where will public scripts be installed?'
./getfile
installscript="$ans"
else
installscript="$scriptdirexp"
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/scriptdir.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_flexfnam.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_flexfnam.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:04 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_flexfnam: cat rm test Setvar
?MAKE: -pick add $@ %<
?S:d_flexfnam:
?S: This variable conditionally defines the FLEXFILENAMES symbol, which
?S: indicates that the system supports filenames longer than 14 characters.
?S:.
?C:FLEXFILENAMES:
?C: This symbol, if defined, indicates that the system supports filenames
?C: longer than 14
?C: characters.
?C:.
?H:#$d_flexfnam FLEXFILENAMES /**/
?H:.
?T:first
?LINT:set d_flexfnam
: see if we can have long filenames
echo " "
?X:
?X: We have to test in both /tmp and . because of NFS (remote server may allow
?X: long filenames while the local filesystem cannot support them). If at least
?X: one of those file systems cannot support long filenames, then we assume the
?X: whole system can't.
?X:
first=123456789abcdef
$rm -f $first
if (echo hi >$first) 2>/dev/null; then
if $test -f 123456789abcde; then
echo 'You cannot have filenames longer than 14 characters. Sigh.'>&4
val="$undef"
else
echo 'You can have filenames longer than 14 characters.'>&4
val="$define"
```

```

fi
else
$cat <<'EOM'
You can't have filenames longer than 14 chars.
You can't even think about them!
EOM
val="$undef"
fi
set d_flexfnam
eval $setvar
$rm -rf 123456789abcde*

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_flexfnam.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: prefshell.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: prefshell.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:28:13 ram
?RCS: patch36: added SHELL temporary since metalint now sees ${SHELL}
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:11:47 ram
?RCS: patch10: non-portable var substitution was used (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:34 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:prefshell: cat package Getfile Oldconfig ksh csh bash
?MAKE: -pick add $@ %<
?S:prefshell:
?S: This
variable contains the eventual value of the PREFSHELL symbol,
?S: which contains the full name of the preferred user shell on this
?S: system. Usual values are /bin/csh, /bin/ksh, /bin/sh.
?S:.
?C:PREFSHELL:
?C: This symbol contains the full name of the preferred user shell on this
?C: system. Usual values are /bin/csh, /bin/ksh, /bin/sh.

```

```

?C:.
?H:#define PREFSHELL "$prefshell" /**/
?H:.
?T:SHELL
: find out which shell people like to use most
case "$prefshell" in
")
case "$ksh $bash $csh" in
*/ksh*) dflt="$ksh" ;;
*/bash*) dflt="$bash" ;;
*/csh*) dflt="$csh" ;;
*) dflt='/bin/sh' ;;
esac
;;
*) dflt="$prefshell";;
esac
?X: Some shells (Ultrix) do not understand ${SHELL:-/bin/sh}, sigh!
$cat <<EOM

```

Give the full path name of the shell most people like to use on your system. This will be used by \$package whenever the user wants to get a shell escape (for instance) and is not necessarily the same as the shell you are currently using (\${SHELL:-/bin/sh}).

```

EOM
fn=f/~
rp='Preferred
shell to be used?'
./getfile
prefshell=$ans

```

```

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/prefshell.U
No license file was found, but licenses were detected in source scan.

```

```

?RCS: $Id: Myinit.U,v 3.0 1993/08/18 12:05:07 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
?RCS: In accordance with clause 7 of dist's modified Artistic License:
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: Myinit.U,v $

```

?RCS: Revision 3.0 1993/08/18 12:05:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: If you want to initialize any default values, copy this unit to your  
?X: personal U directory and add the assignments to the end. This file  
?X: is included after variables are initialized but before any old  
?X: config.sh file is read in and before any Configure switch processing.  
?X:  
?MAKE:Myinit  
libswanted: Init  
?MAKE: -pick add \$@ %<  
?S:libswanted:  
?S: This variable holds a list of all the libraries we want to  
?S: search. The order is chosen to pick up the c library  
?S: ahead of ucb or bsd libraries for SVR4.  
?S:.  
?LINT:extern usevfork glibpth  
?LINT:change usevfork glibpth  
: List of libraries we want.  
?X: Put crypt here, even though I should really fix d\_crypt.U to look  
?X: for it correctly, including possible shared library versions.  
: If anyone needs extra -lxxx, put those in a hint file.  
libswanted="cl pthread socket bind inet nsl ndbm gdbm dbm db malloc dl ld"  
libswanted="\$libswanted sun m crypt sec util c cposix posix ucb bsd BSD"  
: We probably want to search /usr/shlib before most other libraries.  
: This is only used by the lib/ExtUtils/MakeMaker.pm routine extliblist.  
glibpth=`echo " \$glibpth " | sed -e 's! /usr/shlib ! !'`  
glibpth="/usr/shlib \$glibpth"  
: Do not use vfork unless overridden by a hint file.  
usevfork=false

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Myinit.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetbyname\_r.U,v 0RCS:  
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_getnetbyname\_r getnetbyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C  
?MAKE: -pick add \$@ %<



?S:d\_getnetbyname\_r:  
 ?S: This variable conditionally defines the HAS\_GETNETBYNAME\_R symbol,  
 ?S: which indicates to the C program that the getnetbyname\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S:getnetbyname\_r\_proto:  
 ?S: This variable encodes the prototype of getnetbyname\_r.  
 ?S: It is zero if d\_getnetbyname\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyname\_r  
 ?S: is defined.  
 ?S:.  
 ?C:HAS\_GETNETBYNAME\_R:  
 ?C: This symbol, if defined, indicates that  
 the getnetbyname\_r routine  
 ?C: is available to getnetbyname re-entrantly.  
 ?C:.  
 ?C:GETNETBYNAME\_R\_PROTO:  
 ?C: This symbol encodes the prototype of getnetbyname\_r.  
 ?C: It is zero if d\_getnetbyname\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyname\_r  
 ?C: is defined.  
 ?C:.  
 ?H:#\$d\_getnetbyname\_r HAS\_GETNETBYNAME\_R /\*\*/  
 ?H:#define GETNETBYNAME\_R\_PROTO \$getnetbyname\_r\_proto /\*\*/  
 ?H:.  
 ?T:try hdrs d\_getnetbyname\_r\_proto  
 : see if getnetbyname\_r exists  
 set getnetbyname\_r d\_getnetbyname\_r  
 eval \$inlibc  
 case "\$d\_getnetbyname\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
 case "\$d\_getnetbyname\_r\_proto:\$usethreads" in  
 ":define") d\_getnetbyname\_r\_proto=define  
 set d\_getnetbyname\_r\_proto getnetbyname\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_getnetbyname\_r\_proto" in  
 define)  
 case "\$getnetbyname\_r\_proto" in  
 "|0) try='int getnetbyname\_r(const char\*, struct netent\*, char\*, size\_t, struct netent\*\*, int\*);'  
 ./protochk "\$extern\_C  
 \$try" \$hdrs && getnetbyname\_r\_proto=I\_CSBRWRE ;;  
 esac  
 case "\$getnetbyname\_r\_proto" in  
 "|0) try='int getnetbyname\_r(const char\*, struct netent\*, char\*, int);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getnetbyname\_r\_proto=I\_CSBI ;;

```

esac
case "$getnetbyname_r_proto" in
"|0) try='struct netent* getnetbyname_r(const char*, struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetbyname_r_proto=S_CSBI ;;
esac
case "$getnetbyname_r_proto" in
"|0) try='int getnetbyname_r(const char*, struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetbyname_r_proto=I_CSD ;;
esac
case "$getnetbyname_r_proto" in
"|0) d_getnetbyname_r=undef
getnetbyname_r_proto=0
echo "Disabling getnetbyname_r, cannot determine prototype." >&4 ;;
*) case "$getnetbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetbyname_r_proto="REENTRANT_PROTO_${getnetbyname_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo
"getnetbyname_r has no prototype, not using it." >&4 ;;
esac
d_getnetbyname_r=undef
getnetbyname_r_proto=0
;;
esac
;;
*) getnetbyname_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_getnetbyname\_r.U

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?RCS: You may distribute under the terms of either the GNU General Public

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?RCS:

?MAKE:d\_nexttoward: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nexttoward:

?S: This variable conditionally defines HAS\_NEXTTOWARD if nexttoward()

?S: is available to return the next machine representable long double from

?S: x in direction y.

?S:.

?C:HAS\_NEXTTOWARD:

?C: This symbol, if defined, indicates that the nexttoward routine is

?C: available to return the next machine representable long double from

?C: x in direction y.

?C:.

?H:#\$d\_nexttoward HAS\_NEXTTOWARD /\*\*/

?H:.

?LINT:set d\_nexttoward

: see if nexttoward exists

set nexttoward d\_nexttoward

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_nexttoward.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Setvar.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Setvar.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 15:58:28 ram

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:16 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a variable that is intended to be eval'ed in

?X: order to define/undefine a symbol. A consistency check is made

?X: regarding any previous value and a warning is issued if there

?X: is any discrepancy.

?X:

?X:

To use it, say:

?X: val=<value>

?X: set d\_variable

?X: eval \$setvar

?X:

?MAKE:Setvar: Whoa

?MAKE: -pick add \$@ %<

```

?LINT:define setvar
?S:setvar:
?S: This shell variable is used internally by Configure to set a value
?S: to a given symbol that is defined or not. A typical use is:
?S: val=<value computed>
?S: set d_variable
?S: eval $setvar
?S: That will print a message in case the $val value is not the same
?S: as the previous value of $d_variable.
?S:.
?V:setvar:val
?T:var was td tu
: function used to set '$1' to '$val'
setvar='var=$1; eval "was=\$1"; td=$define; tu=$undef;
case "$val$was" in
$define$undef) . ./whoa; eval "$var=\$td";
$undef$define) . ./whoa; eval "$var=\$tu";
*) eval "$var=$val";;
esac'

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1-rc1/dist/U/Setvar.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_closedir.U,v 3.0.1.3 1997/02/28 15:31:26 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_closedir.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:31:26 ram
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:11:18 ram
?RCS: patch36: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:07:21 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_closedir d_void_closedir: Inlibc i_dirent i_sysdir i_sysndir

```

```

\  

i_systypes Compile Setvar rm_try run  

?MAKE: -pick add $@ %<  

?S:d_closedir:  

?S: This variable conditionally defines HAS_CLOSEDIR if closedir() is  

?S: available.  

?S:.  

?C:HAS_CLOSEDIR:  

?C: This symbol, if defined, indicates that the closedir() routine is  

?C: available.  

?C:.  

?H:#$d_closedir HAS_CLOSEDIR /**/  

?H:.  

?S:d_void_closedir:  

?S: This variable conditionally defines VOID_CLOSEDIR if closedir()  

?S: does not return a value.  

?S:.  

?C:VOID_CLOSEDIR:  

?C: This symbol, if defined, indicates that the closedir() routine  

?C: does not return a value.  

?C:.  

?H:#$d_void_closedir VOID_CLOSEDIR /**/  

?H:.  

?F:!try  

?LINT:set d_closedir d_void_closedir  

: see if closedir exists  

set closedir d_closedir  

eval $inlibc  
  

@if VOID_CLOSEDIR || d_void_closedir  

?X: The following contortions are designed so we can call closedir()  

?X: and check whether it returns a value. The contortions are designed  

?X: to portably pick up the correct directory header, for those  

?X: systems that support various mutually incompatible  

directory functions.  

?X: This is from perl5's perl.h  

case "$d_closedir" in  

"$define")  

echo " "  

echo "Checking whether closedir() returns a status..." >&4  

cat > try.c <<EOM  

#$i_dirent I_DIRENT /**/  

#$i_sysdir I_SYS_DIR /**/  

#$i_sysndir I_SYS_NDIR /**/  

#$i_systypes I_SYS_TYPES /**/  
  

#if defined(I_SYS_TYPES)  

#include <sys/types.h>

```

```

#endif
#if defined(I_DIRENT)
#include <dirent.h>
#else
#ifdef I_SYS_NDIR
#include <sys/ndir.h>
#else
#ifdef I_SYS_DIR
#include <sys/dir.h>
#endif
#endif
#endif
#endif
int main() { return closedir(opendir(".")); }
EOM
set try
if eval $compile_ok; then
if $run ./try > /dev/null 2>&1 ; then
echo "Yes, it does."
val="$undef"
else
echo "No, it doesn't."
val="$define"
fi
else
echo "(I can't seem to compile the test program--assuming it doesn't)"
val="$define"
fi
;;
*)
val="$undef";
;;
esac
set d_void_closedir
eval $setvar
$rm_try
@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_closedir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_expm1: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_expm1:

?S: This variable conditionally defines the HAS\_EXPM1 symbol, which

?S: indicates to the C program that the expm1() routine is available.

?S:.

?C:HAS\_EXPM1:

?C: This symbol, if defined, indicates that the expm1 routine is

?C: available to do the exp(x) - 1 when x is near 1 function.

?C:.

?H:#\$d\_expm1 HAS\_EXPM1 /\*\*/

?H:.

?LINT:set d\_expm1

: see if expm1 exists

set expm1 d\_expm1

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_expm1.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_copysignl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_copysignl:

?S: This variable conditionally defines the HAS\_COPYSIGNL symbol, which

?S: indicates to the C program that the copysignl() routine is available.

?S: If aintl is also present we can emulate modfl.

?S:.

?C:HAS\_COPYSIGNL:

?C: This symbol, if defined, indicates that the copysignl routine is

?C: available. If aintl is also present we can emulate modfl.

?C:.

?H:#\$d\_copysignl HAS\_COPYSIGNL /\*\*/

?H:.

?LINT:set d\_copysignl

: see if copysignl exists

set copysignl d\_copysignl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_copysignl.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_shm.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_shm: test d_shmctl d_shmget d_shmat d_shmdt Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_shm:
?S: This variable conditionally defines the HAS_SHM symbol, which
?S: indicates that the entire shm*(2) library is present.
?S:.
?C:HAS_SHM:
?C: This symbol, if defined, indicates that the entire shm*(2) library is
?C: supported.
?C:.
?H:#$d_shm HAS_SHM /**/
?H:.
?T:h_shm
?LINT:set d_shm
:
  see how much of the 'shm*(2)' library is present.
h_shm=true
echo " "
case "$d_shmctl$d_shmget$d_shmat$d_shmdt" in
*"$undef"*) h_shm=false;;
esac
: we could also check for sys/ipc.h ...
if $h_shm && $test `./findhdr sys/shm.h`; then
  echo "You have the full shm*(2) library." >&4
  val="$define"
else
  echo "You don't have the full shm*(2) library." >&4
  val="$undef"
fi
set d_shm
eval $setvar
```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_shm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getsrvby.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getsbyname d\_getsbyport: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getsbyname:

?S: This variable conditionally defines the HAS\_GETSERVBYNAME

?S: symbol, which indicates to the C program that the

?S: getservbyname() routine is available to look up services

?S: by their name.

?S:.

?S:d\_getsbyport:

?S: This variable conditionally defines the HAS\_GETSERVBYPOR

?S: symbol, which indicates to the C program that the

?S: getservbyport() routine is available to look up services

?S: by their port.

?S:.

?C:HAS\_GETSERVBYNAME:

?C: This symbol, if defined, indicates that the getservbyname()

?C: routine is available to look up services by their name.

?C:.

?C:HAS\_GETSERVBYPOR:

?C: This symbol, if defined,

indicates that the getservbyport()

?C: routine is available to look up services by their port.

?C:.

?H:#\$d\_getsbyname HAS\_GETSERVBYNAME /\*\*/

?H:#\$d\_getsbyport HAS\_GETSERVBYPOR /\*\*/

?H:.

?LINT:set d\_getsbyname d\_getsbyport

: Optional checks for getsbyname and getsbyport

@if d\_getsbyname || HAS\_GETSERVBYNAME

: see if getservbyname exists

set getservbyname d\_getsbyname

eval \$inlibc

@end

@if d\_getsbyport || HAS\_GETSERVBYPOR

```
: see if getservbyport exists
set getservbyport d_getsbyport
eval $inlibc
@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_getsrvby.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_symlink.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```
?RCS: as specified in the README file that comes with the distribution.
```

```
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_symlink.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:41 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_symlink: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_symlink:
```

```
?S: This variable conditionally defines the HAS_SYMLINK symbol, which
```

```
?S: indicates to the C program that the symlink() routine is available
```

```
?S: to create symbolic links.
```

```
?S:.
```

```
?C:HAS_SYMLINK (SYMLINK):
```

```
?C: This symbol, if defined, indicates that the symlink routine is available
```

```
?C: to
```

```
create symbolic links.
```

```
?C:.
```

```
?H:#$d_symlink HAS_SYMLINK /**/
```

```
?H:.
```

```
?LINT:set d_symlink
```

```
: see if symlink exists
```

```
set symlink d_symlink
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_symlink.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_erfc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_erfc:

?S: This variable conditionally defines the HAS\_ERFC symbol, which

?S: indicates to the C program that the erfc() routine is available.

?S:.

?C:HAS\_ERFC:

?C: This symbol, if defined, indicates that the erfc routine is

?C: available to do the complementary error function.

?C:.

?H:#\$d\_erfc HAS\_ERFC /\*\*/

?H:.

?LINT:set d\_erfc

: see if erfc exists

set erfc d\_erfc

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_erfc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Inhdr.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Inhdr.U,v \$

?RCS: Revision 3.0.1.2 1995/05/12 12:01:31 ram

?RCS: patch54: deleted tabs that caused some /bin/sh to core dump (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:55:01 ram

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks whether a set of header files exists or not.

?X: If the first header is not

found, the function tries to locate

?X: the next header, and so on, until one is found or there is no

?X: more header in the list.

?X:

?X: To use it, say:

?X: set header i\_header [ header2 i\_header2 ... ]

?X: eval \$inhdr

?X:

?MAKE:Inhdr: test Findhdr Whoa

?MAKE: -pick add \$@ %<

?LINT:define inhdr

?V:inhdr

?S:inhdr:

?S: This shell variable is used internally by Configure to check

?S: whether a set of headers exist or not. A typical use is:

?S: set header i\_header [ header2 i\_header2 ... ]

?S: eval \$inhdr

?S: That will print a message, saying whether header was found or not

?S: and set i\_header\* accordingly. If the first header is not found,

?S: we try the next one, until the list is empty or one is found.

?S:.

?T:xxx xxf var td xxnf tu yyy instead was cont

: define an alternate in-header-list? function

```
inhdr='echo " "; td=$define; tu=$undef; yyy=$@;
cont=true; xxf="echo \"<$1> found.\" >&4";
case $# in 2) xxnf="echo \"<$1> NOT found.\" >&4";;
*) xxnf="echo \"<$1> NOT found, ...\" >&4";;
esac;
case
$# in 4) instead=instead;; *) instead="at last";; esac;
while $test "$cont"; do
xxx=`./findhdr $1`
var=$2; eval "was=\$2";
if $test "$xxx" && $test -r "$xxx";
then eval $xxf;
?X: Next line shifted left 1 tabstop to avoid sh core dump on MachTen 2.1.1.
eval "case \"\${$var}\" in $undef) ./whoa; esac"; eval "$var=\$td";
cont="";
else eval $xxnf;
?X: Likewise, the next line has been shifted left 1 tabstop -- ADO, 08/03/95
eval "case \"\${$var}\" in $define) ./whoa; esac"; eval "$var=\$tu"; fi;
set $yyy; shift; shift; yyy=$@;
case $# in 0) cont="";;
2) xxf="echo \"but I found <$1> $instead.\" >&4";
xxnf="echo \"and I did not find <$1> either.\" >&4";;
*) xxf="echo \"but I found <$1> instead.\" >&4";
xxnf="echo \"there is no <$1>, ...\" >&4";;
esac;
```

```
done;
?X: Remaining values are set to 'undef'
while $test "$yyy";
do set $yyy; var=$2; eval "was=\$2";
eval "case \"\${$var}\" in $define) . /whoa; esac"; eval "$var=\$tu";
set $yyy; shift; shift; yyy=$@;
done'
```

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Inhdr.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setlocale.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_setlocale.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/06/20 06:57:51 ram
```

```
?RCS: patch30: created
```

```
?RCS:
```

```
?MAKE:d_setlocale: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_setlocale:
```

```
?S: This variable conditionally defines HAS_SETLOCALE if setlocale() is
```

```
?S: available to handle locale-specific ctype implementations.
```

```
?S:.
```

```
?C:HAS_SETLOCALE:
```

```
?C: This symbol, if defined, indicates that the setlocale
```

```
routine is
```

```
?C: available to handle locale-specific ctype implementations.
```

```
?C:.
```

```
?H:#$d_setlocale HAS_SETLOCALE /**/
```

```
?H:.
```

```
?LINT:set d_setlocale
```

```
: see if setlocale exists
```

```
set setlocale d_setlocale
```

```
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setlocale.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethbyad.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_gethbyaddr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethbyaddr:

?S: This variable conditionally defines the HAS\_GETHOSTBYADDR symbol, which

?S: indicates to the C program that the gethostbyaddr() routine is available

?S: to look up hosts by their IP addresses.

?S:.

?C:HAS\_GETHOSTBYADDR:

?C: This symbol, if defined, indicates that the gethostbyaddr() routine is

?C: available to look up hosts by their IP addresses.

?C:.

?H:#\$d\_gethbyaddr HAS\_GETHOSTBYADDR /\*\*/

?H:.

?LINT:set d\_gethbyaddr

: see if gethostbyaddr exists

set gethostbyaddr d\_gethbyaddr

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_gethbyad.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ttyname\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_ttyname\_r ttyname\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_unistd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_ttyname\_r:

?S: This variable conditionally defines the HAS\_TTYNAME\_R symbol,

?S: which indicates to the C program that the ttyname\_r()  
?S: routine is available.  
?S:.  
?S: ttyname\_r\_proto:  
?S: This variable encodes the prototype of ttyname\_r.  
?S: It is zero if d\_ttyname\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ttyname\_r  
?S: is defined.  
?S:.  
?C: HAS\_TTYNAME\_R:  
?C: This symbol, if defined, indicates that the ttyname\_r routine  
?C: is available to ttyname re-entrantly.  
?C:.  
?C: TTYNAME\_R\_PROTO:  
?C: This  
symbol encodes the prototype of ttyname\_r.  
?C: It is zero if d\_ttyname\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ttyname\_r  
?C: is defined.  
?C:.  
?H: #d\_ttyname\_r HAS\_TTYNAME\_R /\*\*/  
?H: #define TTYNAME\_R\_PROTO \$ttyname\_r\_proto /\*\*/  
?H:.  
?T: try hdrs d\_ttyname\_r\_proto  
: see if ttyname\_r exists  
set ttyname\_r d\_ttyname\_r  
eval \$inlibc  
case "\$d\_ttyname\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_unistd unistd.h"  
case "\$d\_ttyname\_r\_proto:\$usetthreads" in  
":define") d\_ttyname\_r\_proto=define  
set d\_ttyname\_r\_proto ttyname\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_ttyname\_r\_proto" in  
define)  
case "\$ttyname\_r\_proto" in  
"|0) try='int ttyname\_r(int, char\*, size\_t);'  
./protochk "\$extern\_C \$try" \$hdrs && ttyname\_r\_proto=I\_IBW ;;  
esac  
case "\$ttyname\_r\_proto" in  
"|0) try='int ttyname\_r(int, char\*, int);'  
./protochk "\$extern\_C \$try" \$hdrs && ttyname\_r\_proto=I\_IBI ;;  
esac  
case "\$ttyname\_r\_proto"

```

in
"|0) try='char* ttyname_r(int, char*, int);'
./protochk "$extern_C $try" $hdrs && ttyname_r_proto=B_IBI ;;
esac
case "$ttyname_r_proto" in
"|0) d_ttyname_r=undef
ttyname_r_proto=0
echo "Disabling ttyname_r, cannot determine prototype." >&4 ;;
* ) case "$ttyname_r_proto" in
REENTRANT_PROTO*) ;;
*) ttyname_r_proto="REENTRANT_PROTO_$ttyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "ttyname_r has no prototype, not using it." >&4 ;;
esac
d_ttyname_r=undef
ttyname_r_proto=0
;;
esac
;;
*) ttyname_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_ttyname_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: man1dir.U,v 3.2 1999/07/08 20:57:21 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1996, 1999 Andy Dougherty

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?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: man1dir.U,v \$

?RCS: Revision 3.2 1999/07/08 20:57:21 doughera

?RCS: Used installprefix.

?RCS:

?RCS: Revision 3.1 1999/07/08 20:52:19 doughera



```

?RCS: Updated for perl5.005_5x
?RCS:
?RCS: Revision 3.0.1.1 1997/02/28 16:10:29 ram
?RCS: patch61: created
?RCS:
?X: This was originally specific to perl5. Since perl5 has man pages that
?X: go in both man1/ and man3/ directories, we need both man1dir
?X: and
man3dir. This unit is basically dist's mansrc.U with
?X: man1 used instead of man everywhere.
?X:
?MAKE:man1dir man1direxp man1ext installman1dir: cat nroff Loc Oldconfig \
package test Getfile Setprefixvar Prefixit Prefixup sysman Myread \
prefixexp
?MAKE: -pick add $@ %<
?Y:TOP
?D:man1dir="
?S:man1dir:
?S: This variable contains the name of the directory in which manual
?S: source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S:.
?D:man1direxp="
?S:man1direxp:
?S: This variable is the same as the man1dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installman1dir="
?S:installman1dir:
?S: This variable is really the same as man1direxp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: man1direxp only points to the read-only access location.
For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?S:man1ext:
?S: This variable contains the extension that the manual page should
?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.
?S: See man1dir.
?S:.
?T:lookpath
?LINT:change prefixvar
?LINT:set man1direxp
: determine where manual pages go
set man1dir man1dir none
eval $prefixit
$cat <<EOM

```

```

$spackage has manual pages available in source form.
EOM
case "$nroff" in
nroff)
    echo "However, you don't have nroff, so they're probably useless to you."
    case "$man1dir" in
    *) man1dir="none";;
    esac;;
esac
echo "If you don't want the manual sources installed, answer 'none'."
case "$man1dir" in
'') dflt=none
;;
")
    lookpath="$prefixexp/share/man/man1"
    lookpath="$lookpath $prefixexp/man/man1 $prefixexp/man/l_man/man1"
    lookpath="$lookpath $prefixexp/man/p_man/man1"
    lookpath="$lookpath $prefixexp/man/u_man/man1"
    lookpath="$lookpath $prefixexp/man/man.1"
    ?X: Experience has shown people
    expect man1dir to be under prefix,
    ?X: so we now always put it there. Users who want other behavior
    ?X: can answer interactively or use a command line option.
    ?X: Does user have System V-style man paths.
    case "$sysman" in
    */*_man*) dflt=`./loc . $prefixexp/l_man/man1 $lookpath` ;;
    *) dflt=`./loc . $prefixexp/man/man1 $lookpath` ;;
    esac
    set dflt
    eval $prefixup
    ;;
    *) dflt="$man1dir"
    ;;
    esac
    echo " "
    fn=dn+~
    rp="Where do the main $spackage manual pages (source) go?"
    ./getfile
    if $test "X$man1direxp" != "X$ansexp"; then
        installman1dir="
    fi
    prefixvar=man1dir
    ./setprefixvar

    case "$man1dir" in
    *) man1dir=' '
        installman1dir="";;

```

esac

: What suffix to use on installed man pages

```
case "$man1dir" in
' ')
man1ext='0'
;;
*)
rp="What suffix should be used for the main $spackage man pages?"
case "$man1ext" in
") case "$man1dir" in
*1) dflt=1 ;;
*1p) dflt=1p ;;
*1pm) dflt=1pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L1)
dflt=L1;;
*) dflt=1;;
esac
;;
*) dflt="$man1ext";;
esac
./myread
man1ext="$ans"
;;
esac
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/man1dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sbrk.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sbrk.U,v \$  
?RCS: Revision 3.0.1.1 1994/01/24 14:06:31 ram  
?RCS: patch16: created  
?RCS:  
?MAKE:d\_sbrk: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_sbrk:  
?S: This variable conditionally defines HAS\_SBRK if sbrk() is  
?S: available to add more core to the process.  
?S:.  
?C:HAS\_SBRK:  
?C: This symbol, if defined, indicates that the sbrk system call is  
?C: available to add/release core. Always true on Unix.  
?C:.  
?H:#\$d\_sbrk HAS\_SBRK /\*\*/  
?H:.  
?LINT:set d\_sbrk  
: see  
if sbrk exists  
set sbrk d\_sbrk  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_sbrk.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_localeconv\_l: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_localeconv\_l:  
?S: This variable conditionally defines the HAS\_LOCALECONV\_L symbol, which  
?S: indicates to the C program that the localeconv\_l() routine is available.  
?S:.  
?C:HAS\_LOCALECONV\_L:  
?C: This symbol, if defined, indicates that the localeconv\_l routine is  
?C: available to query certain information about a locale.  
?C:.  
?H:#\$d\_localeconv\_l HAS\_LOCALECONV\_L /\*\*/  
?H:.  
?LINT:set d\_localeconv\_l  
: see if localeconv\_l exists

```
set localeconv_1 d_localeconv_1
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_localeconv_1.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_rdchk.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```
?RCS: as specified in the README file that comes with the distribution.
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_rdchk.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:51 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_rdchk: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_rdchk:
```

```
?S: This variable conditionally defines the HAS_RDCHK symbol, which
```

```
?S: indicates to the C program that the rdchk() routine is available
```

```
?S: to find out if there is input pending on an IO channel.
```

```
?S:.
```

```
?C:HAS_RDCHK (RDCHK):
```

```
?C: This symbol, if defined, indicates that the rdchk routine  
is available
```

```
?C: to find out if there is input pending on an IO channel. Generally
```

```
?C: the routine is used only if FIONREAD and O_NDELAY aren't available.
```

```
?C:.
```

```
?H:#$d_rdchk HAS_RDCHK /**/
```

```
?H:.
```

```
?LINT:set d_rdchk
```

```
: see if rdchk exists
```

```
set rdchk d_rdchk
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_rdchk.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_normsig.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_normsig.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:37:03 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:14:48 ram
?RCS: patch36: call ./bsd explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:44 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_normsig jobslib: test Setvar Guess _a
?MAKE: -pick add $@ %<
?S:d_normsig:
?S: This variable conditionally
?S: defines the NORMSIG symbol, which
?S: indicates to the C program that the normal signal handling routines
?S: should be used, as opposed to the ones in 4.1bsd (sigset, etc.).
?S:.
?S:jobslib:
?S: This variable holds the argument to be passed to the loader to include
?S: the strange signal handling routines from 4.1bsd. On systems that
?S: have NORMSIG defined this variable is null.
?S:.
?C:NORMSIG:
?C: This symbol, if defined, indicates that normal signal handling routines
?C: should be used, as opposed to the ones in 4.1bsd (sigset, etc.).
?C:.
?H:#$d_normsig NORMSIG /**/
?H:.
?LINT:set d_normsig
: see if we need -ljobs and if we have sigset, etc.
echo " "
if $test -r /usr/lib/libjobs$_a || $test -r /usr/local/lib/libjobs$_a ; then
echo "Jobs library found." >&4
val="$undef"
jobslib='-ljobs'
else
if ./bsd; then
echo "No jobs library found. (I suppose this is at least 4.2...)" >&4

```

```
else
  echo "No jobs library found. (That's okay, we all have our faults.)" >&4
fi
val="$define"
jobslib="
fi
set
  d_normsig
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_normsig.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Extensions.U,v\$

?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: Extensions.U,v \$

?RCS:

?MAKE:known\_extensions extensions dynamic\_ext static\_ext nonxs\_ext \

useposix useopcode uselanginfo : \

Myread hint usedl d\_sem d\_socket i\_db i\_dbm i\_rpcsvdbm i\_gdbm \

d\_ndbm usethreads use5005threads package test cat rsrc \

d\_msg d\_shm osname use64bitint \

libs d\_cplusplus sed ls rm contains trnl sort

?MAKE: -pick add \$@ %<

?Y:BOTTOM

?S:known\_extensions:

?S: This variable holds a list of all extensions (both XS and non-xs)

?S: included in the package source distribution. This information is

?S: only really of use during the Perl build, as the list makes no

?S: distinction between extensions which were build and installed, and

?S: those which

where not. See "extensions" for the list of extensions

?S: actually built and available.

?S:.

?S:dynamic\_ext:

?S: This variable holds a list of XS extension files we want to

?S: link dynamically into the package. It is used by Makefile.

?S:.

?S:static\_ext:

?S: This variable holds a list of XS extension files we want to

?S: link statically into the package. It is used by Makefile.

?S:.

?S:nonxs\_ext:

?S: This variable holds a list of all non-xs extensions built and  
 ?S: installed by the package. By default, all non-xs extensions  
 ?S: distributed will be built, with the exception of platform-specific  
 ?S: extensions (currently only one VMS specific extension).

?S:.

?S:extensions:

?S: This variable holds a list of all extension files (both XS and  
 ?S: non-xs) installed with the package. It is propagated to Config.pm  
 ?S: and is typically used to test whether a particular extension  
 ?S: is available.

?S:.

?S:useposix:

?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the  
 ?S: POSIX extension should be used. The sole  
 ?S: use for this currently is to allow an easy mechanism  
 ?S: for hints files to indicate that POSIX will not compile  
 ?S: on a particular system.

?S:.

?S:useopcode:

?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the Opcode extension should be used. The sole  
 ?S: use for this currently is to allow an easy mechanism  
 ?S: for users to skip the Opcode extension from the Configure  
 ?S: command line.

?S:.

?S:uselanginfo:

?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the I18N::Langinfo extension should be used. The sole  
 ?S: use for this currently is to allow an easy mechanism for users to skip  
 ?S: this extension from the Configure command line.

?S:.

?T:xxx avail\_ext this\_ext tdir xs\_extensions nonxs\_extensions find\_extensions  
 ?INIT:: set useposix=false in your hint file to disable the POSIX extension.  
 ?INIT:useposix=true  
 ?INIT:: set useopcode=false in your hint file to disable the Opcode extension.  
 ?INIT:useopcode=true  
 ?INIT::  
 set uselanginfo=false in your hint file to disable the I18N::Langinfo extension.  
 ?INIT:uselanginfo=true  
 ?LINT:extern noextensions  
 ?LINT:extern onlyextensions  
 ?T:keepextensions i  
 : Check extensions  
 echo " "  
 echo "Looking for extensions..." >&4



: If we are using the old config.sh, nonxs\_extensions and xs\_extensions may  
: contain old or inaccurate or duplicate values.

```
nonxs_extensions="
```

```
xs_extensions="
```

: We do not use find because it might not be available.

: We do not just use MANIFEST because the user may have dropped

: some additional extensions into the source tree and expect them

: to be built.

: Function to recursively find available extensions, ignoring DynaLoader

: NOTE: recursion limit of 10 to prevent runaway in case of symlink madness

: In 5.10.1 and later, extensions are stored in directories

: like File-Glob instead of the older File/Glob/.

```
find_extensions='
```

```
  for xxx in *; do
```

```
  case "$xxx" in
```

```
    DynaLoader|dynaload) ;;
```

```
    *)
```

```
    this_ext=`echo
```

```
"$xxx" | $sed -e s/-/\\/g`;
```

```
    case "$this_ext" in
```

```
      Scalar/List/Utils) this_ext="List/Util" ;;
```

```
      PathTools)      this_ext="Cwd" ;;
```

```
    esac;
```

```
    echo " $xs_extensions $nonxs_extensions" > "$tdir/$$.tmp";
```

```
    if $contains " $this_ext " "$tdir/$$.tmp"; then
```

```
    echo >&4;
```

```
    echo "Duplicate directories detected for extension $xxx" >&4;
```

```
    echo "Configure cannot correctly recover from this - shall I abort?" >&4;
```

```
    case "$knowitall" in
```

```
      "") dflt=y;;
```

```
      *) dflt=n;;
```

```
    esac;
```

```
    ../UU/myread;
```

```
    case "$ans" in
```

```
      n*|N*) ;;
```

```
      *) echo >&4;
```

```
        echo "Ok. Stopping Configure." >&4;
```

```
        echo "Please remove the duplicate directory (e.g. using git clean) and then re-run Configure" >&4;
```

```
        exit 1;;
```

```
    esac;
```

```
    echo "Ok. You will need to correct config.sh before running make." >&4;
```

```
  fi;
```

```
  $ls -l "$xxx" > "$tdir/$$.tmp";
```

```
  if $contains "\.xs$" "$tdir/$$.tmp" > /dev/null 2>&1; then
```

```
  xs_extensions="$xs_extensions $this_ext";
```

```
  elif $contains "\.c$" "$tdir/$$.tmp" > /dev/null
```

```

2>&1; then
xs_extensions="$xs_extensions $this_ext";
  elif $test -d "$xxx"; then
nonxs_extensions="$nonxs_extensions $this_ext";
  fi;
  $rm -f "$tdir/$$.tmp";
  ;;
esac;
done'
tdir=`pwd`
cd "$rsrc/cpan"
set X
shift
eval $find_extensions
cd "$rsrc/dist"
set X
shift
eval $find_extensions
cd "$rsrc/ext"
set X
shift
eval $find_extensions
set X $xs_extensions
shift
xs_extensions=`echo "$*" | tr ' ' $trnl | $sort | tr $trnl ' '`
set X $nonxs_extensions
shift
nonxs_extensions=`echo "$*" | tr ' ' $trnl | $sort | tr $trnl ' '`
cd "$tdir"
known_extensions=`echo $nonxs_extensions $xs_extensions | tr ' ' $trnl | $sort | tr $trnl ' `

```

: Now see which are supported on this system.

?X: avail\_ext lists available XS extensions.

```
avail_ext=""
```

```
for xxx in $xs_extensions ; do
```

```
  case "$xxx" in
```

?X: Handle possible DOS 8.3 filename and case alterations

```
  Amiga*)
```

```
    case "$osname" in
```

```
      amigaos) avail_ext="$savail_ext $xxx" ;;
```

```
    esac
```

```
  ;;
```

```
  DB_File|db_file)
```

```
    case "$i_db" in
```

```
      $define)
```

```
        avail_ext="$savail_ext $xxx" ;;
```

```
    esac
```

```
  ;;
```

```

GDBM_File|gdbm_fil)
case "$i_gdbm" in
$define) avail_ext="$avail_ext $xxx" ;;
esac
;;
IPC/SysV|ipc/sysv)
: XXX Do we need a useipcsysv variable here
case "${d_msg}${d_sem}${d_shm}" in
*"${define}*" avail_ext="$avail_ext $xxx" ;;
esac
;;
NDBM_File|ndbm_fil)
case "$d_ndbm" in
$define)
  case "$osname-$use64bitint" in
  hpux-define)
case "$libs" in
*-lndbm*) avail_ext="$avail_ext $xxx" ;;
esac
;;
  *) avail_ext="$avail_ext $xxx" ;;
  esac
  ;;
esac
;;
ODBM_File|odbm_fil)
case "${i_dbm}${i_rpcsvcdbm}" in
*"${define}*"
  case "$d_cplusplus" in
  define) ;; # delete as a function name will not work
  *) case "$osname-$use64bitint" in
  hpux-define)
  case "$libs" in
  *-ldb*) avail_ext="$avail_ext $xxx" ;;
  esac
  ;;
  *) avail_ext="$avail_ext $xxx" ;;
  esac
  ;;
  esac
  ;;
esac
;;
Opcode|opcode)
case "$useopcode" in
true|define|y)
avail_ext="$avail_ext $xxx" ;;
esac

```

```

;;
POSIX|posix)
case "$useposix" in
true|define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
Socket|socket)
case "$d_socket" in
true|$define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
I18N/Langinfo|langinfo)
case "$uselanginfo" in
true|define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
Sys/Syslog|sys/syslog)
case $osname in
amigaos) ;; # not really very useful on AmigaOS
*)
: XXX syslog requires socket
case "$d_socket" in
true|$define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
esac
;;
Thread|thread)
    case "$usetthreads" in
    true|$define|y)
        case "$use5005threads" in
        $define|true|[yY]*) avail_ext="$avail_ext $xxx" ;;
        esac
    esac
;;
threads|threads/shared)
# threads and threads::shared are special cases.
# To stop people from asking "Perl 5.8.0 was supposed
# to have this new fancy threads
implementation but my
# perl doesn't have it" and from people trying to
# (re)install the threads module using CPAN.pm and
# CPAN.pm then offering to reinstall Perl 5.8.0,
# the threads.pm and threads/shared.pm will always be
# there, croaking informatively ("you need to rebuild
# all of Perl with threads, sorry") when threads haven't
# been compiled in.
# --jhi

```

```

avail_ext="$avail_ext $xxx"
;;
VMS*)
;;
Win32*)
case "$osname" in
cygwin) avail_ext="$avail_ext $xxx" ;;
esac
;;
XS/APItest|xs/apitest)
# This is just for testing. Skip it unless we have dynamic loading.

case "$usedl" in
$define) avail_ext="$avail_ext $xxx" ;;
esac
;;
XS/Typemap|xs/typemap)
# This is just for testing. Skip it unless we have dynamic loading.
case "$usedl" in
$define) avail_ext="$avail_ext $xxx" ;;
esac
;;
*) avail_ext="$avail_ext $xxx"
;;
esac
done

set X $avail_ext
shift
avail_ext="$*"

case "$onlyextensions" in
") ;;
*) keepextensions="
echo
"You have requested that only certain extensions be included..." >&4
for i in $onlyextensions; do
case " $avail_ext " in
*" $i "*)
echo "Keeping extension $i."
keepextensions="$keepextensions $i"
;;
*) echo "Ignoring extension $i." ;;
esac
done
avail_ext="$keepextensions"
;;
esac

```

```

case "$noextensions" in
") ;;
*) keepextensions="
  echo "You have requested that certain extensions be ignored..." >&4
  for i in $avail_ext; do
    case " $noextensions " in
    *" $i "*) echo "Ignoring extension $i." ;;
    *) echo "Keeping extension $i.";
      keepextensions="$keepextensions $i"
      ;;
    esac
  done
  avail_ext="$keepextensions"
  ;;
esac

```

: Now see which nonxs extensions are supported on this system.

: For now assume all are.

```

nonxs_ext="
for xxx in $nonxs_extensions ; do
  case "$xxx" in
  VMS*)
  ;;
  *) nonxs_ext="$nonxs_ext $xxx"
  ;;
  esac
done

```

```

set X $nonxs_ext
shift
nonxs_ext="$*"

```

```

case
$usedl in
$define)
$cat <<EOM

```

A number of extensions are supplied with \$package. You may choose to compile these extensions for dynamic loading (the default), compile them into the \$package executable (static loading), or not include them at all. Answer "none" to include no extensions.

Note that DynaLoader is always built and need not be mentioned here.

EOM

```

case "$dynamic_ext" in
")
: Exclude those listed in static_ext
dflt="

```

```

for xxx in $avail_ext; do
  case "$static_ext" in
    *" $xxx ") ;;
    *) dflt="$dflt $xxx" ;;
  esac
done
set X $dflt
shift
dflt="$*"
;;
*) dflt="$dynamic_ext"
# Perhaps we are reusing an old out-of-date config.sh.
case "$hint" in
previous)
  if test X"$dynamic_ext" != X"$avail_ext"; then
    $cat <<EOM

```

NOTICE: Your previous config.sh list may be incorrect.

The extensions now available to you are

```

${avail_ext}

```

but the default list from your previous config.sh is

```

${dynamic_ext}

```

EOM

```

  fi
  ;;
esac
;;
esac
case
"$dflt" in
") dflt=none;;
esac
rp="What extensions do you wish to load dynamically?"
. ./myread
case "$ans" in
?X: Use ' ' so a subsequent Configure will preserve that value.
none) dynamic_ext=' ' ;;
*) dynamic_ext="$ans" ;;
esac

case "$static_ext" in
")
: Exclude those already listed in dynamic linking
dflt="
for xxx in $avail_ext; do
  case "$dynamic_ext" in
    *" $xxx ") ;;
    *) dflt="$dflt $xxx" ;;

```

```

    esac
done
set X $dflt
shift
dflt="$*"
;;
*) dflt="$static_ext"
;;
esac

```

```

case "$dflt" in
") dflt=none;;
esac
rp="What extensions do you wish to load statically?"
. ./myread
case "$ans" in
?X: Use ' ' so a subsequent Configure will preserve that value.
none) static_ext=' ' ;;
*) static_ext="$ans" ;;
esac
;;
*)

```

\$cat <<EOM

A number of extensions are supplied with \$package. Answer "none" to include no extensions.

Note that DynaLoader is always built and need not be mentioned here.

EOM

```

case "$static_ext" in
")
dflt="$avail_ext" ;;
*) dflt="$static_ext"
# Perhaps we are reusing an old out-of-date config.sh.
case "$hint" in
previous)
if test X"$static_ext" != X"$avail_ext"; then
$cat <<EOM

```

NOTICE: Your previous config.sh list may be incorrect.

The extensions now available to you are

```

${avail_ext}

```

but the default list from your previous config.sh is

```

${static_ext}

```

EOM

```

fi
;;
esac
;;

```



```

esac
: Exclude those that are not xs extensions
case "$dflt" in
") dflt=none;;
esac
rp="What extensions do you wish to include?"
. ./myread
case "$ans" in
?X: Use ' ' so a subsequent Configure will preserve that value.
none) static_ext=' ' ;;
*) static_ext="$ans" ;;
esac
;;
esac
#
# Encode is a special case. If we are building Encode as a static
# extension, we need to explicitly list its subextensions as well.
# For other nested extensions, this is handled automatically by
# the appropriate Makefile.PL.
case " $static_ext " in
*" Encode "*) # Add the subextensions of Encode
cd
"$src/cpan"
for xxx in `ls Encode/*/Makefile.PL|awk -F/ '{print $2}'`; do
static_ext="$static_ext Encode/$xxx"
known_extensions="$known_extensions Encode/$xxx"
done
cd "$stdir"
;;
esac

set X $dynamic_ext $static_ext $nonxs_ext
shift
extensions="$*"

# Sanity check: We require an extension suitable for use with
# AnyDBM_File, as well as Fcntl and IO. (Failure to have these
# should show up as failures in the test suite, but it's helpful to
# catch them now.) The 'extensions' list is normally sorted
# alphabetically, so we need to accept either
# DB_File ... Fcntl ... IO ....
# or something like
# Fcntl ... NDBM_File ... IO ....
case " $extensions" in
*_File "*" Fcntl "*" IO "*" );; # DB_File
*_File "*" Fcntl "*" IO "*" );; # GDBM_File
*_File "*" IO "*" *_File "*" );; # NDBM_File
*) echo "WARNING: Extensions DB_File or *_DBM_File, Fcntl, and IO not configured." >&4

```

```
    echo "WARNING: The Perl you are building will be quite crippled." >& 4
;;
esac
```

Found in path(s):

\*

```
/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Extensions.U
```

No license file was found, but licenses were detected in source scan.

```
case $CONFIG in
```

```
")
```

```
    if test -f config.sh; then TOP=.;
```

```
    elif test -f ../config.sh; then TOP=..;
```

```
    elif test -f ../../config.sh; then TOP=../../;
```

```
    elif test -f ../../../config.sh; then TOP=../../../;
```

```
    elif test -f ../../../../config.sh; then TOP=../../../../;
```

```
    else
```

```
        echo "Can't find config.sh."; exit 1
```

```
    fi
```

```
    . $TOP/config.sh
```

```
;;
```

```
esac
```

```
case "$0" in
```

```
*/*) cd `expr X$0 : 'X\(.*/'` ;;
```

```
esac
```

```
echo "Extracting makedir (with variable substitutions)"
```

```
$spitshell >makedir <<!GROK!THIS!
```

```
$startsh
```

```
# $Id: makedir.sh,v 3.0.1.1 1994/01/24 14:00:08 ram Exp ram $
```

```
#
```

```
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
#
```

```
# You may redistribute only under the terms of the Artistic Licence,
```

```
# as specified in the README file that comes with the distribution.
```

```
# You may reuse parts of this distribution only within the terms of
```

```
# that same Artistic Licence; a copy of which may be found at the root
```

```
# of the source tree for dist 4.0.
```

```
#
```

```
# Original
```

```
    Author: Larry Wall <lwall@netlabs.com>
```

```
#
```

```
# $Log: makedir.sh,v $
```

```
# Revision 3.0.1.1 1994/01/24 14:00:08 ram
```

```
# patch16: changed top ln-style config.sh lookup into test-style one
```

```
#
```

```
# Revision 3.0 1993/08/18 12:04:38 ram
```

```
# Baseline for dist 3.0 netwide release.
```

```

#

export PATH || (echo "OOPS, this isn't sh. Desperation time. I will feed myself to sh."; sh \${0}; kill \${0})

case \ $# in
0)
    $echo "mkdir pathname filenameflag"
    exit 1
    ;;
esac

: guarantee one slash before 1st component
case \ $1 in
/*) ;;
*) set .\ $1 \ $2 ;;
esac

: strip last component if it is to be a filename
case X\ $2 in
X1) set \ $echo \ $1 | $sed 's:(.*)/[^\ ]*\$ :1:\` ;;
*) set \ $1 ;;
esac

: return reasonable status if nothing to be created
if $test -d "\ $1" ; then
    exit 0
fi

list=""
while true ; do
    case \ $1 in
    /*/*)
        list="\ $1 \ $list"
        set \ `echo \ $1 | $sed 's:(.*)/:1 :'\`
        ;;
    *)
        break
    ;;
    esac
done

set \ $list

for dir do
    $mkdir \ $dir >/dev/null 2>&1
done
!GROK!THIS!
$unicefix

```

```
makedir
chmod +x makedir
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/makedir.SH
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Cppsym.U,v 3.0.1.5 1995/05/12 11:59:11 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: Cppsym.U,v $
?RCS: Revision 3.0.1.5 1995/05/12 11:59:11 ram
?RCS: patch54: split awk command onto two lines for older awk's (ADO)
?RCS:
?RCS: Revision 3.0.1.4 1995/01/11 14:55:57 ram
?RCS: patch45: new cc vs. cpp symbol checking suggested by JHI
?RCS: patch45: added more cpp symbols (JHI)
?RCS:
?RCS: Revision 3.0.1.3 1994/10/29 15:51:32 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS: patch36: new symbols ardent and titan (ADO)
?RCS:
?RCS:
Revision 3.0.1.2 1994/06/20 06:53:32 ram
?RCS: patch30: extended cpp symbol lookup list (JHI)
?RCS: patch30: renamed attrlist symbol into al for brevity
?RCS:
?RCS: Revision 3.0.1.1 1993/12/15 08:14:14 ram
?RCS: patch15: added new cpp symbols __bsdi__ and BSD_NET2
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:50 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X: This unit produces a shell script called Cppsym, which can be used to
?X: determine whether any in a list of symbols is defined by the C compilation
?X: chain (C preprocessor symbols plus C compiler native ones).
?X: It can determine the status of any symbol, though the symbols in $al
?X: are more easily determined. If you want to add to $al you can do
?X: it in Myinit.U.
?MAKE:Cppsym ccsymbols cppsymbols cppccsymbols: run \
```

eunicefix Guess awk cat tr sed sort rm rm\_try startsh osname \  
 +cc +gccversion test comm uniq echo Options trnl \  
 optimize ccflags ldflags libs cpp\_stuff cpp  
 ?MAKE: -pick add \$@ %<  
 ?T:also  
 symbols i postprocess\_cc\_v tHdrH  
 ?X:  
 ?X: The symbol list is in alpha order for ease of maintenance...  
 ?X:  
 ?X: Lots of new symbols (mostly rummaged from gcc), courtesy of  
 ?X: Jarkko Hietaniemi <jhi@snakemail.hut.fi> -- RAM, 06/06/94  
 ?X:  
 ?S:ccsymbols:  
 ?S: The variable contains the symbols defined by the C compiler alone.  
 ?S: The symbols defined by cpp or by cc when it calls cpp are not in  
 ?S: this list, see cppsymbols and cppccsymbols.  
 ?S: The list is a space-separated list of symbol=value tokens.  
 ?S:.  
 ?S:cppsymbols:  
 ?S: The variable contains the symbols defined by the C preprocessor  
 ?S: alone. The symbols defined by cc or by cc when it calls cpp are  
 ?S: not in this list, see ccymbols and cppccsymbols.  
 ?S: The list is a space-separated list of symbol=value tokens.  
 ?S:.  
 ?S:cppccsymbols:  
 ?S: The variable contains the symbols defined by the C compiler  
 ?S: when it calls cpp. The symbols defined by the cc alone or cpp  
 ?S: alone are not in this list, see ccymbols and cppsymbols.  
 ?S: The  
 list is a space-separated list of symbol=value tokens.  
 ?S:.  
 ?F:./Cppsym  
 ?F:./Cppsym.know  
 ?F:!Cppsym.true  
 ?F:!ccsym.com  
 ?F:!ccsym.cpp  
 ?F:!ccsym.own  
 ?X: fake LINT hints  
 ?LINT:change ccflags  
 ?LINT:extern s  
 ?LINT:extern s\_\_  
 : Preprocessor symbols  
 echo " "  
 \$echo "Guessing which symbols your C compiler and preprocessor define..." >&4  
 ?X: If your symbol is mixed case, just add it as-is.  
 ?X: All symbols will be transformed to both all-lower and all-upper.  
 ?X: Also drop any leading/trailing underscores, the scan will try all those.  
 \$cat <<'EOSH' > Cppsym.know

a29k aarch64 ABI64 aegis AES\_SOURCE AIX AIX32 AIX370 AIX41 AIX42  
AIX43 aixpc AIX\_SOURCE alliant ALL\_SOURCE alpha AM29000 am29000  
AMD64 amd64 amiga AMIGAOS AMIX ansi ANSI\_C\_SOURCE apollo arch\_ppc  
arch\_pwr ardent ARM ARM32 atarist att386 att3b  
BeOS BIG\_ENDIAN BIT\_MSF BSD bsd bsd43 bsd4\_2 BSD4\_3 bsd4\_3 bsd4\_4  
BSDCOMPAT bsd BSD\_4\_3 BSD\_4\_4 BSD\_NET2 BSD\_TIME BSD\_TYPES bull  
byteorder byte\_order  
c cadmus clang clipper CMU COFF COMPILER\_VERSION  
concurrent  
convex cpu CRAY cray CRAYMPP ctix CX\_UX CYGWIN  
DECC DGUX DGUX\_SOURCE DJGPP dmert DOLPHIN DPX2 DSO Dynix DynixPTX  
ELF encore EPI EXTENSIONS  
FAVOR\_BSD FILE\_OFFSET\_BITS FORTIFY\_SOURCE FreeBSD  
GCC\_NEW\_VARARGS gcos gcx gimpel GLIBC GLIBC\_MINOR GNUC GNUMINOR  
GNU\_LIBRARY GNU\_SOURCE GO32 gould GOULD\_PN  
H3050R H3050RX hbullx20 hcx host\_mips hp200 hp300 HP700 hp700  
hp800 hp9000 hp9000s200 hp9000s300 hp9000s400  
hp9000s700 hp9000s800 hp9k8 hppa hpux HPUX\_SOURCE hp\_osf  
i186 i286 i386 i486 i586 i686 i8086 i80960 i860 I960 IA32 IA64  
iAPX286 ibm ibm032 ibmesa IBMR2 ibmrt ILP32 ILP64  
INLINE\_INTRINSICS INT64 INTEL interdata INTRINSICS is68k titanium  
ksr1  
LANGUAGE\_C LARGEFILE64\_SOURCE LARGEFILE\_SOURCE LARGE\_FILE\_API  
LFS64\_LARGEFILE LFS\_LARGEFILE LIBCATAMOUNT Linux LITTLE\_ENDIAN  
LONG64 LONGDOUBLE LONGLONG LONG\_DOUBLE LONG\_LONG LP64 luna  
luna88k Lynx  
M68000 m68k m88100 m88k M88KBCS\_TARGET MACH machine MachTen  
MATH\_HAS\_NO\_SIDE\_EFFECTS mc300 mc500 mc68000 mc68010 mc68020  
mc68030 mc68040 mc68060  
mc68k mc68k32 mc700 mc88000 mc88100  
merlin mert MiNT mips MIPSEB MIPSEL MIPS\_FPSET MIPS\_ISA MIPS\_SIM  
MIPS\_SZINT MIPS\_SZLONG MIPS\_SZPTR MODERN\_C motorola MSDOS  
MTXINU MULTIMAX MVS mvs M\_AMD64 M\_ARM M\_ARMT M\_COFF M\_I186 M\_I286  
M\_I386 M\_I8086 M\_I86 M\_I86SM M\_IA64 M\_IX86 M\_PPC M\_SYS3 M\_SYS5  
M\_SYSIII M\_SYSV M\_UNIX M\_X86 M\_XENIX  
n16 ncl\_el ncl\_mr NetBSD news1500 news1700 news1800 news1900  
news3700 news700 news800 news900 NeXT NLS nonstopux ns16000  
ns32000 ns32016 ns32332 ns32k nsc32000  
OCS88 OEMVS OpenBSD os OS2 OS390 osf OSF1 OSF\_SOURCE  
PARAGON parisc pa\_risc PA\_RISC1\_1 PA\_RISC2\_0 pc532 pdp11 PGC PIC  
plexus PORTAR posix POSIX1B\_SOURCE POSIX2\_SOURCE POSIX4\_SOURCE  
POSIX\_C\_SOURCE POSIX\_SOURCE POWER powerpc ppc PROTOTYPES PWB pyr  
QK\_USER QNX  
R3000 REENTRANT RES Rhapsody RISC6000 riscix riscos RT  
S390 S390x SA110 SCO scs sequent sgi SGI\_SOURCE SH SH3 sinix  
SIZE\_INT SIZE\_LONG SIZE\_PTR SOCKETS\_SOURCE SOCKET\_SOURCE sony  
sonyrisc sony\_news sparc sparclite sparcv8 sparcv9 spectrum  
stardent stdc

```

STDC_EXT stratos sun sun3 sun386 Sun386i svr3 svr4
SVR4_2 SVR4_SOURCE svr5 SX system SYSTYPE_BSD SYSTYPE_BSD43
SYSTYPE_BSD44 SYSTYPE_SVR4 SYSTYPE_SVR5 SYSTYPE_SYSV SYSV SYSV3
SYSV4 SYSV5 sysV68 sysV88
Tek4132 Tek4300 thumb thw_370 thw_intel thw_rs6000 titan TM3200
TM5400 TM5600 tower tower32 tower32_200 tower32_600 tower32_700
tower32_800 tower32_850 tss
u370 u3b u3b2 u3b20 u3b200 u3b20d u3b5 ultrix UMAXV UnicomPBB
UnicomPBD UNICOS UNICOSMK unix UNIX95 UNIX99 unixpc unos USE_BSD
USE_FILE_OFFSET64 USE_GNU USE_ISOC9X USE_LARGEFILE
USE_LARGEFILE64 USE_MISC USE_POSIX USE_POSIX199309
USE_POSIX199506 USE_POSIX2 USE_REENTRANT USE_SVID USE_UNIX98
USE_XOPEN USE_XOPEN_EXTENDED USGr4 USGr4_2 UTek Utek UTS UWIN
uxpm uxps
vax venix VMESA vms
x86_64 xenix Xenix286 XOPEN_SOURCE XOPEN_SOURCE_EXTENDED XPG2
XPG2_EXTENDED XPG3 XPG3_EXTENDED XPG4 XPG4_EXTENDED
z8000 zarch
EOSH
# Maybe put other stuff here too.
?X:Some OS's will have a dash in their $osname
?X:e.g. Android is known as linux-android
?X:The
preprocessor will interpret the dash as a minus
./tr '-' '_' <<EOSH >>Cppsym.know
$osname
EOSH
./tr '[a-z]' '[A-Z]' < Cppsym.know > Cppsym.a
./tr '[A-Z]' '[a-z]' < Cppsym.know > Cppsym.b
$cat Cppsym.know > Cppsym.c
$cat Cppsym.a Cppsym.b Cppsym.c | $tr ' ' $trnl | $sort | $uniq > Cppsym.know
$rm -f Cppsym.a Cppsym.b Cppsym.c
cat <<EOSH > Cppsym
$startsh
if $test $# -gt 0; then
    echo \${*} | $tr " " "$trnl" | ./Cppsym.try > Cppsym.got
    if $test -s Cppsym.got; then
        $rm -f Cppsym.got
    exit 0
    fi
    $rm -f Cppsym.got
    exit 1
else
    $tr " " "$trnl" | ./Cppsym.try
    exit 0
fi
EOSH
chmod +x Cppsym

```

\$eunicefix Cppsym

?X: The below awk script will die a horrible death if

?X: some of the tested symbols are not long ints.

?X: Also, we do not make difference between just defined and defined zero.

cat <<EOSH > Cppsym.try

\$startsh

cat <<'EOCP' > try.c

```
#include <stdio.h>
```

```
#if cpp_stuff == 1
```

```
#define STRINGIFY(a)  "a"
```

```
#endif
```

```
#if cpp_stuff == 42
```

```
#define StGiFy(a) #a
```

```
#define STRINGIFY(a)
```

```
    StGiFy(a)
```

```
#endif
```

```
#if $cpp_stuff != 1 && $cpp_stuff != 42
```

```
# include "Bleth: How does this C preprocessor stringify macros?"
```

```
#endif
```

```
int main() {
```

```
EOCP
```

?X: The length(\$1) command guards against possible empty entries.

?X: The awk snippet is know to give heartburn to UNICOS/mk awk.

```
$awk \\  
EOSH
```

```
cat <<'EOSH' >> Cppsym.try
```

```
'length($1) > 0 {
```

```
    printf "#ifdef %s\nprintf(\"%s=%s\n\", STRINGIFY(%s));\n#endif\n", $1, $1, $1
```

```
    printf "#ifdef _%s\nprintf(\"_%s=%s\n\", STRINGIFY(_%s));\n#endif\n", $1, $1, $1
```

```
    printf "#ifdef __%s\nprintf(\"__%s=%s\n\", STRINGIFY(__%s));\n#endif\n", $1, $1, $1
```

```
    printf "#ifdef __%s_\nprintf(\"__%s__=%s\n\", STRINGIFY(__%s__));\n#endif\n", $1, $1, $1
```

```
}' >> try.c
```

```
echo 'return 0;}' >> try.c
```

```
EOSH
```

```
cat <<EOSH >> Cppsym.try
```

```
ccflags="$ccflags"
```

```
case "$osname-$gccversion" in
```

```
irix-) ccflags="\$ccflags -woff 1178" ;;
```

```
os2-*) ccflags="\$ccflags -Zlinker /PM:VIO" ;;
```

```
esac
```

```
$cc -o try -Dcpp_stuff=$cpp_stuff $optimize \$ccflags $ldflags try.c $libs 2>/dev/null
```

```
&& $run ./try | $sed 's/ /\n/g'
```

```
EOSH
```

```
chmod +x Cppsym.try
```

```
$eunicefix Cppsym.try
```

```
./Cppsym < Cppsym.know | $sort | $uniq > Cppsym.true
```

: Add in any Linux cpp "predefined macros":

```
case "$osname::$gccversion" in
```



```

*linux*:*.*|*gnukfreebsd*:*.*|gnu:*.*)
tHdrH=_tmpHdr
rm -f $tHdrH.h' $tHdrH
touch $tHdrH.h'
# Filter out macro arguments, such as Linux's __INT8_C(c)
if $cpp -dM $tHdrH.h' > $tHdrH'_cppsym.h' && [ -s $tHdrH'_cppsym.h' ]; then
    sed -e 's/#define[\ \ ]*//;s/[\ \ ].*$//' -e 's/(.*// <$tHdrH'_cppsym.h' >$tHdrH'_cppsym.real'
    if [ -s $tHdrH'_cppsym.real' ]; then
cat $tHdrH'_cppsym.real' Cppsym.know | sort | uniq | ./Cpsym | sort | uniq > Cppsym.true
    fi
fi
rm -f $tHdrH.h' $tHdrH'_cppsym.h' $tHdrH'_cppsym.real'
;;
esac
: now check the C compiler for additional symbols
?X: suggested by Jarkko Hietaniemi <jhi@snakemail.hut.fi>, thanks!
postprocess_cc_v="
case "$osname" in
aix) postprocess_cc_v="|$tr , ' "' ;;
esac
$cat >ccsym
<<EOS
$startsh
$cat >tmp.c <<EOF
extern int foo;
EOF
for i in ` $cc -v -c tmp.c 2>&1 $postprocess_cc_v `
do
case "$i" in
-D*) echo "$i" | $sed 's/^-D//';;
-A*) $test "$gccversion" && echo "$i" | $sed 's/^-A//' | $sed 's/^(.*)((.*))\1=2//';;
esac
done
$rm_try
EOS
postprocess_cc_v="
chmod +x ccsym
$unicefix ccsym
./ccsym > ccsym1.raw
?X: AIX complains if $uniq is passed an empty file. ($sort apparently
?X: doesn't care.) --AD 14 July 1998
if $test -s ccsym1.raw; then
    $sort ccsym1.raw | $uniq >ccsym.raw
else
    mv ccsym1.raw ccsym.raw
fi

```

?X: canonicalize symbols for easier sort/uniq/comm usage: append =1 if no = sign

?X: the awk script must be on two lines for older awk programs, sigh! -- ADO

```
$awk '/^=/ { print $0; next }
{ print $0="1" }' ccsym.raw >ccsym.list
$comm -13 Cppsym.true ccsym.list >ccsym.own
$comm -12 Cppsym.true ccsym.list >ccsym.com
$comm -23 Cppsym.true ccsym.list >ccsym.cpp
also="
if $test -z ccsym.raw; then
echo "Your C compiler doesn't seem
to define any symbols!" >&4
echo " "
echo "However, your C preprocessor defines the following symbols:"
$cat Cppsym.true
ccsymbols="
cppsymbols=`$cat Cppsym.true`
cppsymbols=`echo $cppsymbols`
cppccsymbols="$cppsymbols"
else
if $test -s ccsym.com; then
echo "Your C compiler and pre-processor define these symbols:"
$sed -e 's/(.*\)=.*\1/' ccsym.com
also='also '
symbols='ones'
cppccsymbols=`$cat ccsym.com`
cppccsymbols=`echo $cppccsymbols`
$test "$silent" || sleep 1
fi
if $test -s ccsym.cpp; then
$test "$also" && echo " "
echo "Your C pre-processor ${also}defines the following symbols:"
$sed -e 's/(.*\)=.*\1/' ccsym.cpp
also='further '
cppsymbols=`$cat ccsym.cpp`
cppsymbols=`echo $cppsymbols`
$test "$silent" || sleep 1
fi
if $test -s ccsym.own; then
$test "$also" && echo " "
echo "Your C compiler ${also}defines the following cpp symbols:"
$sed -e 's/(.*\)=1\1/' ccsym.own
$sed -e 's/(.*\)=.*\1/' ccsym.own | $uniq >>Cppsym.true
ccsymbols=`$cat
ccsym.own`
ccsymbols=`echo $ccsymbols`
$test "$silent" || sleep 1
fi
fi
```

```

: add -D_FORTIFY_SOURCE if feasible and not already there
case "$gccversion" in
[456789].*[[1-9][0-9]*) case "$optimize$ccflags" in
*-O*) case "$ccflags$cppsymbols" in
*_FORTIFY_SOURCE=*) # Don't add it again.
echo "You seem to have -D_FORTIFY_SOURCE already, not adding it." >&4
;;
*) echo "Adding -D_FORTIFY_SOURCE=2 to ccflags..." >&4
ccflags="$ccflags -D_FORTIFY_SOURCE=2"
;;
esac
;;
*) echo "You have gcc 4.* or later but not optimizing, not adding -D_FORTIFY_SOURCE." >&4
;;
esac
;;
*) echo "You seem not to have gcc 4.* or later, not adding -D_FORTIFY_SOURCE." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/Cppsym.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:full\_ar: ar

?MAKE: -pick add \$@ %<

?S:full\_ar:

?S: This variable contains the full pathname to 'ar', whether or

?S: not the user has specified 'portability'. This is only used

?S: in the Makefile.SH.

?S:.

: Store the full pathname to the ar program for use in the C program

: Respect a hint or command line value for full\_ar.

```

case "$full_ar" in

```

```

") full_ar=$ar ;;

```

```

esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Loc\_ar.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pwritev.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_pwritev.U,v \$

?RCS:

?MAKE:d\_pwritev: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pwritev:

?S: This variable conditionally defines the HAS\_PWRITEV symbol, which

?S: indicates to the C program that the pwritev() routine is available.

?S:.

?C:HAS\_PWRITEV :

?C: This symbol, if defined, indicates that the pwritev routine is

?C: available to perform vectored writes on a file descriptor at a

?C: given offset.

?C:.

?H:#\$d\_pwritev HAS\_PWRITEV /\*\*/

?H:.

?LINT:set

d\_pwritev

: see if pwritev exists

set pwritev d\_pwritev

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_pwritev.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

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 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?MAKE:d\_socketmarkproto: Hasproto d\_socket  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_socketmarkproto:  
 ?S: This variable conditionally defines the HAS\_SOCKETMARK\_PROTO symbol,  
 ?S: which indicates to the C program that the system provides  
 ?S: a prototype for the socketmark() function. Otherwise, it is  
 ?S: up to the program to supply one.  
 ?S:.  
 ?C:HAS\_SOCKETMARK\_PROTO:  
 ?C: This symbol, if defined, indicates that the system provides  
 ?C: a prototype for the socketmark() function. Otherwise, it is up  
 ?C: to the program to supply one. A good  
 guess is  
 ?C: extern int socketmark(int);  
 ?C:.  
 ?H:#\$d\_socketmarkproto HAS\_SOCKETMARK\_PROTO /\*\*/  
 ?H:.  
 ?LINT:set d\_socketmarkproto  
 : see if prototype for socketmark is available  
 echo " "  
 set d\_socketmarkproto socketmark \$d\_socket sys/socket.h  
 eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_socketmarkproto.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_float.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
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 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
 ?RCS:  
 ?RCS: \$Log: i\_float.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/08/29 16:21:57 ram  
 ?RCS: patch32: created by ADO  
 ?RCS:  
 ?MAKE:i\_float: Inhdr

```
?MAKE: -pick add $@ %<
?S:i_float:
?S: This variable conditionally defines the I_FLOAT symbol, and indicates
?S: whether a C program may include <float.h> to get symbols like DBL_MAX
?S: or DBL_MIN, i.e. machine dependent floating point values.
?S:.
?C:I_FLOAT:
?C: This
symbol, if defined, indicates to the C program that it should
?C: include <float.h> to get definition of symbols like DBL_MAX or
?C: DBL_MIN, i.e. machine dependent floating point values.
?C:.
?H:#$i_float I_FLOAT /**/
?H:.
?LINT:set i_float
: see if this is a float.h system
set float.h i_float
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_float.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_time.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:07:43 ram
?RCS: patch56: typo fix, sytem -> system
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:16:38 ram
?RCS: patch36: now uses new Typedef unit to compute type information (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:45 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X: Maybe <sys/types.h> should be included?
?X:INC: i_systypes
?MAKE:d_time timetype: Csym Setvar Findhdr Myread Typedef
?MAKE: -pick add $@ %<
```

?S:d\_time:  
?S: This  
variable conditionally defines the HAS\_TIME symbol, which indicates  
?S: that the time() routine exists. The time() routine is normally  
?S: provided on UNIX systems.

?S:.

?S:timetype:

?S: This variable holds the type returned by time(). It can be long,  
?S: or time\_t on BSD sites (in which case <sys/types.h> should be  
?S: included). Anyway, the type Time\_t should be used.

?S:.

?C:HAS\_TIME (TIMER):

?C: This symbol, if defined, indicates that the time() routine exists.

?C:.

?C:Time\_t (TIMETYPE):

?C: This symbol holds the type returned by time(). It can be long,  
?C: or time\_t on BSD sites (in which case <sys/types.h> should be  
?C: included).

?C:.

?H:#\$d\_time HAS\_TIME /\*\*/

?H:#define Time\_t \$timetype /\* Time type \*/

?H:.

?LINT:set d\_time

: see if time exists

echo " "

if set time val -f d\_time; eval \$csym; \$val; then

echo 'time() found.' >&4

val="\$define"

set time\_t timetype long stdio.h sys/types.h

eval \$typedef

dflt="\$timetype"

echo " "

rp="What type is returned by time() on this  
system?"

. ./myread

timetype="\$ans"

else

echo 'time() not found, hope that will do.' >&4

val="\$undef"

timetype='int';

fi

set d\_time

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1-rc1/dist/U/d\_time.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getprotoprotos.U,v $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_getprotoprotos : Hasproto i_netdb
?MAKE: -pick add $@ %<
?S:d_getprotoprotos:
?S: This variable conditionally defines the HAS_GETPROTO_PROTOS symbol,
?S: which indicates to the C program that <netdb.h> supplies
?S: prototypes for the various getproto*() functions.
?S: See also netdbtype.U for probing for various netdb types.
?S:.
?C:HAS_GETPROTO_PROTOS:
?C: This symbol, if defined, indicates that <netdb.h> includes
?C: prototypes for getprotoent(), getprotobyname(), and
?C: getprotobyaddr().
    Otherwise, it is up to the program to guess
?C: them. See netdbtype.U for probing for various Netdb_xxx_t types.
?C:.
?H:#$d_getprotoprotos HAS_GETPROTO_PROTOS /**/
?H:.
?LINT:set d_getprotoprotos
: see if prototypes for various getprotoxxx netdb.h functions are available
echo " "
set d_getprotoprotos getprotoent $i_netdb netdb.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d_getprotoprotos.U
```

No license file was found, but licenses were detected in source scan.

```
# $Id: errnolist.sh,v 3.0.1.1 1994/01/24 14:00:00 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
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# as specified in the README file that comes with the distribution.
# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
```



```

# of the source tree for dist 4.0.
#
# Original Author: Harlan Stenn <harlan@mumps.pfcs.com>
#
# $Log: errnolist.sh,v $
# Revision 3.0.1.1 1994/01/24 14:00:00 ram
# patch16: changed top ln-style config.sh lookup into test-style one
#
# Revision 3.0 1993/08/18 12:04:36 ram
# Baseline for dist 3.0 netwide release.
#

case $CONFIG in
")
if test -f config.sh; then TOP=.;
elif test -f ../config.sh; then TOP=..;
elif test -f ../../config.sh; then TOP=../../;
elif test -f ../../../config.sh; then TOP=../../../;
elif
test -f ../../../../config.sh; then TOP=../../../../;
else
echo "Can't find config.sh."; exit 1
fi
. $TOP/config.sh
;;
esac
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/\)` ;;
esac
case "$serrnolistic" in
") ;;
*)
echo "Making $serrnolistic ..."
awk -f errnolist.a < /usr/include/sys/errno.h > $serrnolistic
echo "It would be a good idea to make sure that $serrnolistic is correct."
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/errnolist.SH

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?MAKE:d\_atoll: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_atoll:  
?S: This variable conditionally defines the HAS\_ATOLL symbol, which  
?S: indicates to the C program that the atoll() routine is available.  
?S:.  
?C:HAS\_ATOLL:  
?C: This symbol, if defined, indicates that the atoll routine is  
?C: available to convert strings into long longs.  
?C:.  
?H:#\$d\_atoll HAS\_ATOLL /\*\*/  
?H:.  
?LINT:set d\_atoll  
: see if atoll exists  
set atoll d\_atoll  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/atoll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: perlsv.U,v 1.1 2000/08/31 17:53:56 jhi Exp jhi \$  
?RCS:  
?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:ivtype uvtype nvtype ivsize uvsize nvsize \  
i8type u8type i16type u16type i32type u32type i64type u64type \  
i8size u8size i16size u16size i32size u32size i64size u64size \  
d\_nv\_preserves\_uv nv\_preserves\_uv\_bits nv\_overflows\_integers\_at \  
d\_nv\_zero\_is\_allbits\_zero: \  
echo rm\_try use64bitint d\_quad quadtype uquadtype usequadmath \  
d\_longdbl uselongdouble longdblsize doublesize i\_quadmath \  
shortsize intsize longsize i\_stdlib libs gccversion \  
cat Compile i\_inttypes test signal\_t run  
?MAKE: -pick add \$@ %<  
?S:ivtype:  
?S: This variable contains the C type used for Perl's IV.  
?S:.  
?S:uvtype:  
?S: This variable contains the C type  
used for Perl's UV.  
?S:.  
?S:nvtype:

?S: This variable contains the C type used for Perl's NV.

?S:.

?S:i8type:

?S: This variable contains the C type used for Perl's I8.

?S:.

?S:u8type:

?S: This variable contains the C type used for Perl's U8.

?S:.

?S:i16type:

?S: This variable contains the C type used for Perl's I16.

?S:.

?S:u16type:

?S: This variable contains the C type used for Perl's U16.

?S:.

?S:i32type:

?S: This variable contains the C type used for Perl's I32.

?S:.

?S:u32type:

?S: This variable contains the C type used for Perl's U32.

?S:.

?S:i64type:

?S: This variable contains the C type used for Perl's I64.

?S:.

?S:u64type:

?S: This variable contains the C type used for Perl's U64.

?S:.

?S:ivsize:

?S: This variable is the size of an IV in bytes.

?S:.

?S:uvsize:

?S: This variable is the size of a UV in bytes.

?S:.

?S:i8size:

?S: This variable is the size of an I8 in bytes.

?S:.

?S:u8size:

?S: This variable is the size of an U8 in bytes.

?S:.

?S:i16size:

?S: This variable is the  
size of an I16 in bytes.

?S:.

?S:u16size:

?S: This variable is the size of an U16 in bytes.

?S:.

?S:i32size:

?S: This variable is the size of an I32 in bytes.

?S:.

?S:u32size:

?S: This variable is the size of an U32 in bytes.

?S:.

?S:i64size:

?S: This variable is the size of an I64 in bytes.

?S:.

?S:u64size:

?S: This variable is the size of an U64 in bytes.

?S:.

?S:nvsize:

?S: This variable is the size of a Perl NV in bytes.

?S: Note that some floating point formats have unused bytes.

?S:.

?S:d\_nv\_preserves\_uv:

?S: This variable indicates whether a variable of type nvtype

?S: can preserve all the bits a variable of type uvtype.

?S:.

?S:nv\_preserves\_uv\_bits:

?S: This variable indicates how many of bits type uvtype

?S: a variable nvtype can preserve.

?S:.

?S:nv\_overflows\_integers\_at:

?S: This variable gives the largest integer value that NVs can hold

?S: as a constant floating point expression.

?S: If it could not be determined, it holds the value 0.

?S:.

?S:d\_nv\_zero\_is\_allbits\_zero:

?S: This

variable indicates whether a variable of type nvtype

?S: stores 0.0 in memory as all bits zero.

?S:.

?C:IVTYPE:

?C: This symbol defines the C type used for Perl's IV.

?C:.

?C:UVTYPE:

?C: This symbol defines the C type used for Perl's UV.

?C:.

?C:I8TYPE:

?C: This symbol defines the C type used for Perl's I8.

?C:.

?C:U8TYPE:

?C: This symbol defines the C type used for Perl's U8.

?C:.

?C:I16TYPE:

?C: This symbol defines the C type used for Perl's I16.

?C:.

?C:U16TYPE:

?C: This symbol defines the C type used for Perl's U16.

?C:  
?C:I32TYPE:  
?C: This symbol defines the C type used for Perl's I32.  
?C:  
?C:U32TYPE:  
?C: This symbol defines the C type used for Perl's U32.  
?C:  
?C:I64TYPE:  
?C: This symbol defines the C type used for Perl's I64.  
?C:  
?C:U64TYPE:  
?C: This symbol defines the C type used for Perl's U64.  
?C:  
?C:NVTYPE:  
?C: This symbol defines the C type used for Perl's NV.  
?C:  
?C:IVSIZE:  
?C: This symbol contains the sizeof(IV).  
?C:  
?C:UVSIZE:  
?C: This symbol contains the  
sizeof(UV).  
?C:  
?C:I8SIZE:  
?C: This symbol contains the sizeof(I8).  
?C:  
?C:U8SIZE:  
?C: This symbol contains the sizeof(U8).  
?C:  
?C:I16SIZE:  
?C: This symbol contains the sizeof(I16).  
?C:  
?C:U16SIZE:  
?C: This symbol contains the sizeof(U16).  
?C:  
?C:I32SIZE:  
?C: This symbol contains the sizeof(I32).  
?C:  
?C:U32SIZE:  
?C: This symbol contains the sizeof(U32).  
?C:  
?C:I64SIZE:  
?C: This symbol contains the sizeof(I64).  
?C:  
?C:U64SIZE:  
?C: This symbol contains the sizeof(U64).  
?C:  
?C:NVSIZE:

?C: This symbol contains the sizeof(NV).

?C: Note that some floating point formats have unused bytes.

?C: The most notable example is the x86\* 80-bit extended precision

?C: which comes in byte sizes of 12 and 16 (for 32 and 64 bit

?C: platforms, respectively), but which only uses 10 bytes.

?C: Perl compiled with -Duselongdouble on x86\* is like this.

?C:.

?C:NV\_PRESERVES\_UV:

?C: This symbol, if defined, indicates that a variable of type NVTYPE

?C: can preserve all the bits of a variable of type UVTYPE.

?C:.

?C:NV\_PRESERVES\_UV\_BITS:

?C: This

symbol contains the number of bits a variable of type NVTYPE

?C: can preserve of a variable of type UVTYPE.

?C:.

?C:NV\_OVERFLOWES\_INTEGERS\_AT:

?C: This symbol gives the largest integer value that NVs can hold. This

?C: value + 1.0 cannot be stored accurately. It is expressed as constant

?C: floating point expression to reduce the chance of decimal/binary

?C: conversion issues. If it can not be determined, the value 0 is given.

?C:.

?C:NV\_ZERO\_IS\_ALLBITS\_ZERO:

?C: This symbol, if defined, indicates that a variable of type NVTYPE

?C: stores 0.0 in memory as all bits zero.

?C:.

?H:#define IVTYPE \$ivtype /\*\*/

?H:#define UVTYPE \$uvtype /\*\*/

?H:#define I8TYPE \$i8type /\*\*/

?H:#define U8TYPE \$u8type /\*\*/

?H:#define I16TYPE \$i16type /\*\*/

?H:#define U16TYPE \$u16type /\*\*/

?H:#define I32TYPE \$i32type /\*\*/

?H:#define U32TYPE \$u32type /\*\*/

?H:%<:#ifdef HAS\_QUAD

?H:%<:#define I64TYPE \$i64type /\*\*/

?H:%<:#define U64TYPE \$u64type /\*\*/

?H:%<:#endif

?H:#define NVTYPE \$nvtype /\*\*/

?H:#define IVSIZE \$ivsize /\*\*/

?H:#define UVSIZE \$uvsize /\*\*/

?H:#define I8SIZE \$i8size /\*\*/

?H:#define U8SIZE \$u8size /\*\*/

?H:#define I16SIZE \$i16size /\*\*/

?H:#define U16SIZE \$u16size /\*\*/

?H:#define I32SIZE \$i32size /\*\*/

?H:#define U32SIZE \$u32size /\*\*/

?H:%<:#endif

```

HAS_QUAD
?H:?%<:#define I64SIZE $i64size /**/
?H:?%<:#define U64SIZE $u64size /**/
?H:?%<:#endif
?H:#define NVSIZE $nvsize /**/
?H:#$d_nv_preserves_uv NV_PRESERVES_UV
?H:#define NV_PRESERVES_UV_BITS $nv_preserves_uv_bits
?H:#define NV_OVERFLOWS_INTEGERS_AT ($nv_overflows_integers_at)
?H:#$d_nv_zero_is_allbits_zero NV_ZERO_IS_ALLBITS_ZERO
?H:?%<:#if UVSIZE == 8
?H:?%<:# ifdef BYTEORDER
?H:?%<:# if BYTEORDER == 0x1234
?H:?%<:# undef BYTEORDER
?H:?%<:# define BYTEORDER 0x12345678
?H:?%<:# else
?H:?%<:# if BYTEORDER == 0x4321
?H:?%<:# undef BYTEORDER
?H:?%<:# define BYTEORDER 0x87654321
?H:?%<:#
endif
?H:?%<:# endif
?H:?%<:# endif
?H:?%<:#endif
?H:.
?T:xxx
?T:d
?F:!try
: Check basic sizes
echo " "
$echo "Choosing the C types to be used for Perl's internal types..." >&4

case "$suse64bitint:$d_quad:$quadtype" in
define:define:?)
ivtype="$quadtype"
uvtype="$uquadtype"
ivsize=8
uvsize=8
;;
*) ivtype="long"
uvtype="unsigned long"
ivsize=$longsize
uvsize=$longsize
;;
esac

case "$sulongdouble:$d_longdbl" in
define:define)
nvtype="long double"

```

```

nvsizе=$longdblsize
;;
*) nvtype=double
nvsizе=$doublesize
;;
esac

case "$susequadmath:$i_quadmath" in
define:define)
nvtype="__float128"
nvsizе=16
case "$libs" in
*quadmath*) ;;
*) $cat <<EOM >&4

*** You requested the use of the quadmath library, but you
*** do not seem to have the quadmath library installed.
*** Cannot continue, aborting.
EOM
    exit 1
    ;;
esac
;;
define:*) $cat <<EOM >&4

*** You requested the use of the quadmath library, but you
*** do not seem to have the required header, <quadmath.h>.
EOM
    case "$gccversion" in
[23].*|4.[0-5]*)
    $cat <<EOM >&4
*** Your gcc looks a bit old:
*** $gccversion
EOM
        ;;
    ")
    $cat <<EOM >&4
*** You are not running a gcc.
EOM
        ;;
esac
    $cat <<EOM >&4
*** For the quadmath library you need at least gcc 4.6.
*** Cannot continue, aborting.
EOM
    exit 1
    ;;
esac

```



```
$echo "(IV will be "$ivtype", $ivsize bytes)"
$echo "(UV will be "$uvtype", $uvsize bytes)"
$echo "(NV will be "$nvtype", $nvsize bytes)"
```

```
$cat >try.c <<EOCP
#$i_inttypes I_INTTYPES
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#include <stdio.h>
int main() {
#ifdef INT8
    int8_t i = INT8_MAX;
    uint8_t u = UINT8_MAX;
    printf("int8_t\n");
#endif
#ifdef INT16
    int16_t i = INT16_MAX;
    uint16_t u = UINT16_MAX;
    printf("int16_t\n");
#endif
#ifdef INT32
    int32_t i = INT32_MAX;
    uint32_t u = UINT32_MAX;
    printf("int32_t\n");
#endif
}
EOCP
```

```
i8type="signed char"
u8type="unsigned char"
i8size=1
u8size=1
```

```
case "$i16type" in
) case "$shortsize" in
2) i16type=short
    u16type="unsigned
short"
    i16size=$shortsize
    u16size=$shortsize
;;
esac
;;
esac
case "$i16type" in
) set try -DINT16
```

```

if eval $compile; then
case "`$run ./try`" in
int16_t)
i16type=int16_t
u16type=uint16_t
i16size=2
u16size=2
;;
esac
fi
;;
esac
case "$i16type" in
") if $test $shortsize -ge 2; then
i16type=short
u16type="unsigned short"
i16size=$shortsize
u16size=$shortsize
fi
;;
esac

```

```

case "$i32type" in
") case "$longsize" in
4) i32type=long
u32type="unsigned long"
i32size=$longsize
u32size=$longsize
;;
*) case "$intsize" in
4) i32type=int
u32type="unsigned int"
i32size=$intsize
u32size=$intsize
;;
esac
;;
esac
;;
esac

```

```

case "$i32type" in
") set try -DINT32
if eval $compile; then
case "`$run ./try`" in
int32_t)
i32type=int32_t
u32type=uint32_t
i32size=4

```

```

    u32size=4
    ;;
    esac
fi
;;
esac
case "$i32type" in
") if $test $intsize -ge 4; then
    i32type=int
    u32type="unsigned int"
    i32size=$intsize
    u32size=$intsize
    fi
    ;;
    esac

case
"$i64type" in
") case "$d_quad:$quadtype" in
define:?)
    i64type="$quadtype"
    u64type="$uquadtype"
    i64size=8
    u64size=8
    ;;
    esac
    ;;
    esac

$echo "Checking how many bits of your UVs your NVs can preserve..." >&4
$cat <<EOP >try.c
#include <stdio.h>
#$i_stdlib L_STDLIB
#ifdef L_STDLIB
#include <stdlib.h>
#endif
#include <sys/types.h>
#include <signal.h>
#ifdef SIGFPE
/* volatile so that the compiler has to store it out to memory */
volatile int bletched = 0;
$signal_t blech(int s) { bletched = 1; }
#endif
int main() {
    $suvtype u = 0;
    $nvtype d;
    int    n = 8 * $suvsize;
    int    i;

```

```

#ifdef SIGFPE
    signal(SIGFPE, blech);
#endif

    for (i = 0; i < n; i++) {
        u = u << 1 | ($vtype)1;
        d = ($vtype)u;
        if (($vtype)d != u)
            break;
        if (d <= 0)
            break;
        d = ($vtype)(u - 1);
        if (($vtype)d != (u - 1))
            break;
#ifdef SIGFPE
        if (bletched)
            break;
#endif
    }
    printf("%d\n",
        ((i == n) ? -n : i));
    exit(0);
}
EOP
set try

d_nv_preserves_uv="$undef"
if eval $compile; then
    nv_preserves_uv_bits="$ $run ./try`"
fi
case "$nv_preserves_uv_bits" in
\[1-9]*)
    nv_preserves_uv_bits=`expr 0 - $nv_preserves_uv_bits`
    $echo "Your NVs can preserve all $nv_preserves_uv_bits bits of your UVs." 2>&1
    d_nv_preserves_uv="$define"
    ;;
[1-9]*) $echo "Your NVs can preserve only $nv_preserves_uv_bits bits of your UVs." 2>&1
    d_nv_preserves_uv="$undef" ;;
*) $echo "Can't figure out how many bits your NVs preserve." 2>&1
    nv_preserves_uv_bits="0" ;;
esac
$rm_try

$echo "Checking to find the largest integer value your NVs can hold..." >&4
$cat <<EOP >try.c
#include <stdio.h>

typedef $vtype NV;

```

```

int
main() {
    NV value = 2;
    int count = 1;

    while(count < 256) {
        /* volatile so that the compiler has to store it out to memory */
        volatile NV up = value + 1.0;
        volatile NV negated = -value;
        volatile NV down = negated - 1.0;
        volatile NV got_up = up
- value;
        int up_good = got_up == 1.0;
        int got_down = down - negated;
        int down_good = got_down == -1.0;

        if (down_good != up_good) {
            fprintf(stderr,
                "Inconsistency - up %d %f; down %d %f; for 2**%d (%.20f)\n",
                up_good, (double) got_up, down_good, (double) got_down,
                count, (double) value);
            return 1;
        }
        if (!up_good) {
            while (1) {
                if (count > 8) {
                    count -= 8;
                    fputs("256.0", stdout);
                } else {
                    count--;
                    fputs("2.0", stdout);
                }
            }
            if (!count) {
                puts("");
                return 0;
            }
            fputs("*", stdout);
        }
        value *= 2;
        ++count;
    }
    fprintf(stderr, "Cannot overflow integer range, even at 2**%d (%.20f)\n",
        count, (double) value);
    return 1;
}
EOP

```

```
set try
```

```
nv_overflows_integers_at='0'
```

```
if eval $compile; then
```

```
  xxx="$run ./try`"
```

```
  case "$?" in
```

```
0)
```

```
  case "$xxx" in
```

```
2*) cat >&4 <<EOM
```

The largest integer your NVs can preserve is equal to \$xxx

```
EOM
```

```
  nv_overflows_integers_at="$xxx"
```

```
  ;;
```

```
*) cat
```

```
>&4 <<EOM
```

Cannot determine the largest integer value your NVs can hold, unexpected output

```
'$xxx'
```

```
EOM
```

```
  ;;
```

```
  esac
```

```
  ;;
```

```
*) cat >&4 <<EOM
```

Cannot determine the largest integer value your NVs can hold

```
EOM
```

```
  ;;
```

```
  esac
```

```
fi
```

```
$rm_try
```

```
$echo "Checking whether NV 0.0 is all bits zero in memory..." >&4
```

```
$cat <<EOP >try.c
```

```
#include <stdio.h>
```

```
#$i_stdlib I_STDLIB
```

```
#ifdef I_STDLIB
```

```
#include <stdlib.h>
```

```
#endif
```

```
#include <string.h>
```

```
#include <sys/types.h>
```

```
#include <signal.h>
```

```
#ifdef SIGFPE
```

```
/* volatile so that the compiler has to store it out to memory */
```

```
volatile int bleched = 0;
```

```
$signal_t blech(int s) { bleched = 1; }
```

```
#endif
```

```
int checkit($nvtype d, const char *where) {
```

```
  void *v = &d;
```

```
  unsigned char *p = (unsigned char *)v;
```

```

unsigned char *end = p + sizeof(d);
int fail = 0;

while (p < end)
fail += *p++;

if (!fail)
return 0;

p = (unsigned char *)v;
printf("No - %s: 0x", where);
while (p < end)
printf ("%02X", *p++);
printf("\n");
return 1;
}

int
main(int argc, char **argv) {
    $nvtype d = 0.0;
    int fail = 0;
    fail += checkit(d, "0.0");

    /* The compiler shouldn't be assuming that bletched is 0 */
    d = bletched;

    fail += checkit(d, "bleched");

#ifdef SIGFPE
    signal(SIGFPE, blech);
#endif

    /* Paranoia - the compiler should have no way of knowing that ANSI says
       that argv[argc] will always be NULL. Actually, if it did assume this it
       would be buggy, as this is C and main() can be called from elsewhere in
       the program. */
    d = argv[argc] ? 1 : 0;

    if (d) {
        printf("Odd argv[argc]=%p, d=%g\n", argv[argc], d);
    }

    fail += checkit(d, "ternary");

    memset(&d, sizeof(d), argv[argc] ? 1 : 0);

    if (d != 0.0) {
        printf("No - memset doesn't give 0.0\n");
    }
}

```

```

/* This might just blow up: */
printf("(gives %g)\n", d);
return 1;
}

#ifdef SIGFPE
    if (bletched) {
printf("No - something bleched\n");
return 1;
    }
#endif
    if (fail) {
        printf("No - %d fail(s)\n",
fail);
        return 1;
    }
printf("Yes\n");
return 0;
}
EOP
set try

d_nv_zero_is_allbits_zero="$undef"
if eval $compile; then
    xxx="$run ./try`"
    case "$?" in
    0)
        case "$xxx" in
        Yes) cat >&4 <<EOM
0.0 is represented as all bits zero in memory
EOM
            d_nv_zero_is_allbits_zero="$define"
            ;;
        *) cat >&4 <<EOM
0.0 is not represented as all bits zero in memory
EOM
            d_nv_zero_is_allbits_zero="$undef"
            ;;
        esac
            ;;
        *) cat >&4 <<EOM
0.0 is not represented as all bits zero in memory
EOM
            d_nv_zero_is_allbits_zero="$undef"
            ;;
        esac
    fi
$rm_try

```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/perlsv.U

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Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/metaconfig

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patmake

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/metalint

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patcol

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/packinit

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/bindex

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/pat

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patcil

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/makegloss

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patlog

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/manifake

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/makeSH

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/kitsend

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/mlint

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/makedist

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patsnap

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/patsend

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/bin/jmake

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/bin/manicheck  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/dist/lib/errnolist.mk  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patpost  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patnotify  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/manilist  
 \*  
 /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/kitpost  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patclean  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patname  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/mconfig  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patdiff  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patindex  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patbase  
 \*  
 /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/jmkmf  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/dist/files/fixcpp  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
 5.32.1~rc1/bin/patftp  
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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lroundl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lroundl:

?S: This variable conditionally defines the HAS\_LROUNDL symbol, which

?S: indicates to the C program that the lroundl() routine is available

?S: to return the integral value nearest to x away from zero.

?S:.

?C:HAS\_LROUNDL:

?C: This symbol, if defined, indicates that the lroundl routine is

?C: available to return the nearest integral value away from zero of

?C: the long double argument value.

?C:.

```
?H:#$d_rouncl HAS_LROUNCL /**/  
?H.:  
?LINT:set d_rouncl  
: see if lrouncl exists  
set lrouncl d_rouncl  
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/U/perl/d_rouncl.U
```

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```
case $CONFIG in  
")  
if test -f config.sh; then TOP=.;  
elif test -f ../config.sh; then TOP=..;  
elif test -f ../../config.sh; then TOP=../../;  
elif test -f ../../../config.sh; then TOP=../../../;  
elif test -f ../../../../config.sh; then TOP=../../../../;  
else  
echo "Can't find config.sh."; exit 1  
fi  
. $TOP/config.sh  
;;  
esac  
case "$0" in  
*/*) cd `expr X$0 : 'X\(.*/)'"` ;;  
esac  
echo "Extracting makedepend (with variable substitutions)"  
$spitshell >makedepend <<!GROK!THIS!  
$startsh  
# $Id: makedepend.sh,v 3.0.1.1 1994/01/24 14:00:05 ram Exp ram $  
#  
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
#  
# You may redistribute only under the terms of the Artistic Licence,  
# as specified in the README file that comes with the distribution.  
# You may reuse parts of this distribution only within the terms of  
# that same Artistic Licence; a copy of which may be found at the root  
# of the source tree for dist 4.0.  
#  
#  
Original Author: Larry Wall <lwall@netlabs.com>  
#  
# $Log: makedepend.sh,v $  
# Revision 3.0.1.1 1994/01/24 14:00:05 ram  
# patch16: changed top ln-style config.sh lookup into test-style one  
#
```

# Revision 3.0 1993/08/18 12:04:37 ram

# Baseline for dist 3.0 netwide release.

#

export PATH || (echo "OOPS, this isn't sh. Desperation time. I will feed myself to sh."; sh \\${0}; kill \\${0})

cat='\$cat'

cppflags='\$cppflags'

cp='\$cp'

cpp='\$cppstd'

echo='\$echo'

egrep='\$egrep'

expr='\$expr'

mv='\$mv'

rm='\$rm'

sed='\$sed'

sort='\$sort'

test='\$test'

tr='\$tr'

uniq='\$uniq'

!GROK!THIS!

\$spitshell >>makedepend <<!NO!SUBS!

\$cat /dev/null >.deptmp

\$rm -f \*.c.c c/\*.\*c

if test -f Makefile; then

mf=Makefile

else

mf=makefile

fi

if test -f \$mf; then

defrule=`\$mf sed -n \

-e '/^\.c\.o:.\*;/{' \

-e 's/^\\$\*\c//' \

-e 's/^[^;]\*[ ]\*//p' \

-e q \

-e '}' \

-e '/^\.c\.o: \*\$/{' \

-e N \

-e 's/^\\$\*\c//' \

-e 's/^\.\*\n[ ]\*//p' \

-e q \

-e '}'`

fi

case

"\$defrule" in

") defrule='\$(CC) -c \$(CFLAGS)' ;;

esac

```
make clist || ($echo "Searching for .c files..."; \
$echo *.c | $tr ' ' '\012' | $egrep -v '*' >.clist)
```

gotnone=true

```
for file in `Scat .clist`; do
```

```
# for file in `cat /dev/null`; do
```

```
case "$file" in
```

```
*.c) filebase=`basename $file .c` ;;
```

```
*.y) filebase=`basename $file .c` ;;
```

```
") continue ;;
```

```
esac
```

```
gotnone=false
```

```
$echo "Finding dependencies for $filebase.o."
```

```
$sed -n <$file >$file.c \
```

```
-e '/^${filebase}_init(/q' \
```

```
-e '/^#/{' \
```

```
-e 's/^\*.*$|'| \
```

```
-e 's\\$|'| \
```

```
-e p \
```

```
-e '}'
```

```
$cpp -I/usr/local/include -I. $cppflags $file.c | \
```

```
$sed \
```

```
-e '/^#*[0-9]!/d' \
```

```
-e 's/^\*.*\(.*\)".*$/${filebase}.o: \1/' \
```

```
-e 's: \./: |' \
```

```
-e 's|.c|.c|.c'| \
```

```
$uniq | $sort | $uniq >> .deptmp
```

```
done
```

```
$sed <Makefile >Makefile.new -e '1,/^# AUTOMATICALLY!/d'
```

```
make shlist || ($echo "Searching for .SH files..."; \
```

```
$echo *.SH | $tr ' ' '\012' | $egrep -v '*' >.shlist)
```

```
if $gotnone || $test -s .deptmp; then
```

```
for file in `cat .shlist`; do
```

```
$echo ` $expr X$file : 'X\(.*\).SH` : $file config.sh \;
```

```
/bin/sh $file >> .deptmp
```

```
done
```

```
$echo "Updating Makefile..."
```

```
$echo "# If this runs make out of memory, delete /usr/include lines." \
```

```
>> Makefile.new
```

```
$sed 's/^\(.*\o:) *\(.*/.*\c) *$|1 \2; ""$defrule \2|" .deptmp \
```

```
>>Makefile.new
```

```
else
```

```
make hlist || ($echo "Searching for .h files..."; \
```

```
$echo *.h | $tr ' ' '\012' | $egrep -v '*' >.hlist)
```

```

$echo "You don't seem to have a proper C preprocessor. Using grep instead."
$grep '^#include ' `cat .clist` `cat .hlist` >.deptmp
$echo "Updating Makefile..."
<.clist $sed -n \
-e '/\{\ ' \
-e 's^\(.*\)^\(.*\)\.c|2.o: \1\2.c; ""$defrule \1\2.c|p" \
-e d \
-e }' \
-e 's^\(.*\)\.c|1.o: \1.c|p' >> Makefile.new
<.hlist $sed -n 's|\(.*\)^\(.*\)|= \2= \1\2=|p' >.hsed
<.deptmp $sed -n 's|c:#include "\(.*\)".*|o: \1|p' | \
    $sed 's^[^;]*|'| \
    $sed -f
.hsed >> Makefile.new
<.deptmp $sed -n 's|c:#include < \(.*\) >.*|o: /usr/include/\1|p' \
    >> Makefile.new
<.deptmp $sed -n 's|h:#include "\(.*\)".*|h: \1|p' | \
    $sed -f .hsed >> Makefile.new
<.deptmp $sed -n 's|h:#include < \(.*\) >.*|h: /usr/include/\1|p' \
    >> Makefile.new
for file in `scat .shlist`; do
$echo `sexpr X$file : 'X \(.*\) .SH` : $file config.sh \; \
    /bin/sh $file >> Makefile.new
done
fi
$rm -f Makefile.old
$cp Makefile Makefile.old
$cp Makefile.new Makefile
$rm Makefile.new
$echo "# WARNING: Put nothing here or make depend will gobble it up!" >> Makefile
$rm -f .deptmp `sed 's\,c/c.c/' .clist` .shlist .clist .hlist .hsed

!NO!SUBS!
$eunicefix makedepend
chmod +x makedepend
case `pwd` in
*SH)
    $rm -f ./makedepend
    ln makedepend ./makedepend
    ;;
esac

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/makedepend.SH
No license file was found, but licenses were detected in source scan.

?RCS: $Id: d_fchmod.U 1 2006-08-24 12:32:52Z rmanfredi $

```

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_fchmod.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:59 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_fchmod: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fchmod:  
?S: This variable conditionally defines the HAS\_FCHMOD symbol, which  
?S: indicates to the C program that the fchmod() routine is available  
?S: to change mode of opened files.  
?S:.  
?C:HAS\_FCHMOD (FCHMOD):  
?C: This symbol, if defined, indicates that the fchmod routine is available  
?C: to  
change mode of opened files. If unavailable, use chmod().  
?C:.  
?H:#\$d\_fchmod HAS\_FCHMOD /\*\*/  
?H:.  
?LINT:set d\_fchmod  
: see if fchmod exists  
set fchmod d\_fchmod  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fchmod.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: cc.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: cc.U,v \$

```

?RCS: Revision 3.0.1.4 1995/05/12 12:06:47 ram
?RCS: patch54: may now abort Configure when cc does not work
?RCS:
?RCS: Revision 3.0.1.3 1995/01/11 15:20:11 ram
?RCS: patch45: changed gcc checking message to a more explicit one (WED)
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:04:29 ram
?RCS: patch36: detect gcc even when not called as 'gcc' (ADO)
?RCS: patch36: simplified gcc version checking (ADO)
?RCS: patch36: added ?F: line for metalint
file checking
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:26:06 ram
?RCS: patch23: added support for gcc version (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:30 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:cc: Myread Oldconfig Checkcc test
?MAKE: -pick add $@ %<
?S:cc:
?S: This variable holds the name of a command to execute a C compiler which
?S: can resolve multiple global references that happen to have the same
?S: name. Usual values are 'cc' and 'gcc'.
?S: Fervent ANSI compilers may be called 'c89'. AIX has xlc.
?S:.
?F:!cc.cbu
?D:cc='cc'
: Determine the C compiler to be used
echo " "
case "$cc" in
") dflt=cc;;
*) dflt="$cc";;
esac
rp="Use which C compiler?"
./myread
cc="$ans"

: See whether they have no cc but they do have gcc
./trygcc
?X: Look for a hint-file generated 'call-back-unit'. Now that the
?X: user has specified the compiler, we may need to set or change some
?X: other defaults.
if $test -f cc.cbu; then
./cc.cbu
fi
./checkcc

```



Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_attribut.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_attribut.U,v \$

?RCS: Revision 3.0.1.3 1995/01/30 14:33:45 ram

?RCS: patch49: test C program now includes <stdio.h> (WED)

?RCS:

?RCS: Revision 3.0.1.2 1995/01/11 15:25:47 ram

?RCS: patch45: fixed typo in the d\_attribut variable (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:08:55 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_attribute\_deprecated d\_attribute\_format

d\_attribute\_malloc \

d\_attribute\_nonnull d\_attribute\_noreturn d\_attribute\_pure \

d\_attribute\_unused d\_attribute\_warn\_unused\_result \

d\_printf\_format\_null d\_attribute\_always\_inline: \

Myread Oldconfig cat cc ccflags rm Setvar contains i\_stdlib run \

i\_inttypes

?MAKE: -pick add \$@ %<

?S:d\_attribute\_format:

?S: This variable conditionally defines HASATTRIBUTE\_FORMAT, which

?S: indicates the C compiler can check for printf-like formats.

?S:.

?S:d\_attribute\_deprecated:

?S: This variable conditionally defines HASATTRIBUTE\_DEPRECATED, which

?S: indicates that GCC can handle the attribute for marking deprecated

?S: APIs

?S:.

?S:d\_printf\_format\_null:

?S: This variable conditionally defines PRINTF\_FORMAT\_NULL\_OK, which

?S: indicates the C compiler allows printf-like formats to be null.

?S:.

?S:d\_attribute\_malloc:

?S: This variable conditionally defines HASATTRIBUTE\_MALLOC, which

?S: indicates the C compiler can understand functions as having

?S: malloc-like semantics.

?S:.

?S:d\_attribute\_nonnull:

?S: This

variable conditionally defines HASATTRIBUTE\_NONNULL, which

?S: indicates that the C compiler can know that certain arguments

?S: must not be NULL, and will check accordingly at compile time.

?S:.

?S:d\_attribute\_noreturn:

?S: This variable conditionally defines HASATTRIBUTE\_NORETURN, which

?S: indicates that the C compiler can know that certain functions

?S: are guaranteed never to return.

?S:.

?S:d\_attribute\_pure:

?S: This variable conditionally defines HASATTRIBUTE\_PURE, which

?S: indicates that the C compiler can know that certain functions

?S: are "pure" functions, meaning that they have no side effects, and

?S: only rely on function input and/or global data for their results.

?S:.

?S:d\_attribute\_unused:

?S: This variable conditionally defines HASATTRIBUTE\_UNUSED, which

?S: indicates that the C compiler can know that certain variables

?S: and arguments may not always be used, and to not throw warnings

?S: if they don't get used.

?S:.

?S:d\_attribute\_warn\_unused\_result:

?S: This

variable conditionally defines

?S: HASATTRIBUTE\_WARN\_UNUSED\_RESULT, which indicates that the C

?S: compiler can know that certain functions have a return values

?S: that must not be ignored, such as malloc() or open().

?S:.

?S:d\_attribute\_always\_inline:

?S: This variable conditionally defines HASATTRIBUTE\_ALWAYS\_INLINE,

?S: which indicates that the C compiler can know that certain

?S: functions should always be inlined.

?S:.

?C:HASATTRIBUTE\_FORMAT ~ %< (GNU\_ATTRIBUTE\_CHECK):

?C: Can we handle GCC attribute for checking printf-style formats

?C:.

?C:PRINTF\_FORMAT\_NULL\_OK:

?C: Allows \_\_printf\_\_ format to be null when checking printf-style

?C:.

?C:HASATTRIBUTE\_MALLOC:

?C: Can we handle GCC attribute for malloc-style functions.  
?C:.  
?C:HASATTRIBUTE\_NONNULL:  
?C: Can we handle GCC attribute for nonnull function parms.  
?C:.  
?C:HASATTRIBUTE\_NORETURN:  
?C: Can we handle GCC attribute for functions that do not return  
?C:.  
?C:HASATTRIBUTE\_PURE:  
?C: Can we handle GCC attribute  
for pure functions  
?C:.  
?C:HASATTRIBUTE\_UNUSED:  
?C: Can we handle GCC attribute for unused variables and arguments  
?C:.  
?C:HASATTRIBUTE\_DEPRECATED:  
?C: Can we handle GCC attribute for marking deprecated APIs  
?C:.  
?C:HASATTRIBUTE\_WARN\_UNUSED\_RESULT ~ %< (HASATTRIBUTE):  
?C: Can we handle GCC attribute for warning on unused results  
?C:.  
?C:HASATTRIBUTE\_ALWAYS\_INLINE:  
?C: Can we handle GCC attribute for functions that should always be  
?C: inlined.  
?C:.  
?H:%<:#\$d\_attribute\_deprecated HASATTRIBUTE\_DEPRECATED /\*\*/  
?H:%<:#\$d\_attribute\_format HASATTRIBUTE\_FORMAT /\*\*/  
?H:%<:#\$d\_printf\_format\_null PRINTF\_FORMAT\_NULL\_OK /\*\*/  
?H:%<:#\$d\_attribute\_noreturn HASATTRIBUTE\_NORETURN /\*\*/  
?H:%<:#\$d\_attribute\_malloc HASATTRIBUTE\_MALLOC /\*\*/  
?H:%<:#\$d\_attribute\_nonnull HASATTRIBUTE\_NONNULL /\*\*/  
?H:%<:#\$d\_attribute\_pure HASATTRIBUTE\_PURE /\*\*/  
?H:%<:#\$d\_attribute\_unused HASATTRIBUTE\_UNUSED /\*\*/  
?H:%<:#\$d\_attribute\_warn\_unused\_result HASATTRIBUTE\_WARN\_UNUSED\_RESULT /\*\*/  
?H:%<:#\$d\_attribute\_always\_inline  
HASATTRIBUTE\_ALWAYS\_INLINE /\*\*/  
?H:.  
?F:!attrib !attrib.out !attrib.c  
?LINT:set d\_attribute\_deprecated  
?LINT:set d\_attribute\_format  
?LINT:set d\_printf\_format\_null  
?LINT:set d\_attribute\_malloc  
?LINT:set d\_attribute\_nonnull  
?LINT:set d\_attribute\_noreturn  
?LINT:set d\_attribute\_pure  
?LINT:set d\_attribute\_unused  
?LINT:set d\_attribute\_warn\_unused\_result  
?LINT:set d\_attribute\_always\_inline

```

: Look for GCC-style attribute format
case "$d_attribute_format" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((format)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
void my_special_printf(char* pat,...) __attribute__((__format__(__printf__,1,2)));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((format))."
val="$undef"
else
echo "Your C compiler supports __attribute__((format))."
val="$define"
fi
else
echo "Your C compiler doesn't seem
to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_format" ;;
esac
set d_attribute_format
eval $setvar
$rm -f attrib*

```

```

: Look for GCC-style attribute format with null format allowed
case "$d_printf_format_null" in
") case "$d_attribute_format" in
$define)
echo " "
echo "Checking whether your compiler allows __printf__ format to be null ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#$i_inttypes I_INTTYPES
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#ifdef INTPTR_MAX
#define intptr_t int
#endif

```

```

int null_printf (char* pat,...) __attribute__((__format__(__printf__,1,2)));
int null_printf (char* pat,...) { return (int)(intptr_t)pat; }
int main () { exit(null_printf(NULL)); }

```

EOCP

```

if $cc $cflags -o attrib attrib.c >attrib.out 2>&1 ; then
    : run the executable in case it produces a run-time warning
    if $run ./attrib >>attrib.out 2>&1; then
        if $contains 'warning' attrib.out >/dev/null
        2>&1; then
            echo "Your C compiler doesn't allow __printf__ format to be null."
            val="$undef"
        else
            echo "Your C compiler allows __printf__ format to be null."
            val="$define"
        fi
    else
        echo "Your C compiler executable failed with __printf__ format null."
        val="$undef"
    fi
else
    echo "Your C compiler fails with __printf__ format null."
    val="$undef"
fi
;;
*) val="$undef" ;;
esac
;;
*) val="$d_printf_format_null" ;;
esac
set d_printf_format_null
eval $setvar
$rm -f attrib*

```

: Look for GCC-style attribute malloc

```

case "$d_attribute_malloc" in
")
    echo " "
    echo "Checking whether your compiler can handle __attribute__((malloc)) ..." >&4
    $cat >attrib.c <<'EOCP'
    #include <stdio.h>
    char *go_get_some_memory( int how_many_bytes ) __attribute__((malloc));
EOCP
    if $cc $cflags -c attrib.c >attrib.out 2>&1 ; then
        if $contains 'warning' attrib.out >/dev/null 2>&1; then
            echo "Your C compiler doesn't support __attribute__((malloc))."
            val="$undef"
        else
            echo

```

```

"Your C compiler supports __attribute__((malloc))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_malloc" ;;
esac
set d_attribute_malloc
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute nonnull
case "$d_attribute_nonnull" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((nonnull(1))) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
void do_something (char *some_pointer,...) __attribute__((nonnull(1)));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1 ; then
echo "Your C compiler doesn't support __attribute__((nonnull))."
val="$undef"
else
echo "Your C compiler supports __attribute__((nonnull))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_nonnull" ;;
esac
set d_attribute_nonnull
eval
$setvar
$rm -f attrib*

: Look for GCC-style attribute noreturn
case "$d_attribute_noreturn" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((noreturn)) ..." >&4

```

```

$cat >attrib.c <<'EOCP'
#include <stdio.h>
void fall_over_dead( void ) __attribute__((noreturn));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((noreturn))."
val="$undef"
else
echo "Your C compiler supports __attribute__((noreturn))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_noreturn" ;;
esac
set d_attribute_noreturn
eval $setvar
$rm -f attrib*

```

: Look for GCC-style attribute pure

```

case "$d_attribute_pure" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((pure)) ..." >&4

```

```

$cat >attrib.c <<'EOCP'
#include <stdio.h>
int square( int n )
__attribute__((pure));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((pure))."
val="$undef"
else
echo "Your C compiler supports __attribute__((pure))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_pure" ;;
esac

```

```

set d_attribute_pure
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute unused
case "$d_attribute_unused" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((unused)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int do_something( int dummy __attribute__((unused)), int n );
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((unused))."
val="$undef"
else
echo "Your C compiler supports __attribute__((unused))."
val="$define"
fi
else
echo
"Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_unused" ;;
esac
set d_attribute_unused
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute deprecated
case "$d_attribute_deprecated" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((deprecated)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int I_am_deprecated(void) __attribute__((deprecated));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((deprecated))."
val="$undef"
else
echo "Your C compiler supports __attribute__((deprecated))."

```



```

    val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_deprecated" ;;
esac
set d_attribute_deprecated
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute warn_unused_result
case "$d_attribute_warn_unused_result" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((warn_unused_result)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int I_will_not_be_ignored(void) __attribute__((warn_unused_result));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((warn_unused_result))."
val="$undef"
else
echo "Your C compiler supports __attribute__((warn_unused_result))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_warn_unused_result" ;;
esac
set d_attribute_warn_unused_result
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute always_inline
case "$d_attribute_always_inline" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((always_inline)) ..." >&4
$cat >attrib.c <<'EOCP'

```

```

#include
<stdio.h>
static __inline__ __attribute__((always_inline)) int I_will_always_be_inlined(void);
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((always_inline))."
val="$undef"
else
echo "Your C compiler supports __attribute__((always_inline))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_always_inline" ;;
esac
set d_attribute_always_inline
eval $setvar
$rm -f attrib*

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_attribut.U
```

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?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Loc.U,v \$

?RCS: Revision 3.0.1.10 1997/02/28 15:04:16 ram

?RCS: patch61: allow users to specify paths on the command line

?RCS: patch61: will now substitute cp for ln if not supported

?RCS:

?RCS: Revision 3.0.1.9 1995/09/25 09:11:24 ram

?RCS: patch59: commented the purpose of the #un-def directive

?RCS: patch59: abort Configure run when mandatory command is missing

?RCS:

?RCS: Revision 3.0.1.8 1995/07/25 13:40:40 ram

?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.7  
1995/01/11 15:13:37 ram  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS: patch45: added path lookup for the 'comm' program  
?RCS:  
?RCS: Revision 3.0.1.6 1994/10/29 15:56:14 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: be careful and guard against wildcard searching (ADO)  
?RCS:  
?RCS: Revision 3.0.1.5 1994/06/20 06:54:55 ram  
?RCS: patch30: now locates find  
?RCS:  
?RCS: Revision 3.0.1.4 1994/05/13 15:18:15 ram  
?RCS: patch27: added byacc to the trylist (ADO)  
?RCS: patch27: lint lines reformatted (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/01/24 14:01:44 ram  
?RCS: patch16: added metalint hint on changed PATH variable  
?RCS:  
?RCS: Revision 3.0.1.2 1993/12/15 08:16:52 ram  
?RCS: patch15: now set \_test variable when test is built-in  
?RCS: patch15: fixed rare cases where echo is not needed  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:47:13 ram  
?RCS: patch10: test program not always in /bin/test (WAD)  
?RCS:  
?RCS: Revision  
3.0 1993/08/18 12:05:05 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a shell script "loc" which can be used to find out  
?X: where in a list of directories something is. It then uses loc to  
?X: determine the location of commonly used programs. It leaves loc sitting  
?X: around for other Configure units to use, but arranges for its demise  
?X: at the end of Configure.  
?X:  
?X: To add a new program to find, add it both to the ?MAKE: line and to either  
?X: the loclist or trylist variable.  
?X:  
?X: I put startsh at the end of the dependency list, in order to avoid the  
?X: loading of the spitshell unit before the instructions.  
?X:  
?MAKE:Loc awk ar bash bison byacc cat chgrp chmod chown \  
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \  
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \

```

make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee test touch tr troff
\
uname uniq uuname vi zcat zip: eunicefix n c startsh Instruct Warn
?MAKE: -pick weed $@ %<
?LINT:describe awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee test touch tr troff \
uname uniq uuname vi zcat zip
?V::pth loclist trylist
?F:./loc
?T:thisthing thing xxx dir file say DJGPP
?T:_test _grep _cp _gmake _egrep _ln _make dflt
?LINT: change PATH
: find out where common programs are
echo " "
echo "Locating common programs..." >&4
cat <<EOOSC >loc
$startsh
case \$# in
0) exit 1;;
esac
thing=\$1
shift
dflt=\$1
shift
for dir in \$*; do
case "\$thing" in
.)
if test -d \$dir/\$thing; then
echo \$dir
exit 0
fi
;;
*)
?X: Be careful in case thing includes wildcards that might expand to multiple
?X: files. Choose the last one.
This happens when searching for shared
?X: libraries with version numbers. How to choose which one we want is
?X: probably an insoluble problem, in general.
?X: Some folks leave things like libc.so.orig around w/o read
?X: permission. A -r test would handle that, but since ./loc is
?X: also used to find executables (which are installed w/o read
?X: permission on SCO ODT 3.0, we can't include the -r test.
for thisthing in \$dir/\$thing; do
: just loop through to pick last item

```

```

done
if test -f \$thisthing; then
    echo \$thisthing
    exit 0
elif test -f \$thisthing$_exe; then
    echo \$thisthing
    exit 0
elif test -f \$dir/\$thing.exe; then
    if test -n "$DJGPP"; then
        echo \$dir/\$thing.exe
    else
        : on Eunice apparently
        echo \$dir/\$thing
    fi
    exit 0
fi
;;
esac
done
echo \$dflt
exit 1
EOSC
chmod +x loc
$eunicefix loc
loclist="
?awk:awk
?cat:cat
?chgrp:chgrp
?chmod:chmod
?chown:chown
?comm:comm
?cp:cp
?echo:echo
?expr:expr
?find:find
?grep:grep
?ls:ls
?mkdir:mkdir
?mv:mv
?rm:rm
?sed:sed
?sleep:sleep
?sort:sort
?tail:tail
?touch:touch
?tr:tr
?uniq:uniq
"

```

trylist="  
?Mcc:Mcc  
?ar:ar  
?bash:bash  
?bison:bison  
?byacc:byacc  
?compress:compress  
?cpio:cpio  
?cpp:cpp  
?csh:csh  
?date:date  
?egrep:egrep  
?emacs:emacs  
?flex:flex  
?gmake:gmake  
?gzip:gzip  
?inews:inews  
?ksh:ksh  
?less:less  
?line:line  
?lint:lint  
?ln:ln  
?lp:lp  
?lpr:lpr  
?mail:mail  
?mailx:mailx  
?make:make  
?more:more  
?nm:nm  
?nroff:nroff  
?perl:perl  
?pg:pg  
?pmake:pmake  
?pr:pr  
?rmail:rmail  
?sendmail:sendmail  
?shar:shar  
?smail:smail  
?submit:submit  
?tar:tar  
?tbl:tbl  
?tee:tee  
?test:test  
?troff:troff  
?uname:uname  
?uuname:uuname  
?vi:vi  
?zcat:zcat

```

?zip:zip
"
?LINT:set
awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo emacs expr find flex \
gmake gzip grep inews ksh less line lint lp lpr ls mail mailx \
mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee touch tr troff \
uname uniq uuname vi zcat zip
pth=`echo $PATH | sed
-e "s/$p_/g"`
pth="$pth /lib /usr/lib"
for file in $loclist; do
?X:
?X: Allow them to -Dmake=pmake on the command line for instance...
?X: If the file is not fully qualified, as in -Dmake=pmake, then we
?X: look the for the specified command (pmake here). If they say
?X: -Dmake=/sbin/make for instance, then we make sure the file
?X: exists, or we die...
?X:
eval xxx=\$$file
case "$xxx" in
/*|?:[\V]*)
if test -f "$xxx"; then
: ok
else
./warn "no $xxx -- ignoring your setting for $file."
xxx=`./loc $file $file $pth`
fi
;;
*) xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval $_file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\V]*)
echo $file is in $xxx.
;;
*)
echo "I don't know where '$file' is, and my life depends on it." >&4
echo "Go find a public domain implementation or fix your PATH setting!" >&4
exit 1
;;

```

```

esac
done
echo " "
echo "Don't worry
if any of the following aren't found..."
say=offhand
for file in $trylist; do
?X: Allow them to -Dmake=pmake on the command line for instance (see above)
eval xxx=\$$file
case "$xxx" in
/*|?:[\\]*)
if test -f "$xxx"; then
: ok
else
./warn "no $xxx -- ignoring your setting for $file."
xxx=`./loc $file $file $pth`
fi
;;
*) xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval $_file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\\]*)
echo $file is in $xxx.
;;
*)
echo "I don't see $file out there, $say."
say=either
;;
esac
done
case "$grep" in
egrep)
echo "Substituting grep for egrep."
egrep=$grep
_egrep=$_grep
;;
esac
@if ln
case "$ln" in
ln)
echo "Substituting cp for ln."

```



```

ln=$cp
_in=$_cp
;;
esac
@end
@if make || gmake
case "$make" in
make)
case "$gmake" in
gmake)
echo "I can't find make or gmake, and my life depends on it." >&4
echo "Go find a
public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac
;;
esac
case "$gmake" in
gmake) ;;
*) # We can't have osname yet.
if test -f "/system/gnu_library/bin/ar.pm"; then # Stratus VOS
# Assume that gmake, if found, is definitely GNU make
# and prefer it over the system make.
echo "Substituting gmake for make."
make=$gmake
_make=$_gmake
fi
;;
esac
@end
case "$test" in
test)
echo "Hopefully test is built into your sh."
;;
*)
if `sh -c "PATH= test true" >/dev/null 2>&1`; then
echo "Using the test built into your sh."
?X:
?X: We need to set both test and _test, since Oldconfig.U will use the _test
?X: value to systematically restore computed paths, which may be wrong if
?X: we choose to load an old config.sh generated on another platform.
?X:
test=test
_test=test
fi
;;
esac

```

```
?LINT:change n c
case "$echo" in
echo)
echo "Hopefully echo is built into your sh."
;;
?X: For those rare cases where we don't need $echo...
") ;;
*)
echo " "
echo "Checking
compatibility between $echo and builtin echo (if any)..." >&4
$echo $n "hi there$c" >foo1
echo $n "hi there$c" >foo2
if cmp foo1 foo2 >/dev/null 2>&1; then
echo "They are compatible. In fact, they may be identical."
else
case "$n" in
'-n') n=" c='\c';;
*) n='-n' c="";;
esac
cat <<FOO
```

They are not compatible! You are probably running ksh on a non-USG system. I'll have to use \$echo instead of the builtin, since Bourne shell doesn't have echo built in and we may have to run some Bourne shell scripts. That means I'll have to use '\$n\$c' to suppress newlines now. Life is ridiculous.

```
FOO
$echo $n "The star should be here-->$c"
$echo "*"
fi
$rm -f foo1 foo2
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Loc.U
```

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?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:20:13 ram

?RCS: patch61: created

?RCS:

?MAKE:sh: Head

?MAKE: -pick wipe \$@ %<

?S:sh:

?S: This variable contains the full pathname of the shell used

?S: on this system to execute Bourne shell scripts. Usually, this will be

?S: /bin/sh, though it's possible that some systems will have /bin/ksh,

?S: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?S: D:/bin/sh.exe.

?S: This unit comes before Options.U,

so you can't set sh with a -D

?S: option, though you can override this (and startsh)

?S: with -O -Dsh=/bin/whatever -Dstartsh=whatever

?S:.

?C:SH\_PATH:

?C: This symbol contains the full pathname to the shell used on this

?C: on this system to execute Bourne shell scripts. Usually, this will be

?C: /bin/sh, though it's possible that some systems will have /bin/ksh,

?C: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?C: D:/bin/sh.exe.

?C:.

?H:#define SH\_PATH "\$sh" /\*\*/

?H:.

?T:xxx try pth p SYSTYPE

?LINT:extern maintloc maintname

?X:

?X: Be quiet unless something unusual happens because this gets

?X: loaded up even before options are processed.

?X: Can't use ./loc because that depends on startsh, which, in turn

?X: depends on this unit.

?X:

: Find the basic shell for Bourne shell scripts

case "\$sh" in

)

?X: SYSTYPE is for some older MIPS systems.

?X: I do not know if it is still needed.

case "\$SYSTYPE" in

\*bsd\*|sys5\*) xxx="/\$SYSTYPE/bin/sh";;

\*) xxx='/bin/sh';;

esac

if

test -f "\$xxx"; then

sh="\$xxx"

```

else
: Build up a list and do a single loop so we can 'break' out.
pth=`echo $PATH | sed -e "s/$p_/ /g"`
for xxx in sh bash ksh pdksh ash; do
for p in $pth; do
try="$try ${p}/${xxx}"
done
done
for xxx in $try; do
if test -f "$xxx"; then
sh="$xxx"
break
elif test -f "$xxx$_exe"; then
sh="$xxx"
break
elif test -f "$xxx.exe"; then
sh="$xxx"
break
fi
done
fi
;;
esac

```

?X: fd 4 isn't open yet...

case "\$sh" in

") cat >&2 <<EOM

\$me: Fatal Error: I can't find a Bourne Shell anywhere.

Usually it's in /bin/sh. How did you even get this far?

Please contact me (<\$maintname>) at <\$maintloc> and

we'll try to straighten this all out.

EOM

exit 1

;;

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sh.U

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: pager.U,v \$  
?RCS: Revision 3.0.1.2 1995/01/30 14:41:26 ram  
?RCS: patch49: ensure dflt gets initialized in case no pagers are found (WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:27:45 ram  
?RCS: patch36: replaced Myread by Getfile in the dependency line  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:30 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE: pager: pg more less Getfile Oldconfig  
?MAKE: -pick add \$@ %<  
?S: pager:  
?S: This variable contains the name of the preferred pager  
on the system.  
?S: Usual values are (the full pathnames of) more, less, pg, or cat.  
?S:.  
: locate the preferred pager for this system  
fn=f/  
case "\$pager" in  
")  
dflt="  
case "\$pg" in  
/\*) dflt=\$pg;;  
[a-zA-Z]:/\*) dflt=\$pg;;  
esac  
case "\$more" in  
/\*) dflt=\$more;;  
[a-zA-Z]:/\*) dflt=\$more;;  
esac  
case "\$less" in  
/\*) dflt=\$less;;  
[a-zA-Z]:/\*) dflt=\$less;;  
esac  
case "\$dflt" in  
") dflt=/usr/ucb/more;;  
esac  
;;  
\*) dflt="\$pager"  
;;  
esac  
?X: Instruct ./getfile to trust the default pager value,  
?X: even if it does not begin with a slash. For example, on os2,  
?X: pager might be cmd /c more. Also, it might include some options,

?X: such as '/usr/bin/less -R'. ./getfile would report that

?X: "/usr/bin/less -R" doesn't exist.

?X: See comments in Getfile.U.

fn="f/(\$dflt)"

echo " "

rp="What pager is used on your system?"

./getfile

pager="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/pager.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_vprintf.U,v 3.0 1993/08/18 12:07:59 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_vprintf.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:59 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_vprintf d\_charvspr: Compile Guess cat Csym Setvar run rm\_try \  
i\_stdlib i\_unistd i\_stdarg i\_varargs

?MAKE: -pick add \$@ %<

?S:d\_vprintf:

?S: This variable conditionally defines the HAS\_VPRINTF symbol, which

?S: indicates to the C program that the vprintf() routine is available

?S: to printf with a pointer to an argument list.

?S:.

?S:d\_charvspr:

?S: This

variable conditionally defines CHARVSPRINTF if this system

?S: has vsprintf returning type (char\*). The trend seems to be to

?S: declare it as "int vsprintf()".

?S:.

?C:HAS\_VPRINTF (VPRINTF):

?C: This symbol, if defined, indicates that the vprintf routine is available

?C: to printf with a pointer to an argument list. If unavailable, you

?C: may need to write your own, probably in terms of \_doprnt().

?C:.

?C:USE\_CHAR\_VSPRINTF (CHARVSPRINTF):

?C: This symbol is defined if this system has vsprintf() returning type  
?C: (char\*). The trend seems to be to declare it as "int vsprintf()". It  
?C: is up to the package author to declare vsprintf correctly based on the  
?C: symbol.

?C:.

```
?H:#$d_vprintf HAS_VPRINTF /**/
```

```
?H:#$d_charvspr USE_CHAR_VSPRINTF /**/
```

?H:.

?T:val2

?F:!try

```
?LINT:set d_vprintf d_charvspr
```

: see if vprintf exists

```
echo " "
```

```
if set vprintf val -f d_vprintf; eval $csym; $val; then
```

```
echo 'vprintf() found.' >&4
```

```
val="$define"
```

```
$cat >try.c <<EOF
```

```
#$i_stdarg I_STDARG /*
```

```
Only one of these can be defined by i_varhrd */
```

```
#$i_varargs I_VARARGS
```

```
#$i_stdlib I_STDLIB
```

```
#$i_unistd I_UNISTD
```

```
#ifdef I_STDARG
```

```
# include <stdarg.h>
```

```
#else /* I_VARARGS */
```

```
# include <varargs.h>
```

```
#endif
```

```
#ifdef I_UNISTD
```

```
# include <unistd.h>
```

```
#endif
```

```
#ifdef I_STDLIB
```

```
# include <stdlib.h>
```

```
#endif
```

```
#include <stdio.h> /* vsprintf prototype */
```

```
#ifdef I_STDARG
```

```
void xxx(int n, ...)
```

```
{
```

```
va_list args;
```

```
char buf[10];
```

```
va_start(args, n);
```

```
exit((unsigned long)vsprintf(buf,"%s",args) > 10L);
```

```
}
```

```
int main() { xxx(1, "foo"); }
```

```
#else /* I_VARARGS */
```

```
xxx(va_alist)
```

```
va_dcl
```

```
{
```

```
    va_list args;
```

```
    char buf[10];
```

```
    va_start(args);
```

```
    exit((unsigned long)vsprintf(buf,"%s",args) > 10L);
```

```
}
```

```
int main() { xxx("foo"); }
```

```
#endif
```

```
EOF
```

```
set try
```

```
if eval $compile_ok; then
```

```
if $run ./try; then
```

```
    echo "Your vsprintf() returns (int)." >&4
```

```
    val2="$undef"
```

```
else
```

```
    echo "Your vsprintf() returns (char*)." >&4
```

```
    val2="$define"
```

```
fi
```

```
else
```

```
    echo 'I am unable to compile the vsprintf() test program.' >&4
```

```
    #
```

```
We shouldn't get here. If we do, assume the standard signature,
```

```
# not the old BSD one.
```

```
    echo 'Guessing that vsprintf() returns (int).' >&4
```

```
    val2="$undef"
```

```
fi
```

```
else
```

```
    echo 'vprintf() NOT found.' >&4
```

```
    val="$undef"
```

```
    val2="$undef"
```

```
fi
```

```
$rm_try
```

```
set d_vprintf
```

```
eval $setvar
```

```
val=$val2
```

```
set d_charvspr
```

```
eval $setvar
```

```
Found in path(s):
```

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```



5.32.1~rc1/U/compline/d\_vprintf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: MailAuthor.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>  
?RCS:  
?RCS: \$Log: MailAuthor.U,v \$  
?RCS: Revision 3.0.1.5 1997/02/28 15:04:41 ram  
?RCS: patch61: added support for src.U  
?RCS:  
?RCS: Revision 3.0.1.4 1994/08/29 16:05:09 ram  
?RCS: patch32: avoid message sending if they said no previously  
?RCS:  
?RCS: Revision 3.0.1.3 1993/10/16 13:47:30 ram  
?RCS: patch12: now makes sure user-specified address is in Internet format  
?RCS:  
?RCS: Revision  
3.0.1.2 1993/09/13 15:48:49 ram  
?RCS: patch10: reverted to original intent by the Author himself  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/27 14:38:38 ram  
?RCS: patch7: now prompts user for its e-mail address  
?RCS: patch7: no longer silent when mail has been sent  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:06 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?RCS:  
?X:  
?X: This unit asks the user to please send a message to the author.  
?X: To force inclusion of this unit, you must add it's name to the  
?X: dependancies on the MAKE line in your private copy of End.U.  
?X: This allows a smart mailagent program to automatically let users know  
?X: when their package is out of date, and to allow users to be notified of  
?X: any future patches.  
?X:  
?MAKE:MailAuthor mailpatches notifypatches usermail: test cat mailer \  
package Myread patchlevel baserev rm rsrc Oldconfig Configdir  
?MAKE: -pick wipe \$@ %<

?S:mailpatches:

?S: Indicates whether the user would like future patches to be mailed

?S: directly

to them.

?S:.

?S:notifypatches:

?S: Indicates whether the user would like notification of future patches

?S: mailed to them.

?S:.

?S:usermail:

?S: This variable is used internally by Configure to keep track of the

?S: user e-mail address, where notifications or patches should be sent.

?S: A '-' value means the return address will be extracted by parsing

?S: the mail headers.

?S:.

?T:opt mailpatches notifypatches atsh status

: notify author that his package is used

if \$test -f ../config/mailauthor &&

cmp \$src/patchlevel.h ../config/mailauthor >/dev/null 2>&1

then

status="say that you're using \$package";

case "\$mailpatches" in

true) status='have patches mailed to you as they are issued';;

esac

case "\$notifypatches" in

true) status='be notified when new patches are issued';;

esac

\$cat <<EOM

You have already sent the author of \$package (<MAINTLOC>) mail to

\$status. If you wish, you may modify

your previous request by sending a new mail with different options.

EOM

rp='Should

I send a status update to <MAINTLOC>?'

dflt=n

else

\$cat <<EOM

If you are able to send mail to the Internet, the author of \$package would really appreciate you letting me send off a quick note, just to say that you've tried it. The author is more likely to spend time maintaining \$package if it's known that many people are using it, and you can even ask to get sent new patches automatically this way if you wish. To protect your privacy, all I'll say in the mail is the version of \$package that you're using.

EOM

```

rp='Should I send mail to <MAINTLOC>?'
dflt=y
?X: Ensure default is 'n' if question has been asked already, in case they
?X: run Configure -d next time and answered 'n' the first time. Therefore,
?X: an empty nomail will be created later on even if no mail is sent.
$test -f ../.config/nomail && dflt=n
fi
. ./myread
case "$ans" in
[yY]*)
echo " "
echo "Great! Your cooperation is really appreciated."
$cat <<EOM

```

Some braindead sites do not set a proper return address in the From: header of their outgoing mail, making it impossible to reply to mail they generate. If your site is broken in this way, write to your system administrator and get it fixed!!! In the mean time, you can manually specify the Internet e-mail address by which the author can get back to you, should there be a need to do so. If manually specified, it should be something like "user@domain.top". If your mail system generates addresses correctly, specify "none".

```

EOM
case "$usermail" in
'|') dflt=none;;
*) dflt="$usermail";;
esac
rp='Manually specify a return address to use:'
. ./myread
case "$ans" in
none|*@*.*)
case "$ans" in
none) usermail='-';;
*) usermail="$ans";;
esac
;;
*)
echo "(Address does not look like an Internet one -- ignoring it.)"
?X:
?X: If we can't trust their mailer or their return address, it's highly
?X: suggested that they only register and don't ask to get anything from
?X: the author, since it's likely to bounce in null-land --
RAM.
?X:
usermail='- '
mailpatches=false
notifypatches=false

```

```

;;
esac
echo " "
opt=""
rp='Would you like to have new patches automatically mailed to you?'
case "$mailpatches" in
true) dflt=y;;
*) dflt=n;;
esac
. ./myread
case "$ans" in
[yY]*) opt=' mailpatches'; mailpatches=true;;
*)
mailpatches=false
echo " "
rp='Ok, would you like to simply be notified of new patches?'
case "$notifypatches" in
false) dflt=n;;
*) dflt=y;;
esac
. ./myread
echo " "
case "$ans" in
[yY]*) opt=' notifypatches'; notifypatches=true;;
*)
echo "Fine, I'll simply say that you've tried it then."
notifypatches=false
;;
esac
;;
esac
echo "Sending mail to <MAINTLOC>..." >&4
?X: Bizarre hack here. We can't just put @SH in the hereis lines below, because
?X: metaconfig will interpret it as a command, and there's no quoting mechanism.
?X: Do it via a variable instead.
atsh='@SH'
$mailer <MAINTLOC> <<EOM >/dev/null 2>&1
Subject: Command
Precedence: junk
To: <MAINTLOC>

$atsh
package $usermail $package $baserev $patchlevel$opt
EOM
$rm -f ../config/mailauthor ../config/nomail
cp $src/patchlevel.h ../config/mailauthor
;;
*)

```

```
case "$dfit" in
"y")
echo "Oh well, maybe next time."
cp /dev/null ../config/nomail
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/MailAuthor.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_perlio.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: d_perlio.U,v $
```

```
?RCS:
```

```
?MAKE:useperlio: Myread Oldconfig Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:useperlio:
```

```
?S: This variable conditionally defines the USE_PERLIO symbol,
```

```
?S: and indicates that the PerlIO abstraction should be
```

```
?S: used throughout.
```

```
?S:.
```

```
?C:USE_PERLIO:
```

```
?C: This symbol, if defined, indicates that the PerlIO abstraction should
```

```
?C: be used throughout. If not defined, stdio should be
```

```
?C: used in a fully backward compatible manner.
```

```
?C:.
```

```
?H:%<:#ifndef USE_PERLIO
```

```
?H:%<:#$useperlio USE_PERLIO /**/
```

```
?H:%<:#endif
```

```
?H:.
```

```
: Check if we want perlio
```

```
useperlio="$define"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/useperlio.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_truncl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_truncl:

?S: This variable conditionally defines the HAS\_TRUNCL symbol, which

?S: indicates to the C program that the truncl() routine is available

?S: to round long doubles towards zero. If copysignl is also present,

?S: we can emulate modfl.

?S:.

?C:HAS\_TRUNCL :

?C: This symbol, if defined, indicates that the truncl routine is

?C: available. If copysignl is also present we can emulate modfl.

?C:.

?H:#\$d\_truncl HAS\_TRUNCL /\*\*/

?H:.

?LINT:set d\_truncl

: see if truncl exists

set truncl d\_truncl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_truncl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: ipc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: ipc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:ipc serve\_shm serve\_msg serve\_inet\_udp serve\_inet\_tcp serve\_unix\_udp \

serve\_unix\_tcp: test Myread Oldconfig d\_socket d\_msg d\_shm d\_sem

?MAKE: -pick add \$@ %<

?LINT:use d\_msg d\_sem

?S:ipc:

?S: This variable holds the type of IPC service we'll be using. Values

?S: include "ip", "shm", "msg", "cms" and "os9". We don't worry about

?S: cms or os9  
here, because Configure doesn't run in those places--HMS.  
?S:.  
?S:serve\_shm:  
?S: This variable controls the definition of SERVE\_SHM, which tells the  
?S: C program to use USG shared memory for IPC.  
?S:.  
?S:serve\_msg:  
?S: This variable controls the definition of SERVE\_MSG, which tells the  
?S: C program to use USG message queues for IPC.  
?S:.  
?S:serve\_inet\_udp:  
?S: This variable controls the definition of SERVE\_INET\_UDP, which tells  
?S: the C program to enable InterNet-domain UDP support for IPC.  
?S:.  
?S:serve\_inet\_tcp:  
?S: This variable controls the definition of SERVE\_INET\_TCP, which tells  
?S: the C program to enable InterNet-domain TCP support for IPC.  
?S:.  
?S:serve\_unix\_udp:  
?S: This variable controls the definition of SERVE\_UNIX\_UDP, which tells  
?S: the C program to enable Unix-domain UDP support for IPC.  
?S:.  
?S:serve\_unix\_tcp:  
?S: This variable controls the definition of SERVE\_UNIX\_TCP, which tells  
?S: the C program to enable Unix-domain TCP support for IPC.  
?S:.  
?C:SERVE\_SHM:  
?C: If  
defined, tells the C program to use USG shared memory for IPC.  
?C:.  
?C:SERVE\_MSG:  
?C: If defined, tells the C program to use USG message queues for IPC.  
?C:.  
?C:SERVE\_INET\_UDP:  
?C: If defined, tells the C program to enable InterNet-domain UDP  
?C: support for IPC.  
?C:.  
?C:SERVE\_INET\_TCP:  
?C: If defined, tells the C program to enable InterNet-domain TCP  
?C: support for IPC.  
?C:.  
?C:SERVE\_UNIX\_UDP:  
?C: If defined, tells the C program to enable Unix-domain UDP  
?C: support for IPC.  
?C:.  
?C:SERVE\_UNIX\_TCP:  
?C: If defined, tells the C program to enable Unix-domain TCP

```

?C: support for IPC.
?C:.
?H:#$serve_shm SERVE_SHM /**/
?H:#$serve_msg SERVE_MSG /**/
?H:#$serve_inet_udp SERVE_INET_UDP /**/
?H:#$serve_inet_tcp SERVE_INET_TCP /**/
?H:#$serve_unix_udp SERVE_UNIX_UDP /**/
?H:#$serve_unix_tcp SERVE_UNIX_TCP /**/
?H:.
?X: FIXME -- RAM
?INIT:serve_shm=""
?INIT:serve_msg="$undef"
?INIT:serve_inet_udp=""
?INIT:serve_inet_tcp=""
?INIT:serve_unix_udp=""
?INIT:serve_unix_tcp=""
: get IPC mechanism
echo
" "
ipc=""
while $test -z "$ipc"
do
if $test "$ipc" != "shm" -a "$d_socket" = "$define"; then
ipc=""
if $test "$serve_inet_udp" = "$undef"; then
dflt=n
else
dflt=y
fi
rp='Provide InterNet-domain UDP service?'
./myread
dflt=""
case "$ans" in
n*) serve_inet_udp="$undef";;
*)
serve_inet_udp="$define"
ipc='ip'
;;
esac

if $test "$serve_inet_tcp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide InterNet-domain TCP service?'
./myread
dflt=""

```



```

case "$ans" in
n*) serve_inet_tcp="$undef";;
*)
serve_inet_tcp="$define"
ipc='ip'
;;
esac

if $test "$serve_unix_udp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide Unix-domain UDP service?'
./myread
dflt=""
case "$ans" in
n*) serve_unix_udp="$undef";;
*)
serve_unix_udp="$define"
ipc='ip'
;;
esac

if $test "$serve_unix_tcp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide Unix-domain TCP service?'
./myread
dflt=""
case
"$ans" in
n*) serve_unix_tcp="$undef";;
*)
serve_unix_tcp="$define"
ipc='ip'
;;
esac
else
serve_inet_udp="$undef"
serve_inet_tcp="$undef"
serve_unix_udp="$undef"
serve_unix_tcp="$undef"
fi
if $test "$ipc" != "ip" -a "$d_shm" = "$define"; then
echo "Providing USG shared memory IPC support." >&4

```

```

serve_shm="$define"
ipc='shm'
else
serve_shm="$undef"
fi
if $test -z "$ipc"; then
echo "You must select an IPC mechanism." >&4
fi
done

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/ipc.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:multiarch: osname

?MAKE: -pick add \$@ %<

?S:multiarch:

?S: This variable conditionally defines the MULTIARCH symbol

?S: which signifies the presence of multiplatform files.

?S: This is normally set by hints files.

?S:.

?C:MULTIARCH:

?C: This symbol, if defined, signifies that the build

?C: process will produce some binary files that are going to be

?C: used in a cross-platform environment. This is the case for

?C: example with the NeXT "fat" binaries that contain executables

?C: for

several CPUs.

?C:.

?H:#\$multiarch MULTIARCH /\*\*/

?H:.

: Check if is a multiplatform env

case "\$osname" in

darwin) multiarch="\$define" ;;

esac

case "\$multiarch" in

```
"|[nN]*) multiarch="$Sundef" ;;  
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/U/a_dvisory/multiarch.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: mansrc.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: mansrc.U,v $
```

```
?RCS: Revision 3.0.1.9 1997/02/28 16:12:03 ram
```

```
?RCS: patch61: don't ask for AFS when they choose to not install pages
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.8 1995/09/25 09:16:58 ram
```

```
?RCS: patch59: unit is now forced to the top of Configure, if possible
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.7 1995/02/15 14:15:31 ram
```

```
?RCS: patch51: was mistakenly duplicating /usr/local/man/man1 (ADO)
```

```
?RCS: patch51: added /opt/man/man1 to the lookpath (ADO)
```

```
?RCS:
```

```
?RCS: Revision
```

```
3.0.1.6 1995/01/30 14:39:34 ram
```

```
?RCS: patch49: can now handle installation prefix changes (from WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.5 1995/01/11 15:32:25 ram
```

```
?RCS: patch45: can now use Loc variables since path stripping is deferred
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.4 1994/08/29 16:30:38 ram
```

```
?RCS: patch32: now uses installation prefix for default setting
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.3 1994/05/06 15:11:10 ram
```

```
?RCS: patch23: added lint hint, assuring that nroff is used
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1994/01/24 14:14:39 ram
```

```
?RCS: patch16: now uses _nroff in case user asked for portability
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/09/13 16:09:31 ram
```

```
?RCS: patch10: allows for L1 man page extension (WAD)
```

```
?RCS:
```

```

?RCS: Revision 3.0 1993/08/18 12:09:14 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mansrc mansrcexp manext installmansrc: afs cat nroff Loc Oldconfig \
sysman spackage test Getfile Prefixit prefixexp Prefixup
?MAKE: -pick add $@ %<
?Y:TOP
?S:mansrc:
?S: This variable
contains the name of the directory in which manual
?S: source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S:.
?S:mansrcexp:
?S: This variable is the same as the mansrc variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?S:installmansrc:
?S: This variable is really the same as mansrcexp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: mansrcexp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?S:manext:
?S: This variable contains the extension that the manual page should
?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.
?S: See mansrc.
?S:.
?T:lookpath
: determine where manual pages go
set mansrc mansrc none
eval $prefixit
$cat <<EOM

$spackage has manual
pages available in source form.
EOM
case "$nroff" in
nroff)
echo "However, you don't have nroff, so they're probably useless to you."
case "$mansrc" in
") mansrc="none";;
esac;;
esac
echo "If you don't want the manual sources installed, answer 'none'."
case "$mansrc" in
")

```

```

lookpath="$prefixexp/share/man/man1 $prefixexp/man/man1"
lookpath="$lookpath $prefixexp/man/u_man/man1 $prefixexp/man/l_man/man1"
lookpath="$lookpath /usr/local/man/man1 /opt/man/man1 /usr/man/man1"
lookpath="$lookpath /usr/share/man/man1 /usr/local/share/man/man1"
lookpath="$lookpath /usr/man/local/man1 /usr/man/l_man/man1"
lookpath="$lookpath /usr/local/man/u_man/man1 /usr/local/man/l_man/man1"
lookpath="$lookpath /usr/man/man.L"
mansrc=`./loc . $prefixexp/man/man1 $lookpath`
if $test -d "$mansrc"; then
  dflt="$mansrc"
else
  dflt="$sysman"
fi
set dflt
eval $prefixup
;;
') dflt=none;;
*) dflt="$mansrc"
;;
esac
echo " "
fn=dn~
rp='Where do the manual pages (source) go?'
./getfile
if test
"$X$mansrcexp" != "$X$ansexp"; then
installmansrc="
fi
mansrc="$ans"
mansrcexp="$ansexp"
case "$mansrc" in
") mansrc=' '
installmansrc="";;
esac
if $afs && $test "$mansrc"; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installmansrc" in
") dflt=`echo $mansrcexp | sed 's#^/afs/#/afs/#'`;;
*) dflt="$installmansrc";;
esac
fn=de~
rp='Where will man pages be installed?'

```

```
./getfile
installmansrc="$sans"
else
installmansrc="$mansrcexp"
fi
```

```
case "$mansrc" in
' ') manext='0';
*l) manext=l;;
*n) manext=n;;
*o) manext=l;;
*p) manext=n;;
*C) manext=C;;
*L) manext=L;;
*L1) manext=L1;;
*) manext=1;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/mansrc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_link.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_link.U,v \$

?RCS: Revision 3.0.1.1 1993/08/25 14:01:13 ram

?RCS: patch6: created for completeness

?RCS:

?MAKE:d\_link: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_link:

?S: This variable conditionally defines HAS\_LINK if link() is

?S: available to create hard links.

?S:.

?C:HAS\_LINK:

?C: This symbol, if defined, indicates that the link routine is

?C: available to create hard links.

?C:.

?H:#\$d\_link HAS\_LINK /\*\*/

```
?H:
?LINT:set d_link
: see if link exists
set
link d_link
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_link.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_statblks.U,v 3.0 1993/08/18 12:07:29 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_statblks.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:29 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_statblks: Hasfield i_sysstat
?MAKE: -pick add $@ %<
?S:d_statblks:
?S: This variable conditionally defines USE_STAT_BLOCKS
?S: if this system has a stat structure declaring
?S: st_blksize and st_blocks.
?S:
?C:USE_STAT_BLOCKS (STATBLOCKS):
?C: This symbol is defined if this system has a stat structure declaring
?C: st_blksize and st_blocks.
?C:
?H:%<:#ifndef
USE_STAT_BLOCKS
?H:%<:#$d_statblks USE_STAT_BLOCKS /**/
?H:%<:#endif
?H:
?LINT:set d_statblks
: see if stat knows about block sizes
echo " "
echo "Checking to see if your struct stat has st_blocks field..." >&4
set d_statblks stat st_blocks $i_sysstat sys/stat.h
eval $hasfield
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_statblks.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fp\_classl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fp\_classl:

?S: This variable conditionally defines the HAS\_FP\_CLASSL symbol, which

?S: indicates to the C program that the fp\_classl() routine is available.

?S:.

?C:HAS\_FP\_CLASSL:

?C: This symbol, if defined, indicates that the fp\_classl routine is

?C: available to classify long doubles. Available for example in

?C: Digital UNIX. See for possible values HAS\_FP\_CLASS.

?C:.

?H:#\$d\_fp\_classl HAS\_FP\_CLASSL /\*\*/

?H:.

?LINT:set d\_fp\_classl

: see if fp\_classl exists

set fp\_classl d\_fp\_classl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fp\_classl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_msync.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_msync.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:19:17 ram



?RCS: patch15: created  
?RCS:  
?MAKE:d\_msync: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_msync:  
?S: This variable conditionally defines HAS\_MSYNCR if msync() is  
?S: available to synchronize a mapped file.  
?S:.  
?C:HAS\_MSYNCR:  
?C: This symbol, if defined, indicates that the msync system call is  
?C: available to synchronize a mapped file.  
?C:.  
?H:#\$d\_msync HAS\_MSYNCR /\*\*/  
?H:.  
?LINT:set d\_msync  
: see if  
msync exists  
set msync d\_msync  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_msync.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strchr.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strchr.U,v \$  
?RCS: Revision 3.0.1.2 1993/10/16 13:49:20 ram  
?RCS: patch12: added support for HAS\_INDEX  
?RCS: patch12: added magic for index() and rindex()  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:05:26 ram  
?RCS: patch10: now only defines HAS\_STRCHR, no macro remap of index (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:32 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strchr d\_index: contains strings Setvar Myread Oldconfig

```

Csym
?MAKE: -pick add $@ %<
?S:d_strchr:
?S: This variable conditionally defines HAS_STRCHR if strchr() and
?S: strrchr() are available for string searching.
?S:.
?S:d_index:
?S: This variable conditionally defines HAS_INDEX if index() and
?S: rindex() are available for string searching.
?S:.
?C:HAS_STRCHR:
?C: This symbol is defined to indicate that the strchr()/strrchr()
?C: functions are available for string searching. If not, try the
?C: index()/rindex() pair.
?C:.
?C:HAS_INDEX:
?C: This symbol is defined to indicate that the index()/rindex()
?C: functions are available for string searching.
?C:.
?H:#$d_strchr HAS_STRCHR /**/
?H:#$d_index HAS_INDEX /**/
?H:.
?M:index: HAS_INDEX
?M:#ifndef HAS_INDEX
?M:#ifndef index
?M:#define index strchr
?M:#endif
?M:#endif
?M:.
?M:rindex: HAS_INDEX
?M:#ifndef HAS_INDEX
?M:#ifndef rindex
?M:#define rindex strrchr
?M:#endif
?M:#endif
?M:.
?T:vali
?LINT:set d_strchr d_index
: index or strchr
echo " "
if set index val -f; eval $csym; $val; then
if
set strchr val -f d_strchr; eval $csym; $val; then
if $contains strchr "$strings" >/dev/null 2>&1 ; then
?X: has index, strchr, and strrchr in string header
val="$define"
vali="$undef"
echo "strchr() found." >&4

```

```

else
?X: has index, strchr, and no strchr in string header
  val="$undef"
  vali="$define"
  echo "index() found." >&4
fi
else
?X: has only index, no strchr, string header is a moot point
  val="$undef"
  vali="$define"
  echo "index() found." >&4
fi
else
if set strchr val -f d_strchr; eval $sym; $val; then
  val="$define"
  vali="$undef"
  echo "strchr() found." >&4
else
  echo "No index() or strchr() found!" >&4
  val="$undef"
  vali="$undef"
fi
fi
set d_strchr; eval $setvar
val="$vali"
set d_index; eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_strchr.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_seteuid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_seteuid.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_seteuid: Inlibc
?MAKE: -pick add $@ %<

```

?S:d\_setuid:

?S: This variable conditionally defines the HAS\_SETEUID symbol, which

?S: indicates to the C program that the seteuid() routine is available

?S: to change the effective uid of the current program.

?S:.

?C:HAS\_SETEUID (SETEUID):

?C: This symbol, if defined, indicates that the seteuid routine is available

?C: to change the effective uid of the current program.

?C:.

?H:#\$d\_setuid HAS\_SETEUID /\*\*/

?H:.

?LINT:set d\_setuid

: see if seteuid exists

set seteuid d\_setuid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setuid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_safebcpy.U,v \$

?RCS: Revision 3.0.1.4 1997/02/28 15:40:58 ram

?RCS: patch61: improved overlapping copy check

?RCS: patch61: comfort them if they have memmove

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.3 1995/07/25 13:58:40 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.2 1995/01/11 15:29:23 ram

?RCS: patch45: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:49:03

ram

?RCS: patch23: ensure string is not optimized in read-only memory (ADO)

?RCS:

```

?RCS: Revision 3.0 1993/08/18 12:06:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_safebcpy: cat d_bcopy +cc +optimize +ccflags +ldflags +libs rm \
d_memmove i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_safebcpy:
?S: This variable conditionally defines the HAS_SAFE_BCOPY symbol if
?S: the bcopy() routine can do overlapping copies.
?S:.
?C:HAS_SAFE_BCOPY (SAFE_BCOPY):
?C: This symbol, if defined, indicates that the bcopy routine is available
?C: to copy potentially overlapping memory blocks. Otherwise you should
?C: probably use memmove() or memcpy(). If neither is defined, roll your
?C: own version.
?C:.
?H:#$d_safebcpy HAS_SAFE_BCOPY /**/
?H:.
?F:!safebcpy
?LINT: set d_safebcpy
: can bcopy handle overlapping blocks?
?X: assume the worst
val="$undef"
case "$d_bcopy" in
"$define")
echo " "
echo "Checking to see if your bcopy() can do overlapping
copies..." >&4
$cat >foo.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>foo.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#endif I_UNISTD

```

```

# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

?X: Copy "abcde..." string to char abc[] so that gcc doesn't
?X: try to store the string in read-only memory.
bcopy("abcdefghijklmnopqrstuvwxy0123456789", abc, 36);

for (align = 7; align >= 0; align--) {
for (len = 36; len; len--) {
b = buf+align;
bcopy(abc, b, len);
for (off = 1; off <= len; off++) {
bcopy(b, b+off, len);
bcopy(b+off, b, len);
if (bcmp(b, abc, len))
exit(1);
}
}
}
exit(0);
}
EOCP
if $cc $optimize $ccflags $ldflags \
-o safebcpy foo.c $libs >/dev/null 2>&1; then
if ./safebcpy
2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "It can't, sorry."
case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
esac
fi
else
echo "(I can't compile the test program, so we'll assume not...)"
case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
esac
fi
;;

```

```
esac
$rm -f foo.* safebcpy core
set d_safebcpy
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_safebcpy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sighold.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_sighold.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:21 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_sighold: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_sighold:
```

```
?S: This variable conditionally defines HAS_SIGHOLD if sighold() is
```

```
?S: available to hold signals.
```

```
?S:.
```

```
?C:HAS_SIGHOLD:
```

```
?C: This symbol, if defined, indicates that the sighold routine is
```

```
?C: available to hold signals.
```

```
?C:.
```

```
?H:#$d_sighold HAS_SIGHOLD /**/
```

```
?H:.
```

```
?LINT:set d_sighold
```

```
:
```

```
see if sighold exists
```

```
set sighold d_sighold
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sighold.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_vfork.U,v \$  
?RCS: Revision 3.0.1.6 1994/08/29 16:18:21 ram  
?RCS: patch32: set default to 'y' the first time  
?RCS:  
?RCS: Revision 3.0.1.5 1994/06/20 06:59:14 ram  
?RCS: patch30: usevfork was not always properly set  
?RCS:  
?RCS: Revision 3.0.1.4 1994/05/13 15:20:56 ram  
?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:59:09 ram  
?RCS: patch23: now explicitly ask whether vfork() should be used (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1993/10/16  
13:49:39 ram  
?RCS: patch12: added magic for vfork()  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:06:57 ram  
?RCS: patch10: removed automatic remapping of vfork on fork (WAD)  
?RCS: patch10: added compatibility code for older config.sh (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:55 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_vfork usevfork: Inlibc Myread Oldconfig Setvar  
?MAKE:-pick add \$@ %<  
?S:d\_vfork:  
?S: This variable conditionally defines the HAS\_VFORK symbol, which  
?S: indicates the vfork() routine is available.  
?S:.  
?S:usevfork:  
?S: This variable is set to true when the user accepts to use vfork.  
?S: It is set to false when no vfork is available or when the user  
?S: explicitly requests not to use vfork.  
?S:.  
?C:HAS\_VFORK (VFORK):  
?C: This symbol, if defined, indicates that vfork() exists.  
?C:.  
?H:#\$d\_vfork HAS\_VFORK /\*\*/



```

?H:
?M:vfork: HAS_VFORK
?M:#ifndef HAS_VFORK
?M:#define vfork fork
?M:#endif
?M:
?LINT:set d_vfork
: see if there is a vfork
val=""
set
  vfork val
eval $inlibc

: Ok, but do we want to use it. vfork is reportedly unreliable in
: perl on Solaris 2.x, and probably elsewhere.
case "$val" in
$define)
  echo " "
  case "$usevfork" in
  false) dflt='n';
  *) dflt='y';;
  esac
  rp="Some systems have problems with vfork(). Do you want to use it?"
  . ./myread
  case "$ans" in
  y|Y) ;;
  *)
    echo "Ok, we won't use vfork()."
    val="$undef"
    ;;
  esac
  ;;
esac
;;
esac
;;
esac
?X:
?X: Only set it when final value is known to avoid spurious Whoas
?X: Then set usevfork accordingly to the current value, for next run
?X:
set d_vfork
eval $setvar
case "$d_vfork" in
$define) usevfork='true';;
*) usevfork='false';;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_vfork.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_SHM_MAC.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS:
?RCS: $Log: d_SHM_MAC.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:41 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_SHM_MAC d_SHM_PRM d_SHM_SEG d_SHM_IMMU: cat d_shm test rm +cc +ccflags
?MAKE: -pick add $@ %<
?S:d_SHM_MAC:
?S: Sometimes, the SHMLBA manifest needs sys/sysmacros.h, usually for
?S: the ctob() macro.
?S:.
?S:d_SHM_PRM:
?S: Sometimes, the SHMLBA manifest needs sys/param.h, usually for the
?S: NBPC constant.
?S:.
?S:d_SHM_SEG:
?S: Sometimes,
?S: the SHMLBA manifest needs sys/seg.h, usually for the
?S: SNUMSHFT constant.
?S:.
?S:d_SHM_IMMU:
?S: Sometimes, the SHMLBA manifest needs sys/immu.h, usually for the
?S: stob() macro.
?S:.
?C:SHMLBA_WANTS_SYSMACROS:
?C: This value tells us to include <sys/sysmacros.h> because SHMLBA
?C: needs something from there, probably the ctob() macro.
?C:.
?C:SHMLBA_WANTS_PARAM:
?C: This value tells us to include <sys/param.h> because SHMLBA needs
?C: something from there, probably the NBPC constant.
?C:.
?C:SHMLBA_WANTS_SEG:
?C: This value tells us to include <sys/seg.h> because SHMLBA needs
?C: something from there, probably the SNUMSHFT constant.
?C:.
?C:SHMLBA_WANTS_IMMU:
```

?C: This value tells us to include <sys/immu.h> because SHMLBA needs

?C: something from there, probably the stob() macro. (tower\_600 only?)

?C:.

?H:#\$d\_SHM\_MAC SHMLBA\_WANTS\_SYSMACROS /\* SHMLBA wants ctob()? \*/

?H:#\$d\_SHM\_PRM SHMLBA\_WANTS\_PARAM /\* SHMLBA wants NBPC? \*/

?H:#\$d\_SHM\_SEG SHMLBA\_WANTS\_SEG /\* SHMLBA wants

SNUMSHFT? \*/

?H:#\$d\_SHM\_IMMU SHMLBA\_WANTS\_IMMU /\* SHMLBA wants stob()? \*/

?H:.

?T:flags D\_sys\_immu D\_sys\_seg D\_sys\_sysmacros D\_sys\_param

: check for SHMLBA braindamage

d\_SHM\_MAC="\$undef"

d\_SHM\_PRM="\$undef"

d\_SHM\_SEG="\$undef"

d\_SHM\_IMMU="\$undef"

if \$test "\$d\_shm" = "\$define" ; then

echo " "

\$cat >&4 <<EOM

Checking to see if SHMLBA needs additional headers.

The headers I'll be checking are:

sys/macros.h (for the ctob() macro)

sys/param.h (for NBPC)

sys/seg.h (for SNUMSHFT)

sys/immu.h (for the stob() macro)

EOM

\$cat >shm\_mac.c <<'EOCP'

#include <sys/types.h>

#include <sys/ipc.h>

#include <sys/shm.h>

#ifdef I\_SYS\_IMMU

#include <sys/immu.h>

#endif

#ifdef I\_SYS\_SYSMACROS

#include <sys/sysmacros.h>

#endif

#ifdef I\_SYS\_PARAM

#include <sys/param.h>

#endif

#ifdef I\_SYS\_SEG

#include <sys/seg.h>

#endif

int main() {

int foo = SHMLBA ;

}

EOCP

```

flags='xxx'
for D_sys_immu in "-DI_SYS_IMMU"; do
for D_sys_seg in "-DI_SYS_SEG"; do
for D_sys_sysmacros in "-DI_SYS_SYSMACROS";
do
for D_sys_param in "-DI_SYS_PARAM"; do
case "$flags" in
'xxx')
case "$D_sys_immu$D_sys_param$D_sys_sysmacros$D_sys_seg" in
")
echo "Trying it normally..."
;;
*)
echo "Trying $D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg"
;;
esac
if $cc $ccflags \
$D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg \
-o shm_mac shm_mac.c >/dev/null 2>&1 ; then
set X $D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg
shift
flags="$*"
echo "Succeeded with $flags"
fi
;;
esac
done
done
done
done
case "$flags" in
xxx)
echo "I don't know how to keep SHMLBA happy. Good luck!"
;;
esac
case "$flags" in
*I_SYS_PARAM*) d_SHM_PRM="$define";;
esac
case "$flags" in
*I_SYS_SYSMACROS*) d_SHM_MAC="$define";;
esac
case "$flags" in
*I_SYS_SEG*) d_SHM_SEG="$define";;
esac
case "$flags" in
*I_SYS_IMMU*) d_SHM_IMMU="$define";;
esac
fi

```

\$rm -f shm\_mac\*

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_SHM\_MAC.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mbstowcs.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: d\_mbstowcs.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:29 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_mbstowcs: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mbstowcs:

?S: This variable conditionally defines the HAS\_MBSTOWCS symbol, which

?S: indicates to the C program that the mbstowcs() routine is available

?S: to convert a multibyte string into a wide character string.

?S:.

?C:HAS\_MBSTOWCS (MBSTOWCS):

?C: This symbol, if defined, indicates

that the mbstowcs routine is

?C: available to convert a multibyte string into a wide character string.

?C:.

?H:#\$d\_mbstowcs HAS\_MBSTOWCS /\*\*/

?H:.

?LINT:set d\_mbstowcs

: see if mbstowcs exists

set mbstowcs d\_mbstowcs

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mbstowcs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: End.U,v 3.0 1993/08/18 12:04:51 ram Exp \$

?RCS:

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```

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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: End.U,v $
?RCS: Revision 3.0 1993/08/18 12:04:51 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit serves as the goal which forces make to choose all the units that
?X: ask questions. The $W on the ?MAKE: line is the list of all symbols wanted.
?X: To force any unit to be included, copy this unit to your private U directory
?X: and add the name of the unit desired to the ?MAKE: dependency line.
?X:
?MAKE:End perllibs: $W cppstdin gzip zip
libs usedl osname osvers
?MAKE: -pick add $@ %<
?S:perllibs:
?S: The list of libraries needed by Perl only (any libraries needed
?S: by extensions only will be dropped, if using dynamic loading).
?S:.
?INIT:perllibs="
?LINT:use $W
?LINT:use gzip zip
?LINT:change cppstdin
: Remove libraries needed only for extensions
: The appropriate ext/Foo/Makefile.PL will add them back in, if necessary.
: The exception is SunOS 4.x, which needs them.
case "${osname}X${osvers}" in
sunos*X4*)
    perllibs="$libs"
    ;;
*) case "$usedl" in
    $define|true|[yY]*)
        set X `echo " $libs " | sed -e 's@ -lndbm @ @' -e 's@ -lgdbm @ @' -e 's@ -lgdbm_compat @ @' -e 's@ -ldb @ @' -e 's@ -ldb @ @'`
        shift
        perllibs="$*"
        ;;
    *) perllibs="$libs"
        ;;
    esac
    ;;
esac

```

?X: If the user has the cppstd in wrapper, perl.c will try to call  
?X: CPPSTDIN, but that will point to a location in the build  
?X: directory, not the installed version!. Here, we'll just strip the  
?X: name down to 'cppstd in',  
and rely on the fact that perl.c will  
?X: then call SCRIPTDIR/cppstd in, but local things like 'make depend'  
?X: will continue to work.

: Remove build directory name from cppstd in so it can be used from  
: either the present location or the final installed location.

echo " "

: Get out of the UU directory to get correct path name.

cd ..

case "\$cppstd in"

`pwd`/cppstd in)

echo "Stripping down cppstd in path name"

cppstd in=cppstd in

::

esac

cd UU

: end of configuration questions

echo " "

echo "End of configuration questions."

echo " "

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/End.U

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?RCS: \$Id: packadmin.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?MAKE:packadmin: cf\_email Oldconfig Myread cat spackage package

?MAKE: -pick add \$@ %<

?Y:TOP

?S:packadmin:

?S: Electronic mail address of the package administrator.

?S:.

: check whether they will act as local admin for the package

\$cat <<EOM

If you or somebody else will be maintaining \$package at your site, please fill in the correct e-mail address here so that they may be contacted if necessary. You may enter "none" for no administrator.

EOM

```
case "$packadmin" in
") dflt="$cf_email";;
*) dflt="$packadmin";;
esac
rp="$package administrator e-mail address"
. ./myread
packadmin="$ans"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/packadmin.U
```

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?RCS:

?RCS: \$Log: sysman.U,v \$

?RCS: Revision 3.0.1.2 1994/06/20 07:08:43 ram

?RCS: patch30: now explicitly states that /usr/man/man1 is the default

?RCS: patch30: added /usr/local/man/man1 to the search list

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:13:50 ram

?RCS: patch10: added support for /local/man/man1 (WAD)

?RCS: patch10: added temporary syspath variable to cut down on line length

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:55 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:sysman: test

Loc Oldconfig

?MAKE: -pick add \$@ %<

?S:sysman:

?S: This variable holds the place where the manual is located on this



?S: system. It is not the place where the user wants to put his manual  
 ?S: pages. Rather it is the place where Configure may look to find manual  
 ?S: for unix commands (section 1 of the manual usually). See mansrc.  
 ?S:.  
 ?T:syspath  
 : determine where manual pages are on this system  
 echo " "  
 case "\$sysman" in  
 ")  
 syspath='/usr/share/man/man1 /usr/man/man1'  
 syspath="\$syspath /usr/man/mann /usr/man/man1 /usr/man/local/man1"  
 syspath="\$syspath /usr/man/u\_man/man1 /usr/share/man/man1"  
 syspath="\$syspath /usr/catman/u\_man/man1 /usr/man/l\_man/man1"  
 syspath="\$syspath /usr/local/man/u\_man/man1 /usr/local/man/l\_man/man1"  
 syspath="\$syspath /usr/man/man.L /local/man/man1 /usr/local/man/man1"  
 sysman=`./loc . /usr/man/man1 \$syspath`  
 ;;  
 esac  
 if \$test -d "\$sysman"; then  
 echo "System manual is in \$sysman." >&4  
 else  
 echo "Could not find manual pages in source form." >&4  
 fi

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sysman.U

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?RCS: \$Id: d\_perror.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: d\_perror.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:11:38 ram

?RCS: patch32: always define HAS\_PERROR even when not used in C code

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_perror: Inlibc

```
?MAKE: -pick add $@ %<
?S:d_perror:
?S: This variable conditionally remaps perror to a null action and
?S: defines the symbol HAS_PERROR, which indicates to the C program
?S: that the perror()
    routine is not available to print system
?S: error messages.
?S:.
?C:HAS_PERROR ~ %<:
?C: This symbol, if defined, indicates that the perror() routine is
?C: available to print system error messages. If not defined, you should
?C: use your own diagnostic routine...
?C:.
?C:perror ~ %<:
?C: This symbol is mapped to null if the perror() routine is not
?C: available to print system error messages.
?C:.
?H:%<:#$d_perror HAS_PERROR /**/
?H:%<:#ifndef HAS_PERROR
?H:%<:#define perror(s) ; /* mapped to a null statement */
?H:%<:#endif
?H:.
?LINT:set d_perror
: see if perror exists
set perror d_perror
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_perror.U
```

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```
?RCS: $Id: prototype.U,v 3.0.1.3 1994/05/06 15:11:49 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: prototype.U,v $
?RCS: Revision 3.0.1.3 1994/05/06 15:11:49 ram
?RCS: patch23: ensure cc flags used when looking for prototype support
?RCS:
?RCS: Revision 3.0.1.2 1994/01/24 14:15:36 ram
?RCS: patch16: prototype handling macros now appear only when needed
```

?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:03:12 ram  
?RCS: patch6: defines were referring to non-existent VOID symbol  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:36 ram  
?RCS: Baseline for dist  
3.0 netwide release.  
?RCS:  
?MAKE:prototype: Nothing  
?S:prototype:  
?S: This variable holds the eventual value of CAN\_PROTOTYPE, which  
?S: indicates the C compiler can handle function prototypes.  
?S:.  
: stub, never used  
prototype=nothing

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/prototype.U

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_gconvert.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:33:38 ram

?RCS: patch61: integrated new unit from perl5

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 13:55:59 ram

?RCS: patch56: improved comments about the Gconvert macro (ADO)

?RCS: patch56: force compile-link test since it may exist but be unusable (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:12:51 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_Gconvert:

cat cc cflags ldflags libs rm\_try \_o

?MAKE: -pick add \$@ %<

?S:d\_Gconvert:

?S: This variable holds what Gconvert is defined as to convert  
?S: floating point numbers into strings. It could be 'gconvert'  
?S: or a more complex macro emulating gconvert with gcvt() or sprintf.  
?S:.  
?C:Gconvert:  
?C: This preprocessor macro is defined to convert a floating point  
?C: number to a string without a trailing decimal point. This  
?C: emulates the behavior of sprintf("%g"), but is sometimes much more  
?C: efficient. If gconvert() is not available, but gcvt() drops the  
?C: trailing decimal point, then gcvt() is used. If all else fails,  
?C: a macro using sprintf("%g") is used. Arguments for the Gconvert  
?C: macro are: value, number of digits, whether trailing zeros should  
?C: be retained, and the output buffer.  
?C: Possible values are:  
?C: d\_Gconvert='gconvert((x),(n),(t),(b))'  
?C: d\_Gconvert='gcvt((x),(n),(b))'  
?C: d\_Gconvert='sprintf((b),"%.\*g",(n),(x))'  
?C: The last two assume trailing zeros should  
not be kept.  
?C:.  
?H:#define Gconvert(x,n,t,b) \$d\_Gconvert  
?H:.  
?T: xxx\_list xxx\_convert  
?F:!try  
?X:  
: Check how to convert floats to strings.  
echo " "  
echo "Checking for an efficient way to convert floats to strings."  
?X: We want to be sure to drop trailing decimal points (perl5  
?X: needs this).  
\$cat >try.c <<'EOP'  
#ifdef TRY\_gconvert  
#define Gconvert(x,n,t,b) gconvert((x),(n),(t),(b))  
char \*myname = "gconvert";  
#endif  
#ifdef TRY\_gcvt  
#define Gconvert(x,n,t,b) gcvt((x),(n),(b))  
char \*myname = "gcvt";  
#endif  
#ifdef TRY\_sprintf  
#define Gconvert(x,n,t,b) sprintf((b),"%.\*g",(n),(x))  
char \*myname = "sprintf";  
#endif  
  
#include <stdio.h>  
  
int  
checkit(expect, got)

```

char *expect;
char *got;
{
    if (strcmp(expect, got)) {
        printf("%s oddity: Expected %s, got %s\n",
            myname, expect, got);
        exit(1);
    }
}

int
int main()
{
    char buf[64];
    buf[63] = '\0';

    /* This must be 1st test on (which?) platform */
    /* Alan Burlison <AlanBurlsin@unn.unisys.com> */
    Gconvert(0.1, 8, 0, buf);
    checkit("0.1",
        buf);

    Gconvert(1.0, 8, 0, buf);
    checkit("1", buf);

    Gconvert(0.0, 8, 0, buf);
    checkit("0", buf);

    Gconvert(-1.0, 8, 0, buf);
    checkit("-1", buf);

    /* Some Linux gcvt's give 1.e+5 here. */
    Gconvert(100000.0, 8, 0, buf);
    checkit("100000", buf);

    /* Some Linux gcvt's give -1.e+5 here. */
    Gconvert(-100000.0, 8, 0, buf);
    checkit("-100000", buf);

    exit(0);
}
EOP
?X: List of order in which to search for functions.
?X: Usual order of efficiency is gconvert gcvt sprintf
?X: Respect a previous or hinted value.
case "$d_Gconvert" in
gconvert*) xxx_list='gconvert gcvt sprintf' ;;
gcvt*) xxx_list='gcvt gconvert sprintf' ;;

```

```

sprintf*) xxx_list='sprintf gconvert gcvt' ;;
*) xxx_list='gconvert gcvt sprintf' ;;
esac

for xxx_convert in $xxx_list; do
echo "Trying $xxx_convert"
$rm_try
if $cc $ccflags -DTRY_$xxx_convert $ldflags -o try \
try.c $libs > /dev/null 2>&1 ; then
echo "$xxx_convert" found. >&4
if ./try; then
echo "I'll use $xxx_convert to convert floats
into a string." >&4
break;
else
echo "...But $xxx_convert didn't work as I expected."
fi
else
echo "$xxx_convert NOT found." >&4
fi
done

case "$xxx_convert" in
gconvert) d_Gconvert='gconvert((x),(n),(t),(b))' ;;
gcvt) d_Gconvert='gcvt((x),(n),(b))' ;;
*) d_Gconvert='sprintf((b),"%.*g",(n),(x))' ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gconvert.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Tom Tromeey <tromeey@cygnus.com>

?RCS:

?RCS: \$Log: src.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:23:54 ram

?RCS: patch61: created

?RCS:

?MAKE:src +rsrc: Options package contains

?MAKE: -pick add \$@ %<

?Y:TOP

?S:src (sourcedir):

?S: This variable holds the (possibly relative) path of the package source.

?S: It is up to the Makefile to use this variable and set VPATH accordingly

?S: to find the sources remotely. Use \$pkgsrc to have an absolute path.

?S:.

?S:rsrc

(relsrcdir):

?S: This variable holds a potentially relative path to the package

?S: source. The contents are correct for the configuration environment,

?S: i.e. there might be an extra .. prepended to get out of the UU dir.

?S: Configure units should use this, not the src variable.

?S:.

: Find the path to the source tree

```

case "$src" in
") case "$0" in
  /*) src=`echo $0 | sed -e 's%/[^/][^/]*$%%'`
    case "$src" in
/*) ;;
.) ;;
*) src=`cd ../$src && pwd` ;;
esac
;;
*) src='.';;
esac;;
esac
case "$src" in
") src=/
rsrc=/
;;
/*) rsrc="$src";;
*) rsrc="../$src";;
esac

```

?X:

?X: Now check whether we have found the right source tree (i.e. the one for the

?X: package we're about to configure). The original unit from Tom Tromeu forced

?X: the user to pick a unique file from his distribution, and we were merely

?X: checking the existence of that file. I prefer to rely on Configure (which

?X: we know \*is\* present since this unit is

?X: part of it!) and look for the

?X: definition of the package variable, making sure it's the same as ours.

?X: If it matches, we know we found the right source tree. -- RAM, 15/03/96

?X:

```

if test -f $rsrc/Configure && \

```

```

$contains "^package=$package\$" $src/Configure >/dev/null 2>&1
then
  : found it, so we are ok.
else
?X: Otherwise try "." and up to 4 parent directories...
?X: Note that we prepend a ".." to get out of the configuration environment.
  rsrc=""
  for src in . ./. ../../ ../../../; do
  if test -f ../$src/Configure && \
    $contains "^package=$package\$" ../$src/Configure >/dev/null 2>&1
  then
    rsrc=../$src
    break
  fi
  done
fi
case "$rsrc" in
")
  cat <<EOM >&4

```

Sorry, I can't seem to locate the source dir for \$package. Please start Configure with an explicit path -- i.e. /some/path/Configure.

```

EOM
exit 1
;;
?X: Don't echo anything if the sources are in . -- they should know already ;-)
?X: In that case, rsrc is ../. since we lookup from within UU
../.) rsrc='..';;
*)
  echo
  " "

  echo "Sources for $package found in \"$src\"." >&4
  ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/src.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_gethostent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

```



```

?RCS:
?MAKE:d_gethostent_r gethostent_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_gethostent_r:
?S: This variable conditionally defines the HAS_GETHOSTENT_R symbol,
?S: which indicates to the C program that the gethostent_r()
?S: routine is available.
?S:.
?S:gethostent_r_proto:
?S: This variable encodes the prototype of gethostent_r.
?S: It is zero if d_gethostent_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostent_r
?S: is defined.
?S:.
?C:HAS_GETHOSTENT_R:
?C: This symbol, if defined, indicates that the gethostent_r routine
?C: is
  available to gethostent re-entrantly.
?C:.
?C:GETHOSTENT_R_PROTO:
?C: This symbol encodes the prototype of gethostent_r.
?C: It is zero if d_gethostent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostent_r
?C: is defined.
?C:.
?H:#$d_gethostent_r HAS_GETHOSTENT_R /**/
?H:#define GETHOSTENT_R_PROTO $gethostent_r_proto /**/
?H:.
?T:try hdrs d_gethostent_r_proto
: see if gethostent_r exists
set gethostent_r d_gethostent_r
eval $inlibc
case "$d_gethostent_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
  case "$d_gethostent_r_proto:$usethreads" in
  ":define") d_gethostent_r_proto=define
    set d_gethostent_r_proto gethostent_r $hdrs
    eval $hasproto ;;
  *) ;;
  esac
  case "$d_gethostent_r_proto" in
  define)
    case "$gethostent_r_proto" in
    "|0) try='int gethostent_r(struct hostent*, char*, size_t, struct hostent**, int*);'
    ./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SBWRE ;;
    esac

```

```

case "$gethostent_r_proto"
in
"|0) try='int gethostent_r(struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SBIE ;;
esac
case "$gethostent_r_proto" in
"|0) try='struct hostent* gethostent_r(struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=S_SBIE ;;
esac
case "$gethostent_r_proto" in
"|0) try='struct hostent* gethostent_r(struct hostent*, char*, int);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=S_SBI ;;
esac
case "$gethostent_r_proto" in
"|0) try='int gethostent_r(struct hostent*, char*, int);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SBI ;;
esac
case "$gethostent_r_proto" in
"|0) try='int gethostent_r(struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SD ;;
esac
case "$gethostent_r_proto" in
"|0) d_gethostent_r=undef
gethostent_r_proto=0
echo "Disabling gethostent_r, cannot determine prototype." >&4 ;;
*) case
"$gethostent_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostent_r_proto="REENTRANT_PROTO_${gethostent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "gethostent_r has no prototype, not using it." >&4 ;;
esac
d_gethostent_r=undef
gethostent_r_proto=0
;;
esac
;;
*) gethostent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_gethostent_r.U

```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_remquo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_remquo:

?S: This variable conditionally defines the HAS\_REMQUO symbol, which

?S: indicates to the C program that the remquo() routine is available.

?S:.

?C:HAS\_REMQUO:

?C: This symbol, if defined, indicates that the remquo routine is

?C: available to return the remainder and part of quotient.

?C:.

?H:#\$d\_remquo HAS\_REMQUO /\*\*/

?H:.

?LINT:set d\_remquo

: see if remquo exists

set remquo d\_remquo

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_remquo.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fchown.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_fchown.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_fchown: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchown:

?S: This variable conditionally defines the HAS\_FCHOWN symbol, which

?S: indicates to the C program that the fchown() routine is available

?S: to change ownership of opened files.

?S:.

?C:HAS\_FCHOWN (FCHOWN):

?C: This symbol, if defined, indicates that the fchown routine is available

?C: to

change ownership of opened files. If unavailable, use chown().

?C:.

?H:#\$d\_fchown HAS\_FCHOWN /\*\*/

?H:.

?LINT:set d\_fchown

: see if fchown exists

set fchown d\_fchown

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fchown.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_group.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_group.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:34:52 ram

?RCS: patch61: useless unit dropped.

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:48 ram

?RCS: patch32: created by ADO

?RCS:

?X:

?X: Useless unit dropped.

?X:

?LINT:empty

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_group.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fsetpos.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_fsetpos.U,v \$  
?RCS: Revision 3.0.1.1 1994/06/20 06:57:38 ram  
?RCS: patch30: created  
?RCS:  
?MAKE:d\_fsetpos: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fsetpos:  
?S: This variable conditionally defines HAS\_FSETPOS if fsetpos() is  
?S: available to set the file position indicator.  
?S:.  
?C:HAS\_FSETPOS:  
?C: This symbol, if defined, indicates that the fsetpos routine is  
?C: available to set the file position indicator, similar to fseek().  
?C:.  
?H:#\$d\_fsetpos  
HAS\_FSETPOS /\*\*/  
?H:.  
?LINT:set d\_fsetpos  
: see if fsetpos exists  
set fsetpos d\_fsetpos  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_fsetpos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: libpth.U,v \$  
?RCS: Revision 3.0.1.6 1997/02/28 16:08:49 ram  
?RCS: patch61: new loclibpth variable

?RCS:  
 ?RCS: Revision 3.0.1.5 1995/01/11 15:31:30 ram  
 ?RCS: patch45: call ./mips instead of just mips (WED)  
 ?RCS:  
 ?RCS: Revision 3.0.1.4 1994/08/29 16:29:15 ram  
 ?RCS: patch32: added /lib/pa1.1 for HP-UX specially tuned PA-RISC libs (ADO)  
 ?RCS: patch32: fixed information message, making it clearer (ADO)  
 ?RCS:  
 ?RCS: Revision 3.0.1.3 1994/06/20 07:03:54 ram  
 ?RCS: patch30: added /usr/shlib to  
 glibpth for shared-only libraries  
 ?RCS:  
 ?RCS: Revision 3.0.1.2 1994/05/13 15:26:57 ram  
 ?RCS: patch27: fixed a typo (libpth -> glibpth)  
 ?RCS:  
 ?RCS: Revision 3.0.1.1 1994/05/06 15:07:53 ram  
 ?RCS: patch23: now asks for library directories to be searched (ADO)  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:09:02 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?X:  
 ?X: This unit initializes the path for C library lookup.  
 ?X:  
 ?MAKE:libpth glibpth xlibpth plibpth loclibpth: \  
 us rinc incpath test cat Myread Oldconfig  
 ?MAKE: -pick add \$@ %<  
 ?S:libpth:  
 ?S: This variable holds the general path (space-separated) used to find  
 ?S: libraries. It is intended to be used by other units.  
 ?S:.  
 ?S:glibpth:  
 ?S: This variable holds the general path (space-separated) used to  
 ?S: find libraries. It may contain directories that do not exist on  
 ?S: this platform, libpth is the cleaned-up version.  
 ?S:.  
 ?S:xlibpth:  
 ?S: This variable holds extra path (space-separated) used to find  
 ?S: libraries on this platform,  
 for example CPU-specific libraries  
 ?S: (on multi-CPU platforms) may be listed here.  
 ?S:.  
 ?S:loclibpth:  
 ?S: This variable holds the paths (space-separated) used to find local  
 ?S: libraries. It is prepended to libpth, and is intended to be easily  
 ?S: set from the command line.  
 ?S:.  
 ?S:plibpth:

?S: Holds the private path used by Configure to find out the libraries.  
 ?S: Its value is prepended to libpth. This variable takes care of special  
 ?S: machines, like the mips. Usually, it should be empty.  
 ?S:.  
 ?T: xxx dlist  
 ?LINT:use usrine  
 ?INIT:: change the next line if compiling for Xenix/286 on Xenix/386  
 ?INIT:xlibpth='/usr/lib/386 /lib/386'  
 ?INIT:: Possible local library directories to search.  
 ?INIT:loclibpth="/usr/local/lib /opt/local/lib /usr/gnu/lib"  
 ?INIT:loclibpth="\$loclibpth /opt/gnu/lib /usr/GNU/lib /opt/GNU/lib"  
 ?INIT:  
 ?INIT:: general looking path for locating libraries  
 ?INIT:glibpth="/lib /usr/lib \$xlibpth"  
 ?INIT:glibpth="\$glibpth /usr/ccs/lib /usr/ucblib /usr/local/lib"  
 ?X: /shlib  
 is for Digital Unix 4.0  
 ?X: /usr/shlib is for OSF/1 systems.  
 ?INIT:test -f /usr/shlib/libc.so && glibpth="/usr/shlib \$glibpth"  
 ?INIT:test -f /shlib/libc.so && glibpth="/shlib \$glibpth"  
 ?INIT:  
 ?INIT:: Private path used by Configure to find libraries. Its value  
 ?INIT:: is prepended to libpth. This variable takes care of special  
 ?INIT:: machines, like the mips. Usually, it should be empty.  
 ?INIT:pplibpth="  
 ?INIT:  
 : Set private lib path  
 case "\$pplibpth" in  
 ") if ./mips; then  
 ?X: on mips, we DO NOT want /lib, and we want \$incpath/usr/lib  
 pplibpth="\$incpath/usr/lib /usr/local/lib /usr/ccs/lib"  
 fi;;  
 esac  
 case "\$libpth" in  
 ') dlist="";;  
 ") dlist="\$loclibpth \$pplibpth \$glibpth";;  
 \*) dlist="\$libpth";;  
 esac  
  
 : Now check and see which directories actually exist, avoiding duplicates  
 libpth="  
 for xxx in \$dlist  
 do  
 if \$test -d \$xxx; then  
 case " \$libpth " in  
 \*" \$xxx "\*) ;;  
 \*) libpth="\$libpth \$xxx";;  
 esac

```
fi
done
$cat <<'EOM'
```

Some systems have incompatible or broken versions of libraries. Among the directories listed in the question below, please remove any you know not to be holding relevant libraries, and add any that are needed. Say "none" for none.

```
EOM
case "$libpth" in
  ") dflt='none';;
  *)
  ?X: strip leading space
  set X $libpth
  shift
  dflt=${1+"$@"}
  ;;
esac
rp="Directories to use for library searches?"
. ./myread
case "$ans" in
  none) libpth='';;
  *) libpth="$ans";;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libpth.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fmax: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fmax:

?S: This variable conditionally defines the HAS\_FMAX symbol, which

?S: indicates to the C program that the fmax() routine is available.

?S:.

?C:HAS\_FMAX:

?C: This symbol, if defined, indicates that the fmax routine is

?C: available to do the maximum function.

?C:.

?H:#\$d\_fmax HAS\_FMAX /\*\*/

?H:.

?LINT:set d\_fmax



```
: see if fmax exists
set fmax d_fmax
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_fmax.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: libperl.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1996-1998, Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:libperl useshrplib shrpenv ldlibpthname: \
Myread Oldconfig archlibexp awk cat libc \
_a osname osvers so patchlevel subversion usedl ld \
ccdlflags installarchlib userelocatableinc
```

```
?MAKE: -pick wipe $@ %<
```

```
?S:libperl:
```

```
?S: The perl executable is obtained by linking perlmain.c with
```

```
?S: libperl, any static extensions (usually just DynaLoader),
```

```
?S: and any other libraries needed on this system. libperl
```

```
?S: is usually libperl.a, but can also be libperl.so.xxx if
```

```
?S: the user wishes to build a perl executable with a shared
```

```
?S: library.
```

```
?S:.
```

```
?S:useshrplib:
```

```
?S: This variable is set to 'true' if the user wishes
```

```
?S: to build a shared libperl, and 'false' otherwise.
```

```
?S:.
```

```
?S:shrpenv:
```

```
?S: If
```

```
the user builds a shared libperl.so, then we need to tell the
```

```
?S: 'perl' executable where it will be able to find the installed libperl.so.
```

```
?S: One way to do this on some systems is to set the environment variable
```

```
?S: LD_RUN_PATH to the directory that will be the final location of the
```

```
?S: shared libperl.so. The makefile can use this with something like
```

```
?S: $shrpenv $(CC) -o perl perlmain.o $libperl $libs
```

```
?S: Typical values are
```

```
?S: shrpenv="env LD_RUN_PATH=$archlibexp/CORE"
```

```
?S: or
```

```
?S: shrpenv="
```

```
?S: See the main perl Makefile.SH for actual working usage.
```

```
?S:
```

```
?S: Alternatively, we might be able to use a command line option such
```

```

?S: as -R $archlibexp/CORE (Solaris) or -Wl,-rpath
?S: $archlibexp/CORE (Linux).
?S:.
?S:ldlibpthname:
?S: This variable holds the name of the shared library
?S: search path, often LD_LIBRARY_PATH. To get an empty
?S: string, the hints file must set this to 'none'.
?S:.
?T:shrpdir majonly majmin also xxx tmp_shrpenv
?X: metalint gets confused and thinks we're
    actually setting LDOPTS
?X: and LD_RUN_PATH.
?LINT:extern LDOPTS
?LINT:change LDOPTS
?LINT:extern LD_RUN_PATH
?LINT:change LD_RUN_PATH
?LINT:change ccdlflags
?LINT:extern maintloc maintname
?Y:top
: Do we want a shared libperl?
also="
case "$usedl" in
$undef)
    # No dynamic loading being used, so don't bother even to prompt.
    useshrplib='false'
    ;;
*) case "$useshrplib" in
    ") case "$osname" in
        svr4*|nonstopux|dgux|dynixptx|esix|powerux|haiku|cygwin*)
            dflt=y
            also='Building a shared libperl is required for dynamic loading to work on your system.'
            ;;
        *) dflt=n
            ;;
    esac
    ;;
$define[true|[Yy]*)
    dflt=y
    ;;
    *) dflt=n
    ;;
esac
$cat << EOM

```

The perl executable is normally obtained by linking perlmain.c with libperl\${\_a}, any static extensions (usually just DynaLoader), and any other libraries needed on this system (such as -lm, etc.). Since your system supports dynamic loading, it is probably possible to build

a shared libperl.\$so. If you will have more than one executable linked to libperl.\$so, this will significantly reduce the size of each executable, but it may have a noticeable effect on performance. The default is probably sensible for your system.

\$also

EOM

```
rp="Build a shared libperl.$so (y/n)"
. ./myread
case "$ans" in
true|$define[[Yy]*)
  useshrplib='true' ;;
*) useshrplib='false' ;;
esac
;;
esac

case "$useshrplib" in
true)
  case "$userelocatableinc" in
true|define)
    echo "Cannot build with both -Duserelocatableinc and -Duseshrplib" >&4
    echo "See INSTALL for an explanation why that won't work." >&4
    exit 4
    ;;
esac
case "$libperl" in
")
  # Figure out a good name for libperl.so. Since it gets stored in
  # a version-specific architecture-dependent library, the version
  # number isn't really that important, except for making cc/ld happy.
  #
  # A name such as libperl.so.10.1
  majmin="libperl.$so.$patchlevel.$subversion"
  # A name such as libperl.so.100
  majonly=`echo $patchlevel $subversion |
  $awk '{printf
"%d%02d", $1, $2}`
  majonly=libperl.$so.$majonly
  # I'd prefer to keep the os-specific stuff here to a minimum, and
  # rely on figuring it out from the naming of libc.
  case "${osname}${osvers}" in
*linux*|gnu*) # ld won't link with a bare -lperl otherwise.
    dflt=libperl.$so
    ;;
cygwin*) # ld links now against the dll directly
    majmin="cygperl5_${patchlevel}_${subversion}.${so}"
```

```

majonly=`echo $patchlevel $subversion |
$awk '{printf "%03d%03d", $1, $2}`
majonly=cygperl5.$majonly.$so
dflt=$majmin
;;
*) # Try to guess based on whether libc has major.minor.
case "$libc" in
*libc.$so.[0-9]*.[0-9]*) dflt=$majmin ;;
*libc.$so.[0-9]*) dflt=$majonly ;;
*) dflt=libperl.$so ;;
esac
;;
esac
;;
*) dflt=libperl
;;
esac
cat << EOM

```

I need to select a good name for the shared libperl. If your system uses library names with major and minor numbers, then you might want something like \$majmin. Alternatively, if your system uses a single version number for shared libraries, then you might want to use \$majonly. Or, your system might be quite happy with a simple libperl.\$so.

Since the shared libperl will get installed into a version-specific architecture-dependent directory, the version number of the shared perl library probably isn't important, so the default should be o.k.

```

EOM
rp='What name do you want to give to the shared libperl?'
./myread
libperl=$ans
echo "Ok, I'll use $libperl"
;;
*)
libperl="libperl${_a}"
;;
esac

```

```

# Detect old use of shrpdir via undocumented Configure -Dshrpdir
case "$shrpdir" in
") ;;
*) $cat >&4 <<EOM

```

WARNING: Use of the shrpdir variable for the installation location of the shared \$libperl is not supported. It was never documented and will not work in this version. Let me (<\$maintloc>)

know of any problems this may cause.

EOM

```
case "$shrpdir" in
"$sarchlibexp/CORE")
$cat >&4 <<EOM
```

But your current setting of \$shrpdir is the default anyway, so it's harmless.

EOM

```
::
*)
$cat
>&4 <<EOM
```

Further, your current attempted setting of \$shrpdir conflicts with the value of \$sarchlibexp/CORE that installperl will use.

EOM

```
::
esac
::
esac
```

# How will the perl executable find the installed shared \$libperl?

# Add \$xxx to ccdlflags.

# If we can't figure out a command-line option, use \$shrpenv to

# set env LD\_RUN\_PATH. The main perl makefile uses this.

shrpdir=\$sarchlibexp/CORE

xxx=""

tmp\_shrpenv=""

if "\$suseshrplib"; then

case "\$osname" in

aix)

# We'll set it in Makefile.SH...

::

solaris)

xxx="-R \$shrpdir"

::

freebsd|minix|mirbsd|netbsd|openbsd|interix|dragonfly|bitrig)

xxx="-Wl,-R\$shrpdir"

::

bsdos|linux|irix\*|dec\_osf|gnu\*|haiku)

xxx="-Wl,-rpath,\$shrpdir"

::

hpux\*)

# hpux doesn't like the default, either.

tmp\_shrpenv="env LDOPTS=\"+s +b\${shrpdir}\""

::

cygwin)

```

# cygwin needs only ldlibpth
;;
*)
tmp_shrpenv="env LD_RUN_PATH=$shrpdir"
;;
esac
case "$xxx" in
") ;;
*)
# Only add $xxx if it isn't already in ccdlflags.
case
" $ccdlflags " in
*" $xxx "*) ;;
*) ccdlflags="$ccdlflags $xxx"
cat <<EOM >&4

```

Adding \$xxx to the flags  
passed to \$ld so that the perl executable will find the  
installed shared \$libperl.

```

EOM
;;
esac
;;
esac
fi
# Fix ccdlflags in AIX for building external extensions.
# (For building Perl itself bare -bE:perl.exp is needed,
# Makefile.SH takes care of this.)
case "$osname" in
aix) ccdlflags="$ccdlflags -bE:$installarchlib/CORE/perl.exp" ;;
esac
# Respect a hint or command-line value.
case "$shrpenv" in
") shrpenv="$tmp_shrpenv" ;;
esac
case "$ldlibpthname" in
") ldlibpthname=LD_LIBRARY_PATH ;;
none) ldlibpthname="" ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/libperl.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003, Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,  
 ?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?MAKE:d\_thread\_attr\_setscope: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_thread\_attr\_setscope:  
 ?S: This variable conditionally defines HAS\_PTHREAD\_ATTR\_SETSCOPE if  
 ?S: pthread\_attr\_setscope() is available to set the contention scope  
 ?S: attribute of a thread attribute object.  
 ?S:.  
 ?C:HAS\_PTHREAD\_ATTR\_SETSCOPE:  
 ?C: This symbol, if defined, indicates that the pthread\_attr\_setscope  
 ?C: system call is available to set the contention scope attribute of  
 ?C: a thread attribute object.  
 ?C:.  
 ?H:#\$d\_thread\_attr\_setscope HAS\_PTHREAD\_ATTR\_SETSCOPE /\*\*/  
 ?H:.  
 ?LINT:set  
 d\_thread\_attr\_setscope  
 : see if pthread\_attr\_setscope exists  
 set pthread\_attr\_setscope d\_thread\_attr\_setscope  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_thread\_attr\_ss.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endgrent\_r.U,v 0RCS:  
 ?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
 ?RCS:  
 ?MAKE:d\_endgrent\_r endgrent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_grp extern\_C  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_endgrent\_r:  
 ?S: This variable conditionally defines the HAS\_ENDGRENT\_R symbol,  
 ?S: which indicates to the C program that the endgrent\_r()  
 ?S: routine is available.

?S:  
?S:endgrent\_r\_proto:  
?S: This variable encodes the prototype of endgrent\_r.  
?S: It is zero if d\_endgrent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endgrent\_r  
?S: is defined.  
?S:  
?C:HAS\_ENDGRENT\_R:  
?C: This symbol, if defined, indicates that the endgrent\_r routine  
?C: is available to  
endgrent re-entrantly.  
?C:  
?C:ENDGRENT\_R\_PROTO:  
?C: This symbol encodes the prototype of endgrent\_r.  
?C: It is zero if d\_endgrent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endgrent\_r  
?C: is defined.  
?C:  
?H:#\$d\_endgrent\_r HAS\_ENDGRENT\_R /\*\*/  
?H:#define ENDGRENT\_R\_PROTO \$endgrent\_r\_proto /\*\*/  
?H:  
?T:try hdrs d\_endgrent\_r\_proto  
: see if endgrent\_r exists  
set endgrent\_r d\_endgrent\_r  
eval \$inlibc  
case "\$d\_endgrent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_grp grp.h"  
case "\$d\_endgrent\_r\_proto:\$usetheads" in  
":define") d\_endgrent\_r\_proto=define  
set d\_endgrent\_r\_proto endgrent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_endgrent\_r\_proto" in  
define)  
case "\$endgrent\_r\_proto" in  
"|0) try='int endgrent\_r(FILE\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endgrent\_r\_proto=I\_H ;;  
esac  
case "\$endgrent\_r\_proto" in  
"|0) try='void endgrent\_r(FILE\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endgrent\_r\_proto=V\_H ;;  
esac  
case "\$endgrent\_r\_proto"  
in  
"|0) d\_endgrent\_r=undef  
endgrent\_r\_proto=0



```

echo "Disabling endgrent_r, cannot determine prototype." >&4 ;;
*) case "$endgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) endgrent_r_proto="REENTRANT_PROTO_$endgrent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "endgrent_r has no prototype, not using it." >&4 ;;
esac
d_endgrent_r=undef
endgrent_r_proto=0
;;
esac
;;
*) endgrent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/threads/d_endgrent_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sitescript.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: sitescript.U,v \$

?RCS:

?MAKE:sitescript sitescriptexp installsitescript : Getfile Oldconfig test \

Setprefixvar sitebin siteprefix

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitescript="

?S:sitescript:

?S: This variable holds the name of the directory in which the user wants

?S: to put add-on publicly executable files for the package in question. It

?S: is most often a local directory such as /usr/local/bin. Programs using

?S: this variable must be prepared to deal with ~name substitution.

?S: The standard

distribution will put nothing in this directory.

?S: After perl has been installed, users may install their own local

?S: scripts in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitescriptexp="

?S:sitescriptexp:

?S: This is the same as the sitescript variable, but is filename expanded at

?S: configuration time, for use in your makefiles.

?S:.

?D:installsitescript="

?S:installsitescript:

?S: This variable is usually the same as sitescriptexp, unless you are on

?S: a system running AFS, in which case they may differ slightly. You

?S: should always use this variable within your makefiles for portability.

?S:.

?LINT:change prefixvar

?LINT:set installsitescript

?LINT:set sitescript

?LINT:set sitescriptexp

: determine where add-on public executable scripts go

case "\$sitescript" in

\*) dflt=\$siteprefix/script

\$test -d \$dflt || dflt=\$sitebin ;;

\*) dflt="\$sitescript" ;;

esac

fn=d~+

rp='Pathname where add-on public executable scripts

should be installed?'

./getfile

prefixvar=sitescript

./setprefixvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/sitescript.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethostbyaddr\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_gethostbyaddr\_r\_gethostbyaddr\_r\_proto: Inlibc Protochk Hasproto \

```

i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_gethostbyaddr_r:
?S: This variable conditionally defines the HAS_GETHOSTBYADDR_R symbol,
?S: which indicates to the C program that the gethostbyaddr_r()
?S: routine is available.
?S:.
?S:gethostbyaddr_r_proto:
?S: This variable encodes the prototype of gethostbyaddr_r.
?S: It is zero if d_gethostbyaddr_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyaddr_r
?S: is defined.
?S:.
?C:HAS_GETHOSTBYADDR_R:
?C: This symbol, if defined, indicates
that the gethostbyaddr_r routine
?C: is available to gethostbyaddr re-entrantly.
?C:.
?C:GETHOSTBYADDR_R_PROTO:
?C: This symbol encodes the prototype of gethostbyaddr_r.
?C: It is zero if d_gethostbyaddr_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyaddr_r
?C: is defined.
?C:.
?H:#$d_gethostbyaddr_r HAS_GETHOSTBYADDR_R /**/
?H:#define GETHOSTBYADDR_R_PROTO $gethostbyaddr_r_proto /**/
?H:.
?T:try hdrs d_gethostbyaddr_r_proto
: see if gethostbyaddr_r exists
set gethostbyaddr_r d_gethostbyaddr_r
eval $inlibc
case "$d_gethostbyaddr_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_gethostbyaddr_r_proto:$usethreads" in
":define") d_gethostbyaddr_r_proto=define
set d_gethostbyaddr_r_proto gethostbyaddr_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_gethostbyaddr_r_proto" in
define)
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*,
size_t, struct hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CWISBWRE ;;
esac
case "$gethostbyaddr_r_proto" in

```

```

"|0) try='struct hostent* gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*, size_t, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CWISBWIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CWISBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const void*, size_t, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_TWISBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, int, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CIISBIE ;;
esac
case
"$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CSbie ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const void*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_TSBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, size_t, int, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CWISD ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, int, int, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CIISD ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, int, int);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CII ;;
esac
case
"$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const void*, socklen_t, int, struct hostent*, char*, size_t, struct hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_TsISBWRE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) d_gethostbyaddr_r=undef
gethostbyaddr_r_proto=0
echo "Disabling gethostbyaddr_r, cannot determine prototype." >&4 ;;
* ) case "$gethostbyaddr_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostbyaddr_r_proto="REENTRANT_PROTO_$gethostbyaddr_r_proto" ;;

```

```

esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetreads" in
define) echo "gethostbyaddr_r has no prototype, not using it." >&4 ;;
esac
d_gethostbyaddr_r=undef
gethostbyaddr_r_proto=0
;;
esac
;;
*) gethostbyaddr_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_gethostbyaddr_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_socket.U,v 3.0.1.2 1997/02/28 15:46:00 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_socket.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:46:00 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:04 ram

?RCS: patch16: can now safely declare private nm\_extract in dependencies

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_socket d\_oldsock d\_sockpair socketlib sockethdr \

d\_msg\_trunc d\_msg\_dontroute d\_msg\_oob d\_msg\_peek

d\_msg\_proxy \

d\_scm\_rights d\_sockaddr\_sa\_len d\_sockaddr\_in6 d\_sin6\_scope\_id \

d\_ip\_mreq d\_ip\_mreq\_source d\_ipv6\_mreq d\_ipv6\_mreq\_source \

d\_sockaddr\_storage: \

contains echo n c ar nm nm\_opt nm\_extract Inlibc Csym \_a \

Compile cat rm\_try Setvar Hasfield sysroot

?MAKE: -pick add \$@ %<

?S:d\_socket:

?S: This variable conditionally defines HAS\_SOCKET, which indicates  
?S: that the BSD socket interface is supported.

?S:.

?S:d\_sockpair:

?S: This variable conditionally defines the HAS\_SOCKETPAIR symbol, which  
?S: indicates that the BSD socketpair() is supported.

?S:.

?S:d\_oldsock:

?S: This variable conditionally defines the OLDSOCKET symbol, which  
?S: indicates that the BSD socket interface is based on 4.1c and not 4.2.

?S:.

?S:d\_msg\_ctrunc:

?S: This variable conditionally defines the HAS\_MSG\_CTRUNC symbol,  
?S: which indicates that the MSG\_CTRUNC is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_msg\_dontroute:

?S: This variable  
conditionally defines the HAS\_MSG\_DONTRROUTE symbol,  
?S: which indicates that the MSG\_DONTRROUTE is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_msg\_oob:

?S: This variable conditionally defines the HAS\_MSG\_OOB symbol,  
?S: which indicates that the MSG\_OOB is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_msg\_peek:

?S: This variable conditionally defines the HAS\_MSG\_PEEK symbol,  
?S: which indicates that the MSG\_PEEK is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_msg\_proxy:

?S: This variable conditionally defines the HAS\_MSG\_PROXY symbol,  
?S: which indicates that the MSG\_PROXY is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_scm\_rights:

?S: This variable conditionally defines the HAS\_SCM\_RIGHTS symbol,  
?S: which indicates that the SCM\_RIGHTS is available.

#ifdef is

?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_sockaddr\_sa\_len:

?S: This variable conditionally defines the HAS\_SOCKADDR\_SA\_LEN symbol,

?S: which indicates that a struct sockaddr structure has the sa\_len member.

?S:.

?S:d\_sockaddr\_in6:

?S: This variable conditionally defines the HAS\_SOCKADDR\_IN6 symbol, which indicates the availability of a struct sockaddr\_in6.

?S:.

?S:d\_sockaddr\_storage:

?S: This variable conditionally defines the HAS\_SOCKADDR\_STORAGE symbol, which indicates the availability of a struct sockaddr\_storage.

?S:.

?S:d\_sin6\_scope\_id:

?S: This variable conditionally defines the HAS\_SIN6\_SCOPE\_ID symbol, which indicates that a struct sockaddr\_in6 structure has the sin6\_scope\_id member.

?S:.

?S:d\_ip\_mreq:

?S: This variable conditionally defines the HAS\_IP\_MREQ symbol, which indicates the availability of a struct ip\_mreq.

?S:.

?S:d\_ip\_mreq\_source:

?S: This variable conditionally defines the HAS\_IP\_MREQ\_SOURCE symbol, which indicates the availability of a struct ip\_mreq\_source.

?S:.

?S:d\_ipv6\_mreq:

?S: This variable conditionally defines the HAS\_IPV6\_MREQ symbol, which indicates the availability of a struct ipv6\_mreq.

?S:.

?S:d\_ipv6\_mreq\_source:

?S: This variable conditionally defines the HAS\_IPV6\_MREQ\_SOURCE symbol, which indicates the availability of a struct ipv6\_mreq\_source.

?S:.

?S:socketlib:

?S: This variable has the names of any libraries needed for socket support.

?S:.

?S:sockethdr:

?S: This variable has any cpp '-I' flags needed for socket support.

?S:.

?C:HAS\_SOCKET (SOCKET):

?C: This symbol, if defined, indicates that the BSD socket interface is supported.

?C:.

?C:HAS\_SOCKETPAIR (SOCKETPAIR):

?C: This symbol, if defined, indicates that the BSD socketpair() call is supported.

?C:.

?C:USE\_OLD\_SOCKET (OLDSOCKET):

?C: This symbol, if defined, indicates that the 4.1c BSD socket interface  
?C: is supported instead of the 4.2/4.3 BSD socket interface. For instance,  
?C: there  
is no setsockopt() call.

?C:.

?C:HAS\_MSG\_CTRUNC:

?C: This symbol, if defined, indicates that the MSG\_CTRUNC is supported.

?C: Checking just with #ifdef might not be enough because this symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_MSG\_DONTROUTE:

?C: This symbol, if defined, indicates that the MSG\_DONTROUTE is supported.

?C: Checking just with #ifdef might not be enough because this symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_MSG\_OOB:

?C: This symbol, if defined, indicates that the MSG\_OOB is supported.

?C: Checking just with #ifdef might not be enough because this symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_MSG\_PEEK:

?C: This symbol, if defined, indicates that the MSG\_PEEK is supported.

?C: Checking just with #ifdef might not be enough because this symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_MSG\_PROXY:

?C: This symbol, if defined, indicates that the MSG\_PROXY is supported.

?C: Checking just with #ifdef might not be enough because this  
symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_SCM\_RIGHTS:

?C: This symbol, if defined, indicates that the SCM\_RIGHTS is supported.

?C: Checking just with #ifdef might not be enough because this symbol

?C: has been known to be an enum.

?C:.

?C:HAS\_SOCKADDR\_SA\_LEN:

?C: This symbol, if defined, indicates that the struct sockaddr

?C: structure has a member called sa\_len, indicating the length of

?C: the structure.

?C:.

?C:HAS\_SOCKADDR\_IN6:

?C: This symbol, if defined, indicates the availability of

?C: struct sockaddr\_in6;

?C:.

?C:HAS\_SOCKADDR\_STORAGE:

?C: This symbol, if defined, indicates the availability of

?C: struct sockaddr\_storage;



?C:.

?C:HAS\_SIN6\_SCOPE\_ID:

?C: This symbol, if defined, indicates that the struct sockaddr\_in6  
?C: structure has a member called sin6\_scope\_id.

?C:.

?C:HAS\_IP\_MREQ:

?C: This symbol, if defined, indicates the availability of  
?C: struct ip\_mreq;

?C:.

?C:HAS\_IP\_MREQ\_SOURCE:

?C: This symbol, if defined, indicates the availability of  
?C: struct ip\_mreq\_source;

?C:.

?C:HAS\_IPV6\_MREQ:

?C: This  
symbol, if defined, indicates the availability of  
?C: struct ipv6\_mreq;

?C:.

?C:HAS\_IPV6\_MREQ\_SOURCE:

?C: This symbol, if defined, indicates the availability of  
?C: struct ipv6\_mreq\_source;

?C:.

?H:#\$d\_socket HAS\_SOCKET /\*\*/  
?H:#\$d\_sockpair HAS\_SOCKETPAIR /\*\*/  
?H:#\$d\_sockaddr\_sa\_len HAS SOCKADDR\_SA\_LEN /\*\*/  
?H:#\$d\_oldsock USE\_OLD\_SOCKET /\*\*/  
?H:#\$d\_msg\_ctrunc HAS\_MSG\_CTRUNC /\*\*/  
?H:#\$d\_msg\_dontroute HAS\_MSG\_DONTROUTE /\*\*/  
?H:#\$d\_msg\_oob HAS\_MSG\_OOB /\*\*/  
?H:#\$d\_msg\_peek HAS\_MSG\_PEEK /\*\*/  
?H:#\$d\_msg\_proxy HAS\_MSG\_PROXY /\*\*/  
?H:#\$d\_scm\_rights HAS\_SCM\_RIGHTS /\*\*/  
?H:#\$d\_sockaddr\_in6 HAS SOCKADDR\_IN6 /\*\*/  
?H:#\$d\_sockaddr\_storage HAS SOCKADDR\_STORAGE /\*\*/  
?H:#\$d\_sin6\_scope\_id HAS\_SIN6\_SCOPE\_ID /\*\*/  
?H:#\$d\_ip\_mreq HAS\_IP\_MREQ /\*\*/  
?H:#\$d\_ip\_mreq\_source HAS\_IP\_MREQ\_SOURCE /\*\*/  
?H:#\$d\_ipv6\_mreq HAS\_IPV6\_MREQ /\*\*/  
?H:#\$d\_ipv6\_mreq\_source HAS\_IPV6\_MREQ\_SOURCE /\*\*/  
?H:.

?T:val net ENUM enum

?LINT:set d\_sockpair d\_sockaddr\_sa\_len  
?LINT:set d\_msg\_ctrunc d\_msg\_dontroute  
d\_msg\_oob d\_msg\_peek d\_msg\_proxy  
?LINT:set d\_scm\_rights d\_sockaddr\_in6 d\_sin6\_scope\_id d\_ip\_mreq  
?LINT:set d\_ip\_mreq\_source d\_ipv6\_mreq d\_ipv6\_mreq\_source d\_sockaddr\_storage  
: see whether socket exists  
socketlib="

```

sockethdr="
echo " "
$echo $n "Hmm... $c" >&4
if set socket val -f d_socket; eval $scsym; $val; then
    echo "Looks like you have Berkeley networking support." >&4
    d_socket="$define"
?X: now check for advanced features
    if set setsockopt val -f; eval $scsym; $val; then
d_oldsock="$undef"
        else
echo "...but it uses the old BSD 4.1c interface, rather than 4.2." >&4
d_oldsock="$define"
            fi
        else
?X: HP-UX, for one, puts all the socket stuff in socklib.o. Note that if we
?X: come here on HP-UX, then we must have used nm to get symbols, or we really
?X: don't have sockets anyway...
            if $contains socklib libc.list >/dev/null 2>&1; then
echo "Looks like you have Berkeley networking support." >&4
d_socket="$define"
: we will have to assume that it supports
the 4.2 BSD interface
d_oldsock="$undef"
            else
echo "You don't have Berkeley networking in libc$_a..." >&4
?X: look for optional networking libraries
if test "X$d_socket" = "X$define"; then
    echo "...but you seem to believe that you have sockets." >&4
else
    for net in net socket
    do
if test -f $sysroot/usr/lib/lib$net$_a; then
?X: space between two '(' needed for ksh
        ( ($nm $nm_opt $sysroot/usr/lib/lib$net$_a | eval $nm_extract) || \
        $ar t $sysroot/usr/lib/lib$net$_a 2>/dev/null >> libc.list
        if $contains socket libc.list >/dev/null 2>&1; then
d_socket="$define"
socketlib="-l$net"
case "$net" in
net)
    echo "...but the Wollongong group seems to have hacked it in." >&4
    sockethdr="-I$sysroot/usr/netinclude"
    ;;
esac
echo "Found Berkeley sockets interface in lib$net." >&4
?X: now check for advanced features
        if $contains setsockopt libc.list >/dev/null 2>&1; then
d_oldsock="$undef"

```

```

else
    echo
"...using the old BSD 4.1c interface, rather than 4.2." >&4
    d_oldsock="$define"
fi
break
fi
fi
done
if test "X$d_socket" != "X$define"; then
    echo "or anywhere else I see." >&4
    d_socket="$undef"
    d_oldsock="$undef"
fi
fi
fi
fi

@if HAS_SOCKETPAIR || d_socketpair
: see if socketpair exists
set socketpair d_socketpair
eval $inlibc

@end

echo "Checking the availability sa_len in the sock struct ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
int main() {
struct sockaddr sa;
return (sa.sa_len);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_sockaddr_sa_len; eval $setvar
$rm_try

echo "Checking the availability struct sockaddr_in6 ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct sockaddr_in6 sin6;

```

```
return (sin6.sin6_family);
}
```

```
EOF
```

```
val="$undef"
```

```
set try; if eval $compile; then
```

```
    val="$define"
```

```
fi
```

```
set d_sockaddr_in6;
```

```
eval $setvar
```

```
$rm_try
```

```
echo "Checking the availability struct sockaddr_storage ..." >&4
```

```
$cat >try.c <<EOF
```

```
#include <sys/types.h>
```

```
#include <sys/socket.h>
```

```
#include <netinet/in.h>
```

```
int main() {
```

```
    struct sockaddr_storage sator;
```

```
    return (sator.ss_family);
```

```
}
```

```
EOF
```

```
val="$undef"
```

```
set try; if eval $compile; then
```

```
    val="$define"
```

```
fi
```

```
set d_sockaddr_storage; eval $setvar
```

```
$rm_try
```

```
echo "Checking the availability sin6_scope_id in struct sockaddr_in6 ..." >&4
```

```
$cat >try.c <<EOF
```

```
#include <sys/types.h>
```

```
#include <sys/socket.h>
```

```
#include <netinet/in.h>
```

```
int main() {
```

```
    struct sockaddr_in6 sin6;
```

```
    return (sin6.sin6_scope_id);
```

```
}
```

```
EOF
```

```
val="$undef"
```

```
set try; if eval $compile; then
```

```
    val="$define"
```

```
fi
```

```
set d_sin6_scope_id; eval $setvar
```

```
$rm_try
```

```
echo "Checking the availability struct ip_mreq ..." >&4
```

```
$cat >try.c <<EOF
```

```
#include <sys/types.h>
```

```

#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ip_mreq mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile; then

    val="$define"
fi
set d_ip_mreq; eval $setvar
$rm_try

echo "Checking the availability struct ip_mreq_source ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ip_mreq_source mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_ip_mreq_source; eval $setvar
$rm_try

echo "Checking the availability struct ipv6_mreq ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ipv6_mreq mreq;
return (mreq.ipv6mr_interface);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_ipv6_mreq; eval $setvar
$rm_try

```

```
echo "Checking the availability struct ipv6_mreq_source ..." >&4
```

```
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ipv6_mreq_source mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile;
then
    val="$define"
fi
set d_ipv6_mreq_source; eval $setvar
$rm_try
```

?X: these constants are known to be troublesomely defined as enums

?X: so that ifdef will not work for detecting their presence.

```
echo "Checking the availability of certain socket constants..." >&4
```

```
for ENUM in MSG_CTRUNC MSG_DONTROUTE MSG_OOB MSG_PEEK MSG_PROXY SCM_RIGHTS; do
```

```
    enum=`$echo $ENUM|./tr '[A-Z]' '[a-z]'`
```

```
    $cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
int main() {
    int i = $ENUM;
}
EOF
    val="$undef"
    set try; if eval $compile; then
val="$define"
    fi
    set d_${enum}; eval $setvar
    $rm_try
done
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_socket.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_grp.U,v 3.0 1993/08/18 12:08:20 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: GRPASSWD detection added by Andy Dougherty July 14, 1998.  
?RCS:  
?RCS: \$Log: i\_grp.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:20 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_grp d\_grpasswd: \  
contains rm cppstdin cppflags cppminus Inhdr Findhdr Setvar  
?MAKE: -pick add \$@ %<  
?S:i\_grp:  
?S: This variable conditionally defines the I\_GRP symbol, and indicates  
?S: whether a C program should include <grp.h>.  
?S:.  
?S:d\_grpasswd:  
?S: This variable conditionally  
defines GRPASSWD, which indicates  
?S: that struct group in <grp.h> contains gr\_passwd.  
?S:.  
?C:I\_GRP:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <grp.h>.  
?C:.  
?C:GRPASSWD:  
?C: This symbol, if defined, indicates to the C program that struct group  
?C: in <grp.h> contains gr\_passwd.  
?C:.  
?H:#\$i\_grp I\_GRP /\*\*/  
?H:#\$d\_grpasswd GRPASSWD /\*\*/  
?H:.  
?LINT:set i\_grp d\_grpasswd  
?T: xxx  
: see if this is an grp system  
set grp.h i\_grp  
eval \$inhdr  
  
case "\$i\_grp" in  
\$define)  
xxx=`./findhdr grp.h`  
\$cppstdin \$cppflags \$cppminus < \$xxx >\$.h  
  
if \$contains 'gr\_passwd' \$.h >/dev/null 2>&1; then  
val="\$define"

```

else
  val="$undef"
fi
set d_grpasswd
eval $setvar

$rm -f $$h
;;
*)
val="$undef";
set d_grpasswd; eval $setvar
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_grp.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Options.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Options.U,v $
?RCS: Revision 3.0.1.7 1997/02/28 15:08:15 ram
?RCS: patch61: optdef.sh now starts with a "startsh"
?RCS: patch61: moved some code from Head.U
?RCS:
?RCS: Revision 3.0.1.6 1995/09/25 09:14:46 ram
?RCS: patch59: protected option parsing code against 'echo -*' option failure
?RCS:
?RCS: Revision 3.0.1.5 1995/05/12 12:04:52 ram
?RCS: patch54: added -K option for experts
?RCS:
?RCS: Revision 3.0.1.4 1995/01/30 14:27:52 ram
?RCS:
?RCS: patch49: this unit now exports file optdef.sh, not a variable
?RCS:
?RCS: Revision 3.0.1.3 1995/01/11 15:19:00 ram
?RCS: patch45: new -O option allowing -D and -U to override config.sh settings
?RCS: patch45: file optdef.sh is no longer removed after sourcing
?RCS:

```



?RCS: Revision 3.0.1.2 1994/10/29 15:58:06 ram

?RCS: patch36: ensure option definition file is removed before appending

?RCS: patch36: protect variable definitions with spaces in them

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 06:55:44 ram

?RCS: patch30: now uses new me symbol to tag error messages

?RCS: patch30: new -D and -U options to define/undef symbols (JHI)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:14 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Command line parsing. It is really important that the variables used here

?X: be not listed in the MAKE line, or they will be saved in config.sh and

?X: loading this file to fetch default answers would clobber the values set

?X: herein.

?X:

?MAKE:Options:

startsh

?MAKE: -pick wipe \$@ %<

?V:reuseval alldone error realsilent silent extractsh fastread \  
knowitall: config\_sh

?T:arg argn symbol config\_arg0 config\_args config\_argc xxx yyy zzz uuu

?T:args\_exp args\_sep arg\_exp ccflags

?F:!Configure

?F:./optdef.sh ./cmdline.opt ./posthint.sh ./cmdl.opt

: Save command line options in file UU/cmdline.opt for later use in

: generating config.sh.

?X: This temporary file will be read by Oldsym.U. I used a temporary

?X: file to preserve all sorts of potential command line quotes and

?X: also because we don't know in advance how many variables we'll

?X: need, so I can't actually declare them on the MAKE line.

?X: The config\_args variable won't be quite correct if Configure is

?X: fed something like ./Configure -Dcc="gcc -B/usr/ccs/bin/"

?X: since the quotes are gone by the time we see them. You'd have to

?X: reconstruct the command line from the config\_arg? lines, but since

?X: I don't imagine anyone actually having to do that, I'm not going

?X:

to worry too much.

cat > cmdline.opt <<EOSH

: Configure command line arguments.

config\_arg0='\$0'

config\_args='\$\*'

config\_argc=\$#

EOSH

argn=1

args\_exp=""

args\_sep=""

```

for arg in "$@"; do
  cat >>cmdline.opt <<EOSH
  config_arg$argn='$arg'
EOSH
?X: Extreme backslashitis: replace each ' by """"
  cat <<EOC | sed -e "s/"/"""/g" > cmdl.opt
$arg
EOC
  arg_exp=`cat cmdl.opt`
  args_exp="$args_exp$args_sep'$arg_exp'"
  argn=`expr $argn + 1`
  args_sep=' '
done
?X: args_exp is good for restarting self: eval "set X $args_exp"; shift; $0 "$@"
?X: used by hints/os2.sh in Perl, for instance
rm -f cmdl.opt

```

```

: produce awk script to parse command line options
cat >options.awk <<'EOF'
BEGIN {
  optstr = "A:dD:eEf:hKOrsSU:V"; # getopt-style specification

```

```

  len = length(optstr);
  for (i = 1; i <= len; i++) {
    c = substr(optstr, i, 1);
?X: some older awk's do not have the C ?: construct
    if (i < len) a = substr(optstr, i + 1, 1); else a = "";
    if (a == ":") {
      arg[c] = 1;
      i++;
    }
    opt[c]
  = 1;
  }
}
{
  expect = 0;
  str = $0;
  if (substr(str, 1, 1) != "-") {
    printf("%s\n", str);
    next;
  }
  len = length($0);
  for (i = 2; i <= len; i++) {
    c = substr(str, i, 1);
    if (!opt[c]) {
      printf("-%s\n", substr(str, i));
      next;
    }
  }
}

```

```

}
printf("-%s\n", c);
if (arg[c] {
  if (i < len)
    printf("%s\n", substr(str, i + 1));
  else
    expect = 1;
  next;
}
}
}
END {
  if (expect)
    print "?";
}
EOF

```

: process the command line options

?X: Use "\$@" to keep arguments with spaces in them from being split apart.

?X: For the same reason, awk will output quoted arguments and the final eval

?X: removes them and sets a proper \$\* array. An 'X' is prepended to each

?X: argument before being fed to echo to guard against 'echo -x', where -x

?X: would be understood as an echo option! It is removed before feeding awk.

set X `for arg in "\$@"; do echo "X\$arg"; done |

sed -e s/X// | awk -f options.awk`

eval "set \$\*"

shift

rm -f options.awk

: set up default values

fastread=""

reuseval=false

config\_sh=""

alldone=""

error=""

silent=""

extractsh=""

knowitall=""

rm

-f optdef.sh posthint.sh

cat >optdef.sh <<EOS

\$startsh

EOS

?X:

?X: Given that we now have the possibility to execute Configure remotely

?X: thanks to the new src.U support, we have to face the possibility

?X: of having to ask where the source lie, which means we need the Myread.U

?X: stuff and possibly other things that might echo something on the  
 ?X: screen...  
 ?X:  
 ?X: That's not pretty, and might be confusing in 99% of the time. So...  
 ?X: We introduce a new realsilent variable which is set when -s is given,  
 ?X: and we force silent=true if -S is supplied. The Extractall.U unit  
 ?X: will then undo the >&4 redirection based on the value of the  
 ?X: realsilent variable... -- RAM, 18/93/96  
 ?X:

```

: option parsing
while test $# -gt 0; do
case "$1" in
-d) shift; fastread=yes;;
-e) shift; alldone=cont;;
-f)
  shift
  cd ..
  if test -r "$1"; then
    config_sh="$1"
  else
    echo "$me: cannot read config file $1."
  >&2
  error=true
fi
cd UU
shift;;
--help\
-h) shift; error=true;;
-r) shift; reuseval=true;;
-s) shift; silent=true; realsilent=true;;
-E) shift; alldone=exit;;
-K) shift; knowitall=true;;
-O) shift;;
-S) shift; silent=true; extractsh=true;;
-D)
  shift
case "$1" in
*=)
  echo "$me: use '-U symbol=', not '-D symbol='." >&2
  echo "$me: ignoring -D $1" >&2
  ;;
*=*) echo "$1" | \
  sed -e "s/'\"/\"'/g" -e "s/=(.*)/=\\1/" >> optdef.sh;;
*) echo "$1='define'" >> optdef.sh;;
esac
shift
;;

```

```

-U)
shift
case "$1" in
*=*) echo "$1" >> optdef.sh;;
*=*)
echo "$me: use '-D symbol=val', not '-U symbol=val'." >&2
echo "$me: ignoring -U $1" >&2
;;
*) echo "$1='undef'" >> optdef.sh;;
esac
shift
;;

```

```

-A)
shift
xxx=""
yyy="$1"
zzz=""
uuu=undef
case "$yyy" in
*=*) zzz=`echo "$yyy"|sed 's!.=.*!!'^
    case "$zzz" in
*:*) zzz="" ;;
*) xxx=append

    zzz="" ``echo "$yyy"|sed 's!^[^=]*=!!'^
    yyy=`echo "$yyy"|sed 's!.=.*!!'^ ;;
    esac
    ;;
esac
case "$xxx" in
") case "$yyy" in
*:*) xxx=`echo "$yyy"|sed 's!.:.*!!'^
    yyy=`echo "$yyy"|sed 's!^[^:]*:!!'^
    zzz=`echo "$yyy"|sed 's!^[^=]*=!!'^
    yyy=`echo "$yyy"|sed 's!.=.*!!'^ ;;
*) xxx=`echo "$yyy"|sed 's!.:.*!!'^
    yyy=`echo "$yyy"|sed 's!^[^:]*:!!'^ ;;
    esac
    ;;
esac
case "$xxx" in
append)
echo "$yyy=\("${$yyy}$zzz\\"" >> posthint.sh ;;
clear)
echo "$yyy="" >> posthint.sh ;;
define)
    case "$zzz" in
") zzz=define ;;

```

```

esac
echo "$yyy='$zzz'" >> posthint.sh ;;
    eval)
echo "eval \"$yyy=$zzz\" >> posthint.sh ;;
    prepend)
echo "$yyy=\"\$zzz\${$yyy}\" >> posthint.sh ;;
    undef)

        case "$zzz" in
") zzz="$uuu" ;;
esac
echo "$yyy=$zzz" >> posthint.sh ;;
    *) echo "$me: unknown -A command '$xxx', ignoring -A $1" >&2 ;;
esac
shift
;;
-V) echo "$me generated by metaconfig <VERSION> PL<PATCHLEVEL>." >&2
    exit 0;;
--) break;;
-*) echo "$me: unknown option $1" >&2; shift; error=true;;
*) break;;
esac
done

```

```

case "$error" in
true)
cat >&2 <<EOM
Usage: $me [-dehrsEKOSV] [-f config.sh] [-D symbol] [-D symbol=value]

```

```

    [-U symbol] [-U symbol=] [-A command:symbol...]
-d : use defaults for all answers.
-e : go on without questioning past the production of config.sh.
-f : specify an alternate default configuration file.
-h : print this help message and exit (with an error status).
-r : reuse C symbols value if possible (skips costly nm extraction).
-s : silent mode, only echoes questions and essential information.
-D : define symbol to have some value:

```

```

    -D symbol      symbol gets the value
'define'
    -D symbol=value  symbol gets the value 'value'

```

common used examples (see INSTALL for more info):

```

-Duse64bitint      use 64bit integers
-Duse64bitall      use 64bit integers and pointers
-Dusetthreads      use thread support
-Dinc_version_list=none  do not include older perl trees in @INC
-DEBUGGING=none    DEBUGGING options
-Dcc=gcc           choose your compiler
-Dprefix=/opt/perl5  choose your destination
-E : stop at the end of questions, after having produced config.sh.

```

-K : do not use unless you know what you are doing.

-O : ignored for backward compatibility

-S : perform variable substitutions on all .SH files (can mix with -f)

-U : undefine symbol:

- U symbol symbol gets the value 'undef'
- U symbol= symbol gets completely empty

e.g.: -Uversiononly

-A : manipulate symbol after the platform specific hints have been applied:

- A append:symbol=value append value to symbol
- A symbol=value like append:, but with a separating space
- A define:symbol=value define symbol to have value
- A clear:symbol define symbol to be "
- A define:symbol define symbol to be 'define'
- A eval:symbol=value define symbol to be eval of value
- A prepend:symbol=value prepend value to symbol
- A undef:symbol define symbol to be 'undef'
- A undef:symbol= define symbol to be "

e.g.: -A prepend:libswanted='cl pthread '

- A cflags=-DSOME\_MACRO

-V : print version number and exit (with a zero status).

EOM

exit 1

::

esac

?X:

?X: Unless they specified either -S or both -d and -e/E, make sure we're

?X: running interactively, i.e. attached to a terminal. Moved from Head.U to

?X: be able to handle batch configurations...

?X:

?X: We have to hardwire the Configure name and cannot use \$me,  
since if they

?X: said 'sh <Configure', then \$me is 'sh'...

?X:

: Sanity checks

case "\$fastread\$alldone" in

yescont|yesexit) ;;

\*)

case "\$extractsh" in

true) ;;

\*)

if test ! -t 0; then

echo "Say 'sh Configure', not 'sh <Configure'"

exit 1

fi

::

esac

::

esac

?X: In silent mode, the standard output is closed. Questions are asked by  
?X: outputting on file descriptor #4, which is the original stdout descriptor.  
?X: This filters out all the "junk", since all the needed information is written  
?X: on #4. Note that ksh will not let us redirect output if the file descriptor  
?X: has not be defined yet, unlike sh, hence the following line...--RAM.  
exec 4>&1  
case "\$silent" in  
true) exec 1>/dev/null;;  
esac

: run the defines and the undefines, if any, but leave the file out there...

touch optdef.sh

?X: -q is POSIX

?X: It does not work in SysV (solaris) or old BSD greps.

grep '\| optdef.sh >/dev/null 2>&1

if test \$? = 0; then

    echo "Configure does not support \| in -D arguments"

    exit 1

fi

./optdef.sh

: create the posthint manipulation script and leave the file out there...

?X: this file will be perused by Oldconfig.U

touch posthint.sh

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/Options.U

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?RCS:

?MAKE:d\_statvfs d\_fstatvfs: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_statvfs:

?S: This variable conditionally defines the HAS\_STATVFS symbol, which

?S: indicates to the C program that the statvfs() routine is available.

?S:.

?S:d\_fstatvfs:

?S: This variable conditionally defines the HAS\_FSTATVFS symbol, which

?S: indicates to the C program that the fstatvfs() routine is available.

?S:.



?C:HAS\_STATVFS:

?C: This symbol, if defined, indicates that the statvfs routine is

?C: available to stat filesystems by filenames.

?C:.

?C:HAS\_FSTATVFS:

?C: This symbol, if defined, indicates that the fstatvfs routine is

?C: available to stat filesystems by file descriptors.

?C:.

?H:#\$d\_statvfs HAS\_STATVFS /\*\*/

?H:#\$d\_fstatvfs

HAS\_FSTATVFS /\*\*/

?H:.

?LINT:set d\_statvfs

?LINT:set d\_fstatvfs

: see if statvfs exists

set statvfs d\_statvfs

eval \$inlibc

: see if fstatvfs exists

set fstatvfs d\_fstatvfs

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_statvfs.U

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:fflushNULL fflushall: Compile cat rm rm\_try test osname run to from \

Oldconfig Myread Setvar echo targethost \

d\_sysconf i\_unistd d\_stdio\_stream\_array stdio\_stream\_array i\_stdlib

?MAKE: -pick add \$@ %<

?S:fflushNULL:

?S: This symbol, if defined, tells that fflush(NULL) correctly

?S: flushes all pending stdio output without side effects. In

?S: particular, on some platforms calling fflush(NULL) \*still\*

?S: corrupts STDIN if it is a pipe.

?S:.

?S:fflushall:

?S: This symbol, if defined, tells that to flush

?S: all  
pending stdio output one must loop through all

?S: the stdio file handles stored in an array and fflush them.

?S: Note that if fflushNULL is defined, fflushall will not

?S: even be probed for and will be left undefined.

?S:.

?C:FFLUSH\_NULL:

?C: This symbol, if defined, tells that fflush(NULL) correctly

?C: flushes all pending stdio output without side effects. In

?C: particular, on some platforms calling fflush(NULL) \*still\*

?C: corrupts STDIN if it is a pipe.

?C:.

?C:FFLUSH\_ALL:

?C: This symbol, if defined, tells that to flush

?C: all pending stdio output one must loop through all

?C: the stdio file handles stored in an array and fflush them.

?C: Note that if fflushNULL is defined, fflushall will not

?C: even be probed for and will be left undefined.

?C:.

?H:#\$fflushNULL FFLUSH\_NULL /\*\*/  
?H:#\$fflushall FFLUSH\_ALL /\*\*/  
?H:.

?T:output code

?F:!try.out !try !tryp  
: Check how to flush  
echo " "  
\$cat >&4 <<EOM  
Checking how to flush all pending stdio output...  
EOM  
# I only know how to find  
the first 32 possibly open files on SunOS.  
# See also hints/sunos\_4\_1.sh and util.c --AD  
case "\$osname" in  
sunos) \$echo '#define PERL\_FFLUSH\_ALL\_FOPEN\_MAX 32' > try.c ;;  
esac  
\$cat >>try.c <<EOCP  
#include <stdio.h>  
#\$i\_stdlib I\_STDLIB  
#ifdef I\_STDLIB  
#include <stdlib.h>  
#endif  
#\$i\_unistd I\_UNISTD  
#ifdef I\_UNISTD  
# include <unistd.h>  
#endif  
#\$d\_sysconf HAS\_SYSCONF  
#\$d\_stdio\_stream\_array HAS\_STDIO\_STREAM\_ARRAY

```

#ifdef HAS_STDIO_STREAM_ARRAY
#define STDIO_STREAM_ARRAY $stdio_stream_array
#endif
int main() {
FILE* p;
unlink("try.out");
p = fopen("try.out", "w");
#ifdef TRY_FPUTC
fputc('x', p);
#else
#ifdef TRY_FPRINTF
fprintf(p, "x");
#endif
#endif
#ifdef TRY_FFLUSH_NULL
fflush(NULL);
#endif
#ifdef TRY_FFLUSH_ALL
{
long open_max = -1;
#ifdef PERL_FFLUSH_ALL_FOPEN_MAX
open_max = PERL_FFLUSH_ALL_FOPEN_MAX;
#else
#ifdef HAS_SYSCONF && defined(_SC_OPEN_MAX)
open_max = sysconf(_SC_OPEN_MAX);
#else
#ifdef FOPEN_MAX
open_max = FOPEN_MAX;
#else
#ifdef OPEN_MAX
open_max = OPEN_MAX;
#else
#ifdef _NFILE
open_max = _NFILE;
#endif
#endif
#endif
#endif
#endif
#ifdef HAS_STDIO_STREAM_ARRAY
if (open_max > 0) {
long i;
for (i = 0; i < open_max; i++)
if (STDIO_STREAM_ARRAY[i]._file >= 0 &&
STDIO_STREAM_ARRAY[i]._file < open_max &&
STDIO_STREAM_ARRAY[i]._flag)
fflush(&STDIO_STREAM_ARRAY[i]);
}
}

```

```

    }
  }
# endif
#endif
_exit(42);
}
EOCP
: first we have to find out how _not_ to flush
$to try.c
if $test "X$fflushNULL" = X -o "X$fflushall" = X; then
  output="
  set try -DTRY_FPUTC
  if eval $compile; then
    $run ./try 2>/dev/null
    code="$?"
    $from try.out
    if $test ! -s try.out -a "X$code" = X42; then
output=-DTRY_FPUTC
    fi
  fi
  case "$soutput" in
  ")
    set try -DTRY_FPRINTF
    if eval $compile; then
      $run ./try 2>/dev/null
      code="$?"
      $from try.out
      if $test ! -s try.out -a "X$code" = X42; then
output=-DTRY_FPRINTF

    fi
  fi
  ;;
  esac
fi
: check for fflush NULL behavior
case "$fflushNULL" in
") set try -DTRY_FFLUSH_NULL $soutput
if eval $compile; then
$run ./try 2>/dev/null
code="$?"
$from try.out
if $test -s try.out -a "X$code" = X42; then
  fflushNULL="$`cat try.out`"
else
  if $test "X$code" != X42; then
    $cat >&4 <<EOM
(If this test failed, don't worry, we'll try another method shortly.)

```

EOM

fi

fi

fi

```
$rm -f core try.core core.try.*
```

```
case "$fflushNULL" in
```

```
x) $cat >&4 <<EOM
```

Your fflush(NULL) works okay for output streams.

Let's see if it clobbers input pipes...

EOM

```
# As of mid-March 2000 all versions of Solaris appear to have a stdio
```

```
# bug that improperly flushes the input end of pipes. So we avoid the
```

```
# autoflush on fork/system/exec support for now. :-(
```

```
$cat >tryp.c <<EOCP
```

```
#include <stdio.h>
```

```
int
```

```
main(int argc, char **argv)
```

```
{
```

```
    char buf[1024];
```

```
    int i;
```

```
    char *bp = buf;
```

```
    while (1) {
```

```
while ((i = getc(stdin)) != -1
```

```
    && (*bp++ = i) != '\n'
```

```
    && bp < &buf[1024])
```

```
/* DO NOTHING */;
```

```
*bp = '\0';
```

```
fprintf(stdout, "%s", buf);
```

```
fflush(NULL);
```

```
if (i == -1)
```

```
    return 0;
```

```
bp = buf;
```

```
}
```

```
}
```

EOCP

```
fflushNULL="$define"
```

```
set tryp
```

```
if eval $compile; then
```

```
    $rm -f tryp.out
```

```
    # Copy the .c file to the remote host ($to is an ssh-like if targethost is set)
```

```
    if $test "X$targethost" != X; then
```

```
        $to tryp.c
```

```
        $to tryp
```

```
        $run "cat tryp.c | ./tryp " 2>/dev/null > tryp.out
```

```
    else
```

```
        $cat tryp.c | $run ./tryp 2>/dev/null > tryp.out
```

```
    fi
```

```

    if cmp tryp.c tryp.out >/dev/null 2>&1; then
        $cat >&4 <<EOM
fflush(NULL) seems to behave okay with input streams.
EOM
    fflushNULL="$define"
    else
        $cat >&4 <<EOM
Ouch, fflush(NULL) clobbers input pipes! We will not use it.
EOM
    fflushNULL="$undef"
    fi
fi
$rm -f core tryp.c tryp.core core.tryp.*
;;
") $cat >&4 <<EOM

```

Your fflush(NULL) isn't working (contrary to ANSI C).

```

EOM
    fflushNULL="$undef"
    ;;
*) $cat >&4 <<EOM

```

Cannot figure out whether  
your fflush(NULL) works or not.  
I'm assuming it doesn't (contrary to ANSI C).

```

EOM
    fflushNULL="$undef"
    ;;
esac
;;
$define|true|[yY]*)
    fflushNULL="$define"
    ;;
*)
    fflushNULL="$undef"
    ;;
esac

```

: check explicit looping only if NULL did not work, and if the pipe  
: bug does not show up on an explicit flush too  
case "\$fflushNULL" in  
"\$undef")

```

$cat >tryp.c <<EOCP
#include <stdio.h>
int
main(int argc, char **argv)
{
    char buf[1024];
    int i;
    char *bp = buf;
    while (1) {

```

```

while ((i = getc(stdin)) != -1
    && (*bp++ = i) != '\n'
    && bp < &buf[1024])
/* DO NOTHING */;
*bp = '\0';
fprintf(stdout, "%s", buf);
fflush(stdin);
if (i == -1)
    return 0;
bp = buf;
}
}
EOCP

```

```

set tryp
if eval $compile; then
    $rm -f tryp.out
    if $test "X$targethost" != X; then
        $to tryp.c
        $to tryp
        $run "cat tryp.c | ./tryp " 2>/dev/null > tryp.out
    else
        $cat tryp.c | $run ./tryp 2>/dev/null > tryp.out
    fi
    if cmp tryp.c tryp.out >/dev/null 2>&1;
then
    $cat >&4 <<EOM

```

Good, at least fflush(stdin) seems to behave okay when stdin is a pipe.

EOM

```

: now check for fflushall behaviour
case "$fflushall" in
") set try -DTRY_FFLUSH_ALL $output
if eval $compile; then
    $cat >&4 <<EOM

```

(Now testing the other method--but note that this also may fail.)

EOM

```

    $run ./try 2>/dev/null
    code=$?
    $from try.out
    if $test -s try.out -a "X$code" = X42; then
        fflushall="$cat try.out`"
    fi
fi
$rm_try
case "$fflushall" in
x) $cat >&4 <<EOM

```

Whew. Flushing explicitly all the stdio streams works.

EOM

```

    fflushall="$define"

```

```
;;
") $cat >&4 <<EOM
Sigh. Flushing explicitly all the stdio streams doesn't work.
EOM
```

```
fflushall="$undef"
;;
*) $cat >&4 <<EOM
Cannot figure out whether flushing stdio streams explicitly works or not.
I'm assuming it doesn't.
```

```
EOM
fflushall="$undef"
;;
esac
;;
"$define"|true|[yY]*)
fflushall="$define"
;;
*)
fflushall="$undef"
;;
esac
```

```
else
$cat >&4 <<EOM
All is futile. Even fflush(stdin) clobbers input pipes!
```

```
EOM
fflushall="$undef"
fi
else
fflushall="$undef"
fi
$rm -f core tryp.c tryp.core core.tryp.*
;;
*) fflushall="$undef"
;;
esac
```

```
case "$fflushNULL$fflushall" in
undefundef)
$cat <<EOM
```

```
OK, I give up. I cannot figure out how to flush pending stdio output.
We won't be flushing handles at all before fork/exec/popen.
EOM
;;
esac
$rm_try tryp
```

Found in path(s):



\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/fflushall.U

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?RCS:

?MAKE:d\_sendmsg: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sendmsg:

?S: This variable conditionally defines the HAS\_SENDMSG symbol, which

?S: indicates to the C program that the sendmsg() routine is available.

?S:.

?C:HAS\_SENDMSG:

?C: This symbol, if defined, indicates that the sendmsg routine is

?C: available to send structured socket messages.

?C:.

?H:#\$d\_sendmsg HAS\_SENDMSG /\*\*/

?H:.

?LINT:set d\_sendmsg

: see if sendmsg exists

set sendmsg d\_sendmsg

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_sendmsg.U

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?RCS: \$Id: i\_netdb.U,v \$

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?RCS:

?MAKE:i\_netdb: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_netdb:

?S: This variable conditionally defines the I\_NETDB symbol, and indicates

?S: whether a C program should include <netdb.h>.

?S:.

?C:I\_NETDB:

?C: This symbol, if defined, indicates that <netdb.h> exists and

?C: should be included.

?C:.

?H:#\$i\_netdb I\_NETDB /\*\*/

?H:.

?LINT:set i\_netdb

: see if this is a netdb.h system

set netdb.h i\_netdb

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i\_netdb.U

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?RCS:

?MAKE:d\_fdclose: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fdclose:

?S: This variable conditionally defines the HAS\_FDCLOSE symbol, which

?S: indicates to the C program that the fdclose() routine is available.

?S:.

?C:HAS\_FDCLOSE:

?C: This symbol, if defined, indicates that the fdclose routine is

?C: available to free a FILE structure without closing the underlying

?C: file descriptor. This function appeared in FreeBSD 10.2.

?C:.

?H:#\$d\_fdclose HAS\_FDCLOSE /\*\*/

?H:.

?LINT:set d\_fdclose

: see if fdclose exists

set fdclose d\_fdclose

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fdclose.U

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Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/files/Jmake.tmpl

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

```

?RCS:
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?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_flockproto: Hasproto i_sysfile
?MAKE: -pick add $@ %<
?S:d_flockproto:
?S: This variable conditionally defines the HAS_FLOCK_PROTO symbol,
?S: which indicates to the C program that the system provides
?S: a prototype for the flock() function. Otherwise, it is
?S: up to the program to supply one.
?S:.
?C:HAS_FLOCK_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the flock() function. Otherwise, it is up
?C: to the program to supply one. A good guess is
?C: extern int flock(int,
int);
?C:.
?H:#$d_flockproto HAS_FLOCK_PROTO /**/
?H:.
?LINT:set d_flockproto
: see if prototype for flock is available
echo " "
set d_flockproto flock $i_sysfile sys/file.h
eval $hasproto

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_flockproto.U

```

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```

?RCS: $Id: sitearch.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera $
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:

```

?RCS: \$Log: sitearch.U,v \$

?RCS: Revision 3.1 1999/07/08 18:32:29 doughera

?RCS: Updated for perl5.005\_5x

?RCS:

?RCS: Revision 3.0.1.1 1997/02/28 16:21:30 ram

?RCS: patch61: created

?RCS:

?MAKE:sitearch sitearchexp installsitearch d\_sitearch: cat sed Getfile \  
 Oldconfig Setprefixvar Prefixit test archname sitelib

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitearch="

?S:sitearch:

?S: This variable contains the eventual  
 value of the SITEARCH symbol,  
 ?S: which is the name of the private library for this package. It may  
 ?S: have a ~ on the front. It is up to the makefile to eventually create  
 ?S: this directory while performing installation (with ~ substitution).  
 ?S: The standard distribution will put nothing in this directory.  
 ?S: After perl has been installed, users may install their own local  
 ?S: architecture-dependent modules in this directory with  
 ?S: MakeMaker Makefile.PL  
 ?S: or equivalent. See INSTALL for details.

?S:.

?D:sitearchexp="

?S:sitearchexp:

?S: This variable is the ~name expanded version of sitearch, so that you  
 ?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installsitearch="

?S:installsitearch:

?S: This variable is really the same as sitearchexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.

?S:.

?D:d\_sitearch="

?S:d\_sitearch:

?S: This variable conditionally defines SITEARCH to hold the  
 pathname  
 ?S: of architecture-dependent library files for \$package. If  
 ?S: \$sitearch is the same as \$archlib, then this is set to undef.

?S:.

?C:SITEARCH:

?C: This symbol contains the name of the private library for this package.  
 ?C: The library is private in the sense that it needn't be in anyone's  
 ?C: execution path, but it should be accessible by the world. The program  
 ?C: should be prepared to do ~ expansion.  
 ?C: The standard distribution will put nothing in this directory.

?C: After perl has been installed, users may install their own local  
?C: architecture-dependent modules in this directory with  
?C: MakeMaker Makefile.PL  
?C: or equivalent. See INSTALL for details.  
?C:.  
?C:SITEARCH\_EXP:  
?C: This symbol contains the ~name expanded version of SITEARCH, to be used  
?C: in programs that are not prepared to deal with ~ expansion at run-time.  
?C:.  
?H:#\$d\_sitearch SITEARCH "\$sitearch" /\*\*/  
?H:#\$d\_sitearch SITEARCH\_EXP "\$sitearchexp" /\*\*/  
?H:.  
?LINT:change prefixvar  
?LINT:set installsitearch  
?LINT:set  
sitearch  
?LINT:set sitearchexp  
: determine where site specific architecture-dependent libraries go.  
: sitelib default is /usr/local/lib/perl5/site\_perl/\$version  
: sitearch default is /usr/local/lib/perl5/site\_perl/\$version/\$archname  
: sitelib may have an optional trailing /share.  
case "\$sitearch" in  
") dflt=`echo \$sitelib | \$sed 's,/share\$,,'`  
dflt="\$dflt/\$archname"  
;;  
\*) dflt="\$sitearch"  
;;  
esac  
set sitearch sitearch none  
eval \$prefixit  
\$cat <<EOM

The installation process will also create a directory for  
architecture-dependent site-specific extensions and modules.

```
EOM
fn=d~+
rp='Pathname for the site-specific architecture-dependent library files?'
./getfile
prefixvar=sitearch
./setprefixvar
if $test X"$sitearch" = X"$sitelib"; then
d_sitearch="$undef"
else
d_sitearch="$define"
fi
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/sitearch.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysstatvfs.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysstatvfs: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysstatvfs:

?S: This variable conditionally defines the I\_SYSSTATVFS symbol,

?S: and indicates whether a C program should include <sys/statvfs.h>.

?S:.

?C:I\_SYS\_STATVFS:

?C: This symbol, if defined, indicates that <sys/statvfs.h> exists and

?C: should be included.

?C:.

?H:#\$i\_sysstatvfs I\_SYS\_STATVFS /\*\*/

?H:.

?LINT:set i\_sysstatvfs

: see if this is a sys/statvfs.h system

set sys/statvfs.h i\_sysstatvfs

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_sysstatvfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_random\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_random\_r random\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_random\_r:

?S: This variable conditionally defines the HAS\_RANDOM\_R symbol,

?S: which indicates to the C program that the random\_r()

?S: routine is available.

?S:  
?S:random\_r\_proto:  
?S: This variable encodes the prototype of random\_r.  
?S: It is zero if d\_random\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_random\_r  
?S: is defined.  
?S:  
?C:HAS\_RANDOM\_R:  
?C: This symbol, if defined, indicates that the random\_r routine  
?C: is available to random re-entrantly.  
?C:  
?C:RANDOM\_R\_PROTO:  
?C: This  
symbol encodes the prototype of random\_r.  
?C: It is zero if d\_random\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_random\_r  
?C: is defined.  
?C:  
?H:#\$d\_random\_r HAS\_RANDOM\_R /\*\*/  
?H:#define RANDOM\_R\_PROTO \$random\_r\_proto /\*\*/  
?H:  
?T:try hdrs d\_random\_r\_proto  
: see if random\_r exists  
set random\_r d\_random\_r  
eval \$inlibc  
case "\$d\_random\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_stdlib stdlib.h"  
case "\$d\_random\_r\_proto:\$usetthreads" in  
":define") d\_random\_r\_proto=define  
set d\_random\_r\_proto random\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_random\_r\_proto" in  
define)  
case "\$random\_r\_proto" in  
"|0) try='int random\_r(int\*, struct random\_data\*);'  
./protochk "\$\$extern\_C \$try" \$hdrs && random\_r\_proto=I\_iS ;;  
esac  
case "\$random\_r\_proto" in  
"|0) try='int random\_r(long\*, struct random\_data\*);'  
./protochk "\$\$extern\_C \$try" \$hdrs && random\_r\_proto=I\_lS ;;  
esac  
case "\$random\_r\_proto" in  
"|0)  
try='int random\_r(struct random\_data\*, int32\_t\*);'  
./protochk "\$\$extern\_C \$try" \$hdrs && random\_r\_proto=I\_St ;;

```

esac
case "$random_r_proto" in
"(0) d_random_r=undef
random_r_proto=0
echo "Disabling random_r, cannot determine prototype." >&4 ;;
*) case "$random_r_proto" in
REENTRANT_PROTO*) ;;
*) random_r_proto="REENTRANT_PROTO_$random_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "random_r has no prototype, not using it." >&4 ;;
esac
d_random_r=undef
random_r_proto=0
;;
esac
;;
*) random_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_random\_r.U

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_tminsys.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_tminsys.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_tminsys: contains Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_tminsys:
?S: This variable conditionally defines TM_IN_SYS if this system
?S: declares "struct tm" in <sys/time.h> rather than <time.h>.

```



```

?S:.
?C:TM_IN_SYS (TMINSYS):
?C: This symbol is defined if this system declares "struct tm" in
?C: <sys/time.h> rather than <time.h>.
  We can't just say
?C: -I/usr/include/sys because some systems have both time files, and
?C: the -I trick gets the wrong one.
?C:.
?H:#$d_tminsys TM_IN_SYS /**/
?H:.
?LINT:set d_tminsys
: see if struct tm is defined in sys/time.h
echo " "
if $contains 'struct tm' `./findhdr time.h` >/dev/null 2>&1 ; then
echo "You have struct tm defined in <time.h> rather than <sys/time.h>." >&4
val="$undef"
else
echo "You have struct tm defined in <sys/time.h> rather than <time.h>." >&4
val="$define"
fi
set d_tminsys
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_tminsys.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: lseektype.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:30:10 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:lseektype: Myread Typedef
?MAKE: -pick add $@ %<
?S:lseektype:

```

?S: This variable defines lseektype to be something like off\_t, long,  
?S: or whatever type is used to declare lseek offset's type in the  
?S: kernel (which also appears to be lseek's return type).

?S:.

?C:Off\_t

(LSEEKTYPE):

?C: This symbol holds the type used to declare offsets in the kernel.

?C: It can be int, long, off\_t, etc... It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Off\_t \$lseektype /\* <offset> type \*/

?H:.

: see what type lseek is declared as in the kernel

set off\_t lseektype long stdio.h sys/types.h

eval \$typedef

echo " "

dflt="\$lseektype"

rp="What type is lseek's offset on this system declared as?"

./myread

lseektype="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/lseektype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Null.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Null.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:10 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit ends up producing shell code to set all variables to ". This

?X: probably isn't necessary, but I'm paranoid. About certain things.

?X:

?MAKE:Null: Head

?MAKE: -pick add.Null \$@ %<

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Null.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_killpg.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_killpg.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_killpg: Inlibc
?MAKE: -pick add $@ %<
?S:d_killpg:
?S: This variable conditionally defines the HAS_KILLPG symbol, which
?S: indicates to the C program that the killpg() routine is available
?S: to kill process groups.
?S:.
?C:HAS_KILLPG (KILLPG):
?C: This symbol, if defined, indicates that the killpg routine is available
?C: to kill
    process groups. If unavailable, you probably should use kill
?C: with a negative process number.
?C:.
?H:#$d_killpg HAS_KILLPG /**/
?H:.
?LINT:set d_killpg
: see if killpg exists
set killpg d_killpg
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_killpg.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_locconv.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_loconv.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:14:11 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_loconv: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_loconv:  
?S: This variable conditionally defines HAS\_LOCALECONV if localeconv() is  
?S: available for numeric and monetary formatting conventions.  
?S:.  
?C:HAS\_LOCALECONV:  
?C: This symbol, if defined, indicates that the localeconv  
routine is  
?C: available for numeric and monetary formatting conventions.  
?C:.  
?H:#\$d\_loconv HAS\_LOCALECONV /\*\*/  
?H:.  
?LINT:set d\_loconv  
: see if localeconv exists  
set localeconv d\_loconv  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_loconv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2014, H.Merijn Brand  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_backtrace.U,v \$  
?RCS:  
?MAKE:d\_backtrace: Inlibc  
?MAKE: -pick add \$@ %<

?S:d\_backtrace:  
 ?S: This variable conditionally defines the HAS\_BACKTRACE symbol, which  
 ?S: indicates to the C program that the backtrace() routine is available  
 ?S: to get a stack trace.  
 ?S:.  
 ?C:HAS\_BACKTRACE:  
 ?C: This symbol, if defined, indicates that the backtrace() routine is  
 ?C: available to get a stack trace. The <execinfo.h> header must be  
 ?C: included to use this routine.  
 ?C:.  
 ?H:#\$d\_backtrace HAS\_BACKTRACE /\*\*/  
 ?H:.  
 ?LINT:set d\_backtrace  
 :  
 see if backtrace exists  
 set backtrace d\_backtrace  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/d\_backtrace.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: rootid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
 ?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: rootid.U,v \$  
 ?RCS: Revision 3.0.1.1 1995/01/30 14:45:36 ram  
 ?RCS: patch49: now only prints a single empty line when outputting something  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:09:42 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:rootid: sed  
 ?MAKE: -pick add \$@ %<  
 ?S:rootid:  
 ?S: This variable contains the eventual value of the ROOTID symbol,  
 ?S: which is the uid of root.  
 ?S:.  
 ?C:ROOTID:  
 ?C: This symbol contains the uid of root, normally

```

0.
?C:.
?H:#define ROOTID $rootid /**/
?H:.
: determine root id
rootid=`$sed -e "/^root:/{s/^[^:]*:[^:]*:\([^:]*\).*$""^1/" -e "q" -e "}" -e "d" </etc/passwd`
case "$rootid" in
") rootid=0 ;;
*) echo " "; echo "Root uid = $rootid" >&4 ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/rootid.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_csh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:32:18 ram

?RCS: patch61: added full\_csh to preserve the full path even when portable

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_csh full\_csh: csh Setvar

?MAKE: -pick add \$@ %<

?S:d\_csh:

?S: This variable conditionally defines the CSH symbol, which

?S: indicates to the C program that the C-shell exists.

?S:.

?S:full\_csh:

?S: This variable contains the full pathname to 'csh', whether

or

?S: not the user has specified 'portability'. This is only used

?S: in the compiled C program, and we assume that all systems which

?S: can share this executable will have the same full pathname to

?S: 'csh.'

?S:.

?C:HAS\_CSH:

?C: This symbol, if defined, indicates that the C-shell exists.  
?C:.  
?C:CSH:  
?C: This symbol, if defined, contains the full pathname of csh.  
?C:.  
?X: Previously, I just did \$d\_csh CSH "\$full\_csh", but that caused  
?X: problems on VMS where the config.sh extraction program changes  
?X: \$undef to a real cpp undef, and they then had #undef CSH ""  
?X: which the compiler didn't like. It's easy to work around this,  
?X: so I did. --AD 3/1998.  
?X: And we don't want to define CSH if !HAS\_CSH, but we don't want  
?X: those lines in config.h if they don't need CSH, so protect with ?CSH  
?X: and not ?%<. --RAM, 15/02/2004  
?H:?%<:#\$d\_csh HAS\_CSH /\*\*/  
?H:?CSH:#ifdef HAS\_CSH  
?H:?CSH:#define CSH "\$full\_csh" /\*\*/  
?H:?CSH:#endif  
?H:.  
?LINT:set d\_csh  
: get csh whereabouts  
case  
"\$csh" in  
'csh') val="\$undef" ;;  
\*) val="\$define" ;;  
esac  
set d\_csh  
eval \$setvar  
: Respect a hint or command line value for full\_csh.  
case "\$full\_csh" in  
") full\_csh=\$csh ;;  
esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_csh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: usedtrace.U,v \$  
?RCS:  
?RCS: Copyright (c) 2008 H.Merijn Brand  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: usedtrace.U,v \$  
?RCS:  
?MAKE:usedtrace dtrace: Myread Oldconfig Setvar Getfile test  
?MAKE: -pick add \$@ %<

```

?Y:TOP
?S:usedtrace:
?S: This variable indicates whether we are compiling with dtrace
?S: support. See also dtrace.
?S:.
?S:dtrace:
?S: This variable holds the location of the dtrace executable.
?S:.
?C:USE_DTRACE:
?C: This symbol, if defined, indicates that Perl should
?C: be built with support for DTrace.
?C:.
?H:#$usedtrace USE_DTRACE /**/
?H:.
?T:dflt_dtrace
?LINT:set usedtrace
?LINT:set dtrace
: DTrace support
dflt_dtrace='/usr/sbin/dtrace'
$test -x /usr/bin/dtrace && dflt_dtrace='/usr/bin/dtrace'

```

```
cat <<EOM
```

Perl can be built to support DTrace on platforms that support it.  
DTrace is a diagnosis and performance analysis tool from Sun.

If this doesn't make any sense to you, just accept the default.

```
EOM
```

```

while $test 1 ; do
case "$usedtrace" in
$define[true|[yY]*)
dflt='y'
;;
$undef[false|[nN]*)
dflt='n'
dflt_dtrace=""
;;
?*)
dflt='y'
dflt_dtrace=$usedtrace
;;
*)
dflt='n'
;;
esac

```



```

rp='Support DTrace if available?'
. ./myread
case "$ans" in
y|Y) val="$define" ;;
*)   val="$undef" ;;
esac
set usedtrace
eval $setvar

test "X$usedtrace" != "X$define" && break

echo " "
rp='Where is the dtrace executable?'
dflt=$dflt_dtrace
. ./getfile
val="$ans"
set dtrace
eval $setvar

if $test -f $dtrace
then
if $dtrace -h -s ../perldtrace.d \
-o perldtrace.tmp >/dev/null 2>&1 \
&& rm -f perldtrace.tmp
then
echo " "
echo "Good: your $dtrace knows about the -h flag."
else
cat >&2 <<EOM

*** $me: Fatal Error: $dtrace doesn't support -h flag
***
*** Your installed dtrace doesn't support the -h switch to
compile a D
*** program into a C header. Can't continue.

EOM
exit 1
fi
break;
fi

case "$fastread" in
yes)
cat >&2 <<EOM

*** $me: Fatal Error: $dtrace not found.
*** Can't continue.

```

```
EOM
exit 1
;;
*)
echo "*** $dtrace was not found."
echo " "
;;
esac
done
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/usedtrace.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_atolf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_atolf:

?S: This variable conditionally defines the HAS\_ATOLF symbol, which

?S: indicates to the C program that the atolf() routine is available.

?S:.

?C:HAS\_ATOLF:

?C: This symbol, if defined, indicates that the atolf routine is

?C: available to convert strings into long doubles.

?C:.

?H:#\$d\_atolf HAS\_ATOLF /\*\*/

?H:.

?LINT:set d\_atolf

: see if atolf exists

set atolf d\_atolf

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/atolf.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: orderlib.U,v 3.0.1.4 1997/02/28 16:18:18 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: orderlib.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:18:18 ram  
?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS: patch61: likewise for .o replaced by \$\_o  
?RCS: patch61: now uses the ar located by Loc.U  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:33:04 ram  
?RCS: patch45: allows hint files to specify their own value for 'ranlib'  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/29 16:26:48 ram  
?RCS: patch36: now performs a real small compile for accurate  
checks (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/08/29 16:31:17 ram  
?RCS: patch32: use cc variable instead of hardwired 'cc' in 1st compile  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:26 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:orderlib ranlib: Loc ar cat test rm +cc +ccflags +ldflags +libs i\_stdlib \_a \_o run  
?MAKE: -pick add \$@ %<  
?S:orderlib:  
?S: This variable is "true" if the components of libraries must be ordered  
?S: (with `lorder \$\* | tsort`) before placing them in an archive. Set to  
?S: "false" if ranlib or ar can generate random libraries.  
?S:.  
?S:ranlib:  
?S: This variable is set to the pathname of the ranlib program, if it is  
?S: needed to generate random libraries. Set to ":" if ar can generate  
?S: random libraries or if random libraries are not supported  
?S:.  
?F:!foobar  
: see if ar generates random libraries by itself  
echo " "  
echo "Checking how to generate random libraries on your machine..." >&4  
?X: Some systems (like MIPS) complain when running  
ar... Others like Ultrix  
?X: need an explicit 'ar ts' to add the table of contents.  
?X: Still others like Linux run ar ts successfully, but still need ranlib.  
?X: This set of tests seems the minimum necessary to check out Linux.  
?X: We need to explicitly put the entries in out-of-order so that Sun's ld

```

?X: will fail. (Otherwise it complains, but gives an exit status of 0.)
echo 'int bar1() { return bar2(); }' > bar1.c
echo 'int bar2() { return 2; }' > bar2.c
$cat > foo.c <<EOP
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() { printf("%d\n", bar1()); exit(0); }
EOP
$cc $ccflags -c bar1.c >/dev/null 2>&1
$cc $ccflags -c bar2.c >/dev/null 2>&1
$cc $ccflags -c foo.c >/dev/null 2>&1
$ar rc bar$_a bar2$_o bar1$_o >/dev/null 2>&1
if $cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs >/dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then
echo "$ar appears to generate random libraries itself."
orderlib=false
if [ "X$ranlib" = "X" ]; then
    ranlib=":"
fi
elif
$ar s bar$_a >/dev/null 2>&1 &&
$cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs >/dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then
    echo "a table of contents needs to be added with '$ar s'."
    orderlib=false
    ranlib="$ar s"
elif $ar ts bar$_a >/dev/null 2>&1 &&
$cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs >/dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then
    echo "a table of contents needs to be added with '$ar ts'."
    orderlib=false
    ranlib="$ar ts"
else
?X: Allow hints to specify their own ranlib "script". For instance, on
?X: some NeXT machines, the timestamp put by ranlib is not correct, and this
?X: may raise tedious recompiles for nothing. Therefore, NeXT may add the
?X: ranlib='sleep 5; /bin/ranlib' line in their hints to "fix" that.
?X: (reported by Andreas Koenig <k@franz.ww.tu-berlin.de>)
case "$ranlib" in
:) ranlib="";
")
    ranlib=`./loc ranlib X /usr/bin /bin /usr/local/bin`
    $test -f $ranlib || ranlib="
;;
esac
if $test -n "$ranlib";

```

```

then
echo "your system has '$ranlib'; we'll use that."
orderlib=false
else
echo "your system doesn't seem to support random libraries"
echo "so we'll use lorder and tsort to order the libraries."
orderlib=true
ranlib=""
fi
fi
$rm -f foo* bar*

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/orderlib.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_ieeefp.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_ieeefp: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_ieeefp:

?S: This variable conditionally defines the I\_IEEEFP symbol, and indicates

?S: whether a C program should include <ieeefp.h>.

?S:.

?C:I\_IEEEFP:

?C: This symbol, if defined, indicates that <ieeefp.h> exists and

?C: should be included.

?C:.

?H:#\$i\_ieeefp I\_IEEEFP /\*\*/

?H:.

?LINT:set i\_ieeefp

: see if this is a ieeefp.h system

case "\$i\_ieeefp" in

" ) set ieeefp.h i\_ieeefp

eval \$inhdr

::

esac

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_ieeefp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_wctomb.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_wctomb.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:20:43 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_wctomb: Inlibc
?MAKE: -pick add $@ %<
?S:d_wctomb:
?S: This variable conditionally defines the HAS_WCTOMB symbol, which
?S: indicates to the C program that the wctomb() routine is available
?S: to convert a wide character to a multibyte.
?S:.
?C:HAS_WCTOMB (WCTOMB):
?C: This
symbol, if defined, indicates that the wctomb routine is available
?C: to convert a wide character to a multibyte.
?C:.
?H:#$d_wctomb HAS_WCTOMB /**/
?H:.
?LINT:set d_wctomb
: see if wctomb exists
set wctomb d_wctomb
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_wctomb.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_logb: Inlibc
?MAKE: -pick add $@ %<
?S:d_logb:
```

?S: This variable conditionally defines the HAS\_LOGB symbol, which  
?S: indicates to the C program that the logb() routine is available  
?S: to extract the exponent of x.  
?S:.  
?C:HAS\_LOGB:  
?C: This symbol, if defined, indicates that the logb routine is  
?C: available to do the logb function.  
?C:.  
?H:#\$d\_logb HAS\_LOGB /\*\*/  
?H:.  
?LINT:set d\_logb  
: see if logb exists  
set logb d\_logb  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_logb.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: privlib.U,v \$

?RCS: Revision 3.0.1.4 1995/09/25 09:17:09 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:44:23 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:31:52 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:12:34 ram

?RCS: patch10: added support for /local/lib (WED)

?RCS: patch10: prompt phrasing made

more explicit (WED)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

```

?MAKE:privlib privlibexp installprivlib: afs package cat Getfile \
Oldconfig Prefixit test
?MAKE: -pick add $@ %<
?Y:TOP
?S:privlib:
?S: This variable contains the eventual value of the PRIVLIB symbol,
?S: which is the name of the private library for this package. It may
?S: have a ~ on the front. It is up to the makefile to eventually create
?S: this directory while performing installation (with ~ substitution).
?S:.
?S:privlibexp:
?S: This variable is the ~name expanded version of privlib, so that you
?S: may use it directly in Makefiles or shell scripts.
?S:.
?S:installprivlib:
?S: This variable is really the same as privlibexp but may differ on
?S: those systems using AFS. For extra portability, only this variable
?S: should be used in makefiles.
?S:.
?C:PRIVLIB:
?C: This symbol contains the name of the private library for this package.
?C: The library is
private in the sense that it needn't be in anyone's
?C: execution path, but it should be accessible by the world. The program
?C: should be prepared to do ~ expansion.
?C:.
?C:PRIVLIB_EXP:
?C: This symbol contains the ~name expanded version of PRIVLIB, to be used
?C: in programs that are not prepared to deal with ~ expansion at run-time.
?C:.
?H:#define PRIVLIB "$privlib" /**/
?H:#define PRIVLIB_EXP "$privlibexp" /**/
?H:.
: determine where private executables go
set dflt privlib lib/$package
eval $prefixit
$cat <<EOM

```

There are some auxiliary files for \$package that need to be put into a private library directory that is accessible by everyone.

```

EOM
fn=d~+
rp='Pathname where the private library files will reside?'
./getfile
if $test "X$privlibexp" != "X$sansexp"; then
installprivlib="
fi

```



```
privlib="$ans"
privlibexp="$ansexp"
if $afs; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```
EOM
case "$installprivlib" in
") dflt=`echo $privlibexp | sed 's#^/afs/#/afs/#^`;;
*) dflt="$installprivlib";;
esac
fn=de~
rp='Where will private files be installed?'
./getfile
installprivlib="$ans"
else
installprivlib="$privlibexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/privlib.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: sbrktype.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: sbrktype.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:43 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:sbrktype: Myread Oldconfig Loc contains Findhdr
?MAKE: -pick add $@ %<
?S:sbrktype:
?S: This variable defines sbrktype to be something like caddr_t, char *,
?S: or whatever type is used to declare sbrk() in the kernel.
?S:.
```

?C:Caddr\_t (SBRKTYPE):

?C: This symbol holds the type of a core address. It is intended to be used

?C: to safely

declare the return type of system calls like sbrk(). It might

?C: be necessary to include <sys/types.h> as well.

?C:.

?H:#define Caddr\_t \$sbrktype /\* <core address> type \*/

?H:.

: see what type sbrk is declared as in the kernel

case "\$sbrktype" in

")

if \$contains 'caddr\_t;' `./findhdr sys/types.h` >/dev/null 2>&1 ; then

  dflt='caddr\_t';

else

  dflt='char \*';

fi

::

\*) dflt="\$sbrktype"

::

esac

echo " "

rp="What is the return type of sbrk() on this system?"

  ./myread

sbrktype="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sbrktype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_finitel: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_finitel:

?S: This variable conditionally defines the HAS\_FINITEL symbol, which

?S: indicates to the C program that the finitel() routine is available.

?S:.

?C:HAS\_FINITEL:

?C: This symbol, if defined, indicates that the finitel routine is

?C: available to check whether a long double is finite

?C: (non-infinity non-NaN).

?C:.

?H:#\$d\_finitel HAS\_FINITEL /\*\*/

?H:.

?LINT:set d\_finitel

: see if finitel exists

set finitel d\_finitel

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_finitel.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: ccflags.U,v 3.0.1.9 1997/02/28 15:27:07 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: ccflags.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 15:27:07 ram

?RCS: patch61: removed support for NO\_PROTOTYPE detection on SCO

?RCS: patch61: new locincpth variable

?RCS: patch61: added info on the "additional ld flags" question

?RCS:

?RCS: Revision 3.0.1.8 1995/07/25 13:48:54 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.7 1995/05/12 12:08:33 ram

?RCS: patch54: now checks for cc/ccflags/ldflags

coherency

?RCS:

?RCS: Revision 3.0.1.6 1994/10/29 16:07:02 ram

?RCS: patch36: gcc versioning no longer relies on the C compiler's name

?RCS: patch36: simplified check for gcc version checking (ADO)

?RCS:

?RCS: Revision 3.0.1.5 1994/08/29 16:06:35 ram

?RCS: patch32: propagate -posix flag from ccflags to ldflags

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 14:28:45 ram

?RCS: patch23: -fpcc-struct-return only needed in gcc 1.x (ADO)

?RCS: patch23: cppflags now computed on an option-by-option basis

?RCS: patch23: magically added cc flags now only done the first time

?RCS:

?RCS: Revision 3.0.1.3 1993/09/13 15:58:29 ram

?RCS: patch10: explicitly mention -DDEBUG just in case they need it (WAD)

?RCS: patch10: removed all the "tans" variable usage (WAD)

?RCS:

?RCS: Revision 3.0.1.2 1993/08/27 14:39:38 ram

?RCS: patch7: added support for OSF/1 machines

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:00:24 ram

?RCS: patch6: added defaults for cppflags, ccflags and ldflags

?RCS:

?RCS:

Revision 3.0 1993/08/18 12:05:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:ccflags ldflags lkflags cppflags optimize locincpth: test cat osname \

Myread Guess Options Oldconfig +gccversion mips\_type +usrinc \

package contains rm +cc cppstdin cppminus cprun cpplast libpth \

libs loclibpth hint usesocks sh run rm\_try sysroot

?MAKE: -pick add \$@ %<

?S:ccflags:

?S: This variable contains any additional C compiler flags desired by

?S: the user. It is up to the Makefile to use this.

?S:.

?S:cppflags:

?S: This variable holds the flags that will be passed to the C pre-

?S: processor. It is up to the Makefile to use it.

?S:.

?S:optimize:

?S: This variable contains any optimizer/debugger flag that should be used.

?S: It is up to the Makefile to use it.

?S:.

?S:ldflags:

?S: This variable contains any additional C loader flags desired by

?S: the user. It is up to the Makefile to use this.

?S:.

?S:lkflags:

?S: This variable contains any additional C partial linker flags

desired by

?S: the user. It is up to the Makefile to use this.

?S:.

?S:locincpth:

?S: This variable contains a list of additional directories to be

?S: searched by the compiler. The appropriate '-I' directives will

?S: be added to ccflags. This is intended to simplify setting

?S: local directories from the Configure command line.

?S: It's not much, but it parallels the loclibpth stuff in libpth.U.

?S:.

?T:inctest thisincl xxx inclwanted ftry previous thislibdir

?T:EBUGGING DEBUGGING

```

?T:check flag callback checkccflag
?F:!cpp.c !gcctest !try
?D:cppflags=""
?D:ccflags=""
?D:ldflags=""
?D:optimize=""
?LINT:extern _sysroot
?INIT:: Possible local include directories to search.
?INIT:: Set locincpth to "" in a hint file to defeat local include searches.
?INIT:locincpth="/usr/local/include /opt/local/include /usr/gnu/include"
?INIT:locincpth="$locincpth /opt/gnu/include /usr/GNU/include /opt/GNU/include"
?INIT::
?INIT:: no include file wanted by default
?INIT:inclwanted=""
?INIT:
?INIT::
  Enable -DEBUGGING and -DDEBUGGING from the command line
?INIT:EBUGGING=""
?INIT:DEBUGGING=""
?INIT:
: determine optimization, if desired, or use for debug flag also
?X: Allow for Configure -Uoptimize -- it's not strictly sensible, but
?X: it has happened and we know what they mean.  AD 2/16/98
case "$optimize" in
'|$undef) dflt='none';;
") dflt='-O';;
*) dflt="$optimize";;
esac
$cat <<EOH

```

By default, \$package compiles with the -O flag to use the optimizer. Alternately, you might want to use the symbolic debugger, which uses the -g flag (on traditional Unix systems). Either flag can be specified here. To use neither flag, specify the word "none".

EOH

```

rp="What optimizer/debugger flag should be used?"
./myread
optimize="$ans"
case "$optimize" in
'none') optimize="" ;;
esac

```

```

: Check what DEBUGGING is required from the command line
: -DEBUGGING or -DDEBUGGING or
: -DEBUGGING=both = -g + -DDEBUGGING
: -DEBUGGING=-g or -Doptimize=-g = -g
: -DEBUGGING=none or -UDEBUGGING =

```

```

:
-DEBUGGING=old or -DEBUGGING=default = ? $optimize
case "$EBUGGING" in
") ;;
*) DEBUGGING=$EBUGGING ;;
esac

```

```

case "$DEBUGGING" in
-g|both|$define)
  case "$optimize" in
  *-g*) ;;
  *) optimize="$optimize -g" ;;
  esac ;;
none|$undef)
  case "$optimize" in
  *-g*) set `echo "X $optimize " | sed 's/ -g / /'`
  shift
  optimize="$*"
  ;;
  esac ;;
esac

```

```

dflt="
case "$DEBUGGING" in
both|$define) dflt='-DDEBUGGING'
esac

```

```

: argument order is deliberate, as the flag will start with - which set could
: think is an option
checkccflag='check=$1; flag=$2; callback=$3;
echo " ";
echo "Checking if your compiler accepts $flag" 2>&1;
[ "X$sysroot" != "X" ] && echo "For sysroot = $sysroot";
echo "int main(void) { return 0; }" > gcctest.c;
if $cc $_sysroot -O2 $flag -o gcctest gcctest.c 2>gcctest.out && $run ./gcctest; then
  echo "Yes, it does." 2>&1;
  if $test -s gcctest.out ; then
    echo "But your platform does not like it:";
    cat gcctest.out;
  else
  case "$ccflags"
in
*$check*)
  echo "Leaving current flags $ccflags alone." 2>&1
  ;;
*) dflt="$dflt $flag";
  eval $callback
  ;;

```

```

esac
fi
else
    echo "Nope, it does not, but that is ok." 2>&1;
fi
,

```

: We will not override a previous value, but we might want to

: augment a hint file

```
case "$hint" in
```

```
default|recommended)
```

```
case "$gccversion" in
```

```
1.*) dflt="$dflt -fpcc-struct-return" ;;
```

```
esac
```

```
case "$optimize:$DEBUGGING" in
```

```
*-g*:old) dflt="$dflt -DDEBUGGING";;
```

```
esac
```

?X: check for POSIXized ISC

```
case "$gccversion" in
```

```
2.*) if $test -d /etc/conf/kconfig.d &&
```

```
    $contains _POSIX_VERSION $usrinc/sys/unistd.h >/dev/null 2>&1
```

```
then
```

```
    # Interactive Systems (ISC) POSIX mode.
```

```
    dflt="$dflt -posix"
```

```
fi
```

```
::
```

```
esac
```

?X: If the user has gcc-2.95 or greater, try adding -fno-strict-alias.

?X: Since the gcc "version" can be non-numeric, e.g.

?X: "2.95.1 19990809 (prerelease)", we'll do the test on any version

?X: greater than 2.8.

?X: --Andy Dougherty 27 Aug 1999

```
case "$gccversion" in
```

```
1.*)
```

```
::
```

```
2.[0-8]*) ;;
```

```
?*) set strict-aliasing -fno-strict-aliasing
```

```
    eval $checkccflag
```

```
::
```

```
esac
```

?X: HMB 200405

?X: -pipe has shown a compile time speedup of about 40% on Linux and HP-UX

?X: and also worked on cygwin-1.5.9

?X: If a system fails, disable it in the hints. 99% of gcc uses binutils

```
# For gcc, adding -pipe speeds up compilations for some, but apparently
```

```
# some assemblers can't read from stdin. (It also slows down compilations
```

```
# in other cases, but those are apparently rarer these days.) AD 5/2004.
```

```
case "$gccversion" in
```

```
?*) set pipe -pipe
eval $checkccflag
;;
esac
```

?X: NWC 200712

```
# on x86_64 (at least) we require an extra library (libssp) in the
# link command line. This library is not named, so I infer that it is
# an implementation detail that may change. Hence the safest approach
# is to add the flag to the flags passed to the compiler at link time,
# as that way the compiler can do the right implementation dependant
# thing. (NWC)
```

```
case "$osname" in
amigaos)
;; # -fstack-protector builds but doesn't work
*) case "$gccversion" in
?*) set stack-protector-strong -fstack-protector-strong
eval $checkccflag
case "$dflt" in
*-fstack-protector-strong*) ;; # It got added.
*) # Try the plain/older -fstack-protector.
set stack-protector -fstack-protector
eval $checkccflag
;;
esac
;;
esac
;;
esac
;;
esac
```

?X: In USG mode, a MIPS system may need some BSD includes

```
case "$mips_type" in
*BSD*|") inclwanted="$locincpth $usrinc";;
*) inclwanted="$locincpth $inclwanted $usrinc/bsd";;
esac
for thisincl in $inclwanted; do
if $test -d $thisincl; then
if $test x$thisincl != x$usrinc; then
case "$dflt" in
*" -I$thisincl "*);;
*) dflt="$dflt -I$thisincl ";;
esac
fi
fi
done
```



```
?X: Include test function (header, symbol)
inctest='if $contains $2 $usrinc/$1 >/dev/null 2>&1; then
xxx=true;
elif $contains $2 $usrinc/sys/$1 >/dev/null 2>&1; then
xxx=true;
else
xxx=false;
fi;
if $xxx; then
case "$dflt"
in
*$2*);;
*) dflt="$dflt -D$2";;
esac;
fi'
```

```
set signal.h LANGUAGE_C; eval $inctest
```

```
case "$usesocks" in
$define)
ccflags="$ccflags -DSOCKS"
;;
esac
```

```
case "$hint" in
default|recommended) dflt="$ccflags $dflt" ;;
*) dflt="$ccflags";;
esac
```

```
case "$dflt" in
'| ') dflt=none;;
esac
```

```
$cat <<EOH
```

Your C compiler may want other flags. For this question you should include -I/whatever and -DWHATEVER flags and any other flags used by the C compiler, but you should NOT include libraries or ld flags like -lwhatever. If you want \$package to honor its debug switch, you should include -DDEBUGGING here. Your C compiler might also need additional flags, such as -D\_POSIX\_SOURCE.

To use no flags, specify the word "none".

```
EOH
```

```
?X: strip leading space
```

```
set X $dflt
```

```
shift
```

```
dflt=${1+"$@"}
```

```

rp="Any additional cc flags?"
. ./myread
case "$ans" in
none) ccflags="";;
*) ccflags="$ans";;
esac

: the following weeds options from ccflags that are of no interest to cpp
case "$cppflags" in
") cppflags="$ccflags"
;;
*) set X $ccflags; shift
  case " $cppflags " in
  *" $1 "*" ) ;; # Try to avoid doubling the cppflags.
  *) cppflags="$cppflags $ccflags" ;;
  esac
  ;;
esac
case "$gccversion" in
1.*) cppflags="$cppflags -D__GNUC__"
esac
case "$mips_type" in
");;
*BSD*) cppflags="$cppflags -DSYSTYPE_BSD43";;
esac
case "$cppflags" in
");;
*)
echo " "
echo "Let me guess what the preprocessor flags are..." >&4
set X $cppflags
shift
cppflags="
$cat >cpp.c <<'EOM'
#define BLURFL foo

BLURFL xx LFRULB
EOM
?X:
?X: For each cc flag, try it out with both cppstdin and cprun, since the
?X: first is almost surely a cc wrapper. We have to try both in case
?X: of cc flags like '-Olimit 2900' that are actually two words...
?X:
previous="
for flag in $*
do
  case "$flag" in
  -*) ftry="$flag";;

```

```

*) ftry="$previous $flag";
esac
if $cppstdin -DLFRULB=bar $cppflags $ftry $cppminus <cpp.c \
>cpp1.out 2>/dev/null && \
$cpprun -DLFRULB=bar $cppflags $ftry $cpplast <cpp.c \
>cpp2.out
2>/dev/null && \
$contains 'foo.*xx.*bar' cpp1.out >/dev/null 2>&1 && \
$contains 'foo.*xx.*bar' cpp2.out >/dev/null 2>&1
then
cppflags="$cppflags $ftry"
previous="
else
previous="$flag"
fi
done
set X $cppflags
shift
cppflags=${1+"$@"}
case "$cppflags" in
*-* ) echo "They appear to be: $cppflags";;
esac
$rm -f cpp.c cpp?.out
;;
esac

```

: flags used in final linking phase

```

case "$ldflags" in
") if ./venix; then
dflt='-i -z'
else
dflt="
fi
case "$ccflags" in
*-posix*) dflt="$dflt -posix" ;;
esac
;;
*) dflt="$ldflags";;
esac
# See note above about -fstack-protector
case "$ccflags" in
*-fstack-protector-strong*)
case "$dflt" in
*-fstack-protector-strong*) ;; # Don't add it again
*) dflt="$dflt -fstack-protector-strong" ;;
esac
;;
*-fstack-protector*)

```

```

case "$dflt" in
*-fstack-protector*) ;; # Don't add it again
*) dflt="$dflt -fstack-protector" ;;
esac
;;
esac

```

: Try to guess additional flags to pick up local libraries.

```

for thislibdir
in $libpth; do
case " $loclibpth " in
*" $thislibdir "*)
case "$dflt " in
*" -L$thislibdir "*) ;;
*) dflt="$dflt -L$thislibdir" ;;
esac
;;
esac
done

```

```

case "$dflt" in
") dflt='none' ;;
esac

```

\$cat <<EOH

Your C linker may need flags. For this question you should include `-L/whatever` and any other flags used by the C linker, but you should NOT include libraries like `-lwhatever`.

Make sure you include the appropriate `-L/path` flags if your C linker does not normally search all of the directories you specified above, namely

`$libpth`

To use no flags, specify the word "none".

EOH

rp="Any additional ld flags (NOT including libraries)?"

./myread

```

case "$ans" in
none) ldflags="";;
*) ldflags="$ans";;
esac

```

rmlist="\$rmlist pdp11"

@if lkflags

: partial linking may need other flags

```

case "$lkflags" in
") case "$ldflags" in
") dflt='none';;
*) dflt="$ldflags";;
esac;;
*) dflt="$lkflags";;
esac
echo " "
rp="Partial linking flags to be used (NOT including -r)?"
. ./myread
case "$ans"
in
none) lkflags="";;
*) lkflags="$ans";;
esac

@end
?X:
?X: If the user changes compilers after selecting a hint file, it's
?X: possible that the suggested ccflags/ldflags will be wrong. Try to
?X: compile and run a simple test program. Let the user see all the
?X: error messages. -- ADO and RAM
?X: Sometimes, particularly on Linux systems, there is a bad library
?X: (e.g. a dangling symlink or incompatible library or a "run-time"
?X: version but not a "development" version of a library). This test
?X: will catch those sorts of problems too, though how to fix them
?X: may not be obvious.
?X:
?X: : coherency check
echo " "
echo "Checking your choice of C compiler and flags for coherency..." >&4
$cat > try.c <<'EOF'
#include <stdio.h>
int main() { printf("Ok\n"); return(0); }
EOF
?X: Strip extra blanks in case some of the following variables are empty
set X $cc -o try $optimize $ccflags $ldflags try.c $libs
shift
$cat >try.msg <<'EOM'
I've tried to compile and run the following simple
program:

EOM
$cat try.c >> try.msg

$cat >> try.msg <<EOM

I used the command:

```

```
$*  
$run ./try
```

and I got the following output:

```
EOM  
dflt=y  
?X: Use "sh -c" to avoid error messages tagged with leading "Configure:".  
?X: We need to try the resulting executable, because cc might yield a 0 status  
?X: even when ld failed, in which case the executable will not run properly,  
?X: if its x bit is set at all..  
if $sh -c "$cc -o try $optimize $ccflags $ldflags try.c $libs" >>try.msg 2>&1; then  
if $sh -c "$run ./try " >>try.msg 2>&1; then  
xxx=`$run ./try`  
case "$xxx" in  
"Ok") dflt=n ;;  
*) echo 'The program compiled OK, but produced no output.' >> try.msg ;;  
esac  
else  
echo "The program compiled OK, but exited with status $?." >>try.msg  
rp="You have a problem. Shall I abort Configure"  
dflt=y  
fi  
else  
echo "I can't compile the test program." >>try.msg  
rp="You have a BIG problem. Shall I abort Configure"  
dflt=y  
fi  
case "$dflt" in  
y)  
$cat try.msg >&4  
?X: using -K will prevent  
default aborting--maybe they're cross compiling?  
case "$knowitall" in  
")  
echo "(The supplied flags or libraries might be incorrect.)"  
;;  
*) dflt=n;;  
esac  
echo " "  
. /myread  
case "$ans" in  
n*[N*]) ;;  
*) echo "Ok. Stopping Configure." >&4  
exit 1  
;;  
esac
```

```
;;
n) echo "OK, that should do.";;
esac
$rm_try gcctest gcctest.out
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/ccflags.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservbyname\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getservbyname\_r getservbyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getservbyname\_r:

?S: This variable conditionally defines the HAS\_GETSERVBYNAME\_R symbol,

?S: which indicates to the C program that the getservbyname\_r()

?S: routine is available.

?S:.

?S:getservbyname\_r\_proto:

?S: This variable encodes the prototype of getservbyname\_r.

?S: It is zero if d\_getservbyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservbyname\_r

?S: is defined.

?S:.

?C:HAS\_GETSERVBYNAME\_R:

?C: This symbol, if defined, indicates

that the getservbyname\_r routine

?C: is available to getservbyname re-entrantly.

?C:.

?C:GETSERVBYNAME\_R\_PROTO:

?C: This symbol encodes the prototype of getservbyname\_r.

?C: It is zero if d\_getservbyname\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservbyname\_r

?C: is defined.

?C:.

?H:#\$d\_getservbyname\_r HAS\_GETSERVBYNAME\_R /\*\*/

?H:#define GETSERVBYNAME\_R\_PROTO \$getservbyname\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getservbyname\_r\_proto

: see if getservbyname\_r exists

```

set getservbyname_r d_getservbyname_r
eval $inlibc
case "$d_getservbyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getservbyname_r_proto:$usethreads" in
":define") d_getservbyname_r_proto=define
set d_getservbyname_r_proto getservbyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getservbyname_r_proto" in
define)
case "$getservbyname_r_proto" in
"|0) try='int getservbyname_r(const char*, const char*, struct servent*, char*,
size_t, struct servent**);'
./prochck "$extern_C $try" $hdrs && getservbyname_r_proto=I_CCSBWR ;;
esac
case "$getservbyname_r_proto" in
"|0) try='struct servent* getservbyname_r(const char*, const char*, struct servent*, char*, int);'
./prochck "$extern_C $try" $hdrs && getservbyname_r_proto=S_CCSBI ;;
esac
case "$getservbyname_r_proto" in
"|0) try='int getservbyname_r(const char*, const char*, struct servent*, struct servent_data*);'
./prochck "$extern_C $try" $hdrs && getservbyname_r_proto=I_CCSD ;;
esac
case "$getservbyname_r_proto" in
"|0) d_getservbyname_r=undef
getservbyname_r_proto=0
echo "Disabling getservbyname_r, cannot determine prototype." >&4 ;;
* ) case "$getservbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getservbyname_r_proto="REENTRANT_PROTO_$getservbyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getservbyname_r has no prototype, not using it." >&4 ;;
esac
d_getservbyname_r=undef
getservbyname_r_proto=0
;;
esac
;;
*) getservbyname_r_proto=0
;;
esac

```



Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_getservbyname\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setpgrp.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:44:16 ram

?RCS: patch61: obsoleted USE\_BSDGRP in favor of USE\_BSD\_SETPGRP

?RCS: patch61: another unit now also defines a USE\_BSD\_GETPGRP

?RCS: patch61: fallback for test program failure improved

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 13:59:30 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:15:37 ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

patch36: call ./usg explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setpgrp d\_bsdsetpgrp: cat rm +cc +libs +ccflags \  
+ldflags Inlibc Guess Setvar i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_setpgrp:

?S: This variable conditionally defines HAS\_SETPGRP if setpgrp() is

?S: available to set the current process group.

?S:.

?S:d\_bsdsetpgrp (d\_bsdpgp):

?S: This variable conditionally defines USE\_BSD\_SETPGRP if

?S: setpgrp needs two arguments whereas USG one needs none.

?S: See also d\_setpgid for a POSIX interface.

?S:.

?C:HAS\_SETPGRP (SETPGRP):

?C: This symbol, if defined, indicates that the setpgrp routine is

?C: available to set the current process group.  
 ?C:.  
 ?C:USE\_BSD\_SETPGRP (USE\_BSDPGRP BSDPGRP):  
 ?C: This symbol, if defined, indicates that setpgrp needs two  
 ?C: arguments whereas USG one needs none. See also HAS\_SETPGID  
 ?C: for a POSIX interface.  
 ?C:.  
 ?H:#\$d\_setpgrp HAS\_SETPGRP /\*\*/  
 ?H:#\$d\_bsdsetpgrp  
 USE\_BSD\_SETPGRP /\*\*/  
 ?H:.  
 ?F:!set.c !set  
 ?T:xxx  
 ?LINT:set d\_setpgrp d\_bsdsetpgrp  
 : see if setpgrp exists  
 set setpgrp d\_setpgrp  
 eval \$inlibc

```
@if USE_BSD_SETPGRP || d_bsdsetpgrp
case "$d_setpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of setpgrp is in use..."
$cat >set.c <<EOP
#$i_unistd I_UNISTD
#include <sys/types.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
int main()
{
if (getuid() == 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (-1 == setpgrp(1, 1))
exit(0);
#else
if (setpgrp() != -1)
exit(0);
#endif
exit(1);
}
EOP
if $cc -DTRY_BSD_PGRP $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1 && ./set; then
echo 'You have to use setpgrp(pid,pgrp) instead of setpgrp().' >&4
val="$define"
```

```

elif $cc $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1 && ./set; then
echo 'You have to use setpgrp() instead of setpgrp(pid,pgrp).' >&4
val="$undef"
else
echo "(I can't
seem to compile and run the test program.)"
if ./usg; then
xxx="a USG one, i.e. you use setpgrp()."
else
# SVR4 systems can appear rather BSD-ish.
case "$i_unistd" in
$undef)
xxx="a BSD one, i.e. you use setpgrp(pid,pgrp)."
val="$define"
;;
$define)
xxx="probably a USG one, i.e. you use setpgrp()."
val="$undef"
;;
esac
fi
echo "Assuming your setpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set d_bsdsetpgrp
eval $setvar
$rm -f set set.c
@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_setpgrp.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_usendir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: d\_usendir.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:47:34 ram

```

?RCS: patch61: replaced .a with $_a all over the place
?RCS: patch61: likewise for .o replaced by $_o
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:52 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_usendir i_ndir ndirlib: test Setvar Findhdr d_readdir _a
?MAKE: -pick add $@ %<
?S:d_usendir:
?S: This variable conditionally defines the EMULATE_NDIR symbol, which
?S: indicates
to the C program that it should compile the ndir.c code
?S: provided with the package.
?S:.
?S:i_ndir (d_libndir):
?S: This variable conditionally defines the I_NDIR symbol, which
?S: indicates to the C program that it should include the system's
?S: version of ndir.h, rather than the one with this package.
?S:.
?S:ndirlib:
?S: The name of the library to include at linking stage to resolve ndir
?S: symbols. It is up to the makefile to use this value.
?S:.
?C:EMULATE_NDIR (USENDIR):
?C: This symbol, if defined, indicates that the program should compile
?C: the ndir.c code provided with the package.
?C:.
?C:I_NDIR (LIBNDIR):
?C: This symbol, if defined, indicates that the program should include the
?C: system's version of ndir.h, rather than the one with this package.
?C:.
?H:#$d_usendir EMULATE_NDIR /**/
?H:#$i_ndir I_NDIR /**/
?H:.
?T:val2
?LINT: set d_usendir i_ndir
: see if there are directory access routines out there
echo " "
if $test `./findhdr ndir.h` && \
( $test -r /usr/lib/libndir$_a
|| $test -r /usr/local/lib/libndir$_a ); then
echo "Ndir library found." >&4
if $test -r /usr/lib/libndir$_a; then
ndirlib='-lndir'
else
ndirlib="/usr/local/lib/libndir$_a"
fi
val2="$define"

```

```

val="$undef"
else
ndirlib="
val2="$undef"
case "$d_readdir" in
"$define")
echo "No ndir library found, but you have readdir() so we'll use that." >&4
val="$undef";
;;
*)
echo "No ndir library found." >&4
val="$define"
;;
esac
fi
set d_usendir
eval $setvar
val="$val2"
set i_ndir
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_usendir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorlib.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

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?RCS:

?RCS: \$Log: vendorlib.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:d\_vendorlib vendorlib vendorlibexp installvendorlib vendorlib\_stem: \

Getfile Setprefixvar Oldconfig Prefixit package vendorprefix sed \

installstyle version

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorlib:

?S: This variable contains the eventual value of the VENDORLIB symbol,

?S: which is the name of the private library for this package.

?S: The standard distribution will put nothing in this directory.

?S: Vendors who distribute perl may wish to place their own modules in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorlibexp:

?S: This variable is the ~name expanded version of vendorlib, so that you may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorlib="

?S:installvendorlib:

?S: This variable is really the same as vendorlibexp but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

?S:.

?S:d\_vendorlib:

?S: This variable conditionally defines PERL\_VENDORLIB.

?S:.

?S:vendorlib\_stem:

?S: This variable is \$vendorlibexp with any trailing version-specific component removed. The elements in inc\_version\_list (inc\_version\_list.U) can be tacked onto this variable to generate a list of directories to search.

?S:.

?C:PERL\_VENDORLIB:

?C: If defined, this symbol contains the name of a private library.

?C: The library is private in the sense that it needn't be in anyone's execution path, but it should be accessible by the world. The program should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: Vendors who distribute perl may wish to place their own modules in this directory with

?C: MakeMaker Makefile.PL INSTALLDIRS=vendor

?C: or equivalent. See INSTALL for details.

?C:.

?C:PERL\_VENDORLIB\_EXP:

?C: This symbol contains the ~name expanded version of VENDORLIB, to be used in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?C:PERL\_VENDORLIB\_STEM:

?C: This define is PERL\_VENDORLIB\_EXP with any trailing version-specific component removed. The elements in inc\_version\_list (inc\_version\_list.U) can be tacked onto this variable to generate a list of directories to search.

?C:.

?H:#\$d\_vendorlib PERL\_VENDORLIB "\$vendorlib" /\*\*/

?H:#\$d\_vendorlib PERL\_VENDORLIB\_EXP

```

"$vendorlibexp" /**/
?H:#$d_vendorlib PERL_VENDORLIB_STEM "$vendorlib_stem" /**/
?H:
?T:prog
?LINT:change prefixvar
?LINT:set installvendorlib
: Set the vendorlib variables
case "$vendorprefix" in
") d_vendorlib="$undef"
vendorlib="
vendorlibexp="
;;
*) d_vendorlib="$define"
: determine where vendor-supplied modules go.
: Usual default is /usr/local/lib/perl5/vendor_perl/$version
case "$vendorlib" in
")
?X: remove any trailing -3.0 or other version identification
prog=`echo $package | $sed 's/-*[0-9.]*$//`
case "$installstyle" in
*lib/perl5*) dflt=$vendorprefix/lib/$package/vendor_$prog/$version ;;
*) dflt=$vendorprefix/lib/vendor_$prog/$version ;;
esac
;;
*) dflt="$vendorlib"
;;
esac
fn=d~+
rp='Pathname for the vendor-supplied library files?'
./getfile
vendorlib="$ans"
vendorlibexp="$ansexp"
;;
esac
vendorlib_stem=`echo "$vendorlibexp" | sed "s,/,$version$,,"`
prefixvar=vendorlib
./installprefix

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorlib.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Whoa.U,v 3.0.1.2 1997/02/28 15:21:21 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Whoa.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:21:21 ram

?RCS: patch61: whoa script now starts with leading "startsh"

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:02:01 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:19 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a bit of shell code that must be dotted in in order

?X: to warn the user in case a change into a variable

is noticed.

?X:

?X: To use this unit, \$was must hold the old value that has changed. Upon

?X: exit, the two variables \$td and \$tu are set to the correct value for

?X: respectively defining or undefining a variable. For instance, if \$was was

?X: \$undef, but now \$var is \$define, after calling . whoa, you should use

?X: eval "\$var=\\$tu" to finally set \$var to the correct value. See unit Inlibc.

?X:

?MAKE:Whoa: Myread startsh hint

?MAKE: -pick add \$@ %<

?F:./whoa

?T:var was td tu hintfile

: set up the script used to warn in case of inconsistency

cat <<EOS >whoa

\$startsh

EOS

cat <<'EOOSC' >>whoa

dflt=y

case "\$hint" in

recommended)

case "\$hintfile" in

") echo "The \$hint value for \\$\$var on this machine was \"\\$was\!" ">&4

::

\*) echo "Hmm. Based on the hints in hints/\$hintfile.sh, " ">&4

echo "the \$hint value for \\$\$var on this machine was \"\\$was\!" ">&4

::

esac

::

\*) echo " "

echo "\*\*\* WHOA THERE!!! \*\*\*" >&4



```

echo " The $hint value for \$$var on this machine was
\"$was\"!" >&4
;;
esac
rp=" Keep the $hint value?"
. ./myread
case "$ans" in
y) td=$was; tu=$was;;
esac
EOSC

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Whoa.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

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?RCS:

?MAKE:usemultiplicity: useithreads Myread Oldconfig Setvar

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usemultiplicity:

?S: This variable conditionally defines the MULTIPLICITY symbol,

?S: and indicates that Perl should be built to use multiplicity.

?S:.

?C:MULTIPLICITY:

?C: This symbol, if defined, indicates that Perl should

?C: be built to use multiplicity.

?C:.

?H:?%<:#ifndef MULTIPLICITY

?H:?%<:#\$usemultiplicity MULTIPLICITY /\*\*/

?H:?%<:#endif

?H:.

?LINT:set usemultiplicity

?INIT:: set usemultiplicity on the Configure command line to enable multiplicity.

: Check if multiplicity is required

?X: We should really have some explanatory text here, and some

?X: automatic setting of sensible defaults.

cat <<EOM

Perl

can be built so that multiple Perl interpreters can coexist

within the same Perl executable.

EOM

```
case "$useithreads" in
$define)
cat <<EOM
This multiple interpreter support is required for interpreter-based threads.
EOM
val="$define"
;;
*) case "$usemultiplicity" in
$define|true|[yY]*) dflt='y';;
*) dflt='n';;
esac
echo " "
echo "If this doesn't make any sense to you, just accept the default '$dflt'."
rp='Build Perl for multiplicity?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set usemultiplicity
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/usemultiplicity.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: baserev.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: baserev.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:baserev: Null

?MAKE: -pick wipe \$@ %<

?S:baserev:

?S: The base revision level of this package, from the .package file.

?S:.

: set the base revision

baserev=<BASEREV>

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/baserev.U

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?RCS:

?MAKE:d\_fp\_class: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_fp\_class:

?S: This variable conditionally defines the HAS\_FP\_CLASS symbol, which

?S: indicates to the C program that the fp\_class() routine is available.

?S:.

?C:HAS\_FP\_CLASS:

?C: This symbol, if defined, indicates that the fp\_class routine is

?C: available to classify doubles. Available for example in Digital UNIX.

?C: The returned values are defined in <math.h> and are:

?C:

?C: FP\_SNAN        Signaling NaN (Not-a-Number)

?C: FP\_QNAN        Quiet NaN (Not-a-Number)

?C: FP\_POS\_INF     +infinity

?C: FP\_NEG\_INF     -infinity

?C: FP\_POS\_NORM    Positive normalized

?C: FP\_NEG\_NORM    Negative normalized

?C: FP\_POS\_DENORM  Positive denormalized

?C: FP\_NEG\_DENORM

    Negative denormalized

?C: FP\_POS\_ZERO    +0.0 (positive zero)

?C: FP\_NEG\_ZERO    -0.0 (negative zero)

?C:.

?H:#\$d\_fp\_class HAS\_FP\_CLASS /\*\*/

?H:.

?LINT:set d\_fp\_class

: see if fp\_class exists

set fp\_class d\_fp\_class

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fp\_class.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorarch.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

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?RCS:

?RCS: \$Log: vendorarch.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:d\_vendorarch vendorarch vendorarchexp installvendorarch: sed Getfile \

Setprefixvar Oldconfig Prefixit archname vendorlib vendorprefix test

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorarch:

?S: This variable contains the value of the PERL\_VENDORARCH symbol.

?S: It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors

who distribute perl may wish to place their own

?S: architecture-dependent modules and extensions in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorarchexp:

?S: This variable is the ~name expanded version of vendorarch, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorarch="

?S:installvendorarch:

?S: This variable is really the same as vendorarchexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?S:d\_vendorarch:

?S: This variable conditionally defined PERL\_VENDORARCH.

?S:.

?C:PERL\_VENDORARCH:

?C: If defined, this symbol contains the name of a private library.

?C: The library is private in the sense that it needn't be in anyone's

?C: execution path, but it should be accessible by the world.

?C: It may have a ~ on the front.

?C: The standard distribution will put nothing in this directory.

?C: Vendors who distribute perl may wish to place their own architecture-dependent modules and extensions in this directory with

?C: MakeMaker Makefile.PL INSTALLDIRS=vendor

?C: or equivalent. See INSTALL for details.

?C:.

?C:PERL\_VENDORARCH\_EXP:

?C: This symbol contains the ~-name expanded version of PERL\_VENDORARCH, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?H:#\$d\_vendorarch PERL\_VENDORARCH "\$vendorarch" /\*\*/

?H:#\$d\_vendorarch PERL\_VENDORARCH\_EXP "\$vendorarchexp" /\*\*/

?H:.

?LINT:change prefixvar

?LINT:set installvendorarch

: Set the vendorarch variables

```

case "$vendorprefix" in
*) d_vendorarch="$undef"
   vendorarch="
   vendorarchexp="
   ;;
*) d_vendorarch="$define"
   : determine where vendor-supplied architecture-dependent libraries go.
   : vendorlib default is /usr/local/lib/perl5/vendor_perl/$version
   : vendorarch default is /usr/local/lib/perl5/vendor_perl/$version/$sarchname
   : vendorlib may have an optional trailing
   /share.
   case "$vendorarch" in
   *) dflt=`echo $vendorlib | $sed 's,/share$,,'`
      dflt="$dflt/$sarchname"
      ;;
   *) dflt="$vendorarch" ;;
   esac
   fn=d~+
   rp='Pathname for vendor-supplied architecture-dependent files?'
   ./getfile
   vendorarch="$ans"
   vendorarchexp="$ansexp"
   ;;
   esac
   prefixvar=vendorarch
   ./installprefix
   if $test X"$vendorarch" = X"$vendorlib"; then
   d_vendorarch="$undef"
   else

```

d\_vendorarch="\$define"

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorarch.U

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?RCS: \$Id: d\_getprotobyname\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getprotobyname\_r getprotobyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getprotobyname\_r:

?S: This variable conditionally defines the HAS\_GETPROTOBYNAME\_R symbol,

?S: which indicates to the C program that the getprotobyname\_r()

?S: routine is available.

?S:.

?S:getprotobyname\_r\_proto:

?S: This variable encodes the prototype of getprotobyname\_r.

?S: It is zero if d\_getprotobyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotobyname\_r

?S: is defined.

?S:.

?C:HAS\_GETPROTOBYNAME\_R:

?C: This symbol, if

defined, indicates that the getprotobyname\_r routine

?C: is available to getprotobyname re-entrantly.

?C:.

?C:GETPROTOBYNAME\_R\_PROTO:

?C: This symbol encodes the prototype of getprotobyname\_r.

?C: It is zero if d\_getprotobyname\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotobyname\_r

?C: is defined.

?C:.

?H:#d\_getprotobyname\_r HAS\_GETPROTOBYNAME\_R /\*\*/

?H:#define GETPROTOBYNAME\_R\_PROTO \$getprotobyname\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getprotobyname\_r\_proto

: see if getprotobyname\_r exists

set getprotobyname\_r d\_getprotobyname\_r

eval \$inlibc

```

case "$d_getprotobyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getprotobyname_r_proto:$usethreads" in
":define") d_getprotobyname_r_proto=define
set d_getprotobyname_r_proto getprotobyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getprotobyname_r_proto" in
define)
case "$getprotobyname_r_proto" in
"|0) try='int getprotobyname_r(const char*, struct
protoent*, char*, size_t, struct protoent**);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=I_CSBWR ;;
esac
case "$getprotobyname_r_proto" in
"|0) try='struct protoent* getprotobyname_r(const char*, struct protoent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=S_CSBI ;;
esac
case "$getprotobyname_r_proto" in
"|0) try='int getprotobyname_r(const char*, struct protoent*, struct protoent_data*);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=I_CSD ;;
esac
case "$getprotobyname_r_proto" in
"|0) d_getprotobyname_r=undef
getprotobyname_r_proto=0
echo "Disabling getprotobyname_r, cannot determine prototype." >&4 ;;
* ) case "$getprotobyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getprotobyname_r_proto="REENTRANT_PROTO_$getprotobyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getprotobyname_r has no prototype, not using it." >&4 ;;
esac
d_getprotobyname_r=undef
getprotobyname_r_proto=0
;;
esac
;;
*) getprotobyname_r_proto=0
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_getprotobyname\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_dirent.U,v \$

?RCS: Revision 3.0.1.4 1994/10/29 16:20:01 ram

?RCS: patch36: failed scanning for 'd\_namlen' with missing <dirent.h> (ADO)

?RCS:

?RCS: Revision 3.0.1.3 1994/06/20 07:01:25 ram

?RCS: patch30: added direntrytype for hints, merely for NeXT (ADO)

?RCS: patch30: now checks for both struct dirent and direct (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:22:37 ram

?RCS: patch27: new variable direntrytype for proper type setting (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24

14:11:15 ram

?RCS: patch16: added new Direntry\_t pseudo-type for directory entries

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit looks whether there is a dirent system or not

?X:

?MAKE:i\_dirent d\_dirnamlen direntrytype: test contains Setvar \

Myread Findhdr cppstdin cppflags cppminus rm\_try

?MAKE: -pick add \$@ %<

?S:i\_dirent:

?S: This variable conditionally defines I\_DIRENT, which indicates

?S: to the C program that it should include <dirent.h>.

?S:.

?S:d\_dirnamlen:

?S: This variable conditionally defines DIRNAMLEN, which indicates

?S: to the C program that the length of directory entry names is

?S: provided by a d\_namelen field.

?S:.



?S:direntrytype:

?S: This symbol is set to 'struct direct' or 'struct dirent' depending on  
?S: whether dirent is available or not. You should use this pseudo type to  
?S: portably declare your directory entries.

?S:.

?C:I\_DIRENT:

?C: This symbol, if defined, indicates to the C program  
that it should

?C: include <dirent.h>. Using this symbol also triggers the definition

?C: of the Direntry\_t define which ends up being 'struct dirent' or

?C: 'struct direct' depending on the availability of <dirent.h>.

?C:.

?C:DIRNAMLEN:

?C: This symbol, if defined, indicates to the C program that the length

?C: of directory entry names is provided by a d\_namlen field. Otherwise

?C: you need to do strlen() on the d\_name field.

?C:.

?C:Direntry\_t:

?C: This symbol is set to 'struct direct' or 'struct dirent' depending on

?C: whether dirent is available or not. You should use this pseudo type to

?C: portably declare your directory entries.

?C:.

```
?H:#$i_dirent I_DIRENT /**/
```

```
?H:#$d_dirnamlen DIRNAMLEN /**/
```

```
?H:%<:@if I_DIRENT && Direntry_t
```

```
?H:%<:#define Direntry_t $direntrytype
```

```
?H:%<:@end
```

?H:.

```
?T:xinc guess1 guess2
```

```
?LINT:set i_dirent d_dirnamlen
```

```
: see if this is a dirent system
```

```
echo " "
```

```
if xinc=`./findhdr dirent.h`; $test "$xinc"; then
```

```
val="$define"
```

```
echo "<dirent.h> found." >&4
```

```
else
```

```
val="$undef"
```

```
if
```

```
xinc=`./findhdr sys/dir.h`; $test "$xinc"; then
```

```
echo "<sys/dir.h> found." >&4
```

```
echo " "
```

```
else
```

```
xinc=`./findhdr sys/ndir.h`
```

```
fi
```

```
echo "<dirent.h> NOT found." >&4
```

```
fi
```

```
set i_dirent
```

```
eval $setvar
```

?X: Use struct dirent or struct direct? If we're using dirent.h,  
?X: it's probably struct dirent, but apparently not always.  
?X: Assume \$xinc still contains the name of the header file we're using.

```
@if direntrytype || Direntry_t
```

```
: Look for type of directory structure.
```

```
echo " "
```

```
$cppstdin $cppflags $cppminus < "$xinc" > try.c
```

```
case "$direntrytype" in
```

```
"| ')
```

```
case "$i_dirent" in
```

```
$define) guess1='struct dirent' ;;
```

```
*) guess1='struct direct' ;;
```

```
esac
```

```
::
```

```
*) guess1="$direntrytype"
```

```
::
```

```
esac
```

```
case "$guess1" in
```

```
'struct dirent') guess2='struct direct' ;;
```

```
*) guess2='struct dirent' ;;
```

```
esac
```

```
if $contains "$guess1" try.c >/dev/null 2>&1; then
```

```
direntrytype="$guess1"
```

```
echo "Your directory entries are $direntrytype." >&4
```

```
elif $contains "$guess2" try.c >/dev/null 2>&1; then
```

```
direntrytype="$guess2"
```

```
echo
```

```
"Your directory entries seem to be $direntrytype." >&4
```

```
else
```

```
echo "I don't recognize your system's directory entries." >&4
```

```
rp="What type is used for directory entries on this system?"
```

```
dflt="$guess1"
```

```
. ./myread
```

```
direntrytype="$ans"
```

```
fi
```

```
$rm_try
```

```
@end
```

```
@if d_dirnamlen || DIRNAMLEN
```

```
: see if the directory entry stores field length
```

```
echo " "
```

```
$cppstdin $cppflags $cppminus < "$xinc" > try.c
```

```
if $contains 'd_namlen' try.c >/dev/null 2>&1; then
```

```

echo "Good, your directory entry keeps length information in d_namlen." >&4
val="$define"
else
echo "Your directory entry does not know about the d_namlen field." >&4
val="$undef"
fi
set d_dirnamlen
eval $setvar
$rm_try

@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/i_dirent.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: mallocsrc.U,v 3.0.1.2 1997/02/28 16:10:26 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: mallocsrc.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 16:10:26 ram
?RCS: patch61: added support for Free_t, the type of free()
?RCS: patch61: replaced .o with $_o all over the place
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:10:46 ram
?RCS: patch23: added support for MYMALLOC, mainly for perl5 (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:12 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mallocsrc mallocobj usemallocwrap usemymalloc
malloctype d_mymalloc \
freetype: Myread \
Oldconfig package Guess Setvar rm cat +cc +ccflags Findhdr \
i_malloc i_stdlib sed libs _o ptrsize useithreads
?MAKE: -pick add $@ %<
?X: Put near top so that other tests don't erroneously include
?X: -lmalloc. --AD 22 June 1998
?Y:TOP
?S:usemymalloc:

```

?S: This variable contains y if the malloc that comes with this package  
 ?S: is desired over the system's version of malloc. People often include  
 ?S: special versions of malloc for efficiency, but such versions are often  
 ?S: less portable. See also malloclib and mallocobj.  
 ?S: If this is 'y', then -lmalloc is removed from \$libs.  
 ?S:.

?S:usemallocwrap:  
 ?S: This variable contains y if we are wrapping malloc to prevent  
 ?S: integer overflow during size calculations.  
 ?S:.

?S:malloclib:  
 ?S: This variable contains the name of the malloc.c that comes with  
 ?S: the package, if that malloc.c is preferred over the system malloc.  
 ?S: Otherwise the value is null. This variable is intended for generating  
 ?S: Makefiles.  
 ?S:.

?S:d\_malloc:  
 ?S: This  
 variable conditionally defines MYMALLOC in case other parts  
 ?S: of the source want to take special action if MYMALLOC is used.  
 ?S: This may include different sorts of profiling or error detection.  
 ?S:.

?S:mallocobj:  
 ?S: This variable contains the name of the malloc.o that this package  
 ?S: generates, if that malloc.o is preferred over the system malloc.  
 ?S: Otherwise the value is null. This variable is intended for generating  
 ?S: Makefiles. See malloclib.  
 ?S:.

?S:freetype:  
 ?S: This variable contains the return type of free(). It is usually  
 ?S: void, but occasionally int.  
 ?S:.

?S:malloctype:  
 ?S: This variable contains the kind of ptr returned by malloc and realloc.  
 ?S:.

?C:Free\_t:  
 ?C: This variable contains the return type of free(). It is usually  
 ?C: void, but occasionally int.  
 ?C:.

?C:Malloc\_t (MALLOC\_PTRTYPE):  
 ?C: This symbol is the type of pointer returned by malloc and realloc.  
 ?C:.

?H:#define Malloc\_t \$malloctype /\*\*/  
 ?H:#define Free\_t  
 \$freetype /\*\*/  
 ?H:.

?C:PERL\_MALLOC\_WRAP:  
 ?C: This symbol, if defined, indicates that we'd like malloc wrap checks.

```

?C:.
?H:#$usemallocwrap PERL_MALLOC_WRAP /**/
?H:.
?C:MYMALLOC:
?C: This symbol, if defined, indicates that we're using our own malloc.
?C:.
?H:#$d_mymalloc MYMALLOC /**/
?H:.
?LINT:extern usedevel
?LINT:change libs
?X: Cannot test for mallocsrc; it is the unit's name and there is a bug in
?X: the interpreter which defines all the names, even though they are not used.
@if mallocobj
: determine whether to use malloc wrapping
echo " "
case "$usemallocwrap" in
[yY]*|true|$define) dflt='y' ;;
[nN]*|false|$undef) dflt='n' ;;
*) case "$usedevel" in
[yY]*|true|$define) dflt='y' ;;
*) dflt='n' ;;
esac
;;
esac
rp="Do you wish to wrap malloc calls to protect against potential overflows?"
./myread
usemallocwrap="$ans"
case "$ans" in
y*|true)
usemallocwrap="$define" ;;
*)
usemallocwrap="$undef" ;;
esac

: determine which malloc to compile in
echo " "
case "$usemymalloc"
in
[yY]*|true|$define) dflt='y' ;;
[nN]*|false|$undef) dflt='n' ;;
*) case "$ptrsize" in
4) dflt='y' ;;
*) dflt='n' ;;
esac
if test "$useithreads" = "$define"; then dflt='n'; fi
;;
esac
rp="Do you wish to attempt to use the malloc that comes with $package?"

```

```

./myread
usemymalloc="$ans"
case "$ans" in
y*|true)
usemymalloc='y'
mallosrc='malloc.c'
mallocobj="malloc$_o"
d_mymalloc="$define"
?X: Maybe libs.U should be dependent on mallosrc.U, but then
?X: most packages that use dist probably don't supply their own
?X: malloc, so this is probably an o.k. compromise
case "$libs" in
*-lmalloc*)
: Remove malloc from list of libraries to use
echo "Removing unneeded -lmalloc from library list" >&4
set `echo X $libs | $sed -e 's/-lmalloc / /' -e 's/-lmalloc$/'^
shift
libs="$*"
echo "libs = $libs" >&4
;;
esac
;;
*)
usemymalloc='n'
mallosrc=""
mallocobj=""
d_mymalloc="$undef"
;;
esac

```

```

@end
@if MALLOC_PTRTYPE || Malloc_t || Free_t
: compute the return types of
malloc and free
echo " "
$cat >malloc.c <<END
#$i_malloc I_MALLOC
#$i_stdlib I_STDLIB
#include <stdio.h>
#include <sys/types.h>
#ifdef I_MALLOC
#include <malloc.h>
#endif
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#ifdef TRY_MALLOC
void *malloc();

```

```

#endif
#ifdef TRY_FREE
void free();
#endif
END
@if MALLOCPTRTYPE || Malloc_t
case "$malloctype" in
")
if $cc $cflags -c -DTRY_MALLOC malloc.c >/dev/null 2>&1; then
malloctype='void *'
else
malloctype='char *'
fi
;;
esac
echo "Your system wants malloc to return '$malloctype', it would seem." >&4
@end

@if Free_t
case "$freetype" in
")
if $cc $cflags -c -DTRY_FREE malloc.c >/dev/null 2>&1; then
freetype='void'
else
freetype='int'
fi
;;
esac
echo "Your system uses $freetype free(), it would seem." >&4
@end
$rm -f malloc.[co]
@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/mallocsrc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Obsol_h.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```

?RCS: $Log: Obsol_h.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This file is prepended to .MT/Obsol_h if that file is not empty. That file
?X: contains the necessary mappings of new symbols to obsolete ones.
?X:
?MAKE:Obsol_h:
?MAKE: -pick prepend $@ ./Obsol_h
?LINT:nocomment
/*
* The following symbols are obsolete. They are mapped to the new
* symbols only to ease the transition process. The sources
  should be
* updated so as to use the new symbols only, as the support for these
* obsolete symbols may end without notice.
*/

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/Obsol_h.U
No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_asinh: Inlibc
?MAKE: -pick add $@ %<
?S:d_asinh:
?S: This variable conditionally defines the HAS_ASINH symbol, which
?S: indicates to the C program that the asinh() routine is available.
?S:.
?C:HAS_ASINH:
?C: This symbol, if defined, indicates that the asinh routine is
?C: available to do the inverse hyperbolic sine function.
?C:.
?H:#$d_asinh HAS_ASINH /**/
?H:.
?LINT:set d_asinh
: see if asinh exists
set asinh d_asinh
eval $inlibc

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_asinh.U

```



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: install.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: install.U,v $
?RCS: Revision 3.0.1.2 1995/09/25 09:16:37 ram
?RCS: patch59: all possible install programs are now looked for
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:30:41 ram
?RCS: patch45: created
?RCS:
?MAKE:install installdir: Loc Oldconfig Getfile cat test startsh rm +cc \
eunicefix package contains mkdir echo n c
?MAKE: -pick add $@ %<
?S:install:
?S: This variable contains the name of an install program that can accept
?S: BSD-style arguments.
It must correctly support -c, -s, and -m at least.
?S: It is a fully qualified pathname when found. If you have a local
?S: install.SH file at the root directory of your package, it is assumed to
?S: be the default script emulating a BSD install and the variable will be
?S: set to ./install. Otherwise, it is set to plain 'install', relying on
?S: the user's PATH to perform miracles.
?S:.
?S:installdir:
?S: This variable contains the name of a program that can install nested
?S: directories. Often set to 'mkdir -p', it can also be 'install -d' if
?S: you have such a beast and lack the former. If you have an install.SH
?S: file at the root directory of your package, it will be used in last
?S: resort, setting the variable to './install -d'. Otherwise, it is set to
?S: plain 'mkdir', and cross your fingers!
?S:.
?T:dir file tryit prog creatdir either
?F:!tryinst
: locate a BSD compatible install program
echo " "
echo "Looking for a BSD-compatible install program..." >&4
@if installdir
creatdir="
@end
```

```

case
"$install" in
")
tryit="
for dir in $pth; do
for file in ginstall installbsd scoinst install; do
if $test -f $dir/$file; then
tryit="$stryit $dir/$file"
fi
done
done
$cat >try.c <<EOC
int main()
{
printf("OK\n");
exit(0);
}
EOC
if $cc -o try try.c >/dev/null 2>&1; then
cp try try.ns
strip try >/dev/null 2>&1
else
echo "(I can't seem to compile a trivial C program -- bypassing.)"
echo "try" >try
cp try try.ns
fi
$cat >tryinst <<EOS
$startsh
$rm -rf foo d
@if installdir
\ $1 -d foo/bar
@end
$mkdir d
\ $1 -c -m 764 try.ns d
\ $1 -c -s -m 642 try.ns d/try
EOS
chmod +x tryinst
$eunicefix tryinst
dflt="
either="
for prog in $stryit; do
$echo $n "Checking $prog... $c"
./tryinst $prog >/dev/null 2>&1
@if installdir
if $test -d foo/bar; then
creatdir="$prog -d"
fi
@end

```

```

(ls -l d/try >try.ls; ls -l d/try.ns >tryno.ls) 2>/dev/null
if (cmp -s d/try try && cmp -s d/try.ns try.ns && \
  $contains 'rwxrw-r--' tryno.ls && \
  \
  $contains 'rw-r---w-' try.ls) >/dev/null 2>&1
then
  dflt="$prog"
  echo "ok, that will do."
  break
fi
echo "not good$either."
either=' either'
$rm -f try*.ls
done
$rm -rf foo d tryinst try try*.ls try.*
case "$dflt" in
  *)
@if {test -f ../install.SH}
  echo "Hopefully, $package comes with its own install script!"
  dflt='../install'
@else
  dflt='install'
@end
  ;;
esac
  ;;
*) dflt="$install";;
esac
$cat <<EOM

```

I will be requiring a BSD-compatible install program (one that allows options like -s to strip executables or -m to specify a file mode) to install \$package.

If the question below contains a fully qualified default path, then it is probably ok. If it is an unqualified name such as 'install', then it means I was unable to find out a good install program I could use. If

```

@if {test -f ../install.SH}
you know of one, please tell me about it. If the default is '../install',
then I shall be using the install script supplied with $package.
@else
you know of one,
please tell me about it.
@end

```

EOM

```

@if {test -f ../install.SH}
fn='/fe~(install,./install)'

```

```

@else
fn='/fe~(install)'
@end
rp='Which install program shall I use?'
./getfile
install="$ans"

@if installdir
: how can we create nested directories?
echo " "
echo "Ok, let's see how we can create nested directories..." >&4
case "$installdir" in
")
?X: First time, maybe we already found out a working one in $creatdir above...
?X: Prefer "mkdir -p" because of bugs in GNU install when not running as root
$mkdir -p foo/bar >/dev/null 2>&1
if $test -d foo/bar; then
echo "Great, we can build them using 'mkdir -p'."
creatdir='mkdir -p'
else
case "$creatdir" in
")
if eval "$install -d foo/bar"; $test -d foo/bar; then
creatdir="install -d"
echo "It looks like '$creatdir' will do it for us."
fi
;;
*)
eval "$creatdir foo/bar" >/dev/null 2>&1
if $test -d foo/bar; then
echo "Ah! We can use '$creatdir' to do just that."
else
creatdir="
fi
;;
esac
fi
$rm
-rf foo
case "$creatdir" in
")
echo "Heck! Another ancient system lacking the comfort of modern ones!"
@if { test -f ../install.SH }
echo "You can thank $package for bringing you its own install script!"
installdir='./install -d'
@else
echo "We have no choice but to use plain old 'mkdir' -- wish me luck!"
installdir=mkdir

```

```
@end
;;
*) installdir="$creatdir";;
esac
;;
*) echo "As you already told me, '$installdir' should work.";;
esac
```

@end

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/install.U
```

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```
?RCS: $Id: d_setegid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_setegid.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:07 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setegid: Inlibc
?MAKE: -pick add $@ %<
?S:d_setegid:
?S: This variable conditionally defines the HAS_SETEGID symbol, which
?S: indicates to the C program that the setegid() routine is available
?S: to change the effective gid of the current program.
?S:.
?C:HAS_SETEGID (SETEGID):
?C: This symbol, if defined, indicates that the setegid
?C: routine is available
?C: to change the effective gid of the current program.
?C:.
?H:#$d_setegid HAS_SETEGID /**/
?H:.
?LINT:set d_setegid
: see if setegid exists
set setegid d_setegid
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setegid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_nice.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_nice.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:48 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_nice: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nice:

?S: This variable conditionally defines the HAS\_NICE symbol, which

?S: indicates to the C program that the nice() routine is available.

?S:.

?C:HAS\_NICE :

?C: This symbol, if defined, indicates that the nice routine is

?C: available.

?C:.

?H:#\$d\_nice

HAS\_NICE /\*\*/

?H:.

?LINT:set d\_nice

: see if nice exists

set nice d\_nice

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_nice.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Warn\_v7ND.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Warn\_v7ND.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:01:46 ram  
?RCS: patch36: call ./v7 explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:18 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit warns V7 sites that they may not have a non-blocking read.  
?X: This unit needs to be mentioned in End.U to get included.  
?X:  
?MAKE:Warn\_v7ND: package Guess  
?MAKE: -pick add \$@ %<  
: Warnings  
if ./v7; then  
cat  
<<EOM

NOTE: many V7 systems do not have a way to do a non-blocking read. If you  
don't have any of FIONREAD, O\_NDELAY, or rdchk(), the \$package package  
may not work as well as it might. It might not work at all.

EOM

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1-rc1/dist/U/Warn\_v7ND.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?X:

?X: Useless unit dropped. Use randfunc instead.

?X:

?LINT:empty

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/randbits.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_havetlib.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_havetlib.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:36:31 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: likewise for .o replaced by \$\_o

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:44:06 ram

?RCS: patch23: added AIX support to accept shared lib stub as termlib (WED)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:19 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_havetlib termlib: cat contains Myread Loc

Filexp Oldconfig libpth \

test uname \_a \_o

?MAKE: -pick add \$@ %<

?S:d\_havetlib:

?S: This variable conditionally defines the HAS\_TERMLIB symbol, which

?S: indicates to the C program that termlib-style routines are available.

?S:.

?S:termlib:

?S: This variable contains the argument to pass to the loader to get

?S: termlib-style routines. It is up to the Makefile.SH to make sure

?S: the value gets to the right command. Note that on many systems the

?S: termlib routines are emulated by the curses or terminfo library.

?S:.

?C:HAS\_TERMLIB (HAVETERMLIB):

?C: This symbol, when defined, indicates that termlib-style routines

?C: are available. There is nothing to include.

?C:.

?H:#\$d\_havetlib HAS\_TERMLIB /\*\*/

?H:.

?T:xxx



```

: where do we get term lib routines from
echo " "
xxx=`./loc libcurses$_a x $libpth`
case "$xxx" in
/*)
ar t $xxx >grimble
if $contains tputs$_o grimble >/dev/null 2>&1; then
term lib='-lcurses'
d_havetlib="$define"
echo "Terminfo library found." >&4
elif $test "x`$uname
2>/dev/null" = xAIX; then
# Ok, do the AIX shr.o fun thing
/usr/ccs/bin/nm -en $xxx 2>/dev/null >grimble
if $contains '^tputs .*|extern|' grimble >/dev/null 2>&1; then
term lib='-lcurses'
d_havetlib="$define"
echo "AIX Terminfo library found." >&4
else
xxx=x
fi
else
xxx=x
fi
rm -f grimble
;;
esac
case "$xxx" in
x)
xxx=`./loc libterm lib$_a x $libpth`
case "$xxx" in
/usr/lib*/lib*)
term lib='-lterm lib'
d_havetlib="$define"
echo "Term lib library found." >&4
;;
/*)
term lib="$xxx"
d_havetlib="$define"
echo "Term lib library found." >&4
;;
*)
xxx=`./loc libterm cap$_a x $libpth`
case "$xxx" in
/usr/lib*/lib*)
term lib='-lterm cap'
d_havetlib="$define"
echo "Term cap library found." >&4

```

```

;;
/*)
termlib="$xxx"
d_havetlib="$define"
echo "Termcap library found." >&4
;;
*)
case "$termlib" in
")
dflt=y
rp="Your system appears to NOT have termlib-style routines. Is this true?"
./myread
case "$ans"
in
n*|f*) d_havetlib="$define"
$cat <<'EOM'

```

Then where are the termlib-style routines kept? Specify either -llibname or a full pathname (~name ok).

EOM

```

dflt="
rp='Specify termlib path:'
./myread
termlib=`./filexp $ans`
;;
*)
d_havetlib="$undef"
termlib="
echo "You will have to play around with term.c then." >&4
;;
esac
echo " ";;
*) echo "You said termlib was $termlib before." >&4;;
esac;;
esac;;
esac;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_havetlib.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setregid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setregid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:12 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setregid d\_setresgid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setregid:

?S: This variable conditionally defines HAS\_SETREGID if setregid() is

?S: available to change the real and effective gid of the current

?S: process.

?S:.

?S:d\_setresgid:

?S: This variable conditionally defines HAS\_SETRESGID if setresgid() is

?S: available to change

the real, effective and saved gid of the current

?S: process.

?S:.

?C:HAS\_SETREGID (SETREGID):

?C: This symbol, if defined, indicates that the setregid routine is

?C: available to change the real and effective gid of the current

?C: process.

?C:.

?C:HAS\_SETRESGID (SETRESGID):

?C: This symbol, if defined, indicates that the setresgid routine is

?C: available to change the real, effective and saved gid of the current

?C: process.

?C:.

?H:#\$d\_setregid HAS\_SETREGID /\*\*/

?H:#\$d\_setresgid HAS\_SETRESGID /\*\*/

?H:.

?LINT: set d\_setregid d\_setresgid

: see if setregid exists

set setregid d\_setregid

eval \$inlibc

set setresgid d\_setresgid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setregid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: newsspool.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: newsspool.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:09:24 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:newsspool newsspoolexp: Getfile Oldconfig  
?MAKE: -pick add \$@ %<  
?S:newsspool:  
?S: This variable contains the eventual value of the NEWSSPOOL symbol,  
?S: which is the directory name where news articles are spooled. It  
?S: may have a ~ on the front of it.  
?S:.  
?S:newsspoolexp:  
?S: This is the same as the newsspool variable, but is  
filename expanded  
?S: at configuration time, for programs not wanting to deal with it at  
?S: run-time.  
?S:.  
?C:NEWSSPOOL:  
?C: This symbol contains the directory name where news articles are  
?C: spooled. The program must be prepared to do ~ expansion on it.  
?C:.  
?C:NEWSSPOOL\_EXP:  
?C: This is the same as NEWSSPOOL, but is filename expanded at  
?C: configuration time, for use in programs not willing to do so  
?C: at run-time.  
?C:.  
?H:#define NEWSSPOOL "\$newsspool" /\*\*/  
?H:#define NEWSSPOOL\_EXP "\$newsspoolexp" /\*\*/  
?H:.  
: locate news spool directory  
case "\$newsspool" in  
")  
dflt=/usr/spool/news  
;;  
\*) dflt="\$newsspool";;  
esac  
echo " "  
fn=d~  
rp='Where are news spooled?'

```
./getfile
newsspool="$ans"
newsspoolexp="$ansexp"
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/newsspool.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_bcopy.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_bcopy.U,v $
?RCS: Revision 3.0.1.2 1993/10/16 13:48:04 ram
?RCS: patch12: added magic support for bcopy()
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:01:11 ram
?RCS: patch10: now only defines HAS_BCOPY, no macro remap on memcpy (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:44 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_bcopy: Inlibc
?MAKE:-pick add $@ %<
?S:d_bcopy:
?S: This variable conditionally defines the HAS_BCOPY
symbol if
?S: the bcopy() routine is available to copy strings.
?S:.
?C:HAS_BCOPY:
?C: This symbol is defined if the bcopy() routine is available to
?C: copy blocks of memory.
?C:.
?H:#$d_bcopy HAS_BCOPY /**/
?H:.
?M:bcopy: HAS_BCOPY
?M:#ifndef HAS_BCOPY
?M:#ifndef bcopy
?M:#define bcopy(s,d,l) memcpy((d),(s),(l))
?M:#endif
?M:#endif
```

```
?M:
?LINT:set d_bcopy
: see if bcopy exists
set bcopy d_bcopy
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_bcopy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: h_fcntl.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: h_fcntl.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:12 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:h_fcntl: Nothing
```

```
?MAKE: -pick add $@ %<
```

```
?S:h_fcntl:
```

```
?S: This is variable gets set in various places to tell i_fcntl that
```

```
?S: <fcntl.h> should be included.
```

```
?S:.
```

```
: Initialize h_fcntl
```

```
h_fcntl=false
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/h_fcntl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```

?RCS:
?RCS: $Log: Config_h.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 14:57:43 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:10:49 ram
?RCS: patch59: commented the purpose of the #un-def directive
?RCS:
?RCS: Revision 3.0.1.3 1995/01/30 14:25:39 ram
?RCS: patch49: typo fixes in leading config.h comment (WED)
?RCS:
?RCS: Revision 3.0.1.2 1993/08/24 12:13:20 ram
?RCS: patch3: added TOP as a local shell temporary variable
?RCS:
?RCS: Revision 3.0.1.1 1993/08/19 06:42:20
ram
?RCS: patch1: leading config.sh searching was not aborting properly
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This file ends up producing the config_h.SH script, which is run to produce
?X: the config.h file. The file ./Config_h below contains all the ?H: lines
?X: extracted out of all the units. Metaconfig itself adds the !GROK!THIS!.
?X: Note that this code isn't included into Configure, but must be shipped with.
?X:
?X: For those who wish to know why the file is config_h.SH instead of the more
?X: natural config.h.SH, well... it is to support systems like MS-DOG. Only one
?X: 'dot' is allowed within the file name, as it is part of the "extension" of
?X: the file. MS-DOG will not let you have two 'dots' because that would mean
?X: two "extensions".
?X:
?MAKE:Config_h: Id End Config_sh Obsol_h myuname cf_time cf_by package src
?MAKE: -pick c_h_weed $@ %<
?MAKE: -pick c_h_weed $@ ./Config_h
?MAKE: -pick
c_h_weed $@ ./Obsol_h
?T:CONFIG TOP
?LINT:unclosed !GROK!THIS!
?LINT:extern CONFIG_H CONFIG_SH
?LINT:change CONFIG_H CONFIG_SH
?LINT:nocomment
case "$CONFIG_SH" in
") CONFIG_SH=config.sh;;
esac
case "$CONFIG_H" in
") CONFIG_H=config.h;;

```

```

esac
case $CONFIG in
")
if test -f $CONFIG_SH; then TOP=.;
elif test -f ../$CONFIG_SH; then TOP=..;
elif test -f ../../$CONFIG_SH; then TOP=../../;
elif test -f ../../../$CONFIG_SH; then TOP=../../../;
elif test -f ../../../../$CONFIG_SH; then TOP=../../../../;
else
echo "Can't find $CONFIG_SH."; exit 1
fi
.$TOP/$CONFIG_SH
;;
esac
?X: Make sure we are in the directory where the .SH file is located.
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/'` ;;
esac
echo "Extracting $CONFIG_H (with variable substitutions)"
?X:
?X: Since we unconditionally translate leading #undef into /*#define, we're
?X: stuck when we really want to have a #undef in config.h. That's why there
?X: is provision here for #un-def, which is translated back into #undef after
?X:
all original #undef have been processed.
?X:
?X: Previously, we changed all
?X: #undef FOO /**/
?X: into
?X: /*#define FOO /**/
?X: The xlc compiler (available on IBM's AIX) complains that this is
?X: an illegal attempt to write a nested comment, and warns against it.
?X: There's apparently no way to shut the compiler up, either.
?X: This sed command from Hallvard B Furuseth <h.b.furuseth@usit.uio.no>
?X: changes it to
?X: /*#define FOO / **/
sed <<!GROK!THIS! >$CONFIG_H -e 's!^#undef\(.*/\)*!/*#define\1 \*!' -e 's!^#un-def!#undef!'
/*
* This file was produced by running the config_h.SH script, which
* gets its values from $CONFIG_SH, which is generally produced by
* running Configure.
*
* Feel free to modify any of this as the need arises. Note, however,
* that running config_h.SH again will wipe out any changes you've made.
* For a more permanent change edit $CONFIG_SH and rerun config_h.SH.
*
*\$Id: Config_h.U 1 2006-08-24 12:32:52Z rmanfredi $
*/

```



```
/*
* Package name
  : $package
* Source directory : $src
* Configuration time: $cf_time
* Configured by   : $cf_by
* Target system   : $myuname
*/
```

```
#ifndef _config_h_
#define _config_h_
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Config_h.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_ftello: Inlibc longsize
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_ftello:
```

```
?S: This variable conditionally defines the HAS_FTELLO symbol, which
```

```
?S: indicates to the C program that the ftello() routine is available.
```

```
?S:.
```

```
?C:HAS_FTELLO:
```

```
?C: This symbol, if defined, indicates that the ftello routine is
```

```
?C: available to ftell beyond 32 bits (useful for ILP32 hosts).
```

```
?C:.
```

```
?H:#$d_ftello HAS_FTELLO /**/
```

```
?H:.
```

```
?LINT:set d_ftello
```

```
: see if ftello exists
```

```
set ftello d_ftello
```

```
eval $inlibc
```

```
case "$longsize" in
```

```
8) echo "(Your long is 64 bits, so you could use ftell.)" ;;
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_ftello.U
```

No license file was found, but licenses were detected in source scan.

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:ilp d\_ilp32 d\_ilp64 d\_lp64 d\_can64: Assert Myread Setvar \  
cat rm +cc +ccflags echo n c intsize longsize ptrsize

?MAKE: -pick add \$@ %<

?S:ilp:

?S: This variable contains the largest amount of bits that the CPU supports,

?S: from the compiler's point of view. Typically 32 or 64.

?S:.

?S:d\_ilp32:

?S: This variable conditionally defines the CPU\_IS\_ILP32.

?S:.

?S:d\_ilp64:

?S: This variable conditionally defines the CPU\_IS\_ILP64.

?S:.

?S:d\_lp64:

?S: This variable conditionally defines the CPU\_IS\_LP64.

?S:.

?S:d\_can64:

?S: This variable

conditionally defines CAN\_HANDLE\_64BITS.

?S:.

?C:CPU\_ILP\_MAXBITS:

?C: This symbol contains the largest amount of bits that the CPU natively

?C: supports from the compiler's point of view. Typically 32 or 64.

?C:.

?C:CPU\_IS\_ILP32:

?C: When defined, this indicates that the integer, long and pointer variables

?C: hold 32-bit values.

?C:.

?C:CPU\_IS\_ILP64:

?C: When defined, this indicates that the integer, long and pointer variables

?C: hold 64-bit values.

?C:.

?C:CPU\_IS\_LP64:

?C: When defined, this indicates that the long and pointer variables hold

?C: 64-bit values but integers are smaller (probably only 32-bit wide).

?C:.

?C:CAN\_HANDLE\_64BITS:

?C: When defined, this indicates that the compiler can handle 64-bit values  
?C: despite the CPU having only 32-bit registers. These are available using  
?C: the "long long" C type. It is only defined for ILP32 machines, since  
?C: 64-bit support is naturally available on ILP64 and LP64 machines.  
?C:.

```
?H:#define CPU_ILP_MAXBITS $ilp
?H:#$d_ilp32
CPU_IS_ILP32 /**/
?H:#$d_ilp64 CPU_IS_ILP64 /**/
?H:#$d_lp64 CPU_IS_LP64 /**/
?H:#$d_can64 CAN_HANDLE_64BITS /**/
?H:.
?LINT: set d_ilp32 d_ilp64 d_lp64 d_can64
: check for architecture type
echo " "
$echo $n "Computing CPU architecture type...$c" >&4
ilp=`expr $longsize \* 8`
case "$ptrsize" in
8)
val=$undef; set d_ilp32; eval $setvar
case "$intsize" in
8)
echo " ILP64." >&4
val=$define; set d_ilp64; eval $setvar
val=$undef; set d_lp64; eval $setvar
;;
*)
echo " LP64." >&4
val=$define; set d_lp64; eval $setvar
val=$undef; set d_ilp64; eval $setvar
;;
esac
;;
*)
echo " ILP${ilp}." >&4
case "$ilp" in
32) val=$define;;
*) val=$undef;;
esac
set d_ilp32; eval $setvar
val=$undef; set d_ilp64; eval $setvar
val=$undef; set d_lp64; eval $setvar
;;
esac

@if CAN_HANDLE_64BITS || d_can64
: see whether compiler supports 64-bit emulation
val=$undef
```

```

case "$ilp" in
64) val=$define;;
*)
$cat >try.c <<EOCP
#include "static_assert.h"
long long foo;
int main()
{
STATIC_ASSERT(8
== sizeof(foo));
return 0;
}
EOCP
if $cc -c $ccflags try.c >/dev/null 2>&1; then
echo " "
echo "Your compiler also supports 64-bit emulation." >&4
val=$define
fi
$rm -f try.*
;;
esac
set d_can64
eval $setvar

@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/ilp.U

```

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_qgcvt: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_qgcvt:

?S: This variable conditionally defines the HAS\_QGCVT symbol, which

?S: indicates to the C program that the qgcvt() routine is available.

?S:.

?C:HAS\_QGCVT:

?C: This symbol, if defined, indicates that the qgcvt routine is

?C: available to convert long doubles ("quad doubles") to strings.

?C: This is a low-level routine hopefully faster than sprintf.

```
?C:.
?H:#$d_qgcvt HAS_QGCVT /**/
?H:.
?LINT:set d_qgcvt
: see if qgcvt exists
set qgcvt d_qgcvt
eval $inlibc
```

Found in path(s):  
\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_qgcvt.U  
No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_voidsig.U,v $
?RCS: Revision 3.0.1.3 1995/05/12 12:12:46 ram
?RCS: patch54: made cppflags dependency optional
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:20:35 ram
?RCS: patch32: now sets signal_t only once d_voidsig is known (WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:59:54 ram
?RCS: patch30: now properly sets signal_t when re-using previous value
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_voidsig signal_t: rm contains
cppstdin cppminus +cppflags test Myread \
Oldconfig Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_voidsig:
?S: This variable conditionally defines VOIDSIG if this system
?S: declares "void (*signal(...))()" in signal.h. The old way was to
?S: declare it as "int (*signal(...))()".
?S:.
?S:signal_t:
?S: This variable holds the type of the signal handler (void or int).
?S:.
```

?C:VOIDSIG:

?C: This symbol is defined if this system declares "void (\*signal(...))()" in

?C: signal.h. The old way was to declare it as "int (\*signal(...))()". It

?C: is up to the package author to declare things correctly based on the

?C: symbol.

?C:.

?C:Signal\_t (SIGNAL\_T):

?C: This symbol's value is either "void" or "int", corresponding to the

?C: appropriate return type of a signal handler. Thus, you can declare

?C: a signal handler using "Signal\_t (\*handler())", and define the

?C: handler using "Signal\_t handler(sig)".

?C:.

?H:#\$d\_voidsig VOIDSIG /\*\*/

?H:#define Signal\_t \$signal\_t /\* Signal handler's return

type \*/

?H:.

?T:xxx

?LINT:set d\_voidsig

: see if signal is declared as pointer to function returning int or void

echo " "

xxx=`./findhdr signal.h`

\$test "\$xxx" && \$cppstdin \$cppminus \$cppflags < \$xxx >\$\$.tmp 2>/dev/null

if \$contains 'int.\*\\*[ ]\*signal' \$\$.tmp >/dev/null 2>&1 ; then

echo "You have int (\*signal())() instead of void." >&4

val="\$undef"

elif \$contains 'void.\*\\*[ ]\*signal' \$\$.tmp >/dev/null 2>&1 ; then

echo "You have void (\*signal())() instead of int." >&4

val="\$define"

elif \$contains 'extern[ ]\*[ ]\*signal' \$\$.tmp >/dev/null 2>&1 ; then

echo "You have int (\*signal())() instead of void." >&4

val="\$undef"

else

case "\$d\_voidsig" in

\*)

echo "I can't determine whether signal handler returns void or int..." >&4

dflt=void

rp="What type does your signal handler return?"

./myread

case "\$ans" in

v\*) val="\$define";;

\*) val="\$undef";;

esac;;

"\$define")

echo "As you already told me, signal handler returns void." >&4;;

\*)

echo "As you already told

me, signal handler returns int." >&4;;

esac

```
fi
set d_voidsig
eval $setvar
case "$d_voidsig" in
"$define") signal_t="void";;
*) signal_t="int";;
esac
$rm -f $$tmp
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_voidsig.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_srand48\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_srand48\_r srand48\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_srand48\_r:

?S: This variable conditionally defines the HAS\_SRAND48\_R symbol,

?S: which indicates to the C program that the srand48\_r()

?S: routine is available.

?S:.

?S:srand48\_r\_proto:

?S: This variable encodes the prototype of srand48\_r.

?S: It is zero if d\_srand48\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_srand48\_r

?S: is defined.

?S:.

?C:HAS\_SRAND48\_R:

?C: This symbol, if defined, indicates that the srand48\_r routine

?C: is available to srand48 re-entrantly.

?C:.

?C:SRAND48\_R\_PROTO:

?C: This

symbol encodes the prototype of srand48\_r.

?C: It is zero if d\_srand48\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_srand48\_r

?C: is defined.

?C:.

?H:#\$d\_srand48\_r HAS\_SRAND48\_R /\*\*/

```

?H:#define SRAND48_R_PROTO $srand48_r_proto /**/
?H:.
?T:try hdrs d_srand48_r_proto
: see if srand48_r exists
set srand48_r d_srand48_r
eval $inlibc
case "$d_srand48_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_stdlib stdlib.h"
case "$d_srand48_r_proto:$usethreads" in
":define") d_srand48_r_proto=define
set d_srand48_r_proto srand48_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_srand48_r_proto" in
define)
case "$srand48_r_proto" in
"|0) try='int srand48_r(long, struct drand48_data*);'
./protochk "$extern_C $try" $hdrs && srand48_r_proto=I_LS ;;
esac
case "$srand48_r_proto" in
"|0) d_srand48_r=undef
srand48_r_proto=0
echo "Disabling srand48_r, cannot determine prototype." >&4 ;;
* ) case
"$srand48_r_proto" in
REENTRANT_PROTO*) ;;
*) srand48_r_proto="REENTRANT_PROTO_$srand48_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "srand48_r has no prototype, not using it." >&4 ;;
esac
d_srand48_r=undef
srand48_r_proto=0
;;
esac
;;
*) srand48_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_srand48_r.U

```



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```
?RCS: $Id: netdbtype.U,v $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: netdbtype.U,v $
?RCS:
?MAKE:netdb_host_type netdb_hlen_type netdb_name_type netdb_net_type: \
Protochk Oldconfig Myread cat \
d_gethbyaddr d_gethbyname d_getnbyaddr \
i_niin i_netdb i_unistd d_socket sizetype extern_C
?MAKE: -pick add $@ %<
?S:netdb_host_type:
?S: This variable holds the type used for the 1st argument to
?S: gethostbyaddr(). Usually, this is char * or void *, possibly
?S: with or without a const prefix.
?S: This is only useful if you have gethostbyaddr(), naturally.
?S:.
?S:netdb_hlen_type:
?S: This variable holds the type used for the 2nd argument to
?S: gethostbyaddr(). Usually,
?S: this is int or size_t or unsigned.
?S: This is only useful if you have gethostbyaddr(), naturally.
?S:.
?S:netdb_name_type:
?S: This variable holds the type used for the argument to
?S: gethostbyname(). Usually, this is char * or const char *.
?S: This is only useful if you have gethostbyname(), naturally.
?S:.
?S:netdb_net_type:
?S: This variable holds the type used for the 1st argument to
?S: getnetbyaddr(). Usually, this is int or long.
?S: This is only useful if you have getnetbyaddr(), naturally.
?S:.
?C:Netdb_host_t:
?C: This symbol holds the type used for the 1st argument
?C: to gethostbyaddr().
?C:.
?C:Netdb_hlen_t:
?C: This symbol holds the type used for the 2nd argument
?C: to gethostbyaddr().
?C:.
```

```

?C:Netdb_name_t:
?C: This symbol holds the type used for the argument to
?C: gethostbyname().
?C:.
?C:Netdb_net_t:
?C: This symbol holds the type used for the 1st argument to
?C: getnetbyaddr().
?C:.
?H:#define Netdb_host_t $netdb_host_type /**/
?H:#define Netdb_hlen_t $netdb_hlen_type
/**/
?H:#define Netdb_name_t $netdb_name_type /**/
?H:#define Netdb_net_t $netdb_net_type /**/
?H:.
?T:xxx yyy try hdrs
@if netdb_host_type || Netdb_host_t || netdb_hlen_type || Netdb_hlen_t
: check for type of arguments to gethostbyaddr.
if test "X$netdb_host_type" = X -o "X$netdb_hlen_type" = X; then
case "$d_gethbyaddr" in
$define)
$cat <<EOM

```

Checking to see what type of arguments are accepted by gethostbyaddr().

EOM

```

hdrs="$define sys/types.h
$d_socket sys/socket.h
$i_niin netinet/in.h
$i_netdb netdb.h
$i_unistd unistd.h"
: The first arg can 'char *' or 'void *'
: The second arg is some of integral type
for xxx in in_addr_t 'const void *' 'const char *' 'void *' 'char *'; do
for yyy in size_t long int; do
case "$netdb_host_type" in
") try="$extern_C struct hostent *gethostbyaddr($xxx, $yyy, int);"
if ./protochk "$try" $hdrs; then
echo "Your system accepts $xxx for the first arg."
echo "...and $yyy for the second arg."
netdb_host_type="$xxx"
netdb_hlen_type="$yyy"
fi
;;
esac
done
done
:

```

In case none of those worked, prompt the user.

```

case "$netdb_host_type" in

```

```

") rp='What is the type for the 1st argument to gethostbyaddr?'
dflt='char *'
./myread
netdb_host_type=$ans
rp='What is the type for the 2nd argument to gethostbyaddr?'
dflt="$sizetype"
./myread
netdb_hlen_type=$ans
;;
esac
;;
*) : no gethostbyaddr, so pick harmless defaults
netdb_host_type='char *'
netdb_hlen_type="$sizetype"
;;
esac
# Remove the "const" if needed. -- but then we'll have a
# prototype clash!
# netdb_host_type=`echo "$netdb_host_type" | sed 's/^const //'`
fi
@end

@if netdb_name_type || Netdb_name_t
: check for type of argument to gethostbyname.
if test "X$netdb_name_type" = X ; then
case "$d_gethbyname" in
$define)
$cat <<EOM

Checking to see what type of argument is accepted by gethostbyname().
EOM
hdrs="$define sys/types.h
$d_socket sys/socket.h
$i_niin
netinet/in.h
$i_netdb netdb.h
$i_unistd unistd.h"
for xxx in "const char *" "char *"; do
case "$netdb_name_type" in
") try="$extern_C struct hostent *gethostbyname($xxx);"
if ./protochk "$try" $hdrs; then
echo "Your system accepts $xxx."
netdb_name_type="$xxx"
fi
;;
esac
done
: In case none of those worked, prompt the user.

```

```

case "$netdb_name_type" in
") rp='What is the type for the 1st argument to gethostbyname?'
dflt='char *'
./myread
netdb_name_type=$ans
;;
esac
;;
*) : no gethostbyname, so pick harmless default
netdb_name_type='char *'
;;
esac
fi
@end

```

```

@if netdb_net_type || Netdb_net_t
: check for type of 1st argument to getnetbyaddr.
if test "X$netdb_net_type" = X ; then
case "$d_getnbyaddr" in
$define)
$cat <<EOM

```

Checking to see what type of 1st argument is accepted by getnetbyaddr().

EOM

```

hdrs="$define sys/types.h
$d_socket sys/socket.h
$i_niin netinet/in.h
$i_netdb netdb.h
$i_unistd
unistd.h"
for xxx in in_addr_t "unsigned long" long "unsigned int" int; do
case "$netdb_net_type" in
") try="$extern_C struct netent *getnetbyaddr($xxx, int);"
if ./protochk "$try" $hdrs; then
echo "Your system accepts $xxx."
netdb_net_type="$xxx"
fi
;;
esac
done
: In case none of those worked, prompt the user.
case "$netdb_net_type" in
") rp='What is the type for the 1st argument to getnetbyaddr?'
dflt='long'
./myread
netdb_net_type=$ans
;;
esac

```

```
;;
*) : no getnetbyaddr, so pick harmless default
netdb_net_type='long'
;;
esac
fi
@end
```

Found in path(s):

```
*/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/netdbtype.U
```

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?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysun.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit looks wether <inttypes.h> is available or not

?X:

?MAKE:i\_inttypes: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_inttypes:

?S: This variable conditionally defines I\_INTTYPES, which indicates

?S: to the C program that it should include <inttypes.h> to get

?S: format conversions of integer types.

?S:.

?C:I\_INTTYPES:

?C: This symbol, if defined, indicates to the C program that it should

?C: include

<inttypes.h> to get format conversions of integer types.

?C:.

?H:#\$i\_inttypes I\_INTTYPES /\*\*/

?H:.

?LINT:set i\_inttypes

: see if this is a inttypes.h system

set inttypes.h i\_inttypes

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_inttypes.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_fp.U,v \$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_fp: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_fp:

?S: This variable conditionally defines the I\_FP symbol, and indicates

?S: whether a C program should include <fp.h>.

?S:.

?C:I\_FP:

?C: This symbol, if defined, indicates that <fp.h> exists and

?C: should be included.

?C:.

?H:#\$i\_fp I\_FP /\*\*/

?H:.

?LINT:set i\_fp

: see if this is a fp.h system

set fp.h i\_fp

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_fp.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_PRIfldbl sPRIfldbl d\_PRIgldbl d\_PRIFUldbl sPRIGUldbl d\_PRIEUldbl \

sPRIgldbl d\_PRIeldbl sPRIeldbl sPRIFUldbl d\_PRIGUldbl sPRIEUldbl \

d\_SCNfldbl d\_double\_style\_vax d\_double\_style\_ieee \

d\_double\_style\_ibm d\_double\_style\_cray d\_double\_has\_subnormals \

d\_double\_has\_inf d\_double\_has\_nan d\_double\_has\_negative\_zero \

sSCNfldbl doublekind: \

d\_longdbl longdblsize doublesize uselongdouble test echo cat rm\_try \  
Setvar Compile run i\_stdlib osname gccversion cflags  
?MAKE: -pick add \$@ %<  
?S:doublekind:  
?S: This variable, if defined, encodes the type of a double:  
?S: 1 = IEEE 754 32-bit little endian,  
?S: 2 = IEEE 754 32-bit big endian,  
?S: 3 = IEEE 754 64-bit little endian,  
?S: 4 = IEEE  
754 64-bit big endian,  
?S: 5 = IEEE 754 128-bit little endian,  
?S: 6 = IEEE 754 128-bit big endian,  
?S: 7 = IEEE 754 64-bit mixed endian le-be,  
?S: 8 = IEEE 754 64-bit mixed endian be-le,  
?S: 9 = VAX 32bit little endian F float format  
?S: 10 = VAX 64bit little endian D float format  
?S: 11 = VAX 64bit little endian G float format  
?S: 12 = IBM 32bit format  
?S: 13 = IBM 64bit format  
?S: 14 = Cray 64bit format  
?S: -1 = unknown format.  
?S:.  
?S:d\_PRIldbl:  
?S: This variable conditionally defines the PERL\_PRIldbl symbol, which  
?S: indicates that stdio has a symbol to print long doubles.  
?S:.  
?S:d\_PRIgldbl:  
?S: This variable conditionally defines the PERL\_PRIldbl symbol, which  
?S: indicates that stdio has a symbol to print long doubles.  
?S:.  
?S:d\_PRIldbl:  
?S: This variable conditionally defines the PERL\_PRIldbl symbol, which  
?S: indicates that stdio has a symbol to print long doubles.  
?S:.  
?S:d\_PRIFUldbl:  
?S: This variable conditionally defines the PERL\_PRIldbl symbol, which  
?S: indicates  
that stdio has a symbol to print long doubles.  
?S: The 'U' in the name is to separate this from d\_PRIldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:d\_PRIGUldbl:  
?S: This variable conditionally defines the PERL\_PRIldbl symbol, which  
?S: indicates that stdio has a symbol to print long doubles.  
?S: The 'U' in the name is to separate this from d\_PRIgldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:d\_PRIEUldbl:

?S: This variable conditionally defines the PERL\_PRIfldbl symbol, which

?S: indicates that stdio has a symbol to print long doubles.

?S: The 'U' in the name is to separate this from d\_PRIldbl so that even

?S: case-blind systems can see the difference.

?S:.

?S:d\_SCNfldbl:

?S: This variable conditionally defines the PERL\_PRIfldbl symbol, which

?S: indicates that stdio has a symbol to scan long doubles.

?S:.

?S:sPRIfldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'f') for

output.

?S:.

?S:sPRIgldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'g') for output.

?S:.

?S:sPRIldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'e') for output.

?S:.

?S:sPRIFUldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'F') for output.

?S: The 'U' in the name is to separate this from sPRIfldbl so that even

?S: case-blind systems can see the difference.

?S:.

?S:sPRIGUldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'G') for output.

?S: The 'U' in the name is to separate this from sPRIgldbl so that even

?S: case-blind systems can see the difference.

?S:.

?S:sPRIEUldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'E') for output.

?S: The 'U' in the name is to separate this from sPRIldbl so that even

?S: case-blind

systems can see the difference.

?S:.

?S:sSCNfldbl:

?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'f') for input.

?S:.

?S:d\_double\_has\_inf:

?S: This variable conditionally defines the symbol DOUBLE\_HAS\_INF

?S: which indicates that the double type has an infinity.



?S:.

?S:d\_double\_has\_nan:

?S: This variable conditionally defines the symbol DOUBLE\_HAS\_NAN

?S: which indicates that the double type has a not-a-number.

?S:.

?S:d\_double\_has\_negative\_zero:

?S: This variable conditionally defines the symbol DOUBLE\_HAS\_NEGATIVE\_ZERO

?S: which indicates that the double type has a negative zero.

?S:.

?S:d\_double\_has\_subnormals:

?S: This variable conditionally defines the symbol DOUBLE\_HAS\_SUBNORMALS

?S: which indicates that the double type has subnormals (denormals).

?S:.

?S:d\_double\_style\_cray:

?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_CRAY

?S: which indicates that the double is the 64-bit CRAY mainframe  
format.

?S:.

?S:d\_double\_style\_ibm:

?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_IBM,

?S: which indicates that the double is the 64-bit IBM mainframe format.

?S:.

?S:d\_double\_style\_ieee:

?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_IEEE,

?S: which indicates that the double is the 64-bit IEEE 754.

?S:.

?S:d\_double\_style\_vax:

?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_VAX,

?S: which indicates that the double is the 64-bit VAX format D or G.

?S:.

?C:PERL\_PRIldbl:

?C: This symbol, if defined, contains the string used by stdio to

?C: format long doubles (format 'f') for output.

?C:.

?C:PERL\_PRIgldbl:

?C: This symbol, if defined, contains the string used by stdio to

?C: format long doubles (format 'g') for output.

?C:.

?C:PERL\_PRIeldbl:

?C: This symbol, if defined, contains the string used by stdio to

?C: format long doubles (format 'e') for output.

?C:.

?C:PERL\_PRIFldbl:

?C: This symbol, if defined, contains the string used by stdio  
to

?C: format long doubles (format 'F') for output.

?C:.

?C:PERL\_PRIGldbl:

?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'g') for output.  
?C:.  
?C:PERL\_PRIEdbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'e') for output.  
?C:.  
?C:PERL\_SCNfldbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'f') for input.  
?C:.  
?C:DOUBLEKIND:  
?C: DOUBLEKIND will be one of  
?C: DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE  
?C: DOUBLE\_IS\_VAX\_F\_FLOAT  
?C: DOUBLE\_IS\_VAX\_D\_FLOAT  
?C: DOUBLE\_IS\_VAX\_G\_FLOAT  
?C: DOUBLE\_IS\_IBM\_SINGLE\_32\_BIT  
?C: DOUBLE\_IS\_IBM\_DOUBLE\_64\_BIT  
?C: DOUBLE\_IS\_CRAY\_SINGLE\_64\_BIT  
?C: DOUBLE\_IS\_UNKNOWN\_FORMAT  
?C:.  
?C:DOUBLE\_HAS\_INF:  
?C: This  
symbol, if defined, indicates that the double has  
?C: the infinity.  
?C:.  
?C:DOUBLE\_HAS\_NAN:  
?C: This symbol, if defined, indicates that the double has  
?C: the not-a-number.  
?C:.  
?C:DOUBLE\_HAS\_NEGATIVE\_ZERO:  
?C: This symbol, if defined, indicates that the double has  
?C: the negative\_zero.  
?C:.  
?C:DOUBLE\_HAS\_SUBNORMALS:  
?C: This symbol, if defined, indicates that the double has  
?C: the subnormals (denormals).  
?C:.  
?C:DOUBLE\_STYLE\_CRAY:  
?C: This symbol, if defined, indicates that the double is

?C: the 64-bit CRAY mainframe format.

?C:.

?C:DOUBLE\_STYLE\_IBM:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit IBM mainframe format.

?C:.

?C:DOUBLE\_STYLE\_IEEE:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit IEEE 754.

?C:.

?C:DOUBLE\_STYLE\_VAX:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit VAX format D or G.

?C:.

?LINT:known

DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE

?LINT:known DOUBLE\_IS\_VAX\_F\_FLOAT

?LINT:known DOUBLE\_IS\_VAX\_D\_FLOAT

?LINT:known DOUBLE\_IS\_VAX\_G\_FLOAT

?LINT:known DOUBLE\_IS\_IBM\_SINGLE\_32\_BIT

?LINT:known DOUBLE\_IS\_IBM\_DOUBLE\_64\_BIT

?LINT:known DOUBLE\_IS\_CRAY\_SINGLE\_64\_BIT

?LINT:known DOUBLE\_IS\_UNKNOWN\_FORMAT

?H:#define DOUBLEKIND \$doublekind /\*\*/

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN 1

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN 2

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN 3

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN 4

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN 5

?H:?DOUBLEKIND:#define

DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN 6

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE 7

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE 8

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_F\_FLOAT 9

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_D\_FLOAT 10

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_G\_FLOAT 11

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IBM\_SINGLE\_32\_BIT 12

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IBM\_DOUBLE\_64\_BIT 13

?H:?DOUBLEKIND:#define DOUBLE\_IS\_CRAY\_SINGLE\_64\_BIT 14

?H:?DOUBLEKIND:#define DOUBLE\_IS\_UNKNOWN\_FORMAT -1

?H:#\$d\_PRIfldbl PERL\_PRIfldbl \$\$PRIfldbl /\*\*/

```

?H:#$d_PRIgldbl PERL_PRIgldbl $sPRIgldbl /**/
?H:#$d_PRIeldbl PERL_PRIeldbl $sPRIeldbl /**/
?H:#$d_PRIFUdbl PERL_PRIFdbl $sPRIFUdbl /**/
?H:#$d_PRIGUdbl PERL_PRIGldbl $sPRIGUdbl /**/
?H:#$d_PRIEUdbl PERL_PRIeldbl $sPRIEUdbl /**/
?H:#$d_SCNFdbl PERL_SCNFdbl $sSCNFdbl /**/
?H:#$d_double_has_inf DOUBLE_HAS_INF
?H:#$d_double_has_nan DOUBLE_HAS_NAN
?H:#$d_double_has_negative_zero
DOUBLE_HAS_NEGATIVE_ZERO
?H:#$d_double_has_subnormals DOUBLE_HAS_SUBNORMALS
?H:#$d_double_style_cray DOUBLE_STYLE_CRAY
?H:#$d_double_style_ibm DOUBLE_STYLE_IBM
?H:#$d_double_style_ieee DOUBLE_STYLE_IEEE
?H:#$d_double_style_vax DOUBLE_STYLE_VAX
?H:.
?T:yyy message saveccflags
?F:!try
?LINT:change ccflags
?LINT:change uselongdouble
: Check what kind of doubles your system has
$echo "Checking the kind of doubles you have..." >&4
$cat >try.c <<EOP
#$i_stdlib I_STDLIB
#define DOUBLESIZE $doublesize
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
static const double d = -0.1;
int main() {
    unsigned const char* b = (unsigned const char*)&d;
    #if DOUBLESIZE == 4
    if (b[0] == 0xCD && b[3] == 0xBD) {
        /* IEEE 754 32-bit little-endian */
        printf("1\n");
        exit(0);
    }
    if (b[0] == 0xBD && b[3] == 0xCD) {
        /* IEEE 754 32-bit big-endian */
        printf("2\n");
        exit(0);
    }
    if (b[0] == 0xCC && b[3] == 0xCC) {
        /* VAX format F, 32-bit
        PDP-style mixed endian. */
        printf("9\n");
        exit(0);
    }

```

```

}
if (b[0] == 0xC0 && b[3] == 0x9A) {
    /* IBM single 32-bit */
    printf("12\n");
    exit(0);
}
#endif
#if DOUBLESIZE == 8
if (b[0] == 0x9A && b[7] == 0xBF) {
    /* IEEE 754 64-bit little-endian */
    printf("3\n");
    exit(0);
}
if (b[0] == 0xBF && b[7] == 0x9A) {
    /* IEEE 754 64-bit big-endian */
    printf("4\n");
    exit(0);
}
if (b[0] == 0x99 && b[3] == 0xBF && b[4] == 0x9A && b[7] == 0x99) {
    /* ARM mixed endian: two little-endian 32-bit floats, in big endian order:
    * 4 5 6 7 0 1 2 3 (MSB = 7, LSB = 0)
    * 99 99 b9 bf 9a 99 99 99 */
    printf("7\n");
    exit(0);
}
if (b[0] == 0x99 && b[3] == 0x9A && b[4] == 0xBF && b[7] == 0x99) {
    /* The opposite of case 7, mixed endian: two big-endian 32-bit floats,
    * in little endian order: 3 2 1 0 7 6 5 4 (MSB = 7, LSB = 0)
    * 99 99 99 9a bf b9 99 99 */
    printf("8\n");
    exit(0);
}
if (b[0] == 0xCC && b[7] == 0xCC) {
    /* VAX
    format D, 64-bit PDP-style mixed endian. */
    printf("10\n");
    exit(0);
}
if (b[0] == 0xD9 && b[7] == 0x99) {
    /* VAX format G, 64-bit PDP-style mixed endian. */
    printf("11\n");
    exit(0);
}
if (b[0] == 0xC0 && b[7] == 0x9A) {
    /* IBM double 64-bit */
    printf("13\n");
    exit(0);
}
}

```

```

if (b[0] == 0xBF && b[7] == 0xCD) {
    /* CRAY single 64-bit */
    printf("14\n");
    exit(0);
}
#endif
#if DOUBLESIZE == 16
if (b[0] == 0x9A && b[15] == 0xBF) {
    /* IEEE 754 128-bit little-endian */
    printf("5\n");
    exit(0);
}
if (b[0] == 0xBF && b[15] == 0x9A) {
    /* IEEE 754 128-bit big-endian */
    printf("6\n");
    exit(0);
}
#endif
/* Then there are old mainframe/miniframe formats like IBM and CRAY.
 * Whether those environments can still build Perl is debatable. */
printf("-1\n"); /* unknown */
exit(0);
}
EOP
set try
if eval $compile; then
    doublekind=`$run ./try`
else
    doublekind=-1
fi
case "$doublekind" in
1) echo "You have IEEE
754 32-bit little endian doubles." >&4 ;;
2) echo "You have IEEE 754 32-bit big endian doubles." >&4 ;;
3) echo "You have IEEE 754 64-bit little endian doubles." >&4 ;;
4) echo "You have IEEE 754 64-bit big endian doubles." >&4 ;;
5) echo "You have IEEE 754 128-bit little endian doubles." >&4 ;;
6) echo "You have IEEE 754 128-bit big endian doubles." >&4 ;;
7) echo "You have IEEE 754 64-bit mixed endian doubles (32-bit LEs in BE)." >&4 ;;
8) echo "You have IEEE 754 64-bit mixed endian doubles (32-bit BEs in LE)." >&4 ;;
9) echo "You have VAX format F 32-bit PDP-style mixed endian doubles." >&4 ;;
10) echo "You have VAX format D 64-bit PDP-style mixed endian doubles." >&4 ;;
11) echo "You have VAX format G 64-bit PDP-style mixed endian doubles." >&4 ;;
12) echo "You have IBM short 32-bit doubles." >&4 ;;
13) echo "You have IBM long 64-bit doubles." >&4 ;;
14) echo "You have Cray single 64-bit doubles." >&4 ;;
*) echo "Cannot figure out your double. You Cyber, or something?" >&4 ;;
esac

```

```

d_double_style_ieee=$undef
d_double_style_vax=$undef
d_double_style_ibm=$undef
d_double_style_cray=$undef
case
"$doublekind" in
1|2|3|4|5|6|7|8) d_double_style_ieee=$define ;;
9|10|11) d_double_style_vax=$define ;;
12|13) d_double_style_ibm=$define ;;
14) d_double_style_cray=$define ;;
esac
case "$d_double_style_ieee" in
$define)
    d_double_has_inf=$define
    d_double_has_nan=$define
    d_double_has_negative_zero=$define
    d_double_has_subnormals=$define
    ;;
*)
    d_double_has_inf=$undef
    d_double_has_nan=$undef
    d_double_has_negative_zero=$undef
    d_double_has_subnormals=$undef
    ;;
esac
$rm_try

: Check print/scan long double stuff
echo " "

if $test X"$d_longdbl" = X"$define"; then

echo "Checking how to print long doubles..." >&4

if $test X"$sPRIfldbl" = X -a X"$doublesize" = X"$longdblsize"; then
    $cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
    double d = 123.456;
    printf("%.3f\n", d);
}
EOCP
set try
if eval $compile; then
    yyy=`$run
./try`
    case "$yyy" in

```

```

123.456)
sPRIfldbl="f"; sPRIgldbl="g"; sPRIeldbl="e";
sPRIFUldbl="F"; sPRIGUldbl="G"; sPRIEUldbl="E";
echo "We will use %f."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
long double d = 123.456;
printf("%.3Lf\n", d);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
123.456)
sPRIfldbl="Lf"; sPRIgldbl="Lg"; sPRIeldbl="Le";
sPRIFUldbl="LF"; sPRIGUldbl="LG"; sPRIEUldbl="LE";
echo "We will use %Lf."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
long double d = 123.456;
printf("%.3llf\n", d);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
123.456)
sPRIfldbl="llf"; sPRIgldbl="llg"; sPRIeldbl="lle";
sPRIFUldbl="llF"; sPRIGUldbl="llG"; sPRIEUldbl="llE";
echo "We

```



```

will use %lf."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
long double d = 123.456;
printf("%.3lf\n", d);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
123.456)
sPRIfldbl="'lf"; sPRIgldbl="'lg"; sPRIeldbl="'le";
sPRIFUldbl="'lF"; sPRIGUldbl="'lG"; sPRIEUldbl="'lE";
echo "We will use %lf."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
echo "Cannot figure out how to print long doubles." >&4
else
sSCNfldbl=$sPRIfldbl # expect consistency
fi

$rm_try

fi # d_longdbl

case "$sPRIfldbl" in
") d_PRIfldbl="$sundef"; d_PRIgldbl="$sundef"; d_PRIeldbl="$sundef";
d_PRIFUldbl="$sundef"; d_PRIGUldbl="$sundef"; d_PRIEUldbl="$sundef";
d_SCNfldbl="$sundef";
;;
*) d_PRIfldbl="$sdefine"; d_PRIgldbl="$sdefine"; d_PRIeldbl="$sdefine";
d_PRIFUldbl="$sdefine"; d_PRIGUldbl="$sdefine"; d_PRIEUldbl="$sdefine";
d_SCNfldbl="$sdefine";
;;
esac

```

```

: Before committing on uselongdouble,
see whether that looks sane.
if $test "$uselongdouble" = "$define"; then
  message=""
  echo " "
  echo "Checking if your long double math functions work right..." >&4
  $cat > try.c <<EOF
#include <math.h>
#include <stdio.h>
int main() {
  printf("%$PRIgdbl"\n", sqrtl(logl(expl(cosl(sinl(0.0L))))+powl(2.0L, 3.0L)));
}
EOF
  case "$osname:$gccversion" in
  aix:) saveccflags="$ccflags"
ccflags="$ccflags -qlongdouble" ;; # to avoid core dump
  esac
  set try
  if eval $compile_ok; then
    yyy=`$run ./try`
  fi
  case "$yyy" in
  3) echo "Your long double math functions are working correctly." >&4 ;;
  *) echo "Your long double math functions are broken, not using long doubles." >&4
    uselongdouble=$undef
    ;;
  esac
  $rm_try
  case "$osname:$gccversion" in
  aix:) ccflags="$saveccflags" ;; # restore
  esac
fi

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/longdblfi.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_memset.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

?RCS:  
 ?RCS: \$Log: d\_memset.U,v \$  
 ?RCS: Revision 3.0.1.1 1993/09/13 16:03:11 ram  
 ?RCS: patch10: removed text recommending bzero over memset (WAD)  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:06:36 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_memset: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_memset:  
 ?S: This variable conditionally defines the HAS\_MEMSET symbol, which  
 ?S: indicates to the C program that the memset() routine is available  
 ?S: to set blocks of memory.  
 ?S:.  
 ?C:HAS\_MEMSET  
 (MEMSET):  
 ?C: This symbol, if defined, indicates that the memset routine is available  
 ?C: to set blocks of memory.  
 ?C:.  
 ?H:#\$d\_memset HAS\_MEMSET /\*\*/  
 ?H:.  
 ?LINT:set d\_memset  
 : see if memset exists  
 set memset d\_memset  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_memset.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: dlsrc.U,v\$  
 ?RCS:  
 ?RCS: Copyright (c) 1996-1998, Andy Dougherty  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?RCS: \$Log: dlex.t.U,v \$  
 ?RCS:  
 ?X: hpux support thanks to Jeff Okamoto <okamoto@hpcc101.corp.hp.com>  
 ?X:  
 ?X: To create a shared library, you must compile ALL source files in the  
 ?X: library with +z (or possibly +Z if the library is whopping huge),  
 ?X: then link the library with -b. Example:  
 ?X: cc -c +z module\_a.c  
 ?X: cc -c +z module\_b.c

```

?X: ld -b module_a.o module_b.o -o module.sl
?X:
?MAKE:dlex: \
  Getfile Myread cat usedl so
?MAKE: -pick add $@ %<
?Y:BOTTOM
?S:dlex:
?S: This variable contains the extension that is to be used for the
?S: dynamically loaded modules that perl generates.
?S:.
: Check what extension to use for shared libs
case "$usedl" in
$define|y|true)
  $cat <<
  EOM

```

On a few systems, the dynamically loaded modules that perl generates and uses will need a different extension than shared libs. The default will probably be appropriate.

```

EOM
case "$dlex" in
") dflt="$so" ;;
*) dflt="$dlex" ;;
esac
rp='What is the extension of dynamically loaded modules'
. ./myread
dlex="$ans"
;;
*)
dlex="none"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/dlex.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_siglist.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

?RCS: You may reuse parts of this distribution only within the terms of

```

```

?RCS: that same Artistic Licence; a copy of which may be found at the root

```

```

?RCS: of the source tree for dist 4.0.

```

```

?RCS:
?RCS: $Log: d_siglist.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:22 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_siglist: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_siglist:
?S: This variable conditionally defines HAS_SYS_SIGLIST if sys_siglist[] is
?S: available to translate signal numbers to strings.
?S:.
?C:HAS_SYS_SIGLIST (SYS_SIGLIST):
?C: This symbol, if defined, indicates that the sys_siglist array is
?C: available to translate signal numbers
to strings.
?C:.
?H:#$d_siglist HAS_SYS_SIGLIST /**/
?H:.
?LINT:set d_siglist
: see if sys_siglist[] exist
echo " "
if set sys_siglist val -a d_siglist; eval $csym; $val; then
echo "You have sys_siglist[] for signal description." >&4
val="$define"
else
echo "You don't have sys_siglist[]." >&4
val="$undef"
fi
set d_siglist
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_siglist.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getwd.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getwd.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:18 ram

```

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getwd: Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_getwd:

?S: This variable conditionally defines HAS\_GETWD if getwd() is

?S: available to get working directory. If not, you should

?S: probably use getcwd().

?S:.

?C:HAS\_GETWD (GETWD):

?C: This symbol, if defined, indicates that the getwd routine is

?C: available to get working directory.

If not, you should

?C: probably use getcwd().

?C:.

?H:#\$d\_getwd HAS\_GETWD /\*\*/

?H:.

?LINT:set d\_getwd

: see if getwd exists

echo " "

if set getwd val -f d\_getwd; eval \$csym; \$val; then

echo 'getwd() found.'>&4

val="\$define"

else

echo 'getwd() not found. Assuming getcwd() exists.'>&4

val="\$undef"

fi

set d\_getwd

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getwd.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_statfs\_s: \

Hasstruct i\_sysparam i\_sysmount i\_systypes \

i\_sysvfs i\_sysstatfs Setvar

?MAKE: -pick add \$@ %<

?S:d\_statfs\_s:

?S: This variable conditionally defines the HAS\_STRUCT\_STATFS symbol,

```

?S: which indicates that the struct statfs is supported.
?S:.
?C:HAS_STRUCT_STATFS:
?C: This symbol, if defined, indicates that the struct statfs
?C: to do statfs() is supported.
?C:.
?H:#$d_statfs_s HAS_STRUCT_STATFS /**/
?H:.
?LINT:set d_statfs_s
: Check for statfs_s
echo " "
echo "Checking to see if your system supports struct statfs..." >&4
set d_statfs_s statfs $i_systypes sys/types.h $i_sysparam sys/param.h $i_sysmount sys/mount.h $i_sysvfs sys/vfs.h
$i_sysstatfs sys/statfs.h
eval $hasstruct
case "$d_statfs_s"
in
"$define")    echo "Yes, it does." ;;
*)           echo "No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_statfs_s.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Chk_whoami.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Chk_whoami.U,v $
?RCS: Revision 3.0 1993/08/18 12:04:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit makes sure we don't try to include whoami.h if uname() exists.
?X:
?MAKE:Chk_whoami: d_uname i_whoami
?MAKE: -pick add $@ %<
?LINT:change i_whoami
: weed out incompatibilities
case "$d_uname" in

```

```
"$define") i_whoami="$undef" ;;  
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/dist/U/Chk_whoami.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: orderlib.U,v \$

?RCS: Revision 3.0.1.4 1997/02/28 16:18:18 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: likewise for .o replaced by \$\_o

?RCS: patch61: now uses the ar located by Loc.U

?RCS:

?RCS: Revision 3.0.1.3 1995/01/11 15:33:04 ram

?RCS: patch45: allows hint files to specify their own value for 'ranlib'

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:26:48 ram

?RCS: patch36: now performs a real small compile for accurate checks (ADO)

?RCS:

?RCS: Revision 3.0.1.1

1994/08/29 16:31:17 ram

?RCS: patch32: use cc variable instead of hardwired 'cc' in 1st compile

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:orderlib ranlib: Loc ar cat test rm +cc +ccflags +ldflags +libs \_a \_o

?MAKE: -pick add \$@ %<

?S:orderlib:

?S: This variable is "true" if the components of libraries must be ordered

?S: (with `lorder \$\* | tsort`) before placing them in an archive. Set to

?S: "false" if ranlib or ar can generate random libraries.

?S:.

?S:ranlib:

?S: This variable is set to the pathname of the ranlib program, if it is

?S: needed to generate random libraries. Set to ":" if ar can generate

?S: random libraries or if random libraries are not supported



```

?S:.
?F:!foobar
: see if ar generates random libraries by itself
echo " "
echo "Checking how to generate random libraries on your machine..." >&4
?X: Some systems (like MIPS) complain when running ar... Others like Ultrix
?X: need an explicit 'ar ts'
to add the table of contents.
?X: Still others like Linux run ar ts successfully, but still need ranlib.
?X: This set of tests seems the minimum necessary to check out Linux.
?X: We need to explicitly put the entries in out-of-order so that Sun's ld
?X: will fail. (Otherwise it complains, but gives an exit status of 0.)
echo 'int bar1() { return bar2(); }' > bar1.c
echo 'int bar2() { return 2; }' > bar2.c
$cat > foo.c <<'EOP'
int main() { printf("%d\n", bar1()); exit(0); }
EOP
$cc $ccflags -c bar1.c >/dev/null 2>&1
$cc $ccflags -c bar2.c >/dev/null 2>&1
$cc $ccflags -c foo.c >/dev/null 2>&1
$ar rc bar$_a bar2$_o bar1$_o >/dev/null 2>&1
if $cc $ccflags $ldflags -o foobar foo$_o bar$_a $libs > /dev/null 2>&1 &&
./foobar >/dev/null 2>&1; then
echo "ar appears to generate random libraries itself."
orderlib=false
ranlib=":"
elif $ar ts bar$_a >/dev/null 2>&1 &&
$cc $ccflags $ldflags -o foobar foo$_o bar$_a $libs > /dev/null 2>&1 &&
./foobar >/dev/null 2>&1; then
echo "a table of contents
needs to be added with 'ar ts'."
orderlib=false
ranlib="$ar ts"
else
?X: Allow hints to specify their own ranlib "script". For instance, on
?X: some NeXT machines, the timestamp put by ranlib is not correct, and this
?X: may raise tedious recompiles for nothing. Therefore, NeXT may add the
?X: ranlib='sleep 5; /bin/ranlib' line in their hints to "fix" that.
?X: (reported by Andreas Koenig <k@franz.ww.tu-berlin.de>)
case "$ranlib" in
:) ranlib=";;
")
ranlib=`./loc ranlib X /usr/bin /bin /usr/local/bin`
$test -f $ranlib || ranlib="
;;
esac
if $test -n "$ranlib"; then
echo "your system has '$ranlib'; we'll use that."

```

```
orderlib=false
else
echo "your system doesn't seem to support random libraries"
echo "so we'll use lorder and tsort to order the libraries."
orderlib=true
ranlib=""
fi
fi
$rm -f foo* bar*
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/orderlib.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2018-2018, H.Merijn Brand

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_pipe2: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pipe2:

?S: This variable conditionally defines the HAS\_PIPE2 symbol, which

?S: indicates to the C program that the pipe2() routine is available

?S: to create an inter-process channel.

?S:.

?C:HAS\_PIPE2:

?C: This symbol, if defined, indicates that the pipe2 routine is

?C: available to create an inter-process channel.

?C:.

?H:#\$d\_pipe2 HAS\_PIPE2 /\*\*/

?H:.

?LINT:set d\_pipe2

: see if pipe2 exists

set pipe2 d\_pipe2

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_pipe2.U
```

No license file was found, but licenses were detected in source scan.

Perl5 Metaconfig Units

Copyright (c) 1996-1998, Andy Dougherty  
Copyright (c) 1999-2011, H.Merijn Brand  
All rights reserved.

These units are the ones I used to build Configure and config\_h.SH in the Perl5 distribution.

The Configure script and config\_h.SH file in the Perl distribution are generated by a program called metaconfig. To run metaconfig, you will need the full dist 3.0 distribution, maintained by Raphael Manfredi. As of this writing, the current version is dist3.0, patchlevel 70. Dist version dist-3.0@70.tar.gz is available on CPAN (the Comprehensive Perl Archive Network) as  
<<http://www.perl.com/perl/CPAN/authors/id/RAM/dist-3.0@70.tar.gz>>.

Instructions:

1. Unpack the full perl5 sources. Execute the following command

```
chmod +w Configure config_h.SH Porting/Glossary Porting/config*
```

2. Unpack the archive containing this file in the perl5 source directory. This will create a directory 'U' under the perl5 sources. That directory will contain the metaconfig units for perl5. This will also create two files in the perl5 source tree: MANIFEST.new and .package.
3. Apply any patches to perl in the perl\_patches/ directory. (This may well be empty.)
4. Obtain and install dist-3.0p170.
4. Apply any patches to dist under the dist\_patches subdirectory.
5. From your main perl5 source directory, run packinit to regenerate the .package file. **IMPORTANT:** Change the name and address of the maintainer to your own name and address. I don't want bug reports intended for you coming to me.
6. From your main perl5 source directory, run  
  
metalint (or mlint)  
  
and repair every failure it reports.
7. From your main perl5 source directory, run

metaconfig -m (or mconfig -m)

8. Edit U/mkglossary and/or U/mkgloss.pl to point to your dist-3.0pl70 location. (See comments at the top.)

9. Run the Porting/mksample script to update the contents of the Porting/ subdirectory, or run all parts by hand. (see README)

NB: this script used to be U/mksample replaced by Porting/mksample; see Porting/pumpkin.pod instead for current documentation on its use.

10. Let me know about any changes, corrections, or enhancements.

Things to watch out for:

1. The Configure in 5.005 is a hand-patched version of that supplied with perl5.004\_74 or so. Most of the patches had to do with supporting MPE/iX and EBCDIC systems. I have re-integrated most of the changes back into metaconfig, but I don't really understand why MPE/iX needed some of the patches, so I may have missed something important. I did try to flag questionable changes in the individual units.

The Configure as generated in the 5.9.x branch leading towards 5.10, is also used exactly as is without changes in the 5.8.x and 5.6.x branches, so do not remove support for features that are available in those branches, but are removed from devel (e.g. perl5005threads).

2. Future support of better random number generators should probably start with the randfunc.U unit included here. It's currently broken, but well commented and probably a good place to start.

Descriptions:

The units and other related files have been broken up into the following directories:

acl/

This is an old patch to begin to detect and use ACL (access control list) file protection schemes.

compline/

These are similar to the standard units, but I have modified them to have a more uniform compile command line, usually using the new Compile.U unit. I have submitted these for inclusion into the

regular dist distribution. (The cflags.U unit is actually perl-specific since it mentions -DDEBUGGING and -DPOSIX\_SOURCE, but that's the only place it is perl-specific.)

#### dist\_patches/

These are patches to dist that must be applied before it is built and installed. I have submitted these for inclusion in the regular dist distribution.

#### modified/

These are modified versions of the standard units. Also included in this directory are new units that are clearly derived from existing units. I have submitted these for inclusion in the regular dist distribution.

#### perl/

These are specific to perl. Some are heavily derived from original dist units, and are marked as such. Others are original.

#### perl\_patches/

These are patches to the perl source. This directory should ordinarily be empty, but there may have been drift between the standard version of perl and the one associated with these units.

#### protos/

These are units modified to use the new Hasproto.U or Protochk.U units to check for prototypes. I have submitted these for inclusion into the regular dist distribution.

#### target/

This is the very, very beginning of cross-compiler support. It doesn't work yet, and many standard units will need modification.

#### typedefs/

These are standard units modified to use the modified Typedef.U unit to check for typedefs. (The modified Typdef.U includes a function to avoid unnecessary prompts if the typedef being searched for exists.) I have submitted these for inclusion into the regular dist distribution.

#### threads/

These are specific to threading perl.

Copyright Information:

Unless otherwise indicated, the files contained in this distribution are:

Copyright (c) 1996-1998, Andy Dougherty

The following licensing terms apply to all files contained in this distribution:

You may distribute the files contained in this distribution under the terms of either

- a) the "Artistic License" which comes with Perl, or
- b) the "Artistic License" which comes with dist, or
- c) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version (see the file "Copying" that comes with the Perl distribution).

Which one to use is your choice.

The units in the "modified" directory have been derived from units associated with the metaconfig program of Raphael Manfredi's "dist" distribution. These units list Raphael Manfredi as the Copyright holder. dist is distributed under a modified version of the Perl Artistic License. Clause 7 of this modified license as contained in dist-3.0-pl60 provides:

7. You may reuse parts of this Package in your own programs, provided that you explicitly state where you got them from, in the source code (and, left to your courtesy, in the documentation), duplicating all the associated copyright notices and disclaimers. Besides your changes, if any, must be clearly marked as such. Parts reused that way will no longer fall under this license if, and only if, the name of your program(s) have no immediate connection with the name of the Package itself or its associated programs. You may then apply whatever restrictions you wish on the reused parts or choose to place them in the Public Domain--this will apply only within the context of your package.

In accordance with this clause, the versions of these units contained here are made available under the same terms as the rest of the units.

If you have any questions about the use of these units or about the differences between these units and the standard versions, please

feel free to ask.

Andy Dougherty [doughera@lafayette.edu](mailto:doughera@lafayette.edu)  
Dept. of Physics  
Lafayette College  
Easton, PA 18042-1782

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/README.dist
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: lseektype.U,v 3.0.1.1 1994/08/29 16:30:10 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: lseektype.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:30:10 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:lseektype lseeksize: Myread Typedef cat Compile rm_try longsize run
?MAKE: -pick add $@ %<
?S:lseektype:
?S: This variable defines lseektype to be something like off_t, long,
?S: or whatever type is used to declare
?S: lseek offset's type in the
?S: kernel (which also appears to be lseek's return type).
?S:.
?S:lseeksize:
?S: This variable defines lseektype to be something like off_t, long,
?S: or whatever type is used to declare lseek offset's type in the
?S: kernel (which also appears to be lseek's return type).
?S:.
?C:Off_t (LSEEKTYPE):
?C: This symbol holds the type used to declare offsets in the kernel.
?C: It can be int, long, off_t, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?C:LSEEKSIZE:
```

?C: This symbol holds the number of bytes used by the Off\_t.

?C:.

?C:Off\_t\_size:

?C: This symbol holds the number of bytes used by the Off\_t.

?C:.

?H:#define Off\_t \$lseektype /\* <offset> type \*/

?H:#define LSEEKSIZE \$lseeksize /\* <offset> size \*/

?H:#define Off\_t\_size \$lseeksize /\* <offset> size \*/

?H:.

?F:!try

?LINT:set lseektype

: see what type lseek is declared as in the kernel

rp="What is the type used for lseek's offset on this system?"

set off\_t lseektype

long stdio.h sys/types.h

eval \$typedef\_ask

echo " "

echo "Checking to see how big your file offsets are..." >&4

\$cat >try.c <<EOCP

#include <sys/types.h>

#include <stdio.h>

int main()

{

printf("%d\n", (int)sizeof(\$lseektype));

return(0);

}

EOCP

set try

if eval \$compile\_ok; then

lseeksize=`\$run ./try`

echo "Your file offsets are \$lseeksize bytes long."

else

dflt=\$longsize

echo " "

echo "(I can't seem to compile the test program. Guessing...)"

rp="What is the size of your file offsets (in bytes)?"

./myread

lseeksize="\$ans"

fi

\$rm\_try

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/lseektype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: intsize.U,v 3.0.1.2 1997/02/28 15:55:26 ram Exp \$



?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: intsize.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:55:26 ram  
?RCS: patch61: avoid prompting the user if the test runs ok  
?RCS: patch61: moved code from longsize.U into there  
?RCS: patch61: new tests for shortsize as well  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:21:06 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:52 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:intsize longsize  
shortsize: Compile Myread cat run i\_stdlib rm\_try  
?MAKE: -pick add \$@ %<  
?S:intsize:  
?S: This variable contains the value of the INTSIZE symbol, which  
?S: indicates to the C program how many bytes there are in an int.  
?S:.  
?S:longsize:  
?S: This variable contains the value of the LONGSIZE symbol, which  
?S: indicates to the C program how many bytes there are in a long.  
?S:.  
?S:shortsize:  
?S: This variable contains the value of the SHORTSIZE symbol which  
?S: indicates to the C program how many bytes there are in a short.  
?S:.  
?C:INTSIZE:  
?C: This symbol contains the value of sizeof(int) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.  
?C:LONGSIZE:  
?C: This symbol contains the value of sizeof(long) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.  
?C:SHORTSIZE:  
?C: This symbol contains the value of sizeof(short) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.

```

?H:#define INTSIZE $intsize /**/
?H:#define LONGSIZE $longsize /**/
?H:#define
SHORTSIZE $shortsize /**/
?H:.
?F:!try
: check for lengths of integral types
echo " "
case "$intsize" in
")
echo "Checking to see how big your integers are..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
@if INTSIZE || intsize
printf("intsize=%d;\n", (int)sizeof(int));
@end
@if LONGSIZE || longsize
printf("longsize=%d;\n", (int)sizeof(long));
@end
@if SHORTSIZE || shortsize
printf("shortsize=%d;\n", (int)sizeof(short));
@end
exit(0);
}
EOCP
set try
if eval $compile_ok && $run ./try > /dev/null; then
eval ` $run ./try `
@if INTSIZE || intsize
echo "Your integers are $intsize bytes long."
@end
@if LONGSIZE || longsize
echo "Your long integers are $longsize bytes long."
@end
@if SHORTSIZE || shortsize
echo "Your short integers are $shortsize bytes long."
@end
else
$cat >&4 <<EOM
!
Help! I can't compile and run the intsize test program: please enlighten me!
(This is probably a misconfiguration

```

in your system or libraries, and  
you really ought to fix it. Still, I'll try anyway.)

!

EOM

```
@if INTSIZE || intsize
dflt=4
rp="What is the size of an integer (in bytes)?"
./myread
intsize="$ans"
@end
@if LONGSIZE || longsize
dflt=$intsize
rp="What is the size of a long integer (in bytes)?"
./myread
longsize="$ans"
@end
@if SHORTSIZE || shortsize
dflt=2
rp="What is the size of a short integer (in bytes)?"
./myread
shortsize="$ans"
@end
fi
;;
esac
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/a_dvisory/intsize.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```
?MAKE:d_modfl d_modflproto: Inlibc Compile Hasproto cat \
test ccflags uselongdouble \
d_sqrtl d_aintl d_copysignl d_ilogbl d_scalbnl d_frexp1 d_ldexpl \
d_truncl
```

```
?MAKE: -pick add $@ %<
```

?S:d\_modfl:

?S: This variable conditionally defines the HAS\_MODFL symbol, which

?S: indicates to the C program that the modfl() routine is available.

?S:.

```

?S:d_modflproto:
?S: This symbol, if defined, indicates that the system provides
?S: a prototype for the modfl() function. Otherwise, it is up
?S: to the program to supply one. C99 says it should be
?S: long double modfl(long double, long double *);
?S:.
?C:HAS_MODFL:
?C: This symbol, if defined, indicates that the modfl routine is
?C: available to split a long double
?C: x into a fractional part f and
?C: an integer part i such that |f| < 1.0 and (f + i) = x.
?C:.
?C:HAS_MODFL_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the modfl() function. Otherwise, it is up
?C: to the program to supply one.
?C:.
?H:#$d_modfl HAS_MODFL /**/
?H:#$d_modflproto HAS_MODFL_PROTO /**/
?H:.
?T:message
?LINT:set d_modfl
?LINT:set d_modflproto
?LINT:change ccflags
: see if modfl exists
set modfl d_modfl
eval $inlibc

: see if prototype for modfl is available
echo " "
set d_modflproto modfl define math.h
eval $hasproto

if $test "$uselongdouble" = "$define"; then
    message=""
    if $test "$d_sqrtl" != "$define"; then
        message="$message sqrtl"
    fi
    if $test "$d_modfl" != "$define"; then
        if $test "$d_truncl:$d_copysignl" = "$define:$define"; then
            echo "You have both truncl and copysignl, so I can emulate modfl."
        else
            if $test "$d_aintl:$d_copysignl" = "$define:$define"; then
                echo "You have both aintl
and copysignl, so I can emulate modfl."
            else
                message="$message modfl"
            fi
        fi
    fi
fi

```

```

fi
fi
if $test "$d_frexp" != "$define"; then
if $test "$d_ilogbl:$d_scalbnl" = "$define:$define"; then
    echo "You have both ilogbl and scalbnl, so I can emulate frexp."
else
    message="$message frexp"
fi
fi
if $test "$d_ldexpl" != "$define"; then
message="$message ldexpl"
fi

if $test "$message" != ""; then
$cat <<EOM >&4

```

```

*** You requested the use of long doubles but you do not seem to have
*** the following mathematical functions needed for long double support:
*** $message
*** Please rerun Configure without -Duselongdouble and/or -Dusemorebits.
*** Cannot continue, aborting.

```

EOM

```

exit 1
fi
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_modfl.U

```

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?RCS: Copyright (c) 2017, Karl Williamson

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_mbrtowc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mbrtowc:

?S: This variable conditionally defines the HAS\_MBRTOWC symbol if the

?S: mbrtowc() routine is available to be used to convert a multi-byte

?S: character into a wide character.

?S:.

?C:HAS\_MBRTOWC:

?C: This symbol, if defined, indicates that the mbrtowc routine is

?C: available to convert a multi-byte character into a wide character.

?C:.

?H:#\$d\_mbrtowc HAS\_MBRTOWC /\*\*/

?H:.

?LINT: set d\_mbrtowc

: see if mbrtowc exists

set mbrtowc d\_mbrtowc

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_mbrtowc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: cppstdin.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: cppstdin.U,v \$

?RCS: Revision 3.0.1.4 1994/10/29 16:08:34 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:05:38 ram

?RCS: patch16: comment for CPPLAST was missing

?RCS:

?RCS: Revision 3.0.1.2 1993/12/15 08:18:58 ram

?RCS: patch15: new variables cpprun and cpplast, guaranteed wrapper-free

?RCS: patch15: cppstdin now tries to use cc, even at the cost of a wrapper

?RCS:

?RCS: Revision 3.0.1.1

1993/08/25 14:00:53 ram

?RCS: patch6: remove wrapper when not actually used

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cppstdin cppminus cpprun cpplast: contains test \

Myread Oldconfig Loc cpp +cc rm hint osname gccversion

?MAKE: -pick add \$@ %<

?S:cppstdin:

?S: This variable contains the command which will invoke the C  
?S: preprocessor on standard input and put the output to stdout.  
?S: It is primarily used by other Configure units that ask about  
?S: preprocessor symbols.  
?S:.  
?S:cppminus:  
?S: This variable contains the second part of the string which will invoke  
?S: the C preprocessor on the standard input and produce to standard  
?S: output. This variable will have the value "-" if cppstd in needs  
?S: a minus to specify standard input, otherwise the value is "".  
?S:.  
?S:cpprun:  
?S: This variable contains the command which will invoke a C preprocessor  
?S: on standard input and put the output to stdout. It is guaranteed  
not  
?S: to be a wrapper and may be a null string if no preprocessor can be  
?S: made directly available. This preprocessor might be different from the  
?S: one used by the C compiler. Don't forget to append cpplast after the  
?S: preprocessor options.  
?S:.  
?S:cpplast:  
?S: This variable has the same functionality as cppminus, only it applies  
?S: to cpprun and not cppstd in.  
?S:.  
?C:CPPSTDIN:  
?C: This symbol contains the first part of the string which will invoke  
?C: the C preprocessor on the standard input and produce to standard  
?C: output. Typical value of "cc -E" or "/lib/cpp", but it can also  
?C: call a wrapper. See CPPRUN.  
?C:.  
?C:CPPMINUS:  
?C: This symbol contains the second part of the string which will invoke  
?C: the C preprocessor on the standard input and produce to standard  
?C: output. This symbol will have the value "-" if CPPSTDIN needs a minus  
?C: to specify standard input, otherwise the value is "".  
?C:.  
?C:CPPRUN:  
?C: This symbol contains the string which will invoke  
a C preprocessor on  
?C: the standard input and produce to standard output. It needs to end  
?C: with CPPLAST, after all other preprocessor flags have been specified.  
?C: The main difference with CPPSTDIN is that this program will never be a  
?C: pointer to a shell wrapper, i.e. it will be empty if no preprocessor is  
?C: available directly to the user. Note that it may well be different from  
?C: the preprocessor used to compile the C program.  
?C:.  
?C:CPPLAST:  
?C: This symbol is intended to be used along with CPPRUN in the same manner

```

?C: symbol CPPMINUS is used with CPPSTDIN. It contains either "-" or "".
?C:.
?H:#define CPPSTDIN "$cppstdin"
?H:#define CPPMINUS "$cppminus"
?H:#define CPPRUN "$cpprun"
?H:#define CPPLAST "$cpplast"
?H:.
?F:cppstdin !testcpp.out !testcpp.c
?T:wrapper x_cpp x_minus ok
?LINT:extern cppflags
: see how we invoke the C preprocessor
echo " "
echo "Now, how can we feed standard input to your C preprocessor..." >&4
cat <<'EOT' >testcpp.c
#define ABC abc
#define
  XYZ xyz
ABC.XYZ
EOT
cd ..
if test ! -f cppstdin; then
  if test "X$osname" = "Xaix" -a "X$gccversion" = X; then
    # AIX cc -E doesn't show the absolute headerfile
    # locations but we'll cheat by using the -M flag.
    echo 'cat >.$$.c; rm -f .$$.u; ""$cc" ${1+"$@"} -M -c .$$.c 2>/dev/null; test -s .$$.u && awk """"$2 ~ /\.h$/ { print
"#0 \\""$2"\\""" }"""" .$$.u; rm -f .$$.o .$$.u; ""$cc" -E ${1+"$@"} .$$.c; rm .$$.c' > cppstdin
  else
    echo 'cat >.$$.c; ""$cc $cppflags" -E ${1+"$@"} .$$.c; rm .$$.c' >cppstdin
  fi
else
  echo "Keeping your $hint cppstdin wrapper."
fi
chmod 755 cppstdin
wrapper=`pwd`/cppstdin
ok='false'
cd UU

?X:
?X: We'll run the cpp tests again if we don't have any valid C preprocessor
?X: yet or don't know how to proceed without a wrapper (in which case cpprun
?X: is empty and that's really annoying...)
?X:
if $test "X$cppstdin" != "X" && \
  $cppstdin $cppminus <testcpp.c >testcpp.out 2>&1 && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
  echo "You used

```



```

to use $cppstdin $cppminus so we'll use that again."
case "$cpprun" in
*) echo "But let's see if we can live without a wrapper..." ;;
*)
if $cpprun $cppplast <testcpp.c >testcpp.out 2>&1 && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
  echo "(And we'll use $cpprun $cppplast to preprocess directly.)"
  ok='true'
else
  echo "(However, $cpprun $cppplast does not work, let's see...)"
fi
;;
esac
else
case "$cppstdin" in
") ;;
*)
  echo "Good old $cppstdin $cppminus does not seem to be of any help..."
  ;;
esac
fi

if $ok; then
: nothing
elif echo 'Maybe ""$cc" -E" will work...'; \
  $cc -E <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yup, it does."
  x_cpp="$cc $cppflags -E"
  x_minus="";
elif echo 'Nope...maybe ""$cc" -E -" will work...'; \
  $cc -E - <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yup, it does."
  x_cpp="$cc $cppflags -E"
  x_minus='-';
elif
  echo 'Nope...maybe ""$cc" -P" will work...'; \
  $cc -P <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yipee, that works!"
  x_cpp="$cc $cppflags -P"
  x_minus="";
elif echo 'Nope...maybe ""$cc" -P -" will work...'; \
  $cc -P - <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "At long last!"

```

```

x_cpp="$cc $cppflags -P"
x_minus='-';
elif echo 'No such luck, maybe "$cpp" will work...'; \
$cpp <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "It works!"
x_cpp="$cpp $cppflags"
x_minus="";
elif echo 'Nixed again...maybe "$cpp" -" will work...'; \
$cpp - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Hooray, it works! I was beginning to wonder."
x_cpp="$cpp $cppflags"
x_minus='-';
elif echo 'Uh-uh. Time to get fancy. Trying a wrapper...'; \
$wrapper <testcpp.c >testcpp.out 2>&1; \
$contains
'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
x_cpp="$wrapper"
x_minus="
echo "Eureka!"
else
dflt="
rp="No dice. I can't find a C preprocessor. Name one:"
. ./myread
x_cpp="$ans"
x_minus="
$x_cpp <testcpp.c >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "OK, that will do." >&4
else
echo "Sorry, I can't get that to work. Go find one and rerun Configure." >&4
exit 1
fi
fi

case "$ok" in
false)
cppstdin="$x_cpp"
cppminus="$x_minus"
cpprun="$x_cpp"
cpplast="$x_minus"
?X:
?X: If /lib/cpp is used, try using a wrapper to increase our chances to have
?X: the C compiler and our $cppstdin agree on the same symbols... However,
?X: since cpprun is guaranteed not to be a wrapper, we must clear it if the
?X: only preprocessor we found was a wrapper, with all our luck...
?X:

```

```

set X $x_cpp
shift
case "$1" in
"$cpp")
echo "Perhaps can we force $cc -E using a wrapper..."
if $wrapper <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz'
testcpp.out >/dev/null 2>&1
then
echo "Yup, we can."
cppstdin="$wrapper"
cppminus="";
else
echo "Nope, we'll have to live without it..."
fi
;;
esac
case "$cpprun" in
"$wrapper")
cpprun="
cpplast="
;;
esac
;;
esac

case "$cppstdin" in
"$wrapper"|"cppstdin") ;;
*) $rm -f $wrapper;;
esac
$rm -f testcpp.c testcpp.out

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/cppstdin.U

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?RCS: \$Id: Head.U 6 2006-08-25 22:21:46Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Head.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 15:02:09 ram  
?RCS: patch61: make sure we unset CDPATH for shells that support this  
?RCS: patch61: improved Korn shell detection and handling  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:40:02 ram  
?RCS: patch56: added SVR4-ish /opt directories to path list (ADO)  
?RCS: patch56: OS/2 platforms are using another path separator  
?RCS:  
?RCS: Revision 3.0.1.7 1995/03/21 08:46:15 ram  
?RCS: patch52: definition of  
paths wrongly added spurious ':' chars  
?RCS:  
?RCS: Revision 3.0.1.6 1994/10/29 15:54:19 ram  
?RCS: patch36: make sure ENV is unset before calling /bin/ksh  
?RCS:  
?RCS: Revision 3.0.1.5 1994/08/29 16:03:44 ram  
?RCS: patch32: now sets PATH only using existing directories  
?RCS:  
?RCS: Revision 3.0.1.4 1994/06/20 06:54:28 ram  
?RCS: patch30: now computes its invocation name into 'me'  
?RCS: patch30: symbol me is made visible to all units read-only  
?RCS:  
?RCS: Revision 3.0.1.3 1993/12/15 08:15:07 ram  
?RCS: patch15: added /sbin:/usr/sbin:/usr/libexec in PATH for BSD/386  
?RCS:  
?RCS: Revision 3.0.1.2 1993/11/10 17:32:35 ram  
?RCS: patch14: ensure PATH is reset to '.' before testing for alias  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/27 14:38:07 ram  
?RCS: patch7: not all 'test' programs support the -x option  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:58 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This is the very first unit in the Configure script. It is mostly just  
?X:  
things to keep people from getting into a tizzy right off the bat.  
?X:  
?MAKE:Head:  
?MAKE: -pick wipe \$@ %<  
?V:PATH p\_ \_exe me newsh  
?T:argv p paths OS2\_SHELL DJGPP  
?T:inksh needksh avoidksh newsh changesh reason  
?F:!\*  
?LINT:extern ENV CDPATH SHELL MACHTYPE \_exe is\_os2  
?LINT:change ENV CDPATH is\_os2  
?LINT:nocomment

```
#!/bin/sh
#
# If these # comments don't work, trim them. Don't worry about any other
# shell scripts, Configure will trim # comments from them for you.
#
# (If you are trying to port this package to a machine without sh,
# I would suggest you have a look at the prototypical config_h.SH file
# and edit it to reflect your system. Some packages may include samples
# of config.h for certain machines, so you might look for one of those.)
#
?X:
?X: NOTE THAT A CONFIGURE SCRIPT IS IN THE PUBLIC DOMAIN (whether or not
?X: the software which uses it is in the public domain).
?X:
# Yes, you may rip this off to use in other distribution packages. This
# script belongs to the public
# domain and cannot be copyrighted.
#
?X:
?X: WE ASK YOU NOT TO REMOVE OR ALTER THE FOLLOWING PARAGRAPH, PLEASE:
?X:
# Note: this Configure script was generated automatically by the tool
# called "metaconfig". Rather than working with this copy of Configure,
# you should use metaconfig. Perl uses a modified version of this
# tool, and this, together with the metaconfig units, are available
# in the git repository:
# $ git clone https://github.com/perl5-metaconfig/metaconfig metaconfig
# The original dist package (including metaconfig) is available on github:
# $ git clone https://github.com/rmanfredi/dist.git dist-git
#
?X: OK, I'll not alter, but I'll add to it then ...
# Though this script was generated by metaconfig from metaunits, it is
# OK to send patches against Configure itself (but not to commit them
# to bleed). It's up to
# the Configure maintainers to backport the patch to the metaunits if it
# is accepted. Exceptions to this rule, and more information, is in
# Porting/pumpkin.pod.
?X:
?X:
NOTA BENE:
?X: If you develop you own version of metaconfig based on this work,
?X: you have to add some comments telling that the script was generated
?X: by your version, not mine: It credits your work.
?X:

# Generated using [metaconfig <VERSION> PL<PATCHLEVEL>]
# with additional metaconfig patches from https://github.com/Perl/metaconfig
```

```
cat >c1$$ <<EOF
ARGGGHHHH!!!!
```

SCO csh still thinks true is false. Write to SCO today and tell them that next year Configure ought to "rm /bin/csh" unless they fix their blasted shell. :-)

(Actually, Configure ought to just patch csh in place. Hmm. Hmmmmm. All we'd have to do is go in and swap the && and || tokens, wherever they are.)

[End of diatribe. We now return you to your regularly scheduled programming...]

```
EOF
cat >c2$$ <<EOF
```

```
OOPS! You naughty creature! You didn't run Configure with sh!
I will attempt to remedy the situation by running sh for you...
EOF
```

```
true || cat c1$$ c2$$
true || exec sh $0 $argv:q
```

```
(exit
 $?0) || cat c2$$
(exit $?0) || exec sh $0 $argv:q
rm -f c1$$ c2$$
```

```
if test -f /dev/cputype -a -f /dev/drivers -a -f /dev/osversion; then
  cat <<EOF
  ***
  *** I'm sorry but this system looks like Plan 9 and Plan 9 doesn't do
  *** Configure that well. (Plan 9 is close to UNIX but not close enough.)
  *** Please read the README.plan9 for further instructions.
  *** Cannot continue, aborting.
  ***
  EOF
  exit 1
fi
```

```
if test -f /sys/utilities/MultiView ; then
  # AmigaOS, test -c for /dev/null is not useful
  :
elif test ! -c /dev/null ; then
  cat <<EOF
  ***
  *** I'm sorry, but /dev/null appears to be a file rather than a device.
  *** Please consult your operating sytem's notes for making a device
  *** in /dev.
  *** Cannot continue, aborting.
  ***
```

EOF

exit 1

fi

: compute my invocation name

me=\$0

case "\$0" in

\*/\*)

me=`echo \$0 | sed -e 's!.\*\/(.\*)!\1!' 2>/dev/null`

test "\$me" || me=\$0

::

esac

?X:

?X: To be able to run under OS/2, we must detect that early enough to use

?X: the proper path separator,

stored in \$p\_. It is : on UNIX and ; on

?X: DOS-ish systems such as OS/2.

?X:

: Proper separator for the PATH environment variable

p\_=:

: On OS/2 this directory should exist if this is not floppy only system ":-]"

if test -d c:/ || ( uname -a | grep -i 'os\(\(\)\)2' 2>&1 ) 2>&1 >/dev/null ; then

if test -n "\$OS2\_SHELL"; then

p\_=\;

PATH=`cmd /c "echo %PATH%" | tr '\\\|' /`

?X: That's a bug in ksh5.22

OS2\_SHELL=`cmd /c "echo %OS2\_SHELL%" | tr '\\\|' / | tr '[A-Z]' '[a-z]`

is\_os2=yes

elif test -n "\$DJGPP"; then

case "X\${MACHTYPE:-nonesuchmach}" in

\*cygwin|\*msys) ;;

\*) p\_=\; ;;

esac

fi

fi

?X:

?X: There are two schools of thoughts here. Some people correctly argue that

?X: the user has a better chance than we do of setting a reasonable PATH and

?X: others argue that Configure is the best place there is to set up a suitable

?X: PATH. Well, here we try to compromise by keeping the user's PATH and

?X: appending some directories which are known to work on some machine or the

?X:

other. The rationale behind this being that a novice user might not have a

?X: proper environment variable set, and some directories like /etc (where

?X: chown is located on some BSD systems) may be missing--RAM.

?X:

?X: SVR4 adds an /opt directory for optional packages. Some sites use  
 ?X: various permutations on /opt as opposed to /usr or /usr/local.-- ADO  
 ?X:  
 ?X: We only add directories that are not already in the PATH of the  
 ?X: user and the directories must exist also.  
 ?X:  
 ?X: 20040627, Merijn, HP-UX's ANSI compiler is in /opt/ansic/bin if present  
 ?X: and should be before /usr/ccs/bin, where the braindead bundled compiler  
 ?X: can be found. The /usr/ccs/bin compiler cannot be used to build perl.  
 ?X:

: Proper PATH setting

```
paths="/bin /usr/bin /usr/local/bin /usr/ucb /usr/local /usr/lbin"
paths="$paths /opt/bin /opt/local/bin /opt/local /opt/lbin"
paths="$paths /usr/5bin /etc /usr/gnu/bin /usr/new /usr/new/bin /usr/nbin"
paths="$paths /opt/gnu/bin /opt/new /opt/new/bin /opt/nbin"
paths="$paths
/sys5.3/bin /sys5.3/usr/bin /bsd4.3/bin /bsd4.3/usr/ucb"
paths="$paths /bsd4.3/usr/bin /usr/bsd /bsd43/bin /opt/ansic/bin /usr/ccs/bin"
paths="$paths /etc /usr/lib /usr/ucblib /lib /usr/ccs/lib"
paths="$paths /sbin /usr/sbin /usr/libexec"
paths="$paths /system/gnu_library/bin"
```

```
for p in $paths
do
case "$p_${PATH}$p_" in
*$p_${p}_*) ;;
*) test -d $p && PATH=${PATH}$p_$p ;;
esac
done
```

```
PATH=.$p_${PATH}
export PATH
```

: shall we be using ksh?

```
inksh=""
needksh=""
avoidksh=""
newsh=/bin/ksh
changesh=""
```

?X: Use (alias -x) and not (alias) since zsh and bash recognize the alias  
 ?X: builtin but not the -x option which is typically ksh...  
 ?X: We need to set up PATH before calling the "alias" built-in since some  
 ?X: systems like HP-UX have a binary called /bin/alias.

```
if (PATH=.; alias -x) >/dev/null 2>&1; then
  inksh=true
fi
```

?X: On HP-UX, large Configure scripts may exercise a bug in /bin/sh, use ksh  
 if test -f /hp-ux -a -f /bin/ksh; then



```

needksh='to avoid sh bug in "here document"
expansion'
fi
?X: On AIX4, /bin/sh is really ksh and it causes problems, use sh
if test -d /usr/lpp -a -f /usr/bin/bsh -a -f /usr/bin/uname; then
if test X`/usr/bin/uname -v` = X4; then
  avoidksh="to avoid AIX 4's /bin/sh"
  newsh=/usr/bin/bsh
fi
fi
?X: On Digital UNIX, /bin/sh may start up buggy /bin/ksh, use sh
if test -f /osf_boot -a -f /usr/sbin/setld; then
if test X`/usr/bin/uname -s` = XOSF1; then
  avoidksh="to avoid Digital UNIX' ksh"
  newsh=/bin/sh
fi
?X: if BIN_SH is set to 'xpg4', sh will start up ksh
  unset BIN_SH
fi
fi
?X: If we are not in ksh and need it, then feed us back to it
case "$inksh/$needksh" in
/[a-z]*)
?X: Clear ENV to avoid any ~/.kshrc that could alias cd or whatever...
?X: Don't use "unset ENV", that is not portable enough
  ENV=""
  changesh=true
  reason="$needksh"
  ;;
esac
?X: If we are in ksh and must avoid it, then feed us back to a new shell
case "$inksh/$avoidksh" in
true/[a-z]*)
  changesh=true
  reason="$avoidksh"
  ;;
esac
?X: Warn them if they
  use ksh on other systems, which are those where
?X: we don't need ksh nor want to avoid it explicitly, yet are using it.
case "$inksh/$needksh-$avoidksh-" in
true/--)
  cat <<EOM
(I see you are using the Korn shell. Some ksh's blow up on $me,
mainly on older exotic systems. If yours does, try the Bourne shell instead.)
EOM
  ;;
esac
case "$changesh" in

```

```

true)
export newsh
echo "(Feeding myself to $newsh $reason.)"
?X: Make sure they didn't say sh <Configure by checking whether $0 ends
?X: with Configure or not. If they did say sh <../Configure, then too
?X: bad for them anyway, since we lost that path indication...
?X: Otherwise, execing $0 ensures we keep the full remote source dir
?X: indication for src.U.
case "$0" in
Configure|*/Configure) exec $newsh $0 "$@";;
*) exec $newsh Configure "$@";;
esac
;;
esac
?X: 2004.06.09 rac
?X: having $newsh persist as ksh here is bad news if ksh doesn't really
?X: exist. this causes us to toss away a perfectly good working test in
?X: bash
in favor of more exotic external options. see bug 42665.
test -x "${newsh}" || unset newsh

```

```

?X: Unset CDPATH to avoid surprises when using cd under some shells
?X: Can't unset it because that's not portable to very old shells.
?X: Can't set it to " because then bash 2.02 won't do "cd UU" --AD 6/98.
?X: Don't want to set it to '.' because then ksh prints out the
?X: name of the directory every time you cd to it. --AD 6/98
?X: In order to inflict the least harm, change it only if it's set.
: if needed, set CDPATH to a harmless value that is not chatty
: avoid bash 2.02 problems with empty CDPATH.
case "$CDPATH" in
") ;;
*) case "$SHELL" in
*bash*) CDPATH='.' ;;
*) CDPATH="" ;;
esac
;;
esac

```

```

: Configure runs within the UU subdirectory
test -d UU || mkdir UU
?X: Use ./* to avoid any confirmation prompts from enhanced shells -- WED
cd UU && rm -f ./*

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Head.U

```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996,1998 Andy Dougherty

?RCS: Copyright (c) 1996, Sven Verdoolaege

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?RCS:

?MAKE:d\_gnulibc gnulibc\_version: Myread Oldconfig Setvar rm\_try \  
 cat Compile run

?MAKE:-pick add \$@ %<

?S:d\_gnulibc:

?S: Defined if we're dealing with the GNU C Library.

?S:.

?S:gnulibc\_version:

?S: This variable contains the version number of the GNU C library.

?S: It is usually something like '2.2.5'. It is a plain " if this

?S: is not the GNU C library, or if the version is unknown.

?S:.

?C:HAS\_GNULIBC ~ %<:

?C: This

symbol, if defined, indicates to the C program that

?C: the GNU C library is being used. A better check is to use

?C: the \_\_GLIBC\_\_ and \_\_GLIBC\_MINOR\_\_ symbols supplied with glibc.

?C:.

?H:%<:#\$d\_gnulibc HAS\_GNULIBC /\*\*/

?H:%<:#if defined(HAS\_GNULIBC) && !defined(\_GNU\_SOURCE)

?H:%<:#define \_GNU\_SOURCE

?H:%<:#endif

?H:.

?F:!glibc.ver !try.c !try

?LINT: set d\_gnulibc

?LINT: usefile try.c

?LINT: known \_GNU\_SOURCE

?X: gnulibc can be executed by calling \_\_libc\_main().

?X: Ulrich Drepper doesn't think any other libc does that,

?X: but we check if it says 'GNU C Library' to be sure.

?X:

?X: Alas, as of 3/1998 glibc 2.0.7 reportedly isn't going to

?X: have \_\_libc\_main() anymore. :-(. Fortunately, all released

?X: versions of glibc 2.x.x \_do\_ have CPP variables. For 2.0.6,

?X: they are:

?X: #define \_\_GLIBC\_\_ 2

?X: #define \_\_GLIBC\_MINOR\_\_ 0.

```

?X: (The '6' isn't available :-(.
?X: glibc2.1 will also have
?X: extern const char * __gnu_get_libc_release(void);
?X: extern const char *
__gnu_get_libc_version(void);
?X: functions. --thanks to Andreas Jaeger. --AD 6/1998.
?X: Although the exact format isn't documented, __gnu_get_libc_version()
?X: returns a simple string '2.1.3' in glibc 2.1.3.
?X:
: determine whether we are using a GNU C library
echo " "
echo "Checking for GNU C Library..." >&4
cat >try.c <<'EOCP'
/* Find out version of GNU C library. __GLIBC__ and __GLIBC_MINOR__
alone are insufficient to distinguish different versions, such as
2.0.6 and 2.0.7. The function gnu_get_libc_version() appeared in
libc version 2.1.0. A. Dougherty, June 3, 2002.
*/
#include <stdio.h>
int main(void)
{
#ifdef __GLIBC__
# ifdef __GLIBC_MINOR__
# if __GLIBC__ >= 2 && __GLIBC_MINOR__ >= 1
# include <gnu/libc-version.h>
printf("%s\n", gnu_get_libc_version());
# else
printf("%d.%d\n", __GLIBC__, __GLIBC_MINOR__);
# endif
# else
printf("%d\n", __GLIBC__);
# endif
return 0;
#else
return 1;
#endif
}
EOCP
set
try
if eval $compile_ok && $run ./try > glibc.ver; then
val="$define"
gnulibc_version=`$cat glibc.ver`
echo "You are using the GNU C Library version $gnulibc_version"
else
val="$undef"
gnulibc_version=""
echo "You are not using the GNU C Library"

```

```
fi
$rm_try glibc.ver
set d_gnulibc
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gnulibc.U
```

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_aintl: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_aintl:

?S: This variable conditionally defines the HAS\_AINTL symbol, which

?S: indicates to the C program that the aintl() routine is available.

?S: If copysignl is also present we can emulate modfl.

?S:.

?C:HAS\_AINTL:

?C: This symbol, if defined, indicates that the aintl routine is

?C: available. If copysignl is also present we can emulate modfl.

?C:.

?H:#\$d\_aintl HAS\_AINTL /\*\*/

?H:.

?LINT:set d\_aintl

: see if aintl exists

set aintl d\_aintl

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_aintl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: inc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: inc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:inc incexp: Loc Oldconfig Getfile us rinc

?MAKE: -pick add \$@ %<

?S:inc:

?S: This variable holds the name of the directory in which the user wants

?S: to put public header files for the package in question. It is most

?S: often a local directory such as /usr/local/include.

?S:.

?S:incexp:

?S: This is the same as the inc variable, but is filename

expanded

?S: at configuration time for convenient use in your makefiles.

?S:.

: determine where public header files go

```
case "$inc" in
")
dflt=`./loc . ." /usr/local/include /usr/include/local $usrinc`
;;
*) dflt="$inc"
;;
esac
fn=d~
rp="Where do you want to put the public header files?"
./getfile
inc="$ans"
incexp="$ansexp"
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/inc.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fdim: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fdim:

?S: This variable conditionally defines the HAS\_FDIM symbol, which

?S: indicates to the C program that the fdim() routine is available.

?S:.

?C:HAS\_FDIM:

?C: This symbol, if defined, indicates that the fdim routine is

?C: available to do the positive difference function.

?C:.

?H:#\$d\_fdim HAS\_FDIM /\*\*/

?H:.

?LINT:set d\_fdim

: see if fdim exists

set fdim d\_fdim

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fdim.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysdir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysdir.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:22:30 ram

?RCS: patch32: fixed typo in I\_SYS\_DIR symbol name

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:30 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_sysdir: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_sysdir:

?S: This variable conditionally defines the I\_SYS\_DIR symbol, and indicates

?S: whether a C program should include <sys/dir.h>.

?S:.

?C:I\_SYS\_DIR (I\_SYSDIR):

?C: This symbol, if

defined, indicates to the C program that it should

?C: include <sys/dir.h>.

?C:.

?H:#\$i\_sysdir I\_SYS\_DIR /\*\*/

?H:.

?LINT:set i\_sysdir

: see if this is an sysdir system

set sys/dir.h i\_sysdir

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_sysdir.U

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#

# Beyond this point lie functions we may never compile.

#

#

# DO NOT CHANGE A IOTA BEYOND THIS COMMENT!

# The following table lists offsets of functions within the data section.

# Should modifications be needed, change original code and rerun perload

# with the -o option to regenerate a proper offset table.

#

|                           |       |
|---------------------------|-------|
| locate'dump_list          | 2938  |
| locate'private_units      | 3071  |
| locate'public_units       | 3858  |
| locate'units_path         | 5351  |
| main'build_extfun         | 16719 |
| main'build_filext         | 16368 |
| main'build_xref           | 25627 |
| main'complete_line        | 22216 |
| main'dump_obsolete        | 23859 |
| main'end_extraction       | 7714  |
| main'extract_dependencies | 19358 |
| main'extract_filenames    | 15511 |
| main'gensym               | 29705 |
| main'init                 | 1308  |
| main'init_depend          |       |
| 18208                     |       |
| main'init_except          | 1534  |
| main'init_extraction      | 6862  |
| main'locate_units         | 2321  |
| main'manifake             | 29793 |
| main'ofound               | 29321 |
| main'p_c                  | 10283 |
| main'p_config             | 11589 |
| main'p_magic              | 13345 |
| main'p_make               | 8066  |
| main'p_obsolete           | 9676  |
| main'p_shell              | 9830  |
| main'p_wanted             | 14245 |
| main'profile              | 30974 |
| main'q                    | 17825 |



```
main'record_obsolete    22806
main'tilda_expand      30619
main'usage              1832
```

```
#
# End of offset table and beginning of dataloading section.
#

# General initializations
sub main'load_init {
  package main;
  &init_except; # Token which have upper-cased letters
  &init_depend; # The %Depend array records control line handling
}

# Record the exceptions -- all symbols but these are lower case
sub main'load_init_except
{
  package main;
  $Except{'Author'}++;
  $Except{'Date'}++;
  $Except{'Header'}++;
  $Except{'Id'}++;
  $Except{'Locker'}++;
  $Except{'Log'}++;
  $Except{'RCSfile'}++;
  $Except{'Revision'}++;
  $Except{'Source'}++;
  $Except{'State'}++;
}

# Print out metaxref's usage and exits
sub main'load_usage {
  package main;
  print STDERR <<EOM;
  Usage: metaxref [-dhkmsV] [-f manifest] [-L dir]
  -d : debug mode.
  -f : use that file as manifest instead of MANIFEST.new.
  -h : print this help message and exits.
  -k : keep temporary directory.
  -m : assume lots of memory and swap space.
  -s : silent mode.
  -L : specify main units repository.
  -V : print version number and exits.
  EOM
  exit 1;
}
```

```

# Locate the units and push their path in @ARGV (sorted alphabetically)
sub main'load_locate_units {
  package locate;
  print "Locating units...\n" unless $main'opt_s;
  local(*WD) = *main'WD; # Current working directory
  local(*MC) = *main'MC; # Public metaconfig library
  undef %myUlist; #
  Records private units paths
  undef %myUseen; # Records private/public conflicts
  &private_units; # Locate private units in @myUlist
  &public_units; # Locate public units in @ARGV
  @ARGV = sort @ARGV; # Sort it alphabetically
  push(@ARGV, sort @myUlist); # Append user's units sorted
  &dump_list if $main'opt_v; # Dump the list of units
}

# Dump the list of units on stdout
sub locate'load_dump_list {
  package locate;
  print "\t";
  $, = "\n\t";
  print @ARGV;
  $, = ";";
  print "\n";
}

# Scan private units
sub locate'load_private_units {
  package locate;
  return unless -d 'U'; # Nothing to be done if no 'U' entry
  local(*ARGV) = *myUlist; # Really fill in @myUlist
  local($MC) = $WD; # We are really in the working directory
  &units_path("U"); # Locate units in the U directory
  local($unit_name); # Unit's name (without .U)
  local(@kept); # Array of kept units
  # Loop over the units and remove duplicates (the first one seen is the one
  # we keep). Also set the
  %myUseen H table to record private units seen.
  foreach (@ARGV) {
    ($unit_name) = m|^.*(.)\.U$|; # Get unit's name from path
    next if $myUseen{$unit_name}; # Already recorded
    $myUseen{$unit_name} = 1; # Record private unit
    push(@kept, $_); # Keep this unit
  }
  @ARGV = @kept;
}

# Scan public units

```

```

sub locate'load_public_units {
  package locate;
  chdir($MC) || die "Can't find directory $MC.\n";
  &units_path("U"); # Locate units in public U directory
  chdir($WD) || die "Can't go back to directory $WD.\n";
  local($path); # Relative path from $WD
  local($unit_name); # Unit's name (without .U)
  local(*Unit) = *main'Unit; # Unit is a global from main package
  local(@kept); # Units kept
  local(%warned); # Units which have already issued a message
  # Loop over all the units and keep only the ones that were not found in
  # the user's U directory. As it is possible two or more units with the same
  # name be found in
  foreach (@ARGV) {
    ($unit_name) = m|^.*(.*).U$|; #
    Get unit's name from path
    next if $warned{$unit_name}; # We have already seen this unit
    $warned{$unit_name} = 1; # Remember we have warned the user
    if ($myUseen{$unit_name}) { # User already has a private unit
      $path = $Unit{$unit_name}; # Extract user's unit path
      next if $path eq $_; # Same path, we must be in mcon/
      $path =~ s|^$WD/||o; # Weed out leading working dir path
      print " Your private $path overrides the public one.\n"
        unless $main'opt_s;
    } else {
      push(@kept, $_); # We may keep this one
    }
  }
  @ARGV = @kept;
}

# Recursively locate units in the directory. Each file ending with .U has to be
# a unit. Others are stat()'ed, and if they are a directory, they are also
# scanned through. The $MC and @ARGV variable are dynamically set by the caller.
sub locate'load_units_path {
  package locate;
  local($dir) = @_; # Directory where units are to be found
  local(@contents); # Contents of the directory
  local($unit_name); # Unit's name,
  without final .U
  local($path); # Full path of a unit
  local(*Unit) = *main'Unit; # Unit is a global from main package
  unless (opendir(DIR, $dir)) {
    warn("Cannot open directory $dir.\n");
    return;
  }
  print "Locating in $MC/$dir...\n" if $main'opt_v;
  @contents = readdir DIR; # Slurp the whole thing

```

```

closedir DIR; # And close dir, ready for recursion
foreach (@contents) {
next if $_ eq '.' || $_ eq '..';
if (/\.U$/) { # A unit, definitely
($unit_name) = /^(.*)\.U$/;
$path = "$MC/$dir/$_"; # Full path of unit
push(@ARGV, $path); # Record its path
if (defined $Unit{$unit_name}) { # Already seen this unit
if ($main'opt_v) {
($path) = $Unit{$unit_name} =~ m|^(.*)/.*|;
print " We've already seen $unit_name.U in $path.\n";
}
} else {
$Unit{$unit_name} = $path; # Map name to path
}
}
next;
}
# We have found a file which does not look like a unit. If it is a
# directory, then scan it. Otherwise skip the file.
unless
(-d "$dir/$_") {
print " Skipping file $_ in $dir.\n" if $main'opt_v;
next;
}
&units_path("$dir/$_");
print "Back to $MC/$dir...\n" if $main'opt_v;
}
}

# Initialize the extraction process by setting some variables.
# We return a string to be eval to do more customized initializations.
sub main'load_init_extraction {
package main;
open(INIT, ">$WD/.MT/Init.U") ||
die "Can't create .MT/Init.U\n";
open(CONF_H, ">$WD/.MT/Config_h.U") ||
die "Can't create .MT/Config_h.U\n";
open(EXTERN, ">$WD/.MT/Extern.U") ||
die "Can't create .MT/Extern.U\n";
open(MAGIC_H, ">$WD/.MT/Magic_h.U") ||
die "Can't create .MT/Magic_h.U\n";

$c_symbol = ""; # Current symbol seen in ?C: lines
$s_symbol = ""; # Current symbol seen in ?S: lines
$m_symbol = ""; # Current symbol seen in ?M: lines
$heredoc = ""; # Last "here" document symbol seen
$heredoc_nosubst = 0; # True for <<'EOM' here docs
$condlist = ""; # List of conditional symbols

```

```

$defined =
"; # List of defined symbols in the unit
$body = "; # No procedure to handle body
$ending = "; # No procedure to clean-up
}

# End the extraction process
sub main'load_end_extraction {
package main;
close EXTERN; # External dependencies (libraries, includes...)
close CONF_H; # C symbol definition template
close INIT; # Required initializations
close MAGIC; # Magic C symbol redefinition templates

print $dependencies if $opt_v; # Print extracted dependencies
}

# Process the ?MAKE: line
sub main'load_p_make {
package main;
local($_) = @_;
local(@ary); # Locally defined symbols
local(@dep); # Dependencies
if (/^\[w+ ]*:/) { # Main dependency rule
s/^\s*//; # Remove leading spaces
chop;
s/:(.*)//;
@dep = split(' ', $1); # Dependencies
@ary = split(' '); # Locally defined symbols
foreach $sym (@ary) {
# Symbols starting with a '+' are meant for internal use only.
next if $sym =~ s/^\+//;
# Only symbols starting with
a lowercase letter are to
# appear in config.sh, excepted the ones listed in Except.
if ($sym =~ /^[_a-z]/ || $Except{$sym}) {
$shmaster{"\$$sym"} = undef;
push(@Master, "?$unit:$sym=\n"); # Initializations
}
}
$condlist = "; # List of conditional symbols
local($sym); # Symbol copy, avoid @dep alteration
foreach $dep (@dep) {
if ($dep =~ /^[_A-Za-z]/) {
($sym = $dep) =~ s/^\+//;
$condlist .= "$sym ";
push(@Cond, $sym) unless $condseen{$sym};
$condseen{$sym}++; # Conditionally wanted
}
}
}

```

```

}
}
# Append to already existing dependencies. The 'defined' variable
# is set for &write_out, used to implement ?L: and ?I: canvas. It is
# reset each time a new unit is parsed.
# NB: leading '+' for defined symbols (internal use only) have been
# removed at this point, but conditional dependencies still bear it.
$defined = join(' ', @ary); # Symbols defined by this unit
$dependencies .= $defined . ':' . join(' ', @dep) . "\n";
$dependencies
.= " -cond $condlist\n" if $condlist;
} else {
$dependencies .= $_; # Building rules
}
}

```

```

# Process the ?O: line
sub main'load_p_obsolete {
package main;
local($_) = @_;
$Obsolete{"$unit.U"} .= $_; # Message(s) to print if unit is used
}

```

```

# Process the ?S: lines
sub main'load_p_shell {
package main;
local($_) = @_;
unless ($s_symbol) {
if (/^(w+).*/) {
$s_symbol = $1;
print " ?S: $s_symbol\n" if $opt_d;
} else {
warn "\"$file\"", line $.: syntax error in ?S: construct.\n";
$s_symbol = $unit;
return;
}
}
# Deal with obsolete symbol list (enclosed between parenthesis)
&record_obsolete("\$_") if ^(/);
}
m|^\.\s*$| && ($s_symbol = ""); # End of comment
}

```

```

# Process the ?C: lines
sub main'load_p_c {
package main;
local($_) = @_;
unless ($c_symbol) {
if (s/^(w+)\s*\s*(S+)\s*(.*)/$1 $3:/) {

```

```

# The ~ operator aliases the main C symbol to another symbol which
# is to be used instead for definition in config.h. That is to say,
#
the line '?C:SYM ~ other:' would look for symbol 'other' instead,
# and the documentation for symbol SYM would only be included in
# config.h if 'other' were actually wanted.
$c_symbol = $2; # Alias for definition in config.h
print " ?C: $1 ~ $c_symbol\n" if $opt_d;
} elsif (/^\(w+\).*/:) {
# Default behaviour. Include in config.h if symbol is needed.
$c_symbol = $1;
print " ?C: $c_symbol\n" if $opt_d;
} else {
warn "\"$file\", line $.: syntax error in ?C: construct.\n";
$c_symbol = $unit;
return;
}
# Deal with obsolete symbol list (enclosed between parenthesis) and
# make sure that list do not appear in config.h.SH by removing it.
&record_obsolete("$_") if /\(/;
s/s*(.*)//; # Get rid of obsolete symbol list
}
s/^\(w+\)s*|?$c_symbol:/* $1| | # Start of comment
(s/^\.s*|?$c_symbol: *\n| && ($c_symbol = ", 1)) || # End of comment
s/^(.*)|?$c_symbol: *$1|; # Middle of comment
&p_config("$_"); # Add comments
to config.h.SH
}

# Process the ?H: lines
sub main'load_p_config {
package main;
local($_) = @_;
local($constraint); # Constraint to be used for inclusion
++$old_version if s/^\?% 1//; # Old version
if (s/^\?(w+):/) { # Remove leading '?var:'
$constraint = $1; # Constraint is leading '?var'
} else {
$constraint = ""; # No constraint
}
if (/^#.*$/) { # Look only for cpp lines
if (m|^#\$(w+)s+(\w+).*(\w+)|) {
# Case: #d_var VAR "$var"
$constraint = $2 unless $constraint;
print " ?H: ($constraint) #$$1 $2 \\"$3\""\n" if $opt_d;
$cmaster{$2} = undef;
$swanted{$2} = "$1\n$3";
} elsif (m|^#define\s+(\w+)((.*)\)\s+(\w+)|) {

```

```

# Case: #define VAR(x) $var
$constraint = $1 unless $constraint;
print " ?H: ($constraint) #define $1($2) \$$3\n" if $opt_d;
$cmaster{$1} = undef;
$swanted{$1} = $3;
} elsif (m/^\#\$define\s+(\w+)) {
# Case: #define VAR
$constraint = $1 unless $constraint;
print " ?H: ($constraint)
#define $1\n" if $opt_d;
$cmaster{$1} = undef;
$swanted{$1} = "define\n$unit";
} elsif (m/^\#$(\w+)\s+(\w+)) {
# Case: #d_var VAR
$constraint = $2 unless $constraint;
print " ?H: ($constraint) #\$$1 $2\n" if $opt_d;
$cmaster{$2} = undef;
$swanted{$2} = $1;
} elsif (m/^\#define\s+(\w+).*\$(\w+)) {
# Case: #define VAR "$var"
$constraint = $1 unless $constraint;
print " ?H: ($constraint) #define $1 \"\$$2\"\n" if $opt_d;
$cmaster{$1} = undef;
$swanted{$1} = $2;
} else {
$constraint = $unit unless $constraint;
print " ?H: ($constraint) $_" if $opt_d;
}
} else {
print " ?H: ($constraint) $_" if $opt_d;
}
# If not a single ?H:. line, add the leading constraint
s/^\./ || s/^\?constraint:/;
print CONF_H;
}

# Process the ?M: lines
sub main'load_p_magic {
package main;
local($_) = @_;
unless ($m_symbol) {
if (/^\(w+):s*([\w\s]*)n$/) {
# A 'M:sym:' line implies a 'W:%<:sym' since we'll need to know
# about the wantedness
of sym later on when building confmagic.h.
# Buf is sym is wanted, then the C symbol dependencies have to
# be triggered. That is done by introducing sym in the mwanted
# array, known by the Wanted file construction process...

```



```

$m_symbol = $1;
print " ?M: $m_symbol\n" if $opt_d;
$mwanted{$m_symbol} = $2; # Record C dependencies
&p_wanted("$unit:$m_symbol"); # Build fake ?W: line
} else {
warn "\"$file\"", line $.: syntax error in ?M: construct.\n";
}
return;
}
(s/^\s*$/?$m_symbol:\n/ && ($m_symbol = "", 1)) || # End of block
s/^\s*$/?$/;
print MAGIC_H; # Definition goes to confmagic.h
print " ?M: $_" if $opt_d;
}

# Process the ?W: lines
sub main'load_p_wanted {
package main;
# Syntax is ?W:<shell symbols>:<C symbols>
local($active) = $_[0] =~ /^([:]*):/; # Symbols to activate
local($look_symbols) = $_[0] =~ /:(.*)/; # When those are used
local(@syms) = split(/ /, $look_symbols); # Keep original spacing info
$active =~ s/\s+/\n/g; #
One symbol per line

# Concatenate quoted strings, so saying something like 'two words' will
# be introduced as one single symbol "two words".
local(@symbols); # Concatenated symbols to look for
local($concat) = ""; # Concatenation buffer
foreach (@syms) {
if (s/^\//) {
$concat = $_;
} elsif (s/\'$/) {
push(@symbols, $concat . '\'' . $_);
$concat = "";
} else {
push(@symbols, $_) unless $concat;
$concat .= '\'' . $_ if $concat;
}
}
}

local($fake); # Fake unique shell symbol to reparent C symbol

# Now record symbols in master and wanted tables
foreach (@symbols) {
$master{$_} = undef; # Asks for look-up in C files
# Make a fake C symbol and associate that with the wanted symbol
# so that later we know where it comes from

```

```

$fake = &gensym;
$swanted{$_} = "$fake"; # Attached to this symbol
push(@Master, "?$unit:$fake="); # Fake initialization
}
}

# Extract filenames from manifest
sub main'load_extract_filenames {
package
main;
&build_filext; # Construct &is_cfile and &is_shfile
print "Extracting filenames (C and SH files) from $NEWMANI...\n"
unless $opt_s;
open(NEWMANI,$NEWMANI) || die "Can't open $NEWMANI.\n";
local($file);
while (<NEWMANI>) {
($file) = split(' ');
next if $file eq 'config_h.SH'; # skip config_h.SH
next if $file eq 'Configure'; # also skip Configure
next if $file eq 'confmagic.h' && $opt_M;
push(@SHlist, $file) if &is_shfile($file);
push(@clist, $file) if &is_cfile($file);
}
}

# Construct two file identifiers based on the file suffix: one for C files,
# and one for SH files (using the $cext and $shext variables) defined in
# the .package file.
# The &is_cfile and &is_shfile routine may then be called to know whether
# a given file is a candidate for holding C or SH symbols.
sub main'load_build_filext {
package main;
&build_extfun('is_cfile', $cext, '.c.h.y.l');
&build_extfun('is_shfile', $shext, '.SH');
}

# Build routine $name to identify extensions
# listed in $exts, ensuring
# that $minimum is at least matched (both to be backward compatible with
# older .package and because it is really the minimum required).
sub main'load_build_extfun {
package main;
local($name, $exts, $minimum) = @_ ;
local(@single); # Single letter dot extensions (may be grouped)
local(@others); # Other extensions
local(%seen); # Avoid duplicate extensions
foreach $ext (split(' ', "$exts $minimum")) {
next if $seen{$ext}++;

```

```

if ($ext =~ s/^\.(w)$/$1/) {
    push(@single, $ext);
} else {
    # Convert into perl's regexp
    $ext =~ s/\.\./g; # Escape .
    $ext =~ s/^?/./g; # ? turns into .
    $ext =~ s/^*/./g; # * turns into .*
    push(@others, $ext);
}
}
local($fn) = &q(<<EOF); # Function being built
:sub $name {
: local(\$_) = \@_;
EOF
local($single); # Single regexp: .c .h grouped into .[ch]
$single = \[' . join(", @single) . ']' if @single;
$fn .= &q(<<EOL) if @single;
: return 1 if /$single$/;
EOL
foreach $ext (@others)
{
    $fn .= &q(<<EOL);
: return 1 if /$ext$/;
EOL
}
$fn .= &q(<<EOF);
: 0; # None of the extensions may be applied to file name
:}
EOF
print $fn if $opt_d;
eval $fn;
chop($@) && die "Can't compile '$name':\n$fn\n@$@\n";
}

# Remove ':' quotations in front of the lines
sub main'load_q {
    package main;
    local(\$_) = \@_;
    local($*) = 1;
    s/^\:./g;
    $_;
}

# The %Depend array records the functions we use to process the configuration
# lines in the unit, with a special meaning. It is important that all the
# known control symbols be listed below, so that metalint does not complain.
# The %Lcmp array contains valid layouts and their comparison value.
sub main'load_init_depend {

```

```

package main;
%Depend = (
'MAKE', 'p_make', # The ?MAKE: line records dependencies
'INIT', 'p_init', # Initializations printed verbatim
'LINT', 'p_lint', # Hints for metalint
'RCS', 'p_ignore', # RCS comments are ignored
'C', 'p_c', # C symbols
'D', 'p_default', # Default value
for conditional symbols
'E', 'p_example', # Example of usage
'F', 'p_file', # Produced files
'H', 'p_config', # Process the config.h lines
'I', 'p_include', # Added includes
'L', 'p_library', # Added libraries
'M', 'p_magic', # Process the confmagic.h lines
'O', 'p_obsolete', # Unit obsolescence
'P', 'p_public', # Location of PD implementation file
'S', 'p_shell', # Shell variables
'T', 'p_temp', # Shell temporaries used
'V', 'p_visible', # Visible symbols like 'rp', 'dflt'
'W', 'p_wanted', # Wanted value for interpreter
'X', 'p_ignore', # User comment is ignored
'Y', 'p_layout', # User-defined layout preference
);
%Lcmp = (
'top', -1,
'default', 0,
'bottom', 1,
);
}

# Extract dependencies from units held in @ARGV
sub main'load_extract_dependencies {
package main;
local($proc); # Procedure used to handle a ctrl line
local($file); # Current file scanned
local($dir, $unit); # Directory
and unit's name
local($old_version) = 0; # True when old-version unit detected
local($mc) = "$MC/U"; # Public metaconfig directory
local($line); # Last processed line for metalint

printf "Extracting dependency lists from %d units...\n", $#ARGV+1
unless $opt_s;

chdir $WD; # Back to working directory
&init_extraction; # Initialize extraction files
$dependencies = ' ' x (50 * @ARGV); # Pre-extend

```

```

$dependencies = ";

# We do not want to use the <> construct here, because we need the
# name of the opened files (to get the unit's name) and we want to
# reset the line number for each files, and do some pre-processing.

file: while ($file = shift(@ARGV)) {
  close FILE; # Reset line number
  $old_version = 0; # True if unit is an old version
  if (open(FILE, $file)) {
    ($dir, $unit) = ("", $file)
    unless ($dir, $unit) = ($file =~ m|(.*)/(.*)|);
    $unit =~ s|\.U$||; # Remove extension
  } else {
    warn("Can't open $file.\n");
  }
  # If
  unit is in the standard public directory, keep only the unit name
  $file = "$unit.U" if $dir eq $mc;
  print "$dir/$unit.U:\n" if $opt_d;
  line: while (<FILE>) {
    $line = $_; # Save last processed unit line
    if (s/^\?([w\~]+):/) { # We may have found a control line
      $proc = $Depend{$1}; # Look for a procedure to handle it
      unless ($proc) { # Unknown control line
        $proc = $1; # p_unknown expects symbol in '$proc'
        eval '&p_unknown'; # Signal error (metalint only)
        next line; # And go on next line
      }
      # Long lines may be escaped with a final backslash
      $_ = &complete_line(FILE) if s/\\s*$//;
      # Run macros substitutions
      s/%</$unit/g; # %< expands into the unit's name
      if (s/%\*/$unit/) {
        # %* expanded into the entire set of defined symbols
        # in the old version. Now it is only the unit's name.
        ++$old_version;
      }
      eval { &$proc($_) }; # Process the line
    } else {
      next file unless $body; # No procedure to
handle body
      do {
        $line = $_; # Save last processed unit line
        eval { &$body($_) }; # From now on, it's the unit body
      } while (defined ($_ = <FILE>));
      next file;
    }
  }
}

```

```

}
} continue {
warn(" Warning: $file is a pre-3.0 version.\n") if $old_version;
&$ending($line) if $ending; # Post-processing for metalint
}

&end_extraction; # End the extraction process
}

# The first line was escaped with a final \ character. Every following line
# is to be appended to it (until we found a real \n not escaped). Note that
# the leading spaces of the continuation line are removed, so any space should
# be added before the former \ if needed.
sub main'load_complete_line {
package main;
local($file) = @_; # File where lines come from
local($_);
local($read) = ""; # Concatenation of all the continuation lines found
while (<$file>) {
s/^\s+//; # Remove leading spaces
if (s/\\s*$//) { # Still followed by a continuation line
$read .= $_;
} else { #
We've reached the end of the continuation
return $read . $_;
}
}
}

# Record obsolete symbols association (new versus old), that is to say for a
# given old symbol, $Obsolete{'old'} = new symbol to be used. A '$' is prepended
# for all shell variables
sub main'load_record_obsolete {
package main;
local($_) = @_;
local(@obsoleted); # List of obsolete symbols
local($symbol); # New symbol which must be used
local($dollar) = s/^\$/ ? '$:.'; # The '$' or a null string
# Syntax for obsolete symbols specification is
# list of symbols (obsolete ones):
if (/^\(w+)\s*((.*)\)\s*:$/) {
$symbol = "$dollar$1";
@obsoleted = split(' ', $2); # List of obsolete symbols
} else {
if (/^\(w+)\s*((.*):$/) {
warn "\"$file\", line $.: final ')' before ':' missing.\n";
$symbol = "$dollar$1";
@obsoleted = split(' ', $2);
}
}
}

```



```

print OBSOL_SH "$old=\\\\"$new\\n";
} else { # We found an obsolete C symbol
print OBSOL_H "#ifdef $new\n";
print OBSOL_H "#define $old $new\n";
print OBSOL_H "#endif\n\n";
}
}
close OBSOLETE;
close OBSOL_H;
close OBSOL_SH;
if (-s 'Obsolete') {
print "*** Obsolete symbols found -- see file 'Obsolete' for a list.\n";
} else {
unlink 'Obsolete';
}
undef
%ofound; # Not needed any more
}

# Parse files and build cross references
sub main'load_build_xref {
package main;
print "Building cross-reference files...\n" unless $opt_s;
unless (-f $NEWMANI) {
&manifake;
die "No $NEWMANI--don't know who to scan.\n" unless -f $NEWMANI;
}

open(FUI, "|sort | uniq >I.fui") || die "Can't create I.fui.\n";
open(UIF, "|sort | uniq >I.uif") || die "Can't create I.uif.\n";

local($search); # Where to-be-evald script is held
local($_) = ' ' x 50000 if $opt_m; # Pre-extend pattern search space
local(%visited); # Records visited files
local(%lastfound); # Where last occurrence of key was

# Map shell symbol names to units by reverse engineering the @Master array
# which records all the known shell symbols and the units where they
# are defined.
foreach $init (@Master) {
$init =~ /\^(?:(.*)=/' && ($shwanted{"\\$2"} = $1);
}

# Now we are a little clever, and build a loop to eval so that we don't
# have to recompile
our patterns on every file. We also use "study" since
# we are searching the same string for many different things. Hauls!

```



```

if (@clist) {
    print " Scanning .[chyl] files for symbols...\n" unless $opt_s;
    $search = ' ' x (40 * (@cmaster + @ocmaster)); # Pre-extend
    $search = "while (<>) {study;\n"; # Init loop over ARGV
    foreach $key (keys(cmaster)) {
        $search .= "\"$cmaster{'$key'} .= \"\$ARGV#\" if /\b$key\b/;\n";
    }
    foreach $key (grep(!/^$/, keys %Obsolete)) {
        $search .= "&ofound('$key') if /\b$key\b/;\n";
    }
    $search .= "}\n"; # terminate loop
    print $search if $opt_d;
    @ARGV = @clist;
    # Swallow each file as a whole, if memory is available
    undef $/ if $opt_m;
    eval $search;
    eval ";";
    $/ = "\n";
    while (($key,$value) = each(cmaster)) {
        next if $value eq "";
        foreach $file (sort(split(/#/ , $value))) {
            next if $file eq "";
            # %cwanted may contain value separated by \n -- take last one
            @sym = split(/\n/, $cwanted{$key});
            $sym
= pop(@sym);
            $shell = "\"$sym";
            print FUI
                pack("A35", $file),
                pack("A20", "$shwanted{$shell}.U"),
                $key, "\n";
            print UIF
                pack("A20", "$shwanted{$shell}.U"),
                pack("A25", $key),
                $file, "\n";
        }
    }
}

undef @clist;
undef %cwanted;
undef %cmaster; # We're not building Configure, we may delete this
%visited = ();
%lastfound = ();

if (@SHlist) {
    print " Scanning .SH files for symbols...\n" unless $opt_s;
    $search = ' ' x (40 * (@shmaster + @oshmaster)); # Pre-extend

```

```

$search = "while (<>) {study;\n";
# All the keys already have a leading '$'
foreach $key (keys(shmaster)) {
    $search .= "\$shmaster{'$key'} := \"\$ARGV#\" if /\$key\b/;\n";
}
foreach $key (grep (/^\$/, keys %Obsolete)) {
    $search .= "&ofound('$key') if /\$key\b/;\n";
}
$search .= "}\n";
print $search if $opt_d;
@ARGV = @SHlist;
# Swallow each file as a whole, if memory is available
undef $/ if $opt_m;
eval $search;
eval ";
$/ =
\n";
while (($key,$value) = each(shmaster)) {
    next if $value eq ";
    foreach $file (sort(split(/#/,$value))) {
        next if $file eq ";
        print FUI
            pack("A35", $file),
            pack("A20", "$shwanted{$key}.U"),
            $key, "\n";
        print UIF
            pack("A20", "$shwanted{$key}.U"),
            pack("A25", $key),
            $file, "\n";
    }
}

close FUI;
close UIF;

# If obsolete symbols were found, write an Obsolete file which lists where
# each of them appear and the new symbol to be used. Also write Obsol_h.U
# and Obsol_sh.U in .MT for later perusal.

&dump_obsolete;    # Dump obsolete symbols if any

# Clean-up memory by freeing useless data structures
undef @SHlist;
undef %shmaster;
}

# This routine records matches of obsolete keys (C or shell)

```

```

sub main'load_ofound {
    package main;
    local($key) = @_;
    local($_) = $Obsolete{$key}; # Value of new symbol
    $ofound{"$ARGV $key $_"}++; # Record obsolete match
    $cmaster{$_} .= "$ARGV#" unless /^$/; # A C hit
    $shmaster{$_}
    .= "$ARGV#" if /^$/; # Or a shell one
}

# Create a new symbol name each time it is invoked. That name is suitable for
# usage as a perl variable name.
sub main'load_gensym {
    package main;
    $Gensym = 'AAAAA' unless $Gensym;
    $Gensym++;
}

sub main'load_manifake {
    package main;
    # make MANIFEST and MANIFEST.new say the same thing
    if (! -f $NEWMANI) {
        if (-f $MANI) {
            open(IN,$MANI) || die "Can't open $MANI";
            open(OUT,">$NEWMANI") || die "Can't create $NEWMANI";
            while (<IN>) {
                if (/---/) {
                    # Everything until now was a header...
                    close OUT;
                    open(OUT,">$NEWMANI") ||
                    die "Can't recreate $NEWMANI";
                    next;
                }
                s/^\s*(\S+\s+)[0-9]*\s*(.*)/$1$2/;
                print OUT;
                print OUT "\n" unless /\n$/; # If no description
            }
            close IN;
            close OUT;
        }
        else {
            die "You need to make a $NEWMANI file, with names and descriptions.\n";
        }
    }
}

#

```

```

Perform ~name expansion ala ksh...
# (banish csh from your vocabulary ;-))
sub main'load_tilda_expand {
    package main;
    local($path) = @_;
    return $path unless $path =~ /^~/;
    $path =~ s:^(~/+):(getpwnam($1))[$+7]:e; # ~name
    $path =~ s:^~:$ENV{'HOME'} || (getpwuid($<))[$+7]:e; # ~
    $path;
}

# Set up profile components into %Profile, add any profile-supplied options
# into @ARGV and return the command invocation name.
sub main'load_profile {
    package main;
    local($profile) = &tilda_expand($ENV{'DIST'} || '~/dist_profile');
    local($me) = $0; # Command name
    $me =~ s|.*/(.*)|$1|; # Keep only base name
    return $me unless -s $profile;
    local(*PROFILE); # Local file descriptor
    local($options) = ""; # Options we get back from profile
    unless (open(PROFILE, $profile)) {
        warn "$me: cannot open $profile: $!\n";
        return;
    }
    local($_);
    local($component);
    while (<PROFILE>) {
        next if /^\s*#/; # Skip comments
        next unless /^$me/o;
        if (s/^$me://o) { # progname: options
            chop;
            $options
            .= $_; # Merge options if more than one line
        }
        elsif (s/^$me-([^\:]+)//o) { # progname-component: value
            $component = $1;
            chop;
            s/^\s+//; # Trim leading and trailing spaces
            s/\s+$//;
            $Profile{$component} = $_;
        }
    }
    close PROFILE;
    return unless $options;
    require 'shellwords.pl';
    local(@opts);
    eval '@opts = &shellwords($options)'; # Protect against mismatched quotes

```

```

unshift(@ARGV, @opts);
return $me; # Return our invocation name
}

#
# End of dataloading section.
#

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1-rc1/bin/metaxref
No license file was found, but licenses were detected in source scan.

?RCS: $Id: d_getprotobynumber_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_getprotobynumber_r getprotobynumber_r_proto: Inlibc Protochk \
Hasproto i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_getprotobynumber_r:
?S: This variable conditionally defines the HAS_GETPROTOBYNUMBER_R symbol,
?S: which indicates to the C program that the getprotobynumber_r()
?S: routine is available.
?S:.
?S:getprotobynumber_r_proto:
?S: This variable encodes the prototype of getprotobynumber_r.
?S: It is zero if d_getprotobynumber_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getprotobynumber_r
?S: is defined.
?S:.
?C:HAS_GETPROTOBYNUMBER_R:
?C: This
symbol, if defined, indicates that the getprotobynumber_r routine
?C: is available to getprotobynumber re-entrantly.
?C:.
?C:GETPROTOBYNUMBER_R_PROTO:
?C: This symbol encodes the prototype of getprotobynumber_r.
?C: It is zero if d_getprotobynumber_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getprotobynumber_r
?C: is defined.
?C:.
?H:#$d_getprotobynumber_r HAS_GETPROTOBYNUMBER_R /**/
?H:#define GETPROTOBYNUMBER_R_PROTO $getprotobynumber_r_proto /**/

```

```

?H:
?T:try hdrs d_getprotobynumber_r_proto
: see if getprotobynumber_r exists
set getprotobynumber_r d_getprotobynumber_r
eval $inlibc
case "$d_getprotobynumber_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getprotobynumber_r_proto:$usetreads" in
":define") d_getprotobynumber_r_proto=define
set d_getprotobynumber_r_proto getprotobynumber_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getprotobynumber_r_proto" in
define)
case "$getprotobynumber_r_proto"
in
"|0) try='int getprotobynumber_r(int, struct protoent*, char*, size_t, struct protoent**);'
./protochk "$extern_C $try" $hdrs && getprotobynumber_r_proto=I_ISBWR ;;
esac
case "$getprotobynumber_r_proto" in
"|0) try='struct protoent* getprotobynumber_r(int, struct protoent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getprotobynumber_r_proto=S_ISBI ;;
esac
case "$getprotobynumber_r_proto" in
"|0) try='int getprotobynumber_r(int, struct protoent*, struct protoent_data*);'
./protochk "$extern_C $try" $hdrs && getprotobynumber_r_proto=I_ISD ;;
esac
case "$getprotobynumber_r_proto" in
"|0) d_getprotobynumber_r=undef
getprotobynumber_r_proto=0
echo "Disabling getprotobynumber_r, cannot determine prototype." >&4 ;;
*) case "$getprotobynumber_r_proto" in
REENTRANT_PROTO*) ;;
*) getprotobynumber_r_proto="REENTRANT_PROTO_$getprotobynumber_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetreads" in
define) echo "getprotobynumber_r
has no prototype, not using it." >&4 ;;
esac
d_getprotobynumber_r=undef
getprotobynumber_r_proto=0
;;
esac

```

```
;;
*) getprotobynumber_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getprotobynumber_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_itimer.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_itimer.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:25 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_itimer: Inlibc
?MAKE: -pick add $@ %<
?S:d_itimer:
?S: This variable conditionally defines the HAS_ITIMER symbol, which
?S: indicates that the setitimer() routine exists. The setitimer()
?S: routine supports sub-second accuracy for one real-time and two
?S: cpu clocks.
?S:.
?C:HAS_ITIMER (ITIMER):
?C: This symbol, if defined, indicates
?C: that the setitimer() routine exists.
?C:.
?H:#$d_itimer HAS_ITIMER /**/
?H:.
?LINT:set d_itimer
: see if setitimer exists
set setitimer d_itimer
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_itimer.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_niin.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_niin.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:24 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit looks wether <netinet/in.h> is available or not
?X:
?MAKE:i_niin i_sysin: Inhdr
?MAKE: -pick add $@ %<
?S:i_niin:
?S: This variable conditionally defines I_NETINET_IN, which indicates
?S: to the C program that it should include <netinet/in.h>. Otherwise,
?S: you may try <sys/in.h>.
?S:.
?S:i_sysin:
?S: This variable conditionally
defines I_SYS_IN, which indicates
?S: to the C program that it should include <sys/in.h> instead of
?S: <netinet/in.h>.
?S:.
?C:I_NETINET_IN:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <netinet/in.h>. Otherwise, you may try <sys/in.h>.
?C:.
?C:I_SYS_IN (I_SYSIN):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/in.h> instead of <netinet/in.h>.
?C:.
?H:#$i_niin I_NETINET_IN /**/
?H:#$i_sysin I_SYS_IN /**/
?H:.
?LINT:set i_niin i_sysin
: see if this is a netinet/in.h or sys/in.h system
set netinet/in.h i_niin sys/in.h i_sysin
eval $inhdr

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

```



5.32.1~rc1/dist/U/i\_niin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtold\_l: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtold\_l:

?S: This variable conditionally defines the HAS\_STRTOLD\_L symbol, which

?S: indicates to the C program that the strtold\_l() routine is available.

?S:.

?C:HAS\_STRTOLD\_L:

?C: This symbol, if defined, indicates that the strtold\_l routine is

?C: available to convert strings to long doubles.

?C:.

?H:#\$d\_strtold\_l HAS\_STRTOLD\_L /\*\*/

?H:.

?LINT:set d\_strtold\_l

: see if strtold\_l exists

set strtold\_l d\_strtold\_l

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/threads/d\_strtold\_l.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_inetntop: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_inetntop:

?S: This variable conditionally defines the HAS\_INETNTOP symbol,

?S: which indicates to the C program that the inet\_ntop() function

?S: is available.

?S:.

?C:HAS\_INETNTOP:

?C: This symbol, if defined, indicates that the inet\_ntop() function

?C: is available to parse IPv4 and IPv6 strings.

?C:.

?H:#\$d\_inetntop HAS\_INETNTOP /\*\*/

?H:.

?LINT:set d\_inetntop

: see if inet\_ntop exists

set inet\_ntop d\_inetntop

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_inetntop.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Unix.U,v 3.0.1.1 1997/02/28 15:20:06 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Unix.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:06 ram

?RCS: patch61: created

?RCS:

?X:

?X: The purpose of this unit is to define things that are common across all

?X: known UNIX platforms. If Configure is ported/used on a non-UNIX

?X: environment, then some of the following variables can be redefined in hint

?X: files.

?X:

?MAKE:Unix \_exe \_a \_o exe\_ext lib\_ext obj\_ext path\_sep \

firstmakefile archobjs rm\_try: Oldconfig rm

?MAKE: -pick add \$@ %<

?S:\_exe:

?S: This

variable defines the extension used for executable files.

?S: DJGPP, Cygwin and OS/2 use '.exe'. Stratus VOS uses '.pm'.

?S: On operating systems which do not require a specific extension

?S: for executable files, this variable is empty.

?S:.

?S:\_a:

?S: This variable defines the extension used for ordinary library files.

?S: For unix, it is '.a'. The '.' is included. Other possible

?S: values include '.lib'.

?S:.

?S:\_o:

?S: This variable defines the extension used for object files.

?S: For unix, it is '.o'. The '.' is included. Other possible

?S: values include '.obj'.

?S:.

?S:firstmakefile:

?S: This variable defines the first file searched by make. On unix,

?S: it is makefile (then Makefile). On case-insensitive systems,

?S: it might be something else. This is only used to deal with

?S: convoluted make depend tricks.

?S:.

?S:archobjs:

?S: This variable defines any additional objects that must be linked

?S: in with the program on this architecture. On unix, it is usually

?S: empty.

It is typically used to include emulations of unix calls

?S: or other facilities. For perl on OS/2, for example, this would

?S: include os2/os2.obj.

?S:.

?X: Metaconfig's Obsolete symbol stuff is too over-eager. In the

?X: perl sources, it picks up things like "P" and "FLOCK" that are

?X: not used in the way Metaconfig thinks they are. Thus I can't

?X: just declare these obsolete and then run metaconfig -o.

?X: Instead, I'll just handle them here.

?X: Sadly, history has conspired to give us a web of definitions;

?X: this could have been much simpler.

?S:lib\_ext:

?S: This is an old synonym for \_a.

?S:.

?S:exe\_ext:

?S: This is an old synonym for \_exe.

?S:.

?S:obj\_ext:

?S: This is an old synonym for \_o.

?S:.

?S:path\_sep:

?S: This is an old synonym for p\_ in Head.U, the character

?S: used to separate elements in the command shell search PATH.

?S:.

?S:rm\_try:

?S: This is a cleanup variable for try test programs.

?S: Internal Configure use only.

?S:.

?LINT: change p\_

?INIT::

Trailing extension. Override this in a hint file, if needed.

?INIT:: Extra object files, if any, needed on this platform.

```

?INIT:archobjs="
: Define several unixisms.
: Hints files or command line option can be used to override them.
: The convoluted testing is in case hints files set either the old
: or the new name.
case "$_exe" in
") case "$exe_ext" in
") ;;
*) _exe="$exe_ext" ;;
esac
;;
esac
case "$_a" in
") case "$lib_ext" in
") _a='.a';;
*) _a="$lib_ext" ;;
esac
;;
esac
case "$_o" in
") case "$obj_ext" in
") _o='.o';;
*) _o="$obj_ext";;
esac
;;
esac
case "$p_" in
") case "$path_sep" in
") p_=':'.;
*) p_="$path_sep";;
esac
;;
esac
exe_ext=$_exe
lib_ext=$_a
obj_ext=$_o
path_sep=$p_

rm_try="$rm -f try try$_exe a.out .out try.[cho] try.$_o core core.try* try.core*"

@if firstmakefile
: Which makefile gets called first. This is used by make depend.
case "$firstmakefile" in
") firstmakefile='makefile';;
esac

@end

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Unix.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fseeko: Inlibc longsize

?MAKE: -pick add \$@ %<

?S:d\_fseeko:

?S: This variable conditionally defines the HAS\_FSEEKO symbol, which

?S: indicates to the C program that the fseeko() routine is available.

?S:.

?C:HAS\_FSEEKO:

?C: This symbol, if defined, indicates that the fseeko routine is

?C: available to fseek beyond 32 bits (useful for ILP32 hosts).

?C:.

?H:#\$d\_fseeko HAS\_FSEEKO /\*\*/

?H:.

?LINT:set d\_fseeko

: see if fseeko exists

set fseeko d\_fseeko

eval \$inlibc

case "\$longsize" in

8) echo "(Your long is 64 bits, so you could use fseek.)" ;;

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fseeko.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorman3dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999-2000, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorman3dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorman3dir vendorman3direxp installvendorman3dir: man3dir Getfile \ Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorman3dir:

?S: This variable contains the name of the directory for man3

?S: pages. It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors

who distribute perl may wish to place their own

?S: man3 pages in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorman3direxp:

?S: This variable is the ~name expanded version of vendorman3dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorman3dir="

?S:installvendorman3dir:

?S: This variable is really the same as vendorman3direxp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installvendorman3dir

: Set the vendorman3dir variables

case "\$vendorprefix" in

) vendorman3dir="

vendorman3direxp="

::

\*) : determine where vendor-supplied module manual pages go.

case "\$vendorman3dir" in

) dflt=`echo "\$man3dir" | \$sed "s#^\$prefix#\$vendorprefix#" ` ;;

\*) dflt=\$vendorman3dir ;;

esac

case "\$dflt" in

"|" ) dflt=none ;;

esac

fn=nd~+

rp='Pathname

for the vendor-supplied manual section 3 pages?'

./getfile

vendorman3dir="\$ans"

vendorman3direxp="\$ansexp"

```
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorman3dir" = "X" && vendorman3dir=' '
prefixvar=vendorman3dir
. ./installprefix
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorman3dir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endpent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_endpent.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_endpent: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_endpent:
```

```
?S: This variable conditionally defines HAS_ENDPROTOENT if endprotoent() is
```

```
?S: available to close whatever was being used for protocol queries.
```

```
?S:.
```

```
?C:HAS_ENDPROTOENT:
```

```
?C: This symbol, if defined, indicates that the endprotoent() routine is
```

```
?C: available to close whatever was being used
```

```
for protocol queries.
```

```
?C:.
```

```
?H:#$d_endpent HAS_ENDPROTOENT /**/
```

```
?H:.
```

```
?LINT:set d_endpent
```

```
: see if endprotoent exists
```

```
set endprotoent d_endpent
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_endpent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_syssock.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_syssock.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:36 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_syssock: Inhdr
?MAKE: -pick add $@ %<
?S:i_syssock:
?S: This variable conditionally defines the I_SYS_SOCKET symbol, and indicates
?S: whether a C program should include <sys/socket.h> before performing socket
?S: operations.
?S:.
?C:I_SYS_SOCKET:
?C: This symbol, if defined, indicates to the C program that it should
?C: include
<sys/socket.h> before performing socket calls.
?C:.
?H:#$i_syssock I_SYS_SOCKET /**/
?H:.
?LINT:set i_syssock
: see if this is a sys/socket.h system
set sys/socket.h i_syssock
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_syssock.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: libs.U,v 3.0.1.6 1997/02/28 16:09:11 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
```



?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: libs.U,v \$

?RCS: Revision 3.0.1.6 1997/02/28 16:09:11 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.5 1995/07/25 14:12:05 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.4 1994/10/29 16:24:22 ram

?RCS: patch36: removed old broken thislib/thatlib processing (ADO)

?RCS:

?RCS: Revision 3.0.1.3 1994/06/20 07:05:44 ram

?RCS: patch30: code cleanup with if/elif by ADO and RAM

?RCS: patch30:

undone patch23 for libswanted default setting

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 15:08:45 ram

?RCS: patch23: now includes ordered default libswanted variable (ADO)

?RCS: patch23: major cleanup for library lookups (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:02:31 ram

?RCS: patch6: added default for libs

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libs ignore\_versioned\_solibs libsfound libsfiles libsdirs libspath: \  
test cat Myread Oldconfig Loc libpth package xlibpth so \_a \  
usesocks sed uselongdouble usequadmath

?MAKE: -pick add \$@ %<

?S:libs:

?S: This variable holds the additional libraries we want to use.

?S: It is up to the Makefile to deal with it. The list can be empty.

?S:.

?S:libsfound:

?S: This variable holds the full pathnames of the libraries

?S: we found and accepted.

?S:.

?S:libsfiles:

?S: This variable holds the filenames aka basenames of the libraries

?S: we found and accepted.

?S:.

?S:libsdirs:

?S: This  
variable holds the directory names aka dirnames of the libraries

?S: we found and accepted, duplicates are removed.

?S:.

?S:libspath:  
?S: This variable holds the directory names probed for libraries.  
?S:.  
?S:ignore\_versioned\_solibs:  
?S: This variable should be non-empty if non-versioned shared  
?S: libraries (libfoo.so.x.y) are to be ignored (because they  
?S: cannot be linked against).  
?S:.  
?T:xxx yyy thislib thisdir libswanted libstyle  
?D:libs="  
?X:  
?X: This order is chosen so that libraries -lndir, -ldir, -lucb, -lbsd,  
?X: -lBSD, -lPW, and -lx only get used if there are unresolved  
?X: routines at link time. Usually, these are backwards compatibility  
?X: libraries, and may not be as reliable as the standard c library.  
?X:  
?X: The -lsocket -linet -lnsl order has been reported to be necessary  
?X: for at least one SVR4 implementation.  
?X: -lc must proceed -lucb or -lbsd for most Solaris applications.  
?X: -lc\_s proceeds -lc so we pick up the shared library version,  
if  
?X: it is available.  
?X:  
?X: The ordering of c, posix, and cposix is a guess and almost  
?X: certainly wrong on about half of all systems.  
?X:  
?X: Set proper libswanted in your private Myinit.U if needed.  
?X:  
?X:: default ordered library list  
?X:libswanted='net socket inet bind nsl nm sdbm gdbm ndbm dbm malloc dl'  
?X:libswanted="\$libswanted dld sun m c\_s c posix cposix ndir dir ucb"  
?X:libswanted="\$libswanted bsd BSD PW x"  
?X:  
?INIT:: default library list  
?INIT:libswanted="  
?INIT:: some systems want to use only the non-versioned libso:s  
?INIT:ignore\_versioned\_solibs="  
?LINT:extern usecbacktrace  
?LINT:extern libscheck  
?LINT:extern p  
?LINT:use uselongdouble  
: Looking for optional libraries  
echo " "  
echo "Checking for optional libraries..." >&4  
case "\$libs" in  
'|') dflt="";;  
\*) dflt="\$libs";;  
esac

```

case "$libswanted" in
") libswanted='c_s';;
esac
?X: libsocks has nasty naming scheme.
?X: This does not work if somebody wants SOCKS 4.
case "$usesocks" in
"$define") libswanted="$libswanted
socks5 socks5_sh" ;;
esac
case "$usecbacktrace" in
"$define") libswanted="$libswanted bfd" ;;
esac
case "$usequadmath" in
"$define") libswanted="$libswanted quadmath" ;;
esac
libsfound=""
libsfiles=""
libsdirs=""
libspath=""
for thisdir in $libpth $xlibpth; do
test -d $thisdir && libspath="$libspath $thisdir"
done
for thislib in $libswanted; do
for thisdir in $libspath; do
xxx=""
if test ! -f "$xxx" -a "X$ignore_versioned_solibs" = "X"; then
xxx=`ls $thisdir/lib$thislib.$so.[0-9] 2>/dev/null|sed -n '$p`
test -f "$xxx" && eval $libscheck
test -f "$xxx" && libstyle=shared
xxx=`ls $thisdir/lib$thislib.[0-9].$so 2>/dev/null|sed -n '$p`
test -f "$xxx" && eval $libscheck
test -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib.$so
test -f "$xxx" && eval $libscheck
test -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib$_a
test -f "$xxx"
&& eval $libscheck
test -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/$thislib$_a
test -f "$xxx" && eval $libscheck
test -f "$xxx" && libstyle=static

```

```

fi
if test ! -f "$xxx"; then
xxx=${thisdir/lib${thislib}_s$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
$test -f "$xxx" && thislib=${thislib}_s
fi
if test ! -f "$xxx"; then
xxx=${thisdir/Slib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if $test -f "$xxx"; then
case "$libstyle" in
shared) echo "Found -l$thislib (shared)." ;;
static) echo "Found -l$thislib." ;;
*) echo "Found -l$thislib ($libstyle)." ;;
esac
case " $dflt " in
*" -l$thislib "*);;
*) dflt="$dflt -l$thislib"
    libsfound="$libsfound $xxx"
    yyy=`basename $xxx`
    libsfiles="$libsfiles $yyy"
    yyy=`echo $xxx|sed -e
"s%/$yyy\\|\\$%%"`
    case " $libsdirs " in
    *" $yyy "*) ;;
    *) libsdirs="$libsdirs $yyy" ;;
    esac
;;
esac
break
fi
done
if $test ! -f "$xxx"; then
    echo "No -l$thislib."
fi
done
set X $dflt
shift
dflt="$*"
case "$libs" in
") dflt="$dflt";;
*) dflt="$libs";;
esac
case "$dflt" in
'|') dflt='none';;

```

esac

\$cat <<EOM

In order to compile \$package on your machine, a number of libraries are usually needed. Include any other special libraries here as well.

Say "none" for none. The default list is almost always right.

EOM

echo " "

rp="What libraries to use?"

./myread

case "\$ans" in

none) libs=' ';;

\*) libs="\$ans";;

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/libs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getprotoent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getprotoent\_r getprotoent\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getprotoent\_r:

?S: This variable conditionally defines the HAS\_GETPROTOENT\_R symbol,

?S: which indicates to the C program that the getprotoent\_r()

?S: routine is available.

?S:.

?S:getprotoent\_r\_proto:

?S: This variable encodes the prototype of getprotoent\_r.

?S: It is zero if d\_getprotoent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotoent\_r

?S: is defined.

?S:.

?C:HAS\_GETPROTOENT\_R:

?C: This symbol, if defined, indicates that the getprotoent\_r  
routine

?C: is available to getprotoent re-entrantly.

```

?C:.
?C:GETPROTOENT_R_PROTO:
?C: This symbol encodes the prototype of getprotoent_r.
?C: It is zero if d_getprotoent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getprotoent_r
?C: is defined.
?C:.
?H:#$d_getprotoent_r HAS_GETPROTOENT_R /**/
?H:#define GETPROTOENT_R_PROTO $getprotoent_r_proto /**/
?H:.
?T:try hdrs d_getprotoent_r_proto
: see if getprotoent_r exists
set getprotoent_r d_getprotoent_r
eval $inlibc
case "$d_getprotoent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getprotoent_r_proto:$usethreads" in
":define") d_getprotoent_r_proto=define
set d_getprotoent_r_proto getprotoent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getprotoent_r_proto" in
define)
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, char*, size_t, struct protoent**);'
./protochk "$extern_C $try" $hdrs && getprotoent_r_proto=I_SBWR
;;
esac
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getprotoent_r_proto=I_SBI ;;
esac
case "$getprotoent_r_proto" in
"|0) try='struct protoent* getprotoent_r(struct protoent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getprotoent_r_proto=S_SBI ;;
esac
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, struct protoent_data*);'
./protochk "$extern_C $try" $hdrs && getprotoent_r_proto=I_SD ;;
esac
case "$getprotoent_r_proto" in
"|0) d_getprotoent_r=undef
getprotoent_r_proto=0
echo "Disabling getprotoent_r, cannot determine prototype." >&4 ;;
* ) case "$getprotoent_r_proto" in
REENTRANT_PROTO*) ;;

```

```

*) getprotoent_r_proto="REENTRANT_PROTO_${getprotoent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "getprotoent_r has no prototype, not using it." >&4 ;;
esac
d_getprotoent_r=undef
getprotoent_r_proto=0
;;
esac
;;
*) getprotoent_r_proto=0
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/threads/d\_getprotoent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setpwent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_setpwent.U,v \$

?RCS:

?MAKE:d\_setpwent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setpwent:

?S: This variable conditionally defines the HAS\_SETPWENT symbol, which

?S: indicates to the C program that the setpwent() routine is available

?S: for initializing sequential access to the passwd database.

?S:.

?C:HAS\_SETPWENT:

?C: This symbol, if defined, indicates that the setpwent routine is

?C: available for initializing sequential access of the passwd database.

?C:.

?H:#\$d\_setpwent HAS\_SETPWENT /\*\*/

?H:.

?LINT:set d\_setpwent

: see if setpwent exists

set setpwent d\_setpwent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_setpwent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: charorder.U,v 3.0.1.1 1994/10/29 16:07:08 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: charorder.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:07:08 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:chorder\_int chorder\_short chorder\_long: Myread cat Compile rm

?MAKE: -pick add \$@ %<

?S:chorder\_short (d\_cos d\_bos):

?S: Holds the value describing the byte ordering of characters in a short.

?S: On a Big-Endian machine, that

would be "c0c1".

?S:.

?S:chorder\_int (charoder):

?S: Holds the value describing the byte ordering of characters in an int.

?S: For instance, on a Big-Endian machine, this would be: "c0c1c2c3".

?S:.

?S:chorder\_long (d\_col d\_bol):

?S: Holds the value describing the byte ordering of characters in a long.

?S: On a 64 bits Big-Endian machine, that would yield: "c0c1c2c3c4c5c6c7".

?S:.

?C:CHAR\_ORDER\_SHORT:

?C: Holds the byte ordering of characters in a short. It's a string

?C: value like "c0c1" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_INT:

?C: Holds the byte ordering of characters in an int. It's a string

?C: value like "c0c1c2c3" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_LONG:



```

?C: Holds the byte ordering of characters in a long. It's a string
?C: value like "c0c1c2c3c4c5c6c7" on a 64 bits Big-Endian machine.
?C:.
?H:#define CHAR_ORDER_SHORT "$chorder_short" /* byte order in a short */
?H:#define CHAR_ORDER_INT "$chorder_int" /* byte order in an int */
?H:#define CHAR_ORDER_LONG "$chorder_long"
/* byte order in a long */
?H:.
?F:!byteorder
: check for character ordering
echo " "
echo "Checking out byte order..." >&4
$cat >byteorder.c <<'EOCP'
#include <stdio.h>

int main(argc, argv)
int argc;
char *argv[]; {
int i;
int max;
union {
short u_s;
int u_i;
long u_l;
char u_c[sizeof(long)];
} u;
switch (argv[1][0]) {
case 'l':
u.u_l = 0L;
/* HMS: ASSERT: sizeof(long) < 10. */
for(i = 0; i < sizeof(long); ++i) {
u.u_l *= 0x100L;
u.u_l += (0xc0 + i);
}
max = sizeof(long);
break;
case 's':
u.u_s = 0;
/* HMS: ASSERT: sizeof(short) < 10. */
for(i = 0; i < sizeof(short); ++i) {
u.u_s *= 0x100L;
u.u_s += (0xc0 + i);
}
max = sizeof(short);
break;
case 'i':
u.u_i = 0;
/* RAM: ASSERT: sizeof(int) < 10. */

```

```

for(i = 0; i < sizeof(int); ++i) {
    u.u_1 *= 0x100L;
    u.u_1 += (0xc0 + i);
}
max = sizeof(int);
break;
default:
    max = 0;
    break;
}
for(i = 0; i < max; i++) {
    printf("%x", u.u_c[i] & 0x00FF);
}
printf("\n");
exit(0);
}

```

EOCP

set

byteorder

if eval \$compile\_ok ; then

: null statement

@if chorder\_short

chorder\_short=`./byteorder s`

@end

@if chorder\_int

chorder\_int=`./byteorder i`

@end

@if chorder\_long

chorder\_long=`./byteorder l`

@end

else

\$cat <<EOM

(I can't seem to get my test program to work. Guessing 32 bits big-endian.)

EOM

chorder\_short="c0c1"

chorder\_int="c0c1c2c3"

chorder\_long="c0c1c2c3"

fi

@if chorder\_short

dflt=\$chorder\_short

rp='What is the order of characters in a short?'

./myread

chorder\_short="\$ans"

@end

@if chorder\_int

dflt=\$chorder\_int

rp='What is the order of characters in an int?'

./myread

```
chorder_int="$ans"
@end
@if chorder_long
dflt=$chorder_long
rp='What is the order of characters in a long?'
./myread
chorder_long="$ans"
@end
$rm -f byteorder* core
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/charorder.U
```

No license file was found, but licenses were detected in source scan.

```
/*
* $Id: getopt.C,v 3.0.1.1 1994/01/24 13:58:40 ram Exp ram $
*
* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
*
* You may redistribute only under the terms of the Artistic Licence,
* as specified in the README file that comes with the distribution.
* You may reuse parts of this distribution only within the terms of
* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*
* Original Author: unknown, got this off net.sources
*
* $Log: getopt.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:40 ram
* patch16: created
*
*/
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/C/fake/getopt.C
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_gethent.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
```

?RCS:  
?RCS: \$Log: d\_gethent.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:09 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_gethent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_gethent:  
?S: This variable conditionally defines HAS\_GETHOSTENT if gethostent() is  
?S: available to look up host names in some data base or another.  
?S:.  
?C:HAS\_GETHOSTENT:  
?C: This symbol, if defined, indicates that the gethostent() routine is  
?C: available to look up host names in some  
data base or another.  
?C:.  
?H:#\$d\_gethent HAS\_GETHOSTENT /\*\*/  
?H:.  
?LINT:set d\_gethent  
: see if gethostent exists  
set gethostent d\_gethent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_gethent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syspoll.U 15 2006-08-30 18:21:51Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:i\_syspoll: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_syspoll:  
?S: This variable conditionally defines the I\_SYS\_POLL symbol, which  
?S: indicates to the C program that it should include <sys/poll.h>.  
?S:.  
?C:I\_SYS\_POLL:  
?C: This symbol, if defined, indicates that the program may include  
?C: <sys/poll.h>. When I\_POLL is also defined, it's probably safest  
?C: to only include <poll.h>.

```
?C:.
?H:#$i_syspoll I_SYS_POLL /**/
?H:.
?LINT:set i_syspoll
: see if there is
  a sys/poll.h file
set sys/poll.h i_syspoll
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_syspoll.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: Copyright (c) 2017, Karl Williamson
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?MAKE:d_mbrlen: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_mbrlen:
```

```
?S: This variable conditionally defines the HAS_MBRLLEN symbol if the
```

```
?S: mbrlen() routine is available to be used to get the length of
```

```
?S: multi-byte character strings.
```

```
?S:.
```

```
?C:HAS_MBRLLEN:
```

```
?C: This symbol, if defined, indicates that the mbrlen routine is
```

```
?C: available to get the length of multi-byte character strings.
```

```
?C:.
```

```
?H:#$d_mbrlen HAS_MBRLLEN /**/
```

```
?H:.
```

```
?LINT: set d_mbrlen
```

```
: see if mbrlen exists
```

```
set mbrlen d_mbrlen
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_mbrlen.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_htonl.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_htonl.U,v \$  
?RCS: Revision 3.0.1.2 1994/08/29 16:09:25 ram  
?RCS: patch32: now properly handles htonl() and friends when macros (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:45:00 ram  
?RCS: patch23: now also check for htonl() macro (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:22 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_htonl: Inlibc Setvar i\_niin i\_sysin i\_arpainet cat rm contains \  
cppstdin cppflags cppminus  
?MAKE: -pick  
add \$@ %<  
?S:d\_htonl:  
?S: This variable conditionally defines HAS\_HTONL if htonl() and its  
?S: friends are available to do network order byte swapping.  
?S:.  
?C:HAS\_HTONL (HTONL):  
?C: This symbol, if defined, indicates that the htonl() routine (and  
?C: friends htons() ntohl() ntohs()) are available to do network  
?C: order byte swapping.  
?C:.  
?C:HAS\_HTONS (HTONS):  
?C: This symbol, if defined, indicates that the htons() routine (and  
?C: friends htonl() ntohl() ntohs()) are available to do network  
?C: order byte swapping.  
?C:.  
?C:HAS\_NTOHL (NTOHL):  
?C: This symbol, if defined, indicates that the ntohl() routine (and  
?C: friends htonl() htons() ntohs()) are available to do network  
?C: order byte swapping.  
?C:.  
?C:HAS\_NTOHS (NTOHS):  
?C: This symbol, if defined, indicates that the ntohs() routine (and  
?C: friends htonl() htons() ntohl()) are available to do network  
?C: order byte swapping.  
?C:.  
?H:#\$d\_htonl HAS\_HTONL /\*\*/  
?H:#\$d\_htonl HAS\_HTONS /\*\*/  
?H:#\$d\_htonl HAS\_NTOHL /\*\*/

```
?H:#$d_htonl
HAS_NTOHS /**/
?H:
?F:!htonl.c
?LINT:set d_htonl
: see if htonl --and friends-- exists
val="
set htonl val
eval $inlibc
```

: Maybe they are macros.

```
case "$val" in
$undef)
$cat >htonl.c <<EOM
#include <stdio.h>
#include <sys/types.h>
#$i_niin I_NETINET_IN
#$i_sysin I_SYS_IN
#$i_arpainet I_ARPA_INET
#ifdef I_NETINET_IN
#include <netinet/in.h>
#endif
#ifdef I_SYS_IN
#include <sys/in.h>
#endif
#ifdef I_ARPA_INET
#include <arpa/inet.h>
#endif
#ifdef htonl
printf("Defined as a macro.");
#endif
EOM
$cpstdin $cppflags $cppminus < htonl.c >htonl.E 2>/dev/null
if $contains 'Defined as a macro' htonl.E >/dev/null 2>&1; then
val="$define"
echo "But it seems to be defined as a macro." >&4
fi
$rm -f htonl.?
;;
esac
set d_htonl
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_htonl.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_NeWS.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_NeWS.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_news d_news0 d_newshome d_textcan: test rm Myread Getfile
?MAKE: -pick add $@ %<
?S:d_news:
?S: Set if running NeWS 1.1
?S:.
?S:d_news0:
?S: Set if running NeWS 1.0
?S:.
?S:d_newshome:
?S: Path to the top directory of the NeWS structure.
?S:.
?S:d_textcan:
?S: Path to where the textcan.ps stuff is...
?S:.
?C:HAS_NEWS1_1 (NEWS1_1):
?C: This
symbol defined if running NeWS 1.1.
?C:.
?C:HAS_NEWS1_0 (NEWS1_0):
?C: This symbol defined if running NeWS 1.0.
?C:.
?C:TEXTCAN:
?C: Tells path to where the textcan.ps stuff is...
?C:.
?H:#$d_news HAS_NEWS1_1 /**/
?H:#$d_news0 HAS_NEWS1_0 /**/
?H:#define TEXTCAN $d_textcan /**/
?H:.
?INIT:: default path for NeWS
?INIT:d_newshome="/usr/NeWS"
?INIT:
: Check to see what version of NeWS is being run?
cd ..
echo " "

```



```

echo "Now for the interesting stuff... Lets see what kind of NeWS"
echo "they grow round here...."
echo " "
dflt='y'
if $stest -d $d_newshome; then
  d_newshome=`(cd $d_newshome ; /bin/pwd)`
  echo "Ah...found myself a NeWS in $d_newshome..."
  dflt='y'
  rp="Is this the NeWS you want your children to grow up with?"
  . UU/myread
fi
while $stest $ans = "n"; do
  dflt=$d_newshome
  fn=d
  rp="Path to NeWS you want:"
  . UU/getfile
  d_newshome=$ans

  echo " "
  if $stest ! -d $d_newshome/lib; then
    echo "ARG! No lib directory in $d_newshome!!!"
    : heavy medicine. I wonder what the disease
    is...
    $rm -f kit*isdone
    $rm -rf UU
    : bye bye
    set -t; echo "Sorry... no NeWS is bad news..."
  fi

  if $stest -r $d_newshome/lib/NeWS/colors.ps ; then
    echo 'Ahh... your running NeWS 1.1! Boy... that makes stuff easy....'
    echo " "
    d_news="$define"
    d_news0="$undef"
    if $stest -r $d_newshome/lib/NeWS/textcan.ps; then
      d_textcan=$d_newshome/lib/NeWS
      echo "The textcan.ps stuff seems to be in : $d_textcan"
    else
      d_textcan=$d_newshome/clientsrc/client/nterm
      if $stest ! -r $d_textcan/textcan.ps; then
        d_news="$undef"
        d_news0="$define"
        echo 'Hmm... must have been fooled... gotta be NeWS 1.1 beta!'
      else
        echo "The textcan.ps stuff seems to be in : $d_textcan"
      fi
    fi
  fi
else

```

```
echo 'snif... sniff... I smell the dilapidated smell of NeWS 1.0..'  
echo 'Some things will not work under NeWS 1.0...'  
d_news="$undef"  
d_news0="$define"  
fi  
cd UU
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_NeWS.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: so.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: so.U,v $  
?RCS: Revision 3.0.1.2 1994/10/29 16:30:04 ram  
?RCS: patch36: now tells user how he can suppress shared lib lookup (ADO)  
?RCS: patch36: removed echo at the top, since it's now in the here-doc (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 07:07:02 ram  
?RCS: patch30: created  
?RCS:  
?X:  
?X: This unit computes the shared-object / shared-lib extension  
?X:  
?MAKE:so d_libname_unique: test libpth Loc Myread Oldconfig cat Setvar  
?MAKE: -pick add $@ %<  
?S:so:  
?S: This  
variable holds the extension used to identify shared libraries  
?S: (also known as shared objects) on the system. Usually set to 'so'.  
?S:.  
?S:d_libname_unique:  
?S: This variable is defined if the target system insists on unique  
?S: basenames for shared library files. This is currently true on Android,  
?S: false everywhere else we know of.  
?S: Defaults to 'undef'.  
?S:.  
?LINT:set d_libname_unique  
?T: xxx
```

```

: compute shared library extension
case "$so" in
")
if xxx=`./loc libc.sl X $libpth`; $test -f "$xxx"; then
dflt='sl'
else
dflt='so'
fi
;;
*) dflt="$so";;
esac
$cat <<EOM

```

On some systems, shared libraries may be available. Answer 'none' if you want to suppress searching of shared libraries for the remainder of this configuration.

```

EOM
rp='What is the file extension used for shared libraries?'
./myread
so="$ans"

```

```

: Does target system insist that shared library basenames are unique
$cat << EOM

```

Some dynamic loaders assume that the \*basename\* of shared library filenames are globally unique. We'll default this to undef as we assume your system is not this weird. Set to defined if you're on one of them.

```

EOM

dflt='n'
rp='Make shared library basenames unique?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set d_libname_unique
eval $setvar

```

Found in path(s):  
\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/so.U  
No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: pidtype.U,v 3.0.1.1 1994/08/29 16:31:27 ram Exp $
```

```

?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: pidtype.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:31:27 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:33 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:pidtype: Myread Typedef
?MAKE: -pick add $@ %<
?S:pidtype:
?S: This variable defines PIDTYPE to be something like pid_t, int,
?S: ushort, or whatever type is used to declare process ids in the kernel.
?S:.
?C:Pid_t (PIDTYPE):
?C: This
symbol holds the type used to declare process ids in the kernel.
?C: It can be int, uint, pid_t, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Pid_t $pidtype /* PID type */
?H:.
?LINT: set pidtype
: see what type pids are declared as in the kernel
rp="What is the type of process ids on this system?"
set pid_t pidtype int stdio.h sys/types.h
eval $typedef_ask

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/typedefs/pidtype.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id: d_setvbuf.U,v 3.0.1.1 1994/08/29 16:11:57 ram Exp $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:

```

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_setvbuf.U,v \$

?RCS:

?MAKE:d\_setvbuf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setvbuf:

?S: This variable conditionally defines the HAS\_SETVBUF symbol, which

?S: indicates to the C program that the setvbuf() routine is available

?S: to change buffering on an open stdio stream.

?S:.

?C:HAS\_SETVBUF :

?C: This symbol, if defined, indicates that the setvbuf routine is

?C: available to change buffering on an open stdio stream.

?C: to a line-buffered mode.

?C:.

?H:#\$d\_setvbuf HAS\_SETVBUF /\*\*/

?H:.

?LINT:set d\_setvbuf

: see if setvbuf exists

set setvbuf d\_setvbuf

eval \$inlibc

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_setvbuf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_syslog.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_syslog.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:46:56 ram

?RCS: patch61: replaced .o with \$\_o all over the place

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:43 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_syslog: test Csym Setvar Findhdr

?MAKE: -pick add \$@ %<

?S:d\_syslog:  
?S: This variable conditionally defines the HAS\_SYSLOG symbol, which  
?S: indicates to the C program that syslog() exists on this system.  
?S:.  
?C:HAS\_SYSLOG  
(LIBSYSLOG):  
?C: This symbol, if defined, indicates that the program can rely on the  
?C: system providing syslog(). Otherwise, the syslog code provided by  
?C: the package should be used.  
?C:.

?H:#\$d\_syslog HAS\_SYSLOG /\*\*/

?H:.

?LINT:set d\_syslog

: see if syslog is available

echo " "

if \$test `./findhdr syslog.h` && \

(set syslog val -f d\_syslog; eval \$csym; \$val); then

echo "syslog() found." >&4

val="\$define"

else

echo "syslog() not found in your C library." >&4

val="\$undef"

fi

set d\_syslog

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_syslog.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Finish.U,v \$

?RCS: Revision 3.0.1.6 1995/02/15 14:09:30 ram

?RCS: patch51: now clearer about how to edit config.sh at the prompt (WED)

?RCS:

?RCS: Revision 3.0.1.5 1994/10/29 15:53:14 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

```

?RCS: Revision 3.0.1.4 1994/05/06 14:19:37 ram
?RCS: patch23: added blank lines around 'End of Configure'
?RCS:
?RCS: Revision 3.0.1.3 1993/10/16 13:46:09 ram
?RCS: patch12: replaced Config_h by Magic_h in the dependency line
?RCS:
?RCS:
Revision 3.0.1.2 1993/09/13 15:45:26 ram
?RCS: patch10: fixed shell evaluation w/o shell escape while in silent mode
?RCS:
?RCS: Revision 3.0.1.1 1993/08/30 08:55:59 ram
?RCS: patch8: prevents myread from blocking on empty answers, exceptionally
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:55 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit is the very last one in the Configure script. It runs all the
?X: SH files, which among other things produce config.h and (usually) Makefile.
?X: It offers to do a make depend if the Makefile contains that target.
?X:
?MAKE:Finish: Chk_MANI Extract Myread Oldsym Magic_h cat rm contains \
test package make
?MAKE: -pick add $@ %<
?F:!config.sh
?T:pwd
: Finish up by extracting the .SH files
case "$alldone" in
exit)
?X: They supplied the -E switch
echo "Stopping at your request, leaving temporary files around."
exit 0
;;
cont)
;;
")
dflt="
nostick=true
$cat <<EOM

```

If you'd like to make any changes to the config.sh file before I begin to configure things, do it as a shell escape now (e.g. !vi config.sh).

```

EOM
rp="Press return or use a shell escape to edit config.sh:"
. UU/myread
nostick="

```

```

case "$ans" in
") ;;
*) : in case they cannot read
  sh 1>&4 -c "$ans";;
esac
;;
esac

```

: if this fails, just run all the .SH files by hand  
 ./config.sh

```

?X:
?X: Turn silent mode off from now on (we want a verbose file extraction).
?X: This means we have to explicitly test for '$silent' from now on to
?X: strip off any verbose messages.
?X:
echo " "
exec 1>&4
pwd=`pwd`
./UU/extract
cd "$pwd"

```

```

if $contains '^depend:' [Mm]akefile >/dev/null 2>&1; then
dflt=y
case "$silent" in
true) ;;
*)
$cat <<EOM

```

Now you need to generate make dependencies by running "\$make depend".  
 You might prefer to run it in background: "\$make depend > makedepend.out &"  
 It can take a while, so you might not want to run it right now.

```

EOM
;;
esac
rp="Run $make depend now?"
./UU/myread
case "$ans" in
y*)
$make depend
&& echo "Now you must run '$make'."
;;
*)
echo "You must run '$make depend' then '$make'."
;;
esac
elif test -f [Mm]akefile; then

```



```
echo " "  
echo "Now you must run a $make."  
else  
echo "Configure done."  
fi
```

```
if $test -f Policy.sh; then  
$cat <<EOM
```

If you compile \$package on a different machine or from a different object directory, copy the Policy.sh file from this object directory to the new one before you run Configure -- this will help you with most of the policy defaults.

EOM

```
fi  
if $test -f UU/config.msg; then  
echo "Hmm. I also noted the following information while running:"  
echo " "  
$cat UU/config.msg >&4
```

```
fi
```

```
?X:
```

```
?X: kit*isdone files are left over by shell archives built using the makedist
```

```
?X: script which comes from dist, while ark*isdone files are left over by
```

```
?X: the cshar archive maker.
```

```
?X:
```

```
$rm -f kit*isdone ark*isdone
```

```
$rm -rf UU
```

```
: End of Configure
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Finish.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_systable.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_systable.U,v $
```

```
?RCS: Revision 3.0.1.1 1993/10/16 13:50:20 ram
```

?RCS: patch12: created  
?RCS:  
?RCS:  
?MAKE:i\_systable: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_systable:  
?S: This variable conditionally defines the I\_SYS\_TABLE symbol, and  
?S: indicates whether a C program should include <sys/table.h>.  
?S:.  
?C:I\_SYS\_TABLE:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/table.h> for the OSF/1 table() system call.  
?C:.  
?H:#\$i\_systable  
I\_SYS\_TABLE /\*\*/  
?H:.  
?LINT:set i\_systable  
: see if this is an OSF sys/table system  
set sys/table.h i\_systable  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_systable.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_newsadm.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_newsadm.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:36:53 ram  
?RCS: patch61: added Guess dependency  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:14:33 ram  
?RCS: patch36: call ./eunice explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:42 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_newsadm newsadmin: cat contains Guess Setvar Myread Oldconfig  
?MAKE: -pick add \$@ %<

?S:d\_newsadm:  
 ?S: This variable conditionally defines the NEWS\_ADMIN symbol, which ?S: indicates to the C program that there is a user who is in charge ?S: of news administration.  
 ?S:.  
 ?S:newsadmin:  
 ?S: This variable holds the login name of the news administrator, if any.  
 ?S:.  
 ?C:NEWS\_ADMIN (NEWSADMIN):  
 ?C: This symbol, if defined, contains the login name of the news ?C: administrator.  
 ?C:.  
 ?H:#\$d\_newsadm NEWS\_ADMIN "\$newsadmin" /\*\*/  
 ?H:.  
 ?LINT:set d\_newsadm  
 : get news administrator name  
 case "\$newsadmin" in  
 ")  
 if \$contains "^news:" /etc/passwd >/dev/null 2>&1 ; then  
 dflt=news  
 elif \$contains "^usenet:" /etc/passwd >/dev/null 2>&1 ; then  
 dflt=usenet  
 elif ./eunice; then  
 dflt=system  
 else  
 dflt=root  
 fi  
 ;;  
 \*)  
 dflt="\$newsadmin"  
 ;;  
 esac  
 \$cat <<'EOM'

Many systems keep their news in a private directory, or have a non-superuser in charge of administering news. (If you don't have such a user, take the default answer.) I need the login name (not directory) which is used for news administration.

```
EOM
rp="News
admin login?"
./myread
newsadmin="$ans"
case "$newsadmin" in
root) val="$undef" ;;
*) val="$define" ;;
```

```
esac
set d_newsadm
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_newsadm.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:i\_poll: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_poll:

?S: This variable conditionally defines the I\_POLL symbol, which

?S: indicates to the C program that it should include <poll.h>.

?S:.

?C:I\_POLL:

?C: This symbol, if defined, indicates that the program may include

?C: <poll.h>. If there is no <poll.h>, then you may check I\_SYS\_POLL

?C: instead to see whether there is a <sys/poll.h> to include.

?C:.

?H:#\$i\_poll I\_POLL /\*\*/

?H:.

?LINT:set i\_poll

: see if there is a poll.h file

set poll.h i\_poll

eval \$inhdr

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_poll.U
```

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```

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?RCS:
?MAKE:d_fs_data_s: Hasstruct i_sysparam i_sysmount i_systypes Setvar
?MAKE: -pick add $@ %<
?S:d_fs_data_s:
?S: This variable conditionally defines the HAS_STRUCT_FS_DATA symbol,
?S: which indicates that the struct fs_data is supported.
?S:.
?C:HAS_STRUCT_FS_DATA:
?C: This symbol, if defined, indicates that the struct fs_data
?C: to do statfs() is supported.
?C:.
?H:#$d_fs_data_s HAS_STRUCT_FS_DATA /**/
?H:.
?LINT:set d_fs_data_s
: Check for fs_data_s
echo " "
echo "Checking to see if your system supports struct fs_data..." >&4
set d_fs_data_s fs_data $i_systypes sys/types.h $i_sysparam sys/param.h $i_sysmount sys/mount.h
eval $hasstruct
case "$d_fs_data_s" in
"$define") echo "Yes, it does." ;;
*)
    echo "No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d_fs_data_s.U

```

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```

?RCS: $Id$

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

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```

```

?RCS: of the source tree for dist 4.0.

```

```

?RCS:

```

```

?RCS: $Log: archname.U,v $

```

```

?RCS: Revision 3.0.1.3 1997/02/28 15:24:32 ram

```

```

?RCS: patch61: changed the way the archname is mangled from uname

```

```

?RCS:

```

```

?RCS: Revision 3.0.1.2 1995/05/12 12:05:24 ram

```

```

?RCS: patch54: protect against spaces in "uname -m" output (ADO)

```

```

?RCS:

```

?RCS: Revision 3.0.1.1 1995/02/15 14:14:21 ram

?RCS: patch51: created

?RCS:

?MAKE:archname myarchname: sed Loc Myread Oldconfig osname test rm

?MAKE: -pick add \$@ %<

?S:archname:

?S: This variable is a short name to characterize the current

?S: architecture.

It is used mainly to construct the default archlib.

?S:.

?S:myarchname:

?S: This variable holds the architecture name computed by Configure in

?S: a previous run. It is not intended to be perused by any user and

?S: should never be set in a hint file.

?S:.

?C:ARCHNAME:

?C: This symbol holds a string representing the architecture name.

?C: It may be used to construct an architecture-dependant pathname

?C: where library files may be held under a private library, for

?C: instance.

?C:.

?H:#define ARCHNAME "\$archname" /\*\*/

?H:.

?T:xxx tarch

: determine the architecture name

echo " "

?X: We always recompute archname in case osname changes. However, we need

?X: to be careful since, as ADO rightfully pointed out, some systems pick

?X: silly architecture names (0001307135000-aix on AIX or 9000/715-ux under

?X: HP-UX). Therefore, we allow hint files to supersede our guess and ask

?X: the user for confirmation.

```

if xxx=`./loc arch blurfl $pth`; $test -f "$xxx"; then
  tarch=`arch`-"-$osname"
elif
  xxx=`./loc uname blurfl $pth`; $test -f "$xxx" ; then
  if uname -m > tmparch 2>&1 ; then
    tarch=`$sed -e 's/ *$//' -e 's/ /_/' \
      -e 's/"/"-.$osname/' tmparch`
  else
    tarch="$osname"
  fi
  $rm -f tmparch
else
  tarch="$osname"
fi
case "$myarchname" in
|"$tarch") ;;
*)

```

```

echo "(Your architecture name used to be $myarchname.)"
archname=""
;;
esac
case "$archname" in
") dflt="$starch";;
*) dflt="$archname";;
esac
rp='What is your architecture name'
./myread
archname="$ans"
myarchname="$starch"

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/archname.U
```

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```
?RCS: $Id: i_poll.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2001 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:i_langinfo: Inhdr Hasfield
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_langinfo:
```

```
?S: This variable conditionally defines the I_LANGINFO symbol,
```

```
?S: and indicates whether a C program should include <langinfo.h>.
```

```
?S:.
```

```
?C:I_LANGINFO:
```

```
?C: This symbol, if defined, indicates that <langinfo.h> exists and
```

```
?C: should be included.
```

```
?C:.
```

```
?H:#$i_langinfo I_LANGINFO /**/
```

```
?H:.
```

```
?LINT:set i_langinfo
```

```
: see if this is a langinfo.h system
```

```
set langinfo.h i_langinfo
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_langinfo.U
```

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```
?RCS: $Id: d_bzero.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```

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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_bzero.U,v $
?RCS: Revision 3.0.1.2 1993/10/16 13:48:15 ram
?RCS: patch12: added magic support for bzero()
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:01:33 ram
?RCS: patch10: now only defines HAS_BZERO, no macro remap on memset (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_bzero: Inlibc
?MAKE: -pick add $@ %<
?S:d_bzero:
?S: This variable conditionally defines the HAS_BZERO
symbol if
?S: the bzero() routine is available to set memory to 0.
?S:.
?C:HAS_BZERO:
?C: This symbol is defined if the bzero() routine is available to
?C: set a memory block to 0.
?C:.
?H:#$d_bzero HAS_BZERO /**/
?H:.
?M:bzero: HAS_BZERO
?M:#ifndef HAS_BZERO
?M:#ifndef bzero
?M:#define bzero(s,l) memset((s),0,(l))
?M:#endif
?M:#endif
?M:.
?LINT:set d_bzero
: see if bzero exists
set bzero d_bzero
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_bzero.U

```



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```
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?RCS:
?MAKE:d_getmntent: Inlibc
?MAKE: -pick add $@ %<
?S:d_getmntent:
?S: This variable conditionally defines the HAS_GETMNTENT symbol, which
?S: indicates to the C program that the getmntent() routine is available
?S: to iterate through mounted files to get their mount info.
?S:.
?C:HAS_GETMNTENT:
?C: This symbol, if defined, indicates that the getmntent routine is
?C: available to iterate through mounted file systems to get their info.
?C:.
?H:#$d_getmntent HAS_GETMNTENT /**/
?H:.
?LINT:set d_getmntent
: see if getmntent exists
set getmntent d_getmntent
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_getmntent.U
```

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```
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:siteman1dir siteman1direxp installsiteman1dir: Getfile \
Setprefixvar prefix siteprefix man1dir sed
?MAKE: -pick add $@ %<
?Y:TOP
?D:siteman1dir="
?S:siteman1dir:
```

?S: This variable contains the name of the directory in which site-specific  
?S: manual source pages are to be put. It is the responsibility of the  
?S: Makefile.SH to get the value of this into the proper command.  
?S: You must be prepared to do the ~name expansion yourself.  
?S: The standard distribution will put nothing in this directory.

?S: After perl

has been installed, users may install their own local

?S: man1 pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:siteman1direxp="

?S:siteman1direxp:

?S: This variable is the same as the siteman1dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsiteman1dir="

?S:installsiteman1dir:

?S: This variable is really the same as siteman1direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: man1direxp only points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installsiteman1dir

?LINT:set siteman1dir

?LINT:set siteman1direxp

: determine where add-on manual pages go

case "\$siteman1dir" in

") dflt=`echo \$man1dir | \$sed "s#^\$prefix#\$siteprefix#"` ;;

\*) dflt=\$siteman1dir ;;

esac

case "\$dflt" in

"| ") dflt=none ;;

esac

fn=dn+~

rp=Pathname

where the site-specific manual pages should be installed?

./getfile

prefixvar=siteman1dir

./setprefixvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/siteman1dir.U

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?RCS: \$Id: d\_asctime\_r.U,v 0RCS:

```

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_asctime_r asctime_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_time i_systime extern_C
?MAKE: -pick add $@ %<
?S:d_asctime_r:
?S: This variable conditionally defines the HAS_ASCTIME_R symbol,
?S: which indicates to the C program that the asctime_r()
?S: routine is available.
?S:.
?S:asctime_r_proto:
?S: This variable encodes the prototype of asctime_r.
?S: It is zero if d_asctime_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_asctime_r
?S: is defined.
?S:.
?C:HAS_ASCTIME_R:
?C: This symbol, if defined, indicates that the asctime_r routine
?C: is available to asctime
  re-entrantly.
?C:.
?C:ASCTIME_R_PROTO:
?C: This symbol encodes the prototype of asctime_r.
?C: It is zero if d_asctime_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_asctime_r
?C: is defined.
?C:.
?H:#$d_asctime_r HAS_ASCTIME_R /**/
?H:#define ASCTIME_R_PROTO $asctime_r_proto /**/
?H:.
?T:try hdrs d_asctime_r_proto
: see if asctime_r exists
set asctime_r d_asctime_r
eval $inlibc
case "$d_asctime_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
  case "$d_asctime_r_proto:$usethreads" in
  ":define") d_asctime_r_proto=define
    set d_asctime_r_proto asctime_r $hdrs
    eval $hasproto ;;
  *) ;;
  esac

```

```

case "$d_asctime_r_proto" in
define)
case "$asctime_r_proto" in
"|0) try='char* asctime_r(const struct tm*, char*);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=B_SB ;;
esac
case "$asctime_r_proto" in
"|0) try='char* asctime_r(const struct tm*, char*, int);'
./protochk "$extern_C $try" $hdrs
&& asctime_r_proto=B_SBI ;;
esac
case "$asctime_r_proto" in
"|0) try='int asctime_r(const struct tm*, char*);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=I_SB ;;
esac
case "$asctime_r_proto" in
"|0) try='int asctime_r(const struct tm*, char*, int);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=I_SBI ;;
esac
case "$asctime_r_proto" in
"|0) d_asctime_r=undef
asctime_r_proto=0
echo "Disabling asctime_r, cannot determine prototype." >&4 ;;
* ) case "$asctime_r_proto" in
REENTRANT_PROTO*) ;;
*) asctime_r_proto="REENTRANT_PROTO_$asctime_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "asctime_r has no prototype, not using it." >&4 ;;
esac
d_asctime_r=undef
asctime_r_proto=0
;;
esac
;;
*) asctime_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_asctime\_r.U

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: mallocsrc.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:10:26 ram  
?RCS: patch61: added support for Free\_t, the type of free()  
?RCS: patch61: replaced .o with \$\_o all over the place  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:10:46 ram  
?RCS: patch23: added support for MYMALLOC, mainly for perl5 (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:12 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:mallocsrc mallocobj usemymalloc malloctype d\_mymalloc \  
freetype: Myread \  
Oldconfig  
package Guess Setvar rm cat +cc +ccflags Findhdr \  
i\_malloc i\_stdlib sed libs \_o ptrsize  
?MAKE: -pick add \$@ %<  
?X: Put near top so that other tests don't erroneously include  
?X: -lmalloc. --AD 22 June 1998  
?Y:TOP  
?S:usemymalloc:  
?S: This variable contains y if the malloc that comes with this package  
?S: is desired over the system's version of malloc. People often include  
?S: special versions of malloc for efficiency, but such versions are often  
?S: less portable. See also mallocsrc and mallocobj.  
?S: If this is 'y', then -lmalloc is removed from \$libs.  
?S:.  
?S:mallocsrc:  
?S: This variable contains the name of the malloc.c that comes with  
?S: the package, if that malloc.c is preferred over the system malloc.  
?S: Otherwise the value is null. This variable is intended for generating  
?S: Makefiles.  
?S:.  
?S:d\_mymalloc:  
?S: This variable conditionally defines MYMALLOC in case other parts  
?S: of the source want to take special action if MYMALLOC is used.  
?S: This may include different sorts  
?S: of profiling or error detection.  
?S:.

?S:mallocobj:  
 ?S: This variable contains the name of the malloc.o that this package  
 ?S: generates, if that malloc.o is preferred over the system malloc.  
 ?S: Otherwise the value is null. This variable is intended for generating  
 ?S: Makefiles. See mallocsrc.  
 ?S:.  
 ?S:freetype:  
 ?S: This variable contains the return type of free(). It is usually  
 ?S: void, but occasionally int.  
 ?S:.  
 ?S:malloctype:  
 ?S: This variable contains the kind of ptr returned by malloc and realloc.  
 ?S:.  
 ?C:Free\_t:  
 ?C: This variable contains the return type of free(). It is usually  
 ?C: void, but occasionally int.  
 ?C:.  
 ?C:Malloc\_t (MALLOCPTRTYPE):  
 ?C: This symbol is the type of pointer returned by malloc and realloc.  
 ?C:.  
 ?H:#define Malloc\_t \$malloctype /\*\*/  
 ?H:#define Free\_t \$freetype /\*\*/  
 ?H:.  
 ?C:MYMALLOC:  
 ?C: This symbol, if defined, indicates that we're using our own malloc.  
 ?C:.  
 ?H:#\$d\_mymalloc MYMALLOC /\*\*/  
 ?H:.  
 ?LINT:change libs  
 ?X: Cannot test for mallocsrc; it  
 is the unit's name and there is a bug in  
 ?X: the interpreter which defines all the names, even though they are not used.  
 @if mallocobj  
 : determine which malloc to compile in  
 echo " "  
 case "\$usemymalloc" in  
 [yY]\*|true|\$define) dflt='y' ;;  
 [nN]\*|false|\$undef) dflt='n' ;;  
 \*)  
 case "\$ptrsize" in  
 4) dflt='y' ;;  
 \*) dflt='n' ;;  
 esac  
 ;;  
 esac  
 rp="Do you wish to attempt to use the malloc that comes with \$package?"  
 ./myread  
 usemymalloc="\$ans"

```

case "$ans" in
y*|true)
usemymalloc='y'
mallosrc='malloc.c'
mallocobj="malloc$_o"
d_mymalloc="$define"
?X: Maybe libs.U should be dependent on mallosrc.U, but then
?X: most packages that use dist probably don't supply their own
?X: malloc, so this is probably an o.k. compromise
case "$libs" in
*-lmalloc*)
: Remove malloc from list of libraries to use
echo "Removing unneeded -lmalloc from library list" >&4
set `echo X $libs | $sed -e 's/-lmalloc / /' -e 's/-lmalloc$/'^
shift
libs="$*"
echo "libs = $libs" >&4
;;
esac
;;
*)
usemymalloc='n'
mallosrc=""
mallocobj=""
d_mymalloc="$undef"
;;
esac

@end
@if
MALLOCPTRTYPE || Malloc_t || Free_t
: compute the return types of malloc and free
echo " "
$cat >malloc.c <<END
#i_malloc I_MALLOC
#i_stdlib I_STDLIB
#include <stdio.h>
#include <sys/types.h>
#ifdef I_MALLOC
#include <malloc.h>
#endif
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#ifdef TRY_MALLOC
void *malloc();
#endif
#ifdef TRY_FREE

```

```

void free();
#endif
END
@if MALLOC_PTRTYPE || Malloc_t
case "$malloctype" in
")
if $cc $ccflags -c -DTRY_MALLOC malloc.c >/dev/null 2>&1; then
malloctype='void *'
else
malloctype='char *'
fi
;;
esac
echo "Your system wants malloc to return '$malloctype', it would seem." >&4
@end

@if Free_t
case "$freetype" in
")
if $cc $ccflags -c -DTRY_FREE malloc.c >/dev/null 2>&1; then
freetype='void'
else
freetype='int'
fi
;;
esac
echo "Your system uses $freetype free(), it would seem." >&4
@end
$rm -f malloc.[co]
@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/mallocsrc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_table.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS:

?RCS: \$Log: d\_table.U,v \$

?RCS: Revision 3.0.1.2 1993/11/10 17:34:14 ram



?RCS: patch14: wrongly mentionned an obsolete symbol

?RCS:

?RCS: Revision 3.0.1.1 1993/10/16 13:49:29 ram

?RCS: patch12: created

?RCS:

?MAKE:d\_table: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_table:

?S: This variable conditionally defines HAS\_TABLE if table() is

?S: available to examine/update elements from a system table.

?S:.

?C:HAS\_TABLE:

?C: This symbol, if defined, indicates that the OSF/1  
table() system

?C: call is available to examine/update items from a system table.

?C:.

?H:#\$d\_table HAS\_TABLE /\*\*/

?H:.

?LINT:set d\_table

: see if table exists

set table d\_table

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_table.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwuid\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwuid\_r getpwuid\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwuid\_r:

?S: This variable conditionally defines the HAS\_GETPWUID\_R symbol,

?S: which indicates to the C program that the getpwuid\_r()

?S: routine is available.

?S:.

?S:getpwuid\_r\_proto:

?S: This variable encodes the prototype of getpwuid\_r.

?S: It is zero if d\_getpwuid\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwuid\_r

?S: is defined.

?S:.

?C:HAS\_GETPWUID\_R:

?C: This symbol, if defined, indicates that the getpwuid\_r routine

?C: is available to

getpwuid re-entrantly.

?C:.

?C:GETPWUID\_R\_PROTO:

?C: This symbol encodes the prototype of getpwuid\_r.

?C: It is zero if d\_getpwuid\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwuid\_r

?C: is defined.

?C:.

?H:#\$d\_getpwuid\_r HAS\_GETPWUID\_R /\*\*/

?H:#define GETPWUID\_R\_PROTO \$getpwuid\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getpwuid\_r\_proto

: see if getpwuid\_r exists

set getpwuid\_r d\_getpwuid\_r

eval \$inlibc

case "\$d\_getpwuid\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_pwd pwd.h"

case "\$d\_getpwuid\_r\_proto:\$usetthreads" in

":define") d\_getpwuid\_r\_proto=define

set d\_getpwuid\_r\_proto getpwuid\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_getpwuid\_r\_proto" in

define)

case "\$getpwuid\_r\_proto" in

"|0) try='int getpwuid\_r(uid\_t, struct passwd\*, char\*, size\_t, struct passwd\*\*);'

./protochk "\$extern\_C \$try" \$hdrs && getpwuid\_r\_proto=I\_TSBWR ;;

esac

case "\$getpwuid\_r\_proto" in

"|0) try='int getpwuid\_r(uid\_t, struct passwd\*, char\*, int,

struct passwd\*\*);'

./protochk "\$extern\_C \$try" \$hdrs && getpwuid\_r\_proto=I\_TSBIR ;;

esac

case "\$getpwuid\_r\_proto" in

"|0) try='int getpwuid\_r(uid\_t, struct passwd\*, char\*, int);'

./protochk "\$extern\_C \$try" \$hdrs && getpwuid\_r\_proto=I\_TSBI ;;

esac

case "\$getpwuid\_r\_proto" in

"|0) try='struct passwd\* getpwuid\_r(uid\_t, struct passwd\*, char\*, int);'

./protochk "\$extern\_C \$try" \$hdrs && getpwuid\_r\_proto=S\_TSBI ;;

esac

```

case "$getpwuid_r_proto" in
"|0) d_getpwuid_r=undef
getpwuid_r_proto=0
echo "Disabling getpwuid_r, cannot determine prototype." >&4 ;;
* ) case "$getpwuid_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwuid_r_proto="REENTRANT_PROTO_$getpwuid_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getpwuid_r has no prototype, not using it." >&4 ;;
esac
d_getpwuid_r=undef
getpwuid_r_proto=0
;;
esac
;;
*) getpwuid_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getpwuid_r.U
```

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?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_ualarm: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ualarm:

?S: This variable conditionally defines the HAS\_UALARM symbol, which

?S: indicates to the C program that the ualarm() routine is available.

?S:.

?C:HAS\_UALARM:

?C: This symbol, if defined, indicates that the ualarm routine is

?C: available to do alarms with microsecond granularity.

?C:.

?H:#\$d\_ualarm HAS\_UALARM /\*\*/

?H:.

?LINT:set d\_ualarm

```
: see if ualarm exists
set ualarm d_ualarm
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_ualarm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: filexp.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: filexp.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:08 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:filexp: privlib
```

```
?MAKE: -pick add $@ %<
```

```
?S:filexp:
```

```
?S: This symbol contains the full pathname of the filexp script, in case we
```

```
?S: are saving the script for posterity.
```

```
?S:.
```

```
: must not allow self reference
```

```
case "$privlib" in
```

```
/*)
```

```
filexp=$privlib/filexp
```

```
::
```

```
*)
```

```
filexp=`pwd`/filexp
```

```
::
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/filexp_path.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_memcmp.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_memcmp.U,v \$  
?RCS: Revision 3.0.1.1 1993/09/13 16:02:35 ram  
?RCS: patch10: removed text recommending bcmp over memcmp (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:33 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_memcmp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_memcmp:  
?S: This variable conditionally defines the HAS\_MEMCMP symbol, which  
?S: indicates to the C program that the memcmp() routine is available  
?S: to compare blocks of  
memory.  
?S:.  
?C:HAS\_MEMCMP (MEMCMP):  
?C: This symbol, if defined, indicates that the memcmp routine is available  
?C: to compare blocks of memory.  
?C:.  
?H:#\$d\_memcmp HAS\_MEMCMP /\*\*/  
?H:.  
?LINT:set d\_memcmp  
: see if memcmp exists  
set memcmp d\_memcmp  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_memcmp.U

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?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: yacc.U,v \$

```

?RCS: Revision 3.0.1.1 1994/05/13 15:28:48 ram
?RCS: patch27: added yacc as another alternative (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:10:03 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:yacc yaccflags: Guess Myread Loc Oldconfig yacc bison cat test
?MAKE: -pick add $@ %<
?S:yacc:
?S: This variable holds the name of the compiler compiler we
?S: want to use in the Makefile. It can be yacc, byacc, or bison -y.
?S:.
?S:yaccflags:
?S: This variable contains any
additional yacc flags desired by the
?S: user. It is up to the Makefile to use this.
?S:.
?T:comp
: determine compiler compiler
echo " "
comp='yacc'
if $test -f "$byacc$_exe"; then
comp="byacc or $comp"
fi
if $test -f "$bison$_exe"; then
comp="$comp or bison -y"
fi
case "$yacc" in
")
yacc=`./loc yacc yacc $pth`
if $test -f "$yacc$_exe"; then
dflt='yacc'
elif $test -f "$byacc$_exe"; then
dflt='byacc'
elif $test -f "$bison$_exe"; then
dflt='bison'
else
dflt=""
fi
;;
*) dflt="$yacc";;
esac
rp="Which compiler compiler ($comp) shall I use?"
./myread
yacc="$ans"
case "$yacc" in
*bis*)
case "$yacc" in

```

```

*-y*) ;;
*)
yacc="$yacc -y"
echo "(Adding -y option to bison to get yacc-compatible behaviour.)"
;;
esac
;;
esac

```

```

@if yaccflags
: see if we need extra yacc flags
dflt="$yaccflags"
case "$dflt" in
") dflt=none;;
esac
$cat <<EOH

```

Your yacc program may need extra flags to normally process the parser sources. Do NOT specify any -d or -v flags here, since those are explicitly known by the various Makefiles. However, if your machine has strange/undocumented options (like -Sr# on SCO to specify the maximum number of grammar rules), then please add them here. To use no flags, specify the word "none".

```

EOH
rp="Any additional yacc flags?"
./myread
case "$ans" in
none) yaccflags="";;
*) yaccflags="$ans";;
esac

```

@end

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/yacc.U

```

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?RCS: \$Id: sitebin.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

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?RCS: of the source tree for dist 3.0.

```

?RCS:
?RCS: $Log: sitebin.U,v $
?RCS:
?MAKE:sitebin sitebinexp installsitebin : Getfile Oldconfig \
  Setprefixvar siteprefix
?MAKE: -pick add $@ %<
?Y:TOP
?D:sitebin="
?S:sitebin:
?S: This variable holds the name of the directory in which the user wants
?S: to put add-on publicly executable files for the package in question. It
?S: is most often a local directory such as /usr/local/bin. Programs using
?S: this variable must be prepared to deal with ~name substitution.
?S: The standard distribution will put nothing
  in this directory.
?S: After perl has been installed, users may install their own local
?S: executables in this directory with
?S: MakeMaker Makefile.PL
?S: or equivalent. See INSTALL for details.
?S:.
?D:sitebinexp="
?S:sitebinexp:
?S: This is the same as the sitebin variable, but is filename expanded at
?S: configuration time, for use in your makefiles.
?S:.
?D:installsitebin="
?S:installsitebin:
?S: This variable is usually the same as sitebinexp, unless you are on
?S: a system running AFS, in which case they may differ slightly. You
?S: should always use this variable within your makefiles for portability.
?S:.
?LINT:change prefixvar
?LINT:set installsitebin
?LINT:set sitebin
?LINT:set sitebinexp
: determine where add-on public executables go
case "$sitebin" in
") dflt=$siteprefix/bin ;;
*) dflt=$sitebin ;;
esac
fn=d~
rp='Pathname where the add-on public executables should be installed?'
./getfile
prefixvar=sitebin
./setprefixvar

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

```



5.32.1~rc1/U/installdirs/sitebin.U

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_recvmsg: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_recvmsg:

?S: This variable conditionally defines the HAS\_RECVMSG symbol, which

?S: indicates to the C program that the recvmsg() routine is available.

?S:.

?C:HAS\_RECVMSG:

?C: This symbol, if defined, indicates that the recvmsg routine is

?C: available to send structured socket messages.

?C:.

?H:#\$d\_recvmsg HAS\_RECVMSG /\*\*/

?H:.

?LINT:set d\_recvmsg

: see if recvmsg exists

set recvmsg d\_recvmsg

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/d\_recvmsg.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gnulibc.U,v 3.0.1.1 1997/02/28 15:34:33 ram Exp \$

?RCS:

?RCS: Copyright (c) 1996,1998 Andy Dougherty

?RCS: Copyright (c) 1996, Sven Verdoolaege

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS:

?RCS: \$Log: d\_gnulibc.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:34:33 ram

?RCS: patch61: created

?RCS:

```

?MAKE:d_gnulibc gnulibc_version: Myread Oldconfig Setvar rm_try \
cat Compile run
?MAKE: -pick add $@ %<
?S:d_gnulibc:
?S: Defined if we're dealing with the GNU C Library.
?S:.
?S:gnulibc_version:
?S: This variable contains the version number of the GNU C library.
?S: It is
usually something like '2.2.5'. It is a plain " if this
?S: is not the GNU C library, or if the version is unknown.
?S:.
?C:HAS_GNULIBC:
?C: This symbol, if defined, indicates to the C program that
?C: the GNU C library is being used. A better check is to use
?C: the __GLIBC__ and __GLIBC_MINOR__ symbols supplied with glibc.
?C:.
?H:#$d_gnulibc HAS_GNULIBC /**/
?H:?%<:#if defined(HAS_GNULIBC) && !defined(_GNU_SOURCE)
?H:?%<:# define _GNU_SOURCE
?H:?%<:#endif
?H:.
?F:!glibc.ver !try
?LINT: set d_gnulibc
?X: gnulibc can be executed by calling __libc_main().
?X: Ulrich Drepper doesn't think any other libc does that,
?X: but we check if it says 'GNU C Library' to be sure.
?X:
?X: Alas, as of 3/1998 glibc 2.0.7 reportedly isn't going to
?X: have __libc_main() anymore. :-(. Fortunately, all released
?X: versions of glibc 2.x.x _do_ have CPP variables. For 2.0.6,
?X: they are:
?X: #define __GLIBC__ 2
?X: #define __GLIBC_MINOR__ 0.
?X: (The '6' isn't available :-(.
?X: glibc2.1 will also
have
?X: extern const char * __gnu_get_libc_release(void);
?X: extern const char * __gnu_get_libc_version(void);
?X: functions. --thanks to Andreas Jaeger. --AD 6/1998.
?X: Although the exact format isn't documented, __gnu_get_libc_version()
?X: returns a simple string '2.1.3' in glibc 2.1.3.
?X:
: Check if we are using the GNU C library
echo " "
echo "Checking for GNU C Library..." >&4
cat >try.c <<'EOCP'
/* Find out version of GNU C library. __GLIBC__ and __GLIBC_MINOR__

```

alone are insufficient to distinguish different versions, such as 2.0.6 and 2.0.7. The function `gnu_get_libc_version()` appeared in libc version 2.1.0. A. Dougherty, June 3, 2002.

```
*/
#include <stdio.h>
int main(void)
{
#ifdef __GLIBC__
# ifdef __GLIBC_MINOR__
#   if __GLIBC__ >= 2 && __GLIBC_MINOR__ >= 1 && !defined(__cplusplus)
#       include <gnu/libc-version.h>
printf("%s\n", gnu_get_libc_version());
#   else
printf("%d.%d\n", __GLIBC__, __GLIBC_MINOR__);
#   endif
# else
printf("%d\n", __GLIBC__);
# endif
return 0;
#else
return 1;
#endif
}
EOCP
set try
if eval $compile_ok && $run ./try > glibc.ver; then
val="$define"
gnulibc_version=`$cat glibc.ver`
echo "You are using the GNU C Library version $gnulibc_version"
else
val="$undef"
gnulibc_version=""
echo "You are not using the GNU C Library"
fi
$rm_try glibc.ver
set d_gnulibc
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_gnulibc.U
```

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?RCS: \$Id: d\_truncate.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_truncate.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_truncate: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_truncate:

?S: This variable conditionally defines HAS\_TRUNCATE if truncate() is

?S: available to truncate files.

?S:.

?C:HAS\_TRUNCATE (TRUNCATE):

?C: This symbol, if defined, indicates that the truncate routine is

?C: available to truncate files.

?C:.

?H:#\$d\_truncate HAS\_TRUNCATE /\*\*/

?H:.

?LINT:set

d\_truncate

: see if truncate exists

set truncate d\_truncate

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_truncate.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: startperl.U,v 3.0 1993/08/18 12:09:50 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: startperl.U,v \$

?RCS: Perl5 version -- I always have d\_portable=define.

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:startperl: cat Myread sharpbang initialinstalllocation test \  
 versiononly version

?MAKE: -pick add \$@ %<

?Y:TOP

?X: This is different from dist's standard startperl.U unit because

?X: we can't directly test #!/usr/local/bin/perl (or  
 whatever) because

?X: we haven't built and installed perl yet.

?S:startperl:

?S: This variable contains the string to put on the front of a perl  
 ?S: script to make sure (hopefully) that it runs with perl and not some  
 ?S: shell. Of course, that leading line must be followed by the classical  
 ?S: perl idiom:

?S: eval 'exec perl -S \$0 \${1+"\$@"}'  
 ?S: if \$running\_under\_some\_shell;

?S: to guarantee perl startup should the shell execute the script. Note  
 ?S: that this magic incantation is not understood by csh.

?S:.

?C:STARTPERL:

?C: This variable contains the string to put in front of a perl  
 ?C: script to make sure (one hopes) that it runs with perl and not  
 ?C: some shell.

?C:.

?H:#define STARTPERL "\$startperl" /\*\*/  
 ?H:.

: figure out how to guarantee perl startup  
 : XXX Note that this currently takes advantage of the bug that binexp ignores  
 : the Configure -Dinstallprefix setting, which in turn means that under  
 : relocatable @INC, initialinstalllocation is what binexp started as.

case  
 "\$startperl" in  
 ")  
 case "\$sharpbang" in  
 \*)  
 \$cat <<EOH

I can use the #! construct to start perl on your system. This will  
 make startup of perl scripts faster, but may cause problems if you  
 want to share those scripts and perl is not in a standard place  
 (\$initialinstalllocation/perl) on all your platforms. The alternative  
 is to force a shell by starting the script with a single ':' character.

EOH  
 case "\$versiononly" in  
 "\$define") dflt="\$initialinstalllocation/perl\$version";;  
 \*) dflt="\$initialinstalllocation/perl";;

```

esac
rp='What shall I put after the #! to start up perl ("none" to not use #!)?'
./myread
case "$ans" in
none) startperl=": # use perl";;
*) startperl="#!$ans"
if $test 30 -lt `echo "$ans" | wc -c`; then
$cat >&4 <<EOM

```

WARNING: Some systems limit the #! command to 32 characters.

If you experience difficulty running Perl scripts with #!, try installing Perl in a directory with a shorter pathname.

```

EOM
fi ;;
esac
;;
*)
startperl=": # use perl"
;;
esac
;;
esac
echo "I'll use $startperl to start perl scripts."

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/startperl.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_sysvfs.U,v $
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_sysvfs: Inhdr Hasfield
?MAKE:-pick add $@ %<
?S:i_sysvfs:
?S: This variable conditionally defines the I_SYSVFS symbol,
?S: and indicates whether a C program should include <sys/vfs.h>.
?S:.
?C:I_SYS_VFS:
?C: This symbol, if defined, indicates that <sys/vfs.h> exists and
?C: should be included.
?C:.
?H:#$i_sysvfs I_SYS_VFS /**/

```

```
?H:
?LINT:set i_sysvfs
: see if this is a sys/vfs.h system
set sys/vfs.h i_sysvfs
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_sysvfs.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2001 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?MAKE:d_syscallproto: Hasproto i_unistd
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_syscallproto:
```

```
?S: This variable conditionally defines the HAS_SYSCALL_PROTO symbol,
```

```
?S: which indicates to the C program that the system provides
```

```
?S: a prototype for the syscall() function. Otherwise, it is
```

```
?S: up to the program to supply one.
```

```
?S:.
```

```
?C:HAS_SYSCALL_PROTO:
```

```
?C: This symbol, if defined, indicates that the system provides
```

```
?C: a prototype for the syscall() function. Otherwise, it is up
```

```
?C: to the program to supply one. Good guesses are
```

```
?C: extern
```

```
int syscall(int, ...);
```

```
?C: extern int syscall(long, ...);
```

```
?C:.
```

```
?H:#$d_syscallproto HAS_SYSCALL_PROTO /**/
```

```
?H:
```

```
?LINT:set d_syscallproto
```

```
: see if prototype for syscall is available
```

```
echo " "
```

```
set d_syscallproto syscall $i_unistd unistd.h
```

```
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_syscallproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_limits.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_limits.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:20 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_limits: Inhdr
?MAKE: -pick add $@ %<
?S:i_limits:
?S: This variable conditionally defines the I_LIMITS symbol, and indicates
?S: whether a C program may include <limits.h> to get symbols like WORD_BIT
?S: and friends.
?S:
?C:I_LIMITS:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <limits.h> to
?C: get definition of symbols like WORD_BIT or
?C: LONG_MAX, i.e. machine dependant limitations.
?C:
?H:#$i_limits I_LIMITS /**/
?H:
?LINT:set i_limits
: see if this is a limits.h system
set limits.h i_limits
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_limits.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysparam.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
```



?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: i\_sysparam.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/08/29 16:22:43 ram  
 ?RCS: patch32: created  
 ?RCS:  
 ?MAKE:i\_sysparam: Inhdr  
 ?MAKE: -pick add \$@ %<  
 ?S:i\_sysparam:  
 ?S: This variable conditionally defines the I\_SYS\_PARAM symbol, and indicates  
 ?S: whether a C program should include <sys/param.h>.  
 ?S:.  
 ?C:I\_SYS\_PARAM:  
 ?C: This symbol, if defined, indicates to the C program that it should  
 ?C: include <sys/param.h>.  
 ?C:.  
 ?H:#\$i\_sysparam I\_SYS\_PARAM /\*\*/  
 ?H:.  
 ?LINT:set  
 i\_sysparam  
 : see if this is a sys/param system  
 set sys/param.h i\_sysparam  
 eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_sysparam.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror\_r.U,v 0RCS:  
 ?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
 ?RCS:  
 ?MAKE:d\_strerror\_r strerror\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads extern\_C  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_strerror\_r:  
 ?S: This variable conditionally defines the HAS\_STRERROR\_R symbol,  
 ?S: which indicates to the C program that the strerror\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S:strerror\_r\_proto:  
 ?S: This variable encodes the prototype of strerror\_r.

?S: It is zero if d\_strerror\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_strerror\_r

?S: is defined.

?S:.

?C:HAS\_STRERROR\_R:

?C: This symbol, if defined, indicates that the strerror\_r routine

?C: is available to strerror

re-entrantly.

?C:.

?C:STRERROR\_R\_PROTO:

?C: This symbol encodes the prototype of strerror\_r.

?C: It is zero if d\_strerror\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_strerror\_r

?C: is defined.

?C:.

?H:#\$d\_strerror\_r HAS\_STRERROR\_R /\*\*/

?H:#define STRERROR\_R\_PROTO \$strerror\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_strerror\_r\_proto

: see if strerror\_r exists

set strerror\_r d\_strerror\_r

eval \$inlibc

case "\$d\_strerror\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h define string.h"

case "\$d\_strerror\_r\_proto:\$usethreads" in

":define") d\_strerror\_r\_proto=define

set d\_strerror\_r\_proto strerror\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_strerror\_r\_proto" in

define)

case "\$strerror\_r\_proto" in

"|0) try='int strerror\_r(int, char\*, size\_t)'

./protochk "\$extern\_C \$try" \$hdrs && strerror\_r\_proto=I\_IBW ;;

esac

case "\$strerror\_r\_proto" in

"|0) try='int strerror\_r(int, char\*, int)'

./protochk "\$extern\_C \$try" \$hdrs && strerror\_r\_proto=I\_IBI

;;

esac

case "\$strerror\_r\_proto" in

"|0) try='char\* strerror\_r(int, char\*, size\_t)'

./protochk "\$extern\_C \$try" \$hdrs && strerror\_r\_proto=B\_IBW ;;

esac

case "\$strerror\_r\_proto" in

"|0) d\_strerror\_r=undef

```

strerror_r_proto=0
echo "Disabling strerror_r, cannot determine prototype." >&4 ;;
*) case "$strerror_r_proto" in
REENTRANT_PROTO*) ;;
*) strerror_r_proto="REENTRANT_PROTO_${strerror_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "strerror_r has no prototype, not using it." >&4 ;;
esac
d_strerror_r=undef
strerror_r_proto=0
;;
esac
;;
*) strerror_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_strerror_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llround:

?S: This variable conditionally defines the HAS\_LLROUND symbol, which

?S: indicates to the C program that the llround() routine is available

?S: to return the long long value nearest to x.

?S:.

?C:HAS\_LLROUND:

?C: This symbol, if defined, indicates that the llround routine is

?C: available to return the nearest long long value.

?C:.

?H:#\$d\_llround HAS\_LLROUND /\*\*/

?H:.

?LINT:set d\_llround

: see if llround exists

set llround d\_llround

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_llround.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnbyad.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getnbyaddr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getnbyaddr:

?S: This variable conditionally defines the HAS\_GETNETBYADDR symbol, which

?S: indicates to the C program that the getnetbyaddr() routine is available

?S: to look up networks by their IP addresses.

?S:.

?C:HAS\_GETNETBYADDR:

?C: This symbol, if defined, indicates that the getnetbyaddr() routine is

?C: available to look up networks by their IP addresses.

?C:.

?H:\$#d\_getnbyaddr HAS\_GETNETBYADDR /\*\*/

?H:.

?LINT:set d\_getnbyaddr

: see if getnetbyaddr exists

set getnetbyaddr d\_getnbyaddr

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getnbyad.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_getgrent.U,v \$

?RCS:

?MAKE:d\_getgrent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getgrent:

?S: This variable conditionally defines the HAS\_GETGRENTH symbol, which

?S: indicates to the C program that the getgrent() routine is available

?S: for sequential access of the group database.

?S:.

?C:HAS\_GETGRENT:

?C: This symbol, if defined, indicates that the getgrent routine is

?C: available for sequential access of the group database.

?C:.

?H:#\$d\_getgrent HAS\_GETGRENT /\*\*/

?H:.

?LINT:set d\_getgrent

: see if getgrent exists

set getgrent d\_getgrent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getgrent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_dlopen.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 13:52:56 ram

?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:34 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_dlopen: Inlibc runnm

?MAKE: -pick add \$@ %<

?S:d\_dlopen:

?S: This variable conditionally defines the HAS\_DLOPEN symbol, which

?S: indicates to the C program that the dlopen() routine

is available.

?S:.

?C:HAS\_DLOPEN :

?C: This symbol, if defined, indicates that the dlopen routine is

?C: available.

?C:.

```
?H:#$d_dlopen HAS_DLOPEN /**/  
?H.:  
?T: xxx_runnm  
?LINT:set d_dlopen  
?X: We don't permanently change runnm, but we do temporarily.  
?LINT: change runnm  
: see if dlopen exists  
?X: On NetBSD and FreeBSD, dlopen is available, but it is in  
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not  
?X: use the nm extraction, but use a real compile and link test instead.  
xxx_runnm="$runnm"  
runnm=false  
set dlopen d_dlopen  
eval $inlibc  
runnm="$xxx_runnm"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/dist/U/d_dlopen.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: Ins.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram
```

```
?RCS: patch30: created by ADO
```

```
?RCS:
```

```
?X:
```

```
?X: This unit checks whether symbolic links are really supported.
```

```
?X: We can't rely on d_symlink because that may be listed in the
```

```
?X: C library but unimplemented.
```

```
?X:
```

```
?MAKE:lns: ln rm touch test
```

```
?MAKE: -pick add $@ %<
```

```
?S:lns:
```

```
?S: This variable holds the name of the command to make
```

```
?S: symbolic links (if they are supported).
```

```

It can be used
?S: in the Makefile. It is either 'ln -s' or 'ln'
?S:.
: determine whether symbolic links are supported
echo " "
$rm -f blurfl sym
$touch blurfl
if $ln -s blurfl sym > /dev/null 2>&1 && $test -f sym; then
echo "Symbolic links are supported." >&4
lns="$ln -s"
else
echo "Symbolic links are NOT supported." >&4
lns="$ln"
fi
$rm -f blurfl sym

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/lns.U

```

No license file was found, but licenses were detected in source scan.

```

;#####

```

```

;# Jmake rules for building libraries, programs, scripts, and data files

```

```

;# $Id: Jmake.rules 18 2006-12-27 10:35:09Z rmanfredi $

```

```

/*

```

```

* MACHINE-INDEPENDENT RULES -- DO NOT MODIFY

```

```

*/

```

```

/* $Id: Jmake.rules 18 2006-12-27 10:35:09Z rmanfredi $

```

```

*

```

```

* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

*

```

```

* You may redistribute only under the terms of the Artistic Licence,

```

```

* as specified in the README file that comes with the distribution.

```

```

* You may reuse parts of this distribution only within the terms of

```

```

* that same Artistic Licence; a copy of which may be found at the root

```

```

* of the source tree for dist 4.0.

```

```

*

```

```

* $Log: Jmake.rules,v $

```

```

* Revision 3.0.1.7 2004/08/22 08:28:58 ram

```

```

* patch71: random cleanup

```

```

*

```

```

* Revision 3.0.1.6 1997/02/28 14:56:01 ram

```

```

* patch61: now handles USRINC for dependencies

```

```

* patch61: smarter about dependencies

```

```

computation

```

```

*

```

```

* Revision 3.0.1.5 1995/09/25 09:07:19 ram
* patch59: smarter sed command to strip /usr/include dependencies
*
* Revision 3.0.1.4 1995/07/25 13:33:59 ram
* patch56: install of script man pages can now cope with missing files
* patch56: the clobber target now removes the .config directory as well
*
* Revision 3.0.1.3 1995/03/21 08:35:28 ram
* patch52: suppressed extra argument to NormalProgramTarget call
*
* Revision 3.0.1.2 1995/01/11 14:49:55 ram
* patch45: new macros ShellScriptTargetExt and SimpleShellScriptTargetExt
* patch45: directory installation is now made via INSTALLDIR (Configure)
*
* Revision 3.0.1.1 1994/10/29 15:46:30 ram
* patch36: added RemoteDependency rule
*
* Revision 3.0 1993/08/18 12:04:14 ram
* Baseline for dist 3.0 netwide release.
*
*/

```

```

/* Please, edit only with tabstops = 4 (":set ts=4" under vi) */

```

```

/*
* AddedByConfigure:
* Gives name of the files generated by Configure that can safely
* be removed
* when a "make clobber" is issued. Not that it is useless
* to name config.h or config.sh because these are already taken care
* of by jmake.
*/

```

```

#define AddedByConfigure(files) @!\
local_clobber:: @@\
$(RM) files

```

```

/*
* AddSuffix:
* Adds a suffix to the .SUFFIXES: list.
*/

```

```

#define AddSuffix(ext) @!\
|suffix ext

```

```

/*
* AllTarget:
* Generate rules to build necessary things during make all.
*/

```



```

#define AllTarget(depends) @!\
all:: depends  @!\
    @!\
local_realclean::  @@\
$(RM) depends

/*
* RemoveTargetProgram:
* This is used in some other macros in order to remove the target
* before starting its building (saves disk space). There should be
* no '@!' at the end of the '#define' line, because this macro is
* used *inside* building rules.
*/
#define RemoveTargetProgram(program) \
$(RM) program @@\
if test -f program^^^$_EXE; then \ @@\
$(MV) program^^^$_EXE program^^~^^^$_EXE; fi

/*
* NormalProgramTarget:
* Generate rules to compile and link the
indicated program; since
* it does not use any default object files, it may be used for
* multiple programs in the same Jmakefile.
*/
#define NormalProgramTarget(program,sources,objects) @!\
++OBJECTS objects @!\
++SOURCES sources @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program: objects  @@\
RemoveTargetProgram($@) @@\
$(CC) -o $@ objects $(JLDFLAGS) $(LIBS) @!\

/*
* SingleProgramTarget:
* Obsolete version of NormalProgramTarget that doesn't have
* deplibs.
*/
#define SingleProgramTarget(program,objects,libs) \
NormalProgramTarget(program,objects,libs)

/*
* SimpleProgramTarget:
* Generate rules for compiling and linking programs that only have
* one C source file. It should only be used in Jmakefiles that

```

```

* describe a single program.
*/
#define SimpleProgramTarget(program) @!\
NormalProgramTarget(program,program.c,program.o)

/*
* ComplexProgramTarget:
* Generate rules for compiling and linking the program specified by
* $(OBJS) and
$(SRCS), installing the program and its man page, and
* generating dependencies. It should only be used in Jmakefiles
* that describe a single program.
*/
#define ComplexProgramTarget(program) @!\
++OBJECTS $(OBJS) @!\
++SOURCES $(SRCS) @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program: $(OBJS) @@\
RemoveTargetProgram($@) @@\
$(CC) -o $@ $(OBJS) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC)) @!\
DependTarget() @!\
LintTarget()

/*
* ComplexProgramTarget_1:
* Generate rules for compiling and linking the program specified by
* $(OBJS1) and $(SRCS1), installing the program and its man page,
* and generating dependencies for it and any programs described by
* $(SRCS2) and $(SRCS3). It should be used to build the primary
* program in Jmakefiles that describe multiple programs.
*/
#define ComplexProgramTarget_1(program) @!\
++OBJECTS $(OBJS1) @!\
++SOURCES $(SRCS1) @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program:
$(OBJS1) @@\
RemoveTargetProgram($@) @@\

```

```

$(CC) -o $$@ $(OBJS1) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC)) @!\
    @!\
DependTarget()    @!\
LintTarget()

/*
* ComplexProgramTarget_2:
* Generate rules for compiling and linking the program specified by
* $(OBJS2) and $(SRCS2) and installing the program and man page.
* It should be used to build the second program in Jmakefiles
* describing more than one program.
*/
#define ComplexProgramTarget_2(program) @!\
++OBJECTS $(OBJS2) @!\
++SOURCES $(SRCS2) @!\
NormalObjectRule()    @!\
AllTarget(program)    @!\
    @!\
program: $(OBJS2)    @@\
RemoveTargetProgram($@) @@\
$(CC) -o $$@ $(OBJS2) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC))

/*
* ComplexProgramTarget_3:
* Generate rules for compiling and linking the
program specified by
* $(OBJS3) and $(SRCS3) and installing the program and man page. It
* should be used to build the third program in Jmakefiles describing
* more than one program.
*/
#define ComplexProgramTarget_3(program) @!\
++OBJECTS $(OBJS3) @!\
++SOURCES $(SRCS3) @!\
NormalObjectRule()    @!\
AllTarget(program)    @!\
    @!\
program: $(OBJS3)    @@\
RemoveTargetProgram($@) @@\
$(CC) -o $$@ $(OBJS3) $(JLDFLAGS) $(LIBS) @!\
    @!\

```

```
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC))
```

```
/*
```

```
* ComplexShellManualTarget:
* Builds manual pages that are to be extracted from .SH files into
* .$manext files.
```

```
*/
```

```
#define ComplexShellManualTarget(manpages) @!\
++MANPAGE manpages @!\
|once _ShellManualRule_ @!\
|rule:.SH.$manext: @!\
|rule: /bin/sh $< @!\
|rule: @!\
-once @!\
AddSuffix(.SH) @!\
AddSuffix($manext) @!\
AllTarget(manpages) @!\
    @!\
local_install.man:: @@\
    _MakeInstallDirIgnore($(MANSRC)) \    @@\
for
file in manpages; do \    @@\
    (set -x; $(INSTALL) -c -m 444 $$file \    @@\
    $(INSTALL_PREFIX)$ (MANSRC)) || exit 1; \    @@\
done @!\
    @!\
local_deinstall.man:: @@\
    @case '${MFLAGS}' in *[i]*) set +e;; esac; \    @@\
for file in manpages; do \    @@\
    (set -x; $(RM) $(INSTALL_PREFIX)$ (MANSRC)/$$file); \    @@\
done
```

```
/*
```

```
* Initialize:
* Puts the line symbol = value in the initialization section of
* Makefile.SH (the one that is subject to parameter substitutions).
```

```
*/
```

```
#define Initialize(symbol,value) @!\
+symbol = value
```

```
/*
```

```
* InstallLibrary:
* Generate rules to install the indicated library.
```

```
*/
```

```

#define InstallLibrary(libname,dest) @!\
local_install:: lib^^libname.a @@\
  _MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 644 lib^^libname.a $(INSTALL_PREFIX)^^^dest @@\
$(RANLIB) dest/lib^^libname.a @@\
chmod 444 dest/lib^^libname.a @!\
  @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^^dest/lib^^libname.a

/*
* InstallSharedLibrary:
* Generate rules to install
the shared library.
*/
#define InstallSharedLibrary(libname,rev,dest) @!\
local_install:: lib^^libname.so.rev @@\
  _MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 444 lib^^libname.so.rev $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^^dest/lib^^libname.so.rev

/*
* InstallSharedLibraryData:
* Generate rules to install the shared library data
*/
#define InstallSharedLibraryData(libname,rev,dest) @!\
local_install:: lib^^libname.sa.rev @@\
  _MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 444 lib^^libname.sa.rev $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^^dest/lib^^libname.sa.rev

/*
* InstallLibraryAlias:
* Generate rules to create a link from one library name to another
* for the purposes of aliasing.
*/
#define InstallLibraryAlias(libname,alias,dest) @!\
local_install:: lib^^libname.a @@\
$(RM) lib^^alias.a @@\
-(cd dest; $(LN) lib^^libname.a lib^^alias.a)

```

```

@!\
  @!\
local_deinstall::  @@\
$(RM) dest/lib^^alias.a

/*
* InstallLintLibrary:
* Generate rules to install the indicated lint library.
*/
#define InstallLintLibrary(libname,dest) @!\
install.ln:: llib-1^^libname.ln  @@\
  _MakeInstallDirIgnore(dest) \  @@\
$(INSTALL) -c -m 444 llib-1^^libname.ln $(INSTALL_PREFIX)^^dest @!\
  @!\
deinstall.ln::  @@\
$(RM) $(INSTALL_PREFIX)^^dest/llib-1^^libname.ln

/*
* InstallManPageLong:
* Generate rules to install the indicated manual page, giving it an
* alternate name. This is used for installing man pages whose base
* name without the .man suffix would normally be longer than 8
* characters (the limit for using source code control systems on
* files systems with short file names).
*/
#define InstallManPageLong(file,destdir,dest) @!\
local_install.man:: file.man  @@\
  _MakeInstallDirIgnore(destdir) \  @@\
$(INSTALL) -c -m 444 file.man $(INSTALL_PREFIX)^^destdir/dest.$(L) @!\
  @!\
local_deinstall.man::  @@\
$(RM)
$(INSTALL_PREFIX)^^destdir/dest.$(L) @!\

/*
* InstallManPage:
* Generate rules to install the indicated manual page.
*/
#define InstallManPage(file,dest) @!\
InstallManPageLong(file,dest,file)

/*
* InstallNonExec:
* Generate rules to install a data file using any special

```

```

* install flags.
*/
#define InstallNonExec(file,dest) @!\
local_install:: file  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -m 444 file $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/file

/*
* InstallProgramWithFlags:
* Generate rules to install an executable program using given
* install flags.
*/
#define InstallProgramWithFlags(program,dest,flags) @!\
local_install:: program  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -s -m 555 flags program^^^$_EXE $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/program^^^$_EXE

/*
* InstallProgramNoStripWithFlags:
* Generate rules to install an executable program using given
* install flags.
*/
#define InstallProgramNoStripWithFlags(program,dest,flags) @!\
local_install:: program  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -m 555 flags program^^^$_EXE $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/program^^^$_EXE

/*
* InstallProgram:
* Generate rules to install an executable program using any special
* install flags set in $(INSTALLFLAGS).
*/
#define InstallProgram(program,dest) @!\
InstallProgramWithFlags(program,dest,^^)

```

```

/*
* InstallProgramNoStrip:
* Generate rules to install an executable program using any special
* install flags set in $(INSTALLFLAGS), but without stripping the
* executable from debugging symbols.
*/
#define InstallProgramNoStrip(program,dest) @!\
InstallProgramNoStripWithFlags(program,dest,^^)

/*
* InstallScriptWithFlags:
* Generate rules to install an executable script using given
* install
* flags.
*/
#define InstallScriptWithFlags(script,dest,flags) @!\
local_install:: script  @@\
_MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 555 flags script $(INSTALL_PREFIX)^^^dest @!\
    @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^^dest/script

/*
* InstallScript:
* Generate rules to install an executable script using any special
* install flags set in $(INSTALLFLAGS).
*/
#define InstallScript(script,dest) @!\
InstallScriptWithFlags(script,dest,^^)

/*
* InstallScripts:
* Generate rules to install all the scripts listed in the generated
* $(SCRIPTS) and $(LSCRIPTS) macros.
*/
#define InstallScripts() @!\
|once _InstallScripts_ @!\
local_install:: $(SCRIPTS) $(LSCRIPTS)  @@\
_MakeInstallDirIgnore($(SCRIPTDIR)) \ @@\
for file in $(SCRIPTS) $(LSCRIPTS); do \ @@\
    (set -x; \ @@\
    $(INSTALL) -c -m 555 $$file $(INSTALL_PREFIX)$(SCRIPTDIR)) || \ @@\
    exit 1; \ @@\
done  @!\

```



```

    @!\
local_deinstall:: @@\
    @for file in $(SCRIPTS)
$(LSCRIPTS); do \ @@\
    case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
    (set -x; $(RM) $(INSTALL_PREFIX)$(SCRIPTDIR)/$file); \ @@\
done    @!\
-once

/*
* InstallManScripts:
* Generate rule to install/deinstall manual pages for scripts listed
* in the automatically generated $(SCRIPTS) macro.
*/
#define InstallManScripts() @!\
|once _InstallManScripts_ @!\
?NOMAN:|skip    @!\
local_install.man:: @@\
    _MakeInstallDirIgnore($(MANSRC)) \ @@\
for file in $(SCRIPTS); do \ @@\
if test -f $$file.man; then \ @@\
    (set -x; \    @@\
    $(INSTALL) -c -m 444 $$file.man \ @@\
    $(INSTALL_PREFIX)$(MANSRC)/$$file.$(L)) || \ @@\
    exit 1; \ @@\
fi; \    @@\
done    @!\
    @!\
local_deinstall.man:: @@\
    case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for file in $(SCRIPTS); do \ @@\
    (set -x; $(RM) $(INSTALL_PREFIX)$(MANSRC)/$$file.$(L)); \ @@\
done    @!\
    @!\
-skip    @!\
-once

/*
* LinkFileList:
* Link a list of list of files from one place to another
*/
#define LinkFileList(step,list,dir,sub) @!\
step:: list    @@\
    @case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
    echo " cd" dir; cd dir; for i in list; do (set -x; $(LN) sub/$$i.); done

```

```

/*
* InstallMultipleDestFlags:
* Generate rules to install multiple files at once during a particular
* step in the build using a specific set of install flags.
*/
#define InstallMultipleDestFlags(step,list,dest,flags) @!\
step:: list    @@\
  _MakeInstallDirIgnore(dest) \ @@\
  for i in list; do \    @@\
    (set -x; $(INSTALL) -c flags \ @@\
     $$i $(INSTALL_PREFIX)^^^dest) || exit 1; \ @@\
  done

/*
* DeinstallMultipleDest:
* Generate rules to deinstall multiple files at once during a particular
* step in the build.
*/
#define DeinstallMultipleDest(step,list,dest) @!\
step::    @@\
  @case '{MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  for i in list; do \    @@\
    (set -x; $(RM) $(INSTALL_PREFIX)^^^dest/$$i); \ @@\
  done

/*
* InstallMultiple:
* Generate rules to install multiple
* files at once during the install
* step of the build using any install flags set in $(INSTALLFLAGS)
* and deinstall them.
*/
#define InstallMultiple(list,dest) @!\
InstallMultipleDestFlags(local_install,list,dest,$(INSTALLFLAGS)) @!\
DeinstallMultipleDest(local_deinstall,list,dest)

/*
* InstallMultipleFlags:
* Generate rules to install multiple files at once during the
* install step of the build using the given install flags.
*/
#define InstallMultipleFlags(list,dest,flags) @!\
InstallMultipleDestFlags(local_install,list,dest,flags) @!\
DeinstallMultipleDest(local_deinstall,list,dest)

```

```

/*
* InstallMultipleMan:
* Generate rules to install a variety of manual pages
* during the install.man step of the build.
*/
#define InstallMultipleMan(list,dest) @!\
InstallMultipleDestFlags(local_install.man,list,dest,$(INSTALLFLAGS)) @!\
DeinstallMultipleDest(local_deinstall.man,list,dest)

/*
* DependDependency:
* Generate rules to build the makedepend program.
*/
#define DependDependency()
    @!\
depend:: TOPDIR/mkdep    @!\
    @!\
TOPDIR/mkdep:    @!\
?TOP: @echo "You have to run Configure first."; exit 1 @!\
%TOP: @echo "You have to run Configure in $(TOP) first."; exit 1

/*
* DependTarget:
* Generate rules to compute dependencies for all files listed
* in $(SOURCES) (automatically generated macro).
*/
#define DependTarget() @!\
+USRINC = $usrinc @!\
|once _DependTarget_ @!\
DependDependency() @!\
    @!\
depend::    @@\
($SED) '/^# DO NOT DELETE/q' Makefile && \ @@\
$(MKDEP) $(SOURCES) | \ @@\
$(SED) -e 's:/usr/lib[^ ]*::g; s:$(USRINC)[^ ]*::g; ' \ @@\
-e '/: / b print' -e '$$ b print' -e 'H; d; n; : print' \ @@\
-e 'x; s\\$$/; s\\n//g; s/ ^ ^ */ /g; s/ :/:;' -e '/*$$/d' \ @@\
) > Makefile.new    @@\
cp Makefile Makefile.bak    @@\
cp Makefile.new Makefile    @@\
$(RM) Makefile.new    @!\
    @!\
-once

/*

```

```

* CleanTarget:
* Generate rules to remove any garbage files.
*/
#define CleanTarget()  @!\
?SUBDIRS:clean:
  sub_clean local_clean  @!\
%SUBDIRS:clean: local_clean  @!\
?SUBDIRS:realclean: sub_realclean local_realclean @!\
%SUBDIRS:realclean: local_realclean  @!\
?SUBDIRS:clobber: sub_clobber local_clobber  @!\
%SUBDIRS:clobber: local_clobber  @!\
  @!\
local_clean::  @@\
if test -f core; then $(RM) core; fi @@\
$(RM) *~ *.o  @!\
  @!\
local_realclean:: local_clean  @!\
?TOP: $(RM) -r UU  @!\
  @!\
local_clobber:: local_realclean  @!\
%TOP: $(RM) Makefile config.sh  @!\
?TOP: $(RM) config.sh config.h  @!\
?TOP: $(RM) -r .config  @!\
?TOP: $(RM) Makefile  @!\

/*
* InstallTarget:
* Generate rules to recursively install files
*/
#define InstallTarget()  @!\
?SUBDIRS:install:: local_install sub_install  @!\
%SUBDIRS:install:: local_install  @!\
?SUBDIRS:install.man:: maybe_install.man sub_install.man  @!\
%SUBDIRS:install.man:: maybe_install.man  @!\
?SUBDIRS:deinstall:: sub_deinstall local_deinstall  @!\
%SUBDIRS:deinstall::
  local_deinstall  @!\
?SUBDIRS:deinstall.man:: sub_deinstall.man maybe_deinstall.man @!\
%SUBDIRS:deinstall.man:: maybe_deinstall.man  @!\
  @!\
?MANSRC:install.man-yes: local_install.man  @!\
install.man-no:  @!\
?MANSRC:deinstall.man-yes: local_deinstall.man  @!\
deinstall.man-no:  @!\

/*

```

```

* TagsTarget:
* Generate rules to compute tags files for C source code.
*/
#define TagsTarget() @!\
tags::    @@\
$(CTAGS) -w *. [ch]  @@\
$(CTAGS) -xw *. [ch] > tags  @!\
        @!\
local_clobber::    @@\
$(RM) tags

/*
* BuildMakefileSH:
* Generate rules to build a Makefile.SH from an Jmakefile and any
* special jmake flags. This is generally done automatically by the
* template or by any special Jmakefiles.
* This function will simply touch Makefile.SH if no $(TOP)/.package
* exists, assuming the Jmakefile is not in a production environment.
*/
#define BuildMakefileSH(jmakeflags) @!\
Makefile.SH:
Jmakefile    @@\
-@if test -f $(TOP)/.package; then \ @@\
if test -f Makefile.SH; then \ @@\
    echo " $(RM) Makefile.SH~; $(MV) Makefile.SH Makefile.SH~"; \ @@\
    $(RM) Makefile.SH~; $(MV) Makefile.SH Makefile.SH~; \ @@\
fi; \    @@\
echo " $(JMAKE) -DTOPDIR=$(TOP) -DCURDIR=$(CURRENT)" jmakeflags; \ @@\
$(JMAKE) -DTOPDIR=$(TOP) -DCURDIR=$(CURRENT) jmakeflags; \ @@\
else touch $@; fi

/*
* BuildMakefile:
* Generate rules to build a Makefile from a Makefile.SH.
*/
#define BuildMakefile() @!\
Makefile: Makefile.SH    @@\
/bin/sh Makefile.SH

/*
* MakefileTarget:
* Generate rules to build a normal Makefile.
*/
#define MakefileTarget() @!\

```

```
BuildMakefileSH(^) @!\
```

```
BuildMakefile()
```

```
/*
```

```
* NormalObjectRule:
```

```
* Generate make rule to build usual object files.
```

```
*/
```

```
#define NormalObjectRule() @!\
```

```
|once _ObjectRule_ @!\
```

```
|rule:.c.o: @!\
```

```
|rule: $(CC) -c $(JCFLAGS) $< @!\
```

```
|rule: @!\
```

```
-once
```

```
/*
```

```
* NormalLibraryObjectRule:
```

```
* Generate make rules to build
```

```
"normal" objects.
```

```
*/
```

```
#define NormalLibraryObjectRule() @!\
```

```
|once _ObjectRule_ @!\
```

```
|rule:.c.o: @!\
```

```
|rule: $(RM) $@ @!\
```

```
|rule: $(CC) -c $(JCFLAGS) $< @!\
```

```
|rule: @!\
```

```
-once
```

```
/*
```

```
* ProfiledLibraryObjectRule:
```

```
* Generate make rules to build both profiled and "normal" objects.
```

```
*/
```

```
#define ProfiledLibraryObjectRule() @!\
```

```
all:: @@\
```

```
@if [ ! -d profiled ]; then mkdir profiled; fi @!\
```

```
@!\
```

```
|rule:.c.o: @!\
```

```
|rule: $(RM) $@ profiled/$@ @!\
```

```
|rule: $(CC) -pg -c $(JCFLAGS) $*.c @!\
```

```
|rule: $(MV) $*.o profiled/$*.o @!\
```

```
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
```

```
|rule: @!\
```

```
local_clean:: @@\
```

```
-@if [ -d profiled ]; then echo " $(RM) profiled/?*.o"; \ @@\
```

```
$(RM) profiled/?*.o; fi
```

```
/*
```

```

* DebuggedLibraryObjectRule:
* Generate make rules to build both debuggable and "normal"
* objects.
*/
#define DebuggedLibraryObjectRule() @!\
all::    @@\
    @if [ ! -d debugger ]; then mkdir debugger; fi @!\
        @!\
|rule:.c.o:    @!\
|rule: $(RM) $@
debugger/$@ @!\
|rule: $(CC) -g -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
-@if [ -d debugger ]; then echo " $(RM) debugger/?*.o"; \ @@\
$(RM) debugger/?*.o; fi

/*
* DebuggedAndProfiledLibraryObjectRule:
* Generate make rules to build debuggable, profiled, and "normal"
* objects.
*/
#define DebuggedAndProfiledLibraryObjectRule() @!\
all::    @@\
    @if [ ! -d profiled ]; then mkdir profiled; fi @@\
    @if [ ! -d debugger ]; then mkdir debugger; fi @!\
        @!\
|rule:.c.o:    @!\
|rule: $(RM) $@ profiled/$@ debugger/$@ @!\
|rule: $(CC) -pg -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o profiled/$*.o @!\
|rule: $(CC) -g -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
-@if [ -d profiled ]; then echo " $(RM) profiled/?*.o"; \ @@\
$(RM) profiled/?*.o; fi @@\
-@if [ -d debugger ];
then echo " $(RM) debugger/?*.o"; \ @@\
$(RM) debugger/?*.o; fi

/*
* SharedLibraryObjectRule:

```

```

* Generate make rules to build shared and "normal" object files.
*/
#define SharedLibraryObjectRule() @!\
all::    @@\
    @if [ ! -d shared ]; then mkdir shared; fi @!\
        @!\
|rule:.c.o:    @!\
|rule: $(RM) $@ shared/$@ @!\
|rule: $(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o shared/$*.o @!\
|rule: $(CC) -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
    -@if [ -d shared ]; then echo " $(RM) shared/?*.o"; \ @@\
    $(RM) shared/?*.o; fi

/*
* SharedAndDebuggedLibraryObjectRule:
* Generate make rules to build shared, debuggable, and "normal"
* object files.
*/
#define SharedAndDebuggedLibraryObjectRule() @!\
all::    @@\
    @if [ ! -d shared ]; then mkdir shared; fi @@\
    @if [ ! -d debugger ]; then mkdir debugger; fi @!\
        @!\
|rule:.c.o:    @!\
|rule: $(RM) $@ shared/$@ debugger/$@ @!\
|rule:
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o shared/$*.o @!\
|rule: $(CC) -g -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
    -@if [ -d shared ]; then echo " $(RM) shared/?*.o"; \ @@\
    $(RM) shared/?*.o; fi @@\
    -@if [ -d debugger ]; then echo " $(RM) debugger/?*.o"; \ @@\
    $(RM) debugger/?*.o; fi

/*
* SpecialSharedAndDebuggedObjectRule:
* Generate rules to compile a file with special flags and to make
* shared and debuggable versions.
*/
#define SpecialSharedAndDebuggedObjectRule(objs,depends,options) @!\
all::    @@\

```



```

@if [ ! -d shared ]; then mkdir shared; fi @@\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
  @!\
objs: depends    @@\
$(RM) $@ shared/$@ debugger/$@ @@\
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) options $*.c @@\
$(MV) $*.o shared/$*.o  @@\
$(CC)
-g -c $(SHLIBDEF) $(JCFLAGS) options $*.c  @@\
$(MV) $*.o debugger/$*.o  @@\
$(CC) -c $(SHLIBDEF) $(JCFLAGS) options $*.c

/*
* SpecialSharedObjectRule:
* Generate rules to compile a file with special flags and to make
* shared and debuggable versions.
*/
#define SpecialSharedObjectRule(objs,depends,options) @!\
all::    @@\
  @if [ ! -d shared ]; then mkdir shared; fi @!\
    @!\
objs: depends    @@\
$(RM) $@ shared/$@  @@\
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) options $*.c @@\
$(MV) $*.o shared/$*.o  @@\
$(CC) -c $(SHLIBDEF) $(JCFLAGS) options $*.c

/*
* SpecialObjectRule:
* Generate rules to compile a file with special flags.
*/
#define SpecialObjectRule(objs,depends,options) @!\
objs: depends    @@\
$(RM) $@  @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialProfiledObjectRule:
* Generate rules to compile a file with special flags and to make a
* profiled version.
*/
#define SpecialProfiledObjectRule(objs,depends,options) @!\
all::    @@\
  @if
[ ! -d profiled ]; then mkdir profiled; fi @!\
    @!\

```

```

objs: depends    @@\
$(RM) $@ profiled/$@  @@\
$(CC) -pg -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o profiled/$*.o  @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialDebuggedObjectRule:
* Generate rules to compile a file with special flags and to make a
* debuggable version.
*/
#define SpecialDebuggedObjectRule(objs,depends,options) @!\
all::    @@\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
    @!\
objs: depends    @@\
$(RM) $@ debugger/$@  @@\
$(CC) -g -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o debugger/$*.o  @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialDebuggedAndProfiledObjectRule:
* Generate rules to compile a file with special flags and to make
* debuggable and profiled versions.
*/
#define SpecialDebuggedAndProfiledObjectRule(objs,depends,options) @!\
all::    @@\
@if [ ! -d profiled ]; then mkdir profiled; fi @@\
@if [ ! -d
debugger ]; then mkdir debugger; fi @!\
    @!\
objs: depends    @@\
$(RM) $@ profiled/$@ debugger/$@  @@\
$(CC) -pg -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o profiled/$*.o  @@\
$(CC) -g -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o debugger/$*.o  @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* NormalLibraryTarget:
* Generate rules to create a library. The 'srclist' and 'objlist'
* parameters are added to SOURCES and OBJECTS macros. The 'srclist'
* is not otherwise used by this rule, but is necessary for make depend.

```

```

*/
#define NormalLibraryTarget(libname,srclist,objlist) @!\
++OBJECTS objlist @!\
++SOURCES srclist @!\
NormalLibraryObjectRule() @!\
AllTarget(lib^^libname.a) @!\
    @!\
lib^^libname.a: objlist @@\
$(RM) $@ @@\
$(AR) $@ objlist @@\
$(RANLIB) $@

/*
* NormalSharedLibraryTarget:
* Generate rules to create a shared library; build it into a
* different name so that the we don't hose people by having the
* library gone for long periods.
*/
#define
NormalSharedLibraryTarget(libname,rev,solist) @!\
AllTarget(lib^^libname.so.rev) @!\
    @!\
lib^^libname.so.rev: solist @@\
$(RM) $@~ @@\
(cd shared; $(LD) -o ../$@~ -assert pure-text solist) @@\
$(RM) $@ @@\
$(MV) $@~ $@

/*
* NormalSharedLibraryDataTarget:
* Generate rules to create shlib data file; build it into a
* different name so that the we don't hose people by having the
* library gone for long periods.
*/
#define NormalSharedLibraryDataTarget(libname,rev,salist) @!\
AllTarget(lib^^libname.sa.rev) @!\
    @!\
lib^^libname.sa.rev: salist @@\
$(RM) $@ @@\
$(AR) $@ salist @@\
$(RANLIB) $@

/*
* NormalLibraryTarget2:
* Generate rules to create a library in two steps. This is used to
* create libraries with large numbers of files.

```

```

*/
#define NormalLibraryTarget2(libname,srclist,objlist1,objlist2) @!\
++SOURCES srclist @!\
++OBJECTS objlist1 @!\
++OBJECTS objlist2 @!\
NormalLibraryObjectRule() @!\
AllTarget(lib^^libname.a) @!\
    @!\
lib^^libname.a:
objlist1 objlist2 @@\
$(RM) $@    @@\
$(AR) $@ objlist1    @@\
$(AR) $@ objlist2    @@\
$(RANLIB) $@

```

```

/*
* ProfiledLibraryTarget:
* Generate rules to create a profiled library.
*/

```

```

#define ProfiledLibraryTarget(libname,srclist,objlist) @!\
++SOURCES srclist @!\
++OBJECTS objlist @!\
AllTarget(lib^^libname^^_p.a) @!\
    @!\
lib^^libname^^_p.a: objlist    @@\
$(RM) $@    @@\
cd profiled; $(AR) ../$@ objlist @@\
$(RANLIB) $@

```

```

/*
* DebuggedLibraryTarget:
* Generate rules to create a debuggable library.
*/

```

```

#define DebuggedLibraryTarget(libname,srclist,objlist) @!\
++SOURCES srclist @!\
++OBJECTS objlist @!\
AllTarget(lib^^libname^^_d.a) @!\
    @!\
lib^^libname^^_d.a: objlist    @@\
$(RM) $@    @@\
cd debugger; $(AR) ../$@ objlist @@\
$(RANLIB) $@

```

```

/*
* AliasedLibraryTarget:

```

```

* Generate rules to link one library to another.
*/
#define AliasedLibraryTarget(libname,alias) @!\
AllTarget(lib^^alias.a) @!\
    @!\
lib^^alias.a:
lib^^libname.a @@\
$(RM) $@  @@\
$(LN) lib^^libname.a $@

/*
* PrelinkedRelocatableTarget:
* Generate rules to produce a relocatable object file instead of a
* library.
*/
#define PrelinkedRelocatableTarget(objname,objlist,libs) @!\
AllTarget(objname.o) @!\
    @!\
objname.o: objlist  @@\
$(RM) $@  @@\
$(LD) $(JLDFLAGS) -r objlist -o $@ libs

/*
* NormalObjectTarget:
* Generate rules to produce a single object file.o from a file.c.
*/
#define NormalObjectTarget(file) @!\
++SOURCES file^^.c  @!\
AllTarget(file^^.o) @!\
NormalObjectRule()

/*
* NormalRelocatableTarget:
* Generate rules to produce a relocatable object file instead of a
* library.
*/
#define NormalRelocatableTarget(objname,objlist) @!\
AllTarget(objname.o) @!\
    @!\
objname.o: objlist  @@\
$(RM) $@  @@\
$(LD) $(JLDFLAGS) -r objlist -o $@

/*
* ProfiledRelocatableTarget:

```

```

* Generate rules to produce a profiled relocatable object file
* instead
of a library.
*/
#define ProfiledRelocatableTarget(objname,objlist) @!\
AllTarget(objname^^_p.o) @!\
    @!\
objname^^_p.o: objlist  @@\
$(RM) $@  @@\
$(LD) -X -r objlist -o $@

/*
* DebuggedRelocatableTarget:
* Generate rules to produce a debuggable relocatable object file
* instead of a library.
*/
#define DebuggedRelocatableTarget(objname,objlist) @!\
AllTarget(objname^^_d.o) @!\
    @!\
objname^^_d.o: objlist  @@\
$(RM) $@  @@\
$(LD) -X -r objlist -o $@

/*
* LintLibraryTarget:
* Generate rules to create a lint library. Note that the lint
* library is always forced to be newer than the library itself.
*/
#define LintLibraryTarget(libname,srclist) @!\
lintlib:: llib-l^^libname.ln @!\
    @!\
llib-l^^libname.ln: srclist  @@\
$(RM) $@  @@\
$(LINT) $(LINTLIBFLAG)^^libname $(LINTFLAGS) srclist

/*
* NormalLintTarget:
* Generate rules to lint a set of sources.
*/
#define NormalLintTarget(srclist) @!\
lint:  @@\
$(LINT) $(LINTFLAGS) srclist
$(LINTLIBS)

/*

```

```

* LintTarget:
* Generate rules to lint $(SOURCES) (automatically generated)
*/
#define LintTarget() @!\
|once _LintTarget_ @!\
NormalLintTarget($(SOURCES)) @!\
-once

/*
* LinkSourceFile:
* Snag source file from some other directory
*/
#define LinkSourceFile(src,dir) @!\
src: dir/src @@\
$(RM) $@ @@\
$(LN) $? $@ @!\

/*
* MakeSubincludesForBuild:
* Make includes in sub directories.
*/
#define MakeSubincludesForBuild(step,dir,srclist) @!\
step:: dir srclist @@\
@-(list=`echo srclist | sed -e 's/[^\ ]*///g^'; \ @@\
set -x; cd dir; $(RM) $$list) @@\
@for i in srclist; do \ @@\
(set -x; cd dir; $(LN) ../$${i} .) || exit 1; \ @@\
done @!\
@!\
MakeDirectories(dir,dir) @!\
@!\
local_realclean:: @@\
@-(if [ -d dir ]; then \ @@\
list=`echo srclist | sed -e 's/[^\ ]*///g^'; \ @@\
set -x; cd dir; $(RM) $$list; fi)

/*
* CommonSubdirsRule:
* Rule for making $(TARGET) in
every subdirectory, with $(VERB) as
* verbose message and $(FLAGS) as additional flags.
*/
#define CommonSubdirsRule(dirs) @!\
subdirs: @@\
@case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\

```

```

for i in dirs ;\  @@\
do \  @@\
(cd $$i ; echo $(VERB) "in $(DIR)$$i..."; \  @@\
$(MAKE) $(MFLAGS) $(FLAGS) $(TARGET)) || exit 1; \  @@\
done

```

/\*

\* NamedTargetSubdirsRule:  
\* Recursively make a series of steps in the specified directories.  
\*/

```

#define NamedTargetSubdirsRule(dirs,name,verb,flags) @!\
name::  @@\
@case '{$MFLAGS}' in *[ik]*) set +e;; esac; \  @@\
for i in dirs ;\  @@\
do \  @@\
(cd $$i ; echo verb "in $(DIR)$$i..."; \  @@\
$(MAKE) $(MFLAGS) flags name) || exit 1; \  @@\
done

```

/\*

\* NamedTargetSubdirs:  
\* Recursively make a series of steps.  
\*/

```

#define NamedTargetSubdirs(name,verb,flags) @!\
name::  @@\
@$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags

```

/\*

\* NamedSubTargetSubdirs:  
\* Recursively make a series of steps,  
like NamedTargetSubdirs.  
\* However, the supplied "name" has "sub\_" prefixed to it.  
\*/

```

#define NamedSubTargetSubdirs(name,verb,flags) @!\
sub_^^name::  @@\
@$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags

```

/\*

\* NamedDepthTargetSubdirs:  
\* Recursively make a series of steps. We first enter the  
\* subdirectories, then perform the local entries.  
\* The supplied "name" has "sub\_" prefixed to it.  
\*/

```

#define NamedDepthTargetSubdirs(name,verb,flags) @!\
sub_^^name::  @@\

```



```
@$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags @@\
```

```
@echo "Back to $(CURRENT) for "name^^..."
```

```
/*
```

```
* MakeSubdirs:
```

```
* Generate rules to do makes in the given subdirectories.
```

```
*/
```

```
#define MakeSubdirs() \
```

```
NamedTargetSubdirs(all,"Making all",^^)
```

```
/*
```

```
* DependDirs:
```

```
* Generate rules to recursively compute dependencies as part of the
```

```
* make depend step.
```

```
*/
```

```
#define DependDirs(dirs) \
```

```
NamedTargetSubdirsRule(dirs,depend,"Depending",^^)
```

```
/*
```

```
* DependSubdirs:
```

```
* Generate rules to recursively compute dependencies
```

```
as part of the
```

```
* make depend step.
```

```
*/
```

```
#define DependSubdirs() \
```

```
DependDirs($(SUBDIRS))
```

```
/*
```

```
* InstallSubdirs:
```

```
* Generate rules to recursively install and deinstall programs and
```

```
* files.
```

```
*/
```

```
#define InstallSubdirs() \
```

```
NamedSubTargetSubdirs(install,"Installing",^^) @!\
```

```
NamedDepthTargetSubdirs(deinstall,"Deinstalling",^^)
```

```
/*
```

```
* InstallManSubdirs:
```

```
* Generate rules to recursively install and deinstall manual pages.
```

```
*/
```

```
#define InstallManSubdirs() \
```

```
NamedSubTargetSubdirs(install.man,"Installing man pages",^^) @!\
```

```
NamedDepthTargetSubdirs(deinstall.man,"Deinstalling man pages",^^)
```

```

/*
* IncludesSubdirs:
* Generate rules to recursively put include files in build
*/
#define IncludesSubdirs() \
NamedTargetSubdirs(includes,including,^^)

/*
* CleanSubdirs:
* Generate rules to recursively clean out garbage files.
*/
#define CleanSubdirs() \
NamedDepthTargetSubdirs(clean,"Cleaning",^^) @!\
NamedDepthTargetSubdirs(realclean,"Real cleaning",^^) @!\
NamedDepthTargetSubdirs(clobber,"Clobbering",^^)

/*
* TagSubdirs:
* Generate rules to recursively create tags files.
*/
#define TagSubdirs(dirs) \
NamedTargetSubdirsRule(dirs,tag,"Tagging",^^)

/*
* MakeLintSubdirs:
* Generate rules to recursively lint directories as part of the
* named step.
*/
#define MakeLintSubdirs(dirs,target) \
NamedTargetSubdirsRule(dirs,target,"Linting",^^)

/*
* LintDirs:
* Generate rules to recursively lint directories as part of the
* make lint step.
*/
#define LintDirs(dirs) \
MakeLintSubdirs(dirs,lint)

/*
* LintSubdirs:
* Generate rules to recursively lint directories as part of the

```

```

* make lint step.
*/
#define LintSubdirs() \
LintDirs($(SUBDIRS))

/*
* MakeDirs:
* Creates a set of directories, even if some directories in the path
* do not already exist. There should be no '@!' at the end of the
* '#define' line, because this macro is used *inside* building rules.
*/
#define MakeDirs(dirs) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for dir in dirs;
do \    @@\
(set -x; test -d $$dir || $(INSTALLDIR) $$dir) || \ @@\
exit 1; \ @@\
done

/*
* _MakeInstallDirs:
* Creates a set of intall directories, even if some directories in the path
* do not already exist. There should be no '@!' at the end of the
* '#define' line, because this macro is used *inside* building rules.
*/
#define _MakeInstallDirs(dirs) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for dir in dirs; do \    @@\
_MakeInstallDir($$dir) \    @@\
done

/*
* _MakeInstallDir:
* Internal macro to create a missing install directory.
*/
#define _MakeInstallDir(dir) \
(set -x; test -d $(INSTALL_PREFIX)^dir || \ @@\
$(INSTALLDIR) $(INSTALL_PREFIX)^dir);

/*
* _MakeInstallDirIgnore:
* Same as _MakeInstallDir but handles "make -i" as well.
*/
#define _MakeInstallDirIgnore(dir) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
_MakeInstallDir(dir)

```

```

/*
* _RmInstallDirs:
* Removes a set of intall directories.
* There should be no '@!'
at the end of the '#define' line, because this
* macro is used *inside* building rules.
*/
#define _RmInstallDirs(dirs) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for dir in dirs; do \    @@\
(set -x; test -d $$dir && $(RM) -r $(INSTALL_PREFIX)$$dir); \ @@\
done

```

```

/*
* MakeDirectories:
* Generate rules to create a hierarchy of directories.
*/
#define MakeDirectories(step,dirs) @!\
step::    @@\
MakeDirs(dirs)

```

```

/*
* MakeInstallDirectories:
* Generate a rule to create a set of directories at installation
* time (removed by deinstall).
*/
#define MakeInstallDirectories(dirs) @!\
local_install::    @@\
    _MakeInstallDirs(dirs) @!\
        @!\
local_deinstall::    @@\
    _RmInstallDirs(dirs)

```

```

/*
* MakeLintLibSubdirs:
* Generate rules to recursively create lint libraries.
*/
#define MakeLintLibSubdirs(dirs) @!\
MakeLintSubdirs(dirs,lintlib)

```

```

/*
* MakeMakeSubdirs:
* Generate rules to recursively recreate target as part of the
* specified step in the build.

```

This assumes Makefile.SH has

\* already been built (which is the case for a delivery), but does

\* not rely on the existence of a Makefile.

\*/

```
#define MakeMakeSubdirs(target) @!\ntarget::    @@\@case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\for i in $(SUBDIRS); \  @@\do \      @@\echo "Making "target" in $(DIR)$Si..."; \ @@\(cd $Si || exit 1; \  @@\if test ! -f Makefile; then /bin/sh Makefile.SH; fi; \ @@\$(MAKE) $(MFLAGS) target) || exit 1; \ @@\done
```

/\*

\* MakeMakefilesSH:

\* Generate rules to recursively recreate target as part of the

\* specified step in the build. If \$(TOP) is set to an absolute

\* path, don't prepend the ../ prefix. This makes running things

\* outside of the source tree to be much easier.

\*/

```
#define MakeMakefilesSH() @!\nMakefiles.SH:: Makefile.SH  @@\@case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\for i in $(SUBDIRS); \  @@\do \      @@\case "$(DIR)$Si" in \      @@\^^*^^/^^*^^/^^*^^/^^*^^) newtop=../..../..;; \ @@\\ @@\^^*^^/^^*^^/^^*^^) newtop=../..../..;; \  @@\^^*^^/^^*^^) newtop=../..../..;; \  @@\*^^) newtop=..;; \      @@\esac; \      @@\case "$(TOP)" in \      @@\/^^*) newtop="$(TOP)" ;; \      @@\esac; \      @@\echo "Making Makefiles.SH in $(DIR)$Si..."; \ @@\(cd $Si || exit 1; \  @@\if test -f Jmakefile; then \ @@\$(MAKE) $(MFLAGS) -f ../Makefile \ @@\Makefile TOP=$$newtop CURRENT=$(DIR)$Si && \ @@\$(MAKE) $(MFLAGS) Makefiles.SH; \ @@\fi; \      @@\) || exit 1; \ @@\done
```

```

/*
* MakefileSubdirs:
* Generate rules to create Makefiles.
*/
#define MakefileSubdirs() @!\
MakeMakeSubdirs(Makefiles) @!\
MakeMakefilesSH()

/*
* CppScriptTarget:
* Generate rules to create a shell script by running the input
* through cpp.
*/
#define CppScriptTarget(dst,src,defs,deplist) @!\
dst:: src deplist    @@\
$(RM) $@    @@\
$(CPP) defs <src | \  @@\
sed -e '/^# *[0-9][0-9]* *.*$$/d' >$@  @@\
chmod a+x $@

/*
* MakeScriptFromCpp:
* Generate rules to create a script from a file with a
* .cpp suffix.
*/
#define MakeScriptFromCpp(name,defs) @!\
CppScriptTarget(name,name.cpp,defs,^^)

/*
* ShellScriptTargetExt:
* Generate rules to create and install a set of scripts from
* ext files (.sh and .SH are the most common examples). Man pages
* derived from the name of the scripts are also installed unless
* NoManPages() is specified.
*/
#define ShellScriptTargetExt(scripts,ext) @!\
++SCRIPTS scripts @!\
SimpleShellScriptTargetExt(scripts,ext) @!\
InstallScripts()    @!\
InstallManScripts()

/*
* ShellScriptTarget:

```

\* Generate rules to create and install a set of scripts from  
\* .SH files. Man pages derived from the name of the scripts are  
\* also installed unless NoManPages() is specified.

\*/

```
#define ShellScriptTarget(scripts) @!\
ShellScriptTargetExt(scripts,.SH)
```

/\*

\* SimpleShellScriptTargetExt:  
\* Generate rules to create a set of scripts from ext files where  
\* ext is usually  
\* something like .sh or .SH, or whatever file  
\* extension you like..

\*/

```
#define SimpleShellScriptTargetExt(scripts,ext) @!\
AllTarget(scripts) @!\
    @!\
|expand s!scripts! @!\
!s: !s^^ext @@\
/bin/sh !s^^ext @!\
    @!\
-expand
```

/\*

\* SimpleShellScriptTarget:  
\* Generate rules to create a set of scripts from .SH files.

\*/

```
#define SimpleShellScriptTarget(scripts) @!\
SimpleShellScriptTargetExt(scripts,.SH)
```

/\*

\* ShellScriptLongTarget:  
\* Generate rules to create a set of scripts from .SH files where  
\* the name of the generated file is different from the basename of  
\* the .SH file (when, for instance, the total length with the .SH  
\* extension would not leave enough space for RCS ,v extension).

\*/

```
#define ShellScriptLongTarget(basename,scriptname) @!\
++LSCRIPTS scriptname @!\
AllTarget(scriptname) @!\
    @!\
scriptname: basename^^.SH @@\
/bin/sh basename^^.SH @!\
    @!\
InstallScripts() @!\
```

```

?NOMAN:|skip @!\
InstallManPageLong(basename,$(MANSRC),scriptname) @!\
-skip

/*
 * ForceTarget:
 * The force target will force reconstruction of all the other
 * targets which include .FORCE in their own dependencies.
 */
#define ForceTarget() @!\
|once _force_ @!\
.FORCE: @!\
    @!\
-once

/*
 * RemoteTargetDependency:
 * A local target may rely on a remote dependency (e.g. a library)
 * made in a separate directory. This rule explicits the dependency
 * and forces a make of that dependency in the remote directory.
 */
#define RemoteTargetDependency(target,directory,dependency) @!\
RemoteDependency(directory,dependency) @!\
target: directory/^^^dependency @!\

/*
 * RemoteDependency:
 * Specify rules for making a remote dependency.
 */
#define RemoteDependency(directory,dependency) @!\
ForceTarget() @!\
|once =directory/^^^dependency= @!\
directory/^^^dependency: .FORCE @@\
    @echo "Checking "^^^dependency" in "^^^directory"..." @@\
    cd ^^^directory; $(MAKE) ^^^dependency @@\
    @echo "Continuing in $(CURRENT)..." @!\
    @!\
-once

/*
 * SetSubdirs:
 * Actually forces the definition of SUBDIRS, and lets the user
 * specify what the sub-directories are. This will be added to the
 * customization part.
 */

```



```

#define SetSubdirs(subdirs) @!\
>SUBDIRS @!\
+SUBDIRS = subdirs

/*
* NoManPages:
* Actually forces the definition of NOMAN, which tells the jmake
* program to not generate rules for installing manual pages.
*/
#define NoManPages() @!\
>NOMAN

/*
* Expand:
* This powerful macro expands the `rule' given a `pattern'. It
* relies on a built-in command in jmake. The expansion is
* documented in the short notes file that comes with jmake and
* gives some insights on the internal syntax.
*/
#define Expand(rule, pattern) @!\
|expand pattern @!\
rule @!\
-expand

/*
* Lex and yacc stuff.
*/

/*
* YaccRule:
* This is the rule which is used to build a .c file from a .y file.
*/
#define YaccRule() @!\
AddSuffix(.y) @!\
|once _YaccRule_ @!\
|rule:.y.c: @!\
|rule: $(YACC) $(JYFLAGS)
$< @!\
|rule: $(MV) y.tab.c $@ @!\
|rule: @!\
-once

/*
* SimpleYaccTarget:
* Declare a yacc base.y file to be used in the building of the

```

```

* specified target program. The source file must be given without
* its final .y extension. The name of the .c and .o will be
* derived from the source file basename provided.
*/
#define SimpleYaccTarget(program,base) @!\
++SOURCES base.y @!\
++OBJECTS base.o @!\
YaccRule() @!\
program: base.c @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

/*
* ComplexYaccTarget:
* Declare a yacc base.y file to be used in the building of the
* specified target program. The source file must be given without
* its final .y extension. The name of the .c and .o will be
* derived from the source file basename provided.
* The difference with SimpleYaccTarget is the identifying process
* where all the 'yy' are replaced by the specified prefix.
*/
#define ComplexYaccTarget(program,base,prefix) @!\
++SOURCES base.y @!\
++OBJECTS base.o
    @!\
program: base.c @!\
    @!\
base.c: base.y @@\
$(YACC) $(JYFLAGS) base.y @@\
$(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.c > base.c @@\
$(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h @@\
$(RM) y.tab.c y.tab.h @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

/*
* SimpleYaccInclude:
* Declare that program will need an include file produced by
* the output of yacc on base.y, which typically produces a file
* named y.tab.h, which will be renamed as base.h.
* The only problem is that the dependencies towards base.h have
* to be manually given in the Jmakefile.
*/
#define SimpleYaccInclude(base) @!\

```

```

base.h: base.c @@\
@if test -f y.tab.h; then \ @@\
  echo " $(MV) y.tab.h $@"; \ @@\
  $(MV) y.tab.h $@; \ @@\
fi  @!\
  @!\
local_realclean::  @@\
$(RM) base.h

/*
* ComplexYaccInclude:
* Declare that program will need an include file produced by
* the output of yacc on base.y, which typically produces a file
* named y.tab.h, which will
* be renamed as base.h.
* The difference with SimpleYaccInclude is the identifying process
* of the y.tab.h file where all 'yy' are renamed to prefix.
* The only problem is that the dependencies towards base.h have
* to be manually given in the Jmakefile.
*/
#define ComplexYaccInclude(base,prefix) @!\
base.h: base.c @@\
@if test -f y.tab.h; then \ @@\
  echo " $(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h"; \ @@\
  $(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h; \ @@\
  echo " $(RM) y.tab.h"; \ @@\
  $(RM) y.tab.h; \ @@\
elif test -f base.h; then \ @@\
  echo " $(CP) base.h base.ht"; \ @@\
  $(CP) base.h base.ht; \ @@\
  echo " $(SED) -e 's/yy\(.)/prefix\1/g' < base.ht > base.h"; \ @@\
  $(SED) -e 's/yy\(.)/prefix\1/g' < base.ht > base.h; \ @@\
  echo " $(RM) base.ht"; \ @@\
  $(RM) base.ht; \ @@\
fi  @!\
  @!\
local_realclean::  @@\
$(RM) base.h

/*
* NormalYaccTarget:
* Declare a yacc base.y file which should produce a base.c and
* base.h file
* as derived from the output of yacc, to be used by
* the specified program.
*/
#define NormalYaccTarget(program,base) @!\

```

```
SimpleYaccTarget(program,base) @!\
SimpleYaccInclude(base)
```

```
/*
 * IdentifiedYaccTarget:
 * Declare a yacc base.y file which should produce a base.c and
 * base.h file as derived from the output of yacc, to be used by
 * the specified program. The specified prefix is used to replace
 * all the 'yy' in the generated file, for use when more than a
 * single parser is needed in one executable.
 */
#define IdentifiedYaccTarget(program,base,prefix) @!\
ComplexYaccTarget(program,base,prefix) @!\
ComplexYaccInclude(base,prefix)
```

```
/*
 * SimpleLexTarget:
 * This declares a lex base.l file which is to be ran through
 * lex to produce a base.c file.
 */
#define SimpleLexTarget(program,base) @!\
++SOURCES base.l @!\
++OBJECTS base.o @!\
|once _LexRule_ @!\
|rule:.l.c: @!\
|rule: $(LEX) $(JLFLAGS) $< @!\
|rule: $(MV) lex.yy.c $@ @!\
|rule: @!\
-once @!\
AddSuffix(.l) @!\
program:
  base.c @!\
  @!\
local_realclean:: @@\
$(RM) base.c @!\
```

```
/*
 * IdentifiedLexTarget:
 * This declares a lex base.l file which is to be ran through
 * lex to produce a base.c file. The prefix is used to replace
 * the 'yy', so that the lexical analyzer may be identified.
 */
#define IdentifiedLexTarget(program,base,prefix) @!\
++SOURCES base.l @!\
++OBJECTS base.o @!\
```

```

program: base.c @!\
    @!\
base.c: base.l @@\
$(LEX) $(JLFLAGS) base.l @@\
$(SED) -e 's/yy\(.\)\/prefix\1/g' < lex.yy.c > base.c @@\
$(RM) lex.yy.c @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

```

```

/*
 * NormalLexDependTarget:
 * Declare that program will need an include file produced by
 * the output of lex on base.l, which typically produces a file
 * named lex.yy.c which will be renamed as base.c. Besides, the
 * lexical analyzer needs the file parser.h produced by running
 * parser.y through yacc and renaming y.tab.h as parser.h.
 */

```

```

#define NormalLexDependTarget(program,base,parser)
    @!\
base.o: parser.h @!\
    @!\
SimpleLexTarget(program,base)

```

```

/*
 * IdentifiedLexDependTarget:
 * Declare that program will need an include file produced by
 * the output of lex on base.l, which typically produces a file
 * named lex.yy.c which will be renamed as base.c. Besides, the
 * lexical analyzer needs the file parser.h produced by running
 * parser.y through yacc and renaming y.tab.h as parser.h.
 * The lexical analyzer is identified with the supplied prefix,
 * which replaces the regular 'yy' prefix in the symbol names.
 */

```

```

#define IdentifiedLexDependTarget(program,base,parser,prefix) @!\
base.o: parser.h @!\
    @!\
IdentifiedLexTarget(program,base,prefix)

```

```

/*
 * NormalParserTarget:
 * Specify that program is using the lex/yacc combination to
 * produce a parser. The lexic and parser parameters are the
 * base name of the .l and .y file, respectively.
 */

```

```

#define NormalParserTarget(program,lexic,parser) @!\
NormalLexDependTarget(program,lexic,parser)
@!\
NormalYaccTarget(program,parser)

/*
* IdentifiedParserTarget:
* Specify that program is using the lex/yacc combination to
* produce a parser. The lexic and parser parameters are the
* base name of the .l and .y file, respectively. The parser
* produced is identified via its prefix, which replaces all
* the normally supplied 'yy' prefix, hence making it possible
* to have multiple parsers in a single executable.
*/
#define IdentifiedParserTarget(program,lexic,parser,prefix) @!\
IdentifiedLexDependTarget(program,lexic,parser,prefix) @!\
IdentifiedYaccTarget(program,parser,prefix)

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/files/Jmake.rules

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?MAKE:usesocks: Myread Oldconfig Setvar spackage package

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usesocks:

?S: This variable conditionally defines the USE\_SOCKS symbol,

?S: and indicates that Perl should be built to use SOCKS.

?S:.

?C:USE\_SOCKS:

?C: This symbol, if defined, indicates that Perl should

?C: be built to use socks.

?C:.

?H:?%<:#\$usesocks USE\_SOCKS /\*\*/

```
?H:
?D:usesocks="
?LINT:set usesocks
: check for requested SOCKS support
case "$usesocks" in
$define|true|[yY]*) dflt='y';
*)
dflt='n';
esac
cat <<EOM
```

\$spackage can be built to use the SOCKS proxy protocol library.  
If this doesn't make any sense to you, just accept the default '\$dflt'.

```
EOM
rp="Build $package for SOCKS?"
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set usesocks
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/usesocks.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_termio.U,v $
?RCS: Revision 3.0.1.4 1994/10/29 16:20:54 ram
?RCS: patch36: call ./usg and ./Cpplib explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0.1.3 1994/08/29 16:26:38 ram
?RCS: patch32: don't include all three I_* symbols in config.h
?RCS: patch32: (had forgotten to undo this part last time)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:25:03 ram
?RCS: patch27: undone ADO's fix in previous patch since it was useless
```

?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:05:23  
ram  
?RCS: patch23: now include all three defines in config.h (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:44 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_termio i\_sgty i\_termios: test Inlibc Cppsym Guess Setvar Findhdr Warn  
?MAKE: -pick add \$@ %<  
?S:i\_termio:  
?S: This variable conditionally defines the I\_TERMIO symbol, which  
?S: indicates to the C program that it should include <termio.h> rather  
?S: than <sgtty.h>.  
?S:.  
?S:i\_termios:  
?S: This variable conditionally defines the I\_TERMIOS symbol, which  
?S: indicates to the C program that the POSIX <termios.h> file is  
?S: to be included.  
?S:.  
?S:i\_sgty:  
?S: This variable conditionally defines the I\_SGTTY symbol, which  
?S: indicates to the C program that it should include <sgtty.h> rather  
?S: than <termio.h>.  
?S:.  
?C:I\_TERMIO:  
?C: This symbol, if defined, indicates that the program should include  
?C: <termio.h> rather than <sgtty.h>. There are also differences in  
?C: the ioctl() calls that depend on the value of  
this symbol.  
?C:.  
?C:I\_TERMIOS:  
?C: This symbol, if defined, indicates that the program should include  
?C: the POSIX termios.h rather than sgtty.h or termio.h.  
?C: There are also differences in the ioctl() calls that depend on the  
?C: value of this symbol.  
?C:.  
?C:I\_SGTTY:  
?C: This symbol, if defined, indicates that the program should include  
?C: <sgtty.h> rather than <termio.h>. There are also differences in  
?C: the ioctl() calls that depend on the value of this symbol.  
?C:.  
?H:#\$i\_termio I\_TERMIO /\*\*/  
?H:#\$i\_termios I\_TERMIOS /\*\*/  
?H:#\$i\_sgty I\_SGTTY /\*\*/  
?H:.  
?T:val2 val3  
?LINT:set i\_termio i\_sgty i\_termios



```

: see if this is a termio system
val="$undef"
val2="$undef"
val3="$undef"
?X: Prefer POSIX-approved termios.h over all else
if $test `./findhdr termios.h`; then
  set tcsetattr i_termios
  eval $inlibc
  val3="$i_termios"
fi
echo " "
case "$val3" in
"$define") echo "You have POSIX termios.h... good!" >&4;
*) if ./Cpplib pyr; then
  case "`/bin/universe`" in
ucb) if $test `./findhdr
sgtty.h`; then
  val2="$define"
  echo "<sgtty.h> found." >&4
  else
  echo "System is pyramid with BSD universe."
  ./warn "<sgtty.h> not found--you could have problems."
  fi;;
*) if $test `./findhdr termio.h`; then
  val="$define"
  echo "<termio.h> found." >&4
  else
  echo "System is pyramid with USG universe."
  ./warn "<termio.h> not found--you could have problems."
  fi;;
esac
?X: Start with USG to avoid problems if both usg/bsd was guessed
elif ./usg; then
if $test `./findhdr termio.h`; then
  echo "<termio.h> found." >&4
  val="$define"
elif $test `./findhdr sgtty.h`; then
  echo "<sgtty.h> found." >&4
  val2="$define"
else
  ./warn "Neither <termio.h> nor <sgtty.h> found--cross fingers!"
fi
else
if $test `./findhdr sgtty.h`; then
  echo "<sgtty.h> found." >&4
  val2="$define"
elif $test `./findhdr termio.h`; then
  echo "<termio.h> found." >&4

```

```

    val="$define"
else
    ./warn "Neither <sgtty.h> nor <termio.h> found--cross
fingers!"
fi
fi;;
esac
set i_termio; eval $setvar
val=$val2; set i_sgtty; eval $setvar
val=$val3; set i_termios; eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_termio.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorhtml3dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorhtml3dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorhtml3dir vendorhtml3direxp installvendorhtml3dir: html3dir Getfile \

Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorhtml3dir:

?S: This variable contains the name of the directory for html

?S: library pages. It may have a ~ on the front.

?S: The standard distribution will put nothing

in this directory.

?S: Vendors who distribute perl may wish to place their own

?S: html pages for modules and extensions in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorhtml3direxp:

?S: This variable is the ~name expanded version of vendorhtml3dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

```

?D:installvendorhtml3dir="
?S:installvendorhtml3dir:
?S: This variable is really the same as vendorhtml3direxp but may differ on
?S: those systems using AFS. For extra portability, only this variable
?S: should be used in makefiles.
?S:.
?LINT:change prefixvar
?LINT:set installvendorhtml3dir
: Set the vendorhtml3dir variables
case "$vendorprefix" in
") vendorhtml3dir="
vendorhtml3direxp="
;;
*) : determine where vendor-supplied module html pages go.
: There is no standard location, so try to copy the previously-selected
: directory structure for the core html pages.
: XXX Better default
: suggestions would be welcome.
case "$vendorhtml3dir" in
") dflt=`echo "$html3dir" | $sed "s#^$prefix#$vendorprefix#"` ;;
*) dflt=$vendorhtml3dir ;;
esac
case "$dflt" in
"| ") dflt=none ;;
esac
fn=dn+~
rp='Pathname for the vendor-supplied html pages?'
./getfile
vendorhtml3dir="$ans"
vendorhtml3direxp="$ansexp"
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorhtml3dir" = "X" && vendorhtml3dir=' '
prefixvar=vendorhtml3dir
./installprefix

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/installdirs/vendorhtml3dir.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_hidnet.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_hidnet.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:20 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_hidnet hiddennet: cat sed myhostname mydomain Myread Oldconfig
?MAKE: -pick add $@ %<
?S:d_hidnet:
?S: This variable conditionally defines the symbol HIDDEN_NET, which
?S: tells the C program that it should pretend it is on a different
?S: host for purposes of advertising a mailing address.
?S:.
?S:hiddennet:
?S: This variable contains
?S: the value eventually given to the symbol
?S: HIDDEN_NET, if d_hidnet defines it. If defined, it's the name
?S: of the host which serves as the mail server for a network that
?S: is invisible to the outside world.
?S:.
?C:HIDDEN_NET (HIDDENNET):
?C: This symbol, if defined, contains the host name that you want to
?C: advertise to the outside world. This name can be different from
?C: your actual host name, as long as the machine you specify knows
?C: how to forward mail to you.
?C:.
?H:#$d_hidnet HIDDEN_NET "$hiddennet" /**/
?H:.
: now get the host name to advertise as our mailing address
case "$hiddennet" in
") dflt=n;;
*) dflt=y;;
esac
$cat <<EOM

```

Some sites are on "hidden" networks, in the sense that the network appears to the outside world as a single machine. The advertised name of any host on this hidden network is the name of one machine on the local network which knows how to forward mail to any other host on the hidden network.

Do you wish to advertise a different hostname to the world than the one your own host (\$myhostname\$mydomain) has?

```

EOM
rp="Use "hidden" network?"

```

```

./myread
case "$ans" in
n*) d_hidnet="$sundef" hiddennet="";;
*)
d_hidnet="$define"
echo " "
case "$hiddennet" in
") dflt=`echo $mydomain | $sed -e 's/^\./'`;
*) dflt="$hiddennet";;
esac
rp='What hostname do you wish to advertise?'
./myread
hiddennet="$ans"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d_hidnet.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strerror\_1: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strerror\_1:

?S: This variable conditionally defines the HAS\_STRERROR\_L symbol, which

?S: indicates to the C program that the strerror\_l() routine is available

?S: to return the error message for a given errno value in a particular

?S: locale (identified by a locale\_t object).

?S:.

?C:HAS\_STRERROR\_L:

?C: This symbol, if defined, indicates that the strerror\_l routine is

?C: available to return the error message for a given errno value in

?C: a particular locale (identified by a locale\_t object).

?C:.

?H:#\$d\_strerror\_1 HAS\_STRERROR\_L /\*\*/

?H:.

?LINT:set d\_strerror\_1

: see if strerror\_l exists

set strerror\_l d\_strerror\_1

eval \$inlibc

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d_strerror_1.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: maildir.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: maildir.U,v $
?RCS: Revision 3.0.1.1 1993/12/15 08:21:56 ram
?RCS: patch15: now also looks under /var/mail for BSD/386
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:maildir maildirexp: Getfile Loc Oldconfig
?MAKE: -pick add $@ %<
?S:maildir:
?S: This variable contains the name of the directory in which mail is
?S: spooled. Programs using this variable must be prepared to deal with
?S: ~name
substitutions.
?S:.
?S:maildirexp:
?S: This is the same as the maildir variable, but is filename expanded
?S: at configuration time, for programs not willing to deal with it at
?S: run-time.
?S:.
: determine where mail is spooled
case "$maildir" in
") dflt=`./loc . /usr/spool/mail /usr/spool/mail /usr/mail /var/mail`;;
*) dflt="$maildir";;
esac
echo " "
fn=d~
rp="Where is yet-to-be-read mail spooled?"
./getfile
maildir="$sans"
maildirexp="$sansexp"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/maildir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_gethid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_gethid.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:10 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_gethid: Inlibc
?MAKE: -pick add $@ %<
?S:d_gethid:
?S: This variable conditionally defines HAS_GETHOSTID if gethostid() is
?S: available to get the host id.
?S:.
?C:HAS_GETHOSTID (GETHOSTID):
?C: This symbol, if defined, indicates that the gethostid system call is
?C: available to get the host id.
?C:.
?H:#$d_gethid HAS_GETHOSTID /**/
?H:.
?LINT:set
d_gethid
: see if gethid exists
set gethostid d_gethid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gethid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorscript.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1999, Andy Dougherty
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
```

?RCS:  
?RCS: \$Log: vendorscript.U,v \$  
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera  
?RCS: Initial revision  
?RCS:  
?MAKE:d\_vendorscript vendorscript vendorscriptexp installvendorscript: Getfile \  
vendorbin cat Setprefixvar Oldconfig Prefixit test vendorprefix  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:vendorscript:  
?S: This variable contains the eventual value of the VENDORSRIPT symbol.  
?S: It may have a ~ on the front.  
?S: The standard distribution will put nothing in this  
directory.  
?S: Vendors who distribute perl may wish to place additional  
?S: executable scripts in this directory with  
?S: MakeMaker Makefile.PL INSTALLDIRS=vendor  
?S: or equivalent. See INSTALL for details.  
?S:.  
?S:vendorscriptexp:  
?S: This variable is the ~name expanded version of vendorscript, so that you  
?S: may use it directly in Makefiles or shell scripts.  
?S:.  
?D:installvendorscript="  
?S:installvendorscript:  
?S: This variable is really the same as vendorscriptexp but may differ on  
?S: those systems using AFS. For extra portability, only this variable  
?S: should be used in makefiles.  
?S:.  
?S:d\_vendorscript:  
?S: This variable conditionally defines PERL\_VENDORSRIPT.  
?S:.  
?C:PERL\_VENDORSRIPT:  
?C: If defined, this symbol contains the name of a directory  
?C: for holding vendor-supplied executable scripts.  
?C: It may have a ~ on the front.  
?C: The standard distribution will put nothing in this directory.  
?C: Vendors who distribute perl may wish to place additional  
?C: executable  
scripts in this directory with  
?C: MakeMaker Makefile.PL INSTALLDIRS=vendor  
?C: or equivalent. See INSTALL for details.  
?C:.  
?C:PERL\_VENDORSRIPT\_EXP:  
?C: This symbol contains the ~name expanded version of VENDORSRIPT, to be used  
?C: in programs that are not prepared to deal with ~ expansion at run-time.  
?C:.  
?H:#\$d\_vendorscript PERL\_VENDORSRIPT "\$vendorscript" /\*\*/



```

?H:#$d_vendorscript PERL_VENDORSCRIPT_EXP "$vendorscriptexp" /**/
?H:.
?LINT:change prefixvar
?LINT:set installvendorscript
: Set the vendorscript variables
case "$vendorprefix" in
") d_vendorscript="$undef"
vendorscript="
vendorscriptexp="
;;
*) d_vendorscript="$define"
: determine where vendor-supplied scripts go.
case "$vendorscript" in
") dflt=$vendorprefix/script
$test -d $dflt || dflt=$vendorbin ;;
*) dflt="$vendorscript" ;;
esac
$cat <<EOM

```

The installation process will create a directory for vendor-supplied scripts.

```

EOM
fn=d~+
rp='Pathname for the vendor-supplied scripts directory?'
./getfile
vendorscript="$ans"
vendorscriptexp="$ansexp"
;;
esac
prefixvar=vendorscript
.
./installprefix

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorscript.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_sigblock.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.

```

```

?RCS:
?RCS: $Log: d_sigblock.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:21 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_sigblock: Inlibc
?MAKE: -pick add $@ %<
?S:d_sigblock:
?S: This variable conditionally defines HAS_SIGBLOCK if sigblock() is
?S: available to block signal reception.
?S:.
?C:HAS_SIGBLOCK:
?C: This symbol, if defined, indicates that the sigblock routine is
?C: available to block signal reception.
?C:.
?H:#$d_sigblock HAS_SIGBLOCK /**/
?H:.
?LINT:set
d_sigblock
: see if sigblock exists
set sigblock d_sigblock
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sigblock.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_localtime_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS: Copyright (c) 2006,2007 H.Merijn Brand
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_localtime_r d_localtime_r_needs_tzset localtime_r_proto: Inlibc \
cat run Protochk Hasproto i_systypes usethreads i_time i_systime \
rm_try Compile extern_C i_stdlib i_unistd i_malloc
?MAKE: -pick add $@ %<
?S:d_localtime_r:
?S: This variable conditionally defines the HAS_LOCALTIME_R symbol,
?S: which indicates to the C program that the localtime_r()
?S: routine is available.
?S:.
?S:d_localtime_r_needs_tzset:
?S: This variable conditionally defines the LOCALTIME_R_NEEDS_TZSET

```

?S: symbol, which makes us call tzset before localtime\_r()  
?S:.  
?S:localtime\_r\_proto:  
?S: This  
variable encodes the prototype of localtime\_r.  
?S: It is zero if d\_localtime\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_localtime\_r  
?S: is defined.  
?S:.  
?C:HAS\_LOCALTIME\_R:  
?C: This symbol, if defined, indicates that the localtime\_r routine  
?C: is available to localtime re-entrantly.  
?C:.  
?C:LOCALTIME\_R\_NEEDS\_TZSET:  
?C: Many libc's localtime\_r implementations do not call tzset,  
?C: making them differ from localtime(), and making timezone  
?C: changes using \\${ENV}{TZ} without explicitly calling tzset  
?C: impossible. This symbol makes us call tzset before localtime\_r  
?C:.  
?H:%<:#\$d\_localtime\_r\_needs\_tzset LOCALTIME\_R\_NEEDS\_TZSET /\*\*/  
?H:%<:#ifdef LOCALTIME\_R\_NEEDS\_TZSET  
?H:%<:#define L\_R\_TZSET tzset(),  
?H:%<:#else  
?H:%<:#define L\_R\_TZSET  
?H:%<:#endif  
?H:.  
?C:L\_R\_TZSET:  
?C: If localtime\_r() needs tzset, it is defined in this define  
?C:.  
?C:LOCALTIME\_R\_PROTO:  
?C: This symbol encodes the prototype of localtime\_r.  
?C: It is zero if d\_localtime\_r  
is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_localtime\_r  
?C: is defined.  
?C:.  
?H:#\$d\_localtime\_r HAS\_LOCALTIME\_R /\*\*/  
?H:#define LOCALTIME\_R\_PROTO \$localtime\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_localtime\_r\_proto  
?F:!try  
: see if localtime\_r exists  
set localtime\_r d\_localtime\_r  
eval \$inlibc  
case "\$d\_localtime\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_time time.h \$i\_systime sys/time.h"  
case "\$d\_localtime\_r\_proto:\$usetthreads" in

```

":define") d_localtime_r_proto=define
set d_localtime_r_proto localtime_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_localtime_r_proto" in
define)
case "$localtime_r_proto" in
"|0) try='struct tm* localtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && localtime_r_proto=S_TS ;;
esac
case "$localtime_r_proto" in
"|0) try='int localtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && localtime_r_proto=I_TS ;;
esac
case "$localtime_r_proto" in
"|0) d_localtime_r=undef
localtime_r_proto=0
echo
"Disabling localtime_r, cannot determine prototype." >&4 ;;
* ) case "$localtime_r_proto" in
REENTRANT_PROTO*) ;;
*) localtime_r_proto="REENTRANT_PROTO_$localtime_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "localtime_r has no prototype, not using it." >&4 ;;
esac
d_localtime_r=undef
localtime_r_proto=0
;;
esac
;;
*) localtime_r_proto=0
;;
esac

: see if localtime_r calls tzset
case "$localtime_r_proto" in
REENTRANT_PROTO*)
$cat >try.c <<EOCP
/* Does our libc's localtime_r call tzset ?
* return 0 if so, 1 otherwise.
*/
#$i_systypes I_SYS_TYPES
#$i_unistd I_UNISTD

```

```

#$_time I_TIME
#$_stdlib I_STDLIB
#$_malloc I_MALLOC
#ifdef I_SYS_TYPES
# include <sys/types.h>
#endif
#ifdef I_UNISTD
# include <unistd.h>
#endif
#ifdef I_TIME
# include <time.h>
#endif
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <string.h>
#ifdef I_MALLOC
# include <malloc.h>
#endif
int
main()
{
    time_t t = time(0L);
    char w_tz[]="TZ" "=GMT+5",
    e_tz[]="TZ" "=GMT-5",
    *tz_e = (char*)malloc(16),
    *tz_w = (char*)malloc(16);
    struct tm tm_e, tm_w;
    memset(&tm_e, '\0', sizeof(struct tm));
    memset(&tm_w, '\0', sizeof(struct tm));
    strcpy(tz_e, e_tz);
    strcpy(tz_w, w_tz);

    putenv(tz_e);
    localtime_r(&t, &tm_e);

    putenv(tz_w);
    localtime_r(&t, &tm_w);

    if( memcmp(&tm_e, &tm_w, sizeof(struct tm)) == 0 )
return 1;
    return 0;
}
EOCP
set try
if eval $compile; then
    if $run ./try; then
        d_localtime_r_needs_tzset=undef;

```

```

else
d_localtime_r_needs_tzset=define;
fi;
else
d_localtime_r_needs_tzset=undef;
fi;
;;
*)
d_localtime_r_needs_tzset=undef;
;;
esac
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_localtime_r.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: afs.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: afs.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:23:06 ram
?RCS: patch61: can now explicitly tell Configure whether AFS is running
?RCS:
?RCS: Revision 3.0.1.1 1993/08/24 12:24:43 ram
?RCS: patch3: created
?RCS:
?MAKE:afs afsroot: test
?MAKE: -pick add $@ %<
?S:afs:
?S: This variable is set to 'true' if AFS (Andrew File System) is used
?S: on the system, 'false' otherwise. It is possible to override this
?S: with a hint value or command line option,
?S: but you'd better know
?S: what you are doing.
?S:..
?S:afsroot:
?S: This variable is by default set to '/afs'. In the unlikely case
?S: this is not the correct root, it is possible to override this with
?S: a hint value or command line option. This will be used in subsequent

```

?S: tests for AFSness in the configure and test process.

?S:.

: allow them to override the AFS root

case "\$afsroot" in

") afsroot=/afs ;;

\*) afsroot=\$afsroot ;;

esac

: is AFS running?

echo " "

case "\$afs" in

\$define|true) afs=true ;;

\$undef|false) afs=false ;;

\*) if \$test -d \$afsroot; then

afs=true

else

afs=false

fi

;;

esac

if \$afs; then

echo "AFS may be running... I'll be extra cautious then..." >&4

else

echo "AFS does not seem to be running..." >&4

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/afs.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017, Lukas Mai

?RCS:

?RCS: You may distribute this file under the terms of either

?RCS: a) the "Artistic License" which comes with Perl, or

?RCS: b) the "Artistic License" which comes with dist, or

?RCS: c) the GNU General Public License as published by the Free

?RCS: Software Foundation; either version 1, or (at your option) any

?RCS: later version (see the file "Copying" that comes with the

?RCS: Perl distribution).

?RCS: Which one to use is your choice.

?RCS: See the U/README file.

?MAKE:d\_builtin\_add\_overflow d\_builtin\_sub\_overflow d\_builtin\_mul\_overflow : Compile Setvar cat run rm\_try

?MAKE: -pick add \$@ %<

?S:d\_builtin\_add\_overflow:

?S: This variable conditionally defines HAS\_BUILTIN\_ADD\_OVERFLOW, which

?S: indicates that the compiler supports \_\_builtin\_add\_overflow(x,y,&z)

?S: for safely adding x and y into z while checking for overflow.

?S:  
?S:d\_builtin\_sub\_overflow:  
?S: This  
variable conditionally defines HAS\_BUILTIN\_SUB\_OVERFLOW, which  
?S: indicates that the compiler supports \_\_builtin\_sub\_overflow(x,y,&z)  
?S: for safely subtracting y from x into z while checking for overflow.  
?S:  
?S:d\_builtin\_mul\_overflow:  
?S: This variable conditionally defines HAS\_BUILTIN\_MUL\_OVERFLOW, which  
?S: indicates that the compiler supports \_\_builtin\_mul\_overflow(x,y,&z)  
?S: for safely multiplying x and y into z while checking for overflow.  
?S:  
?C:HAS\_BUILTIN\_ADD\_OVERFLOW:  
?C: This symbol, if defined, indicates that the compiler supports  
?C: \_\_builtin\_add\_overflow for adding integers with overflow checks.  
?C:  
?C:HAS\_BUILTIN\_SUB\_OVERFLOW:  
?C: This symbol, if defined, indicates that the compiler supports  
?C: \_\_builtin\_sub\_overflow for subtracting integers with overflow checks.  
?C:  
?C:HAS\_BUILTIN\_MUL\_OVERFLOW:  
?C: This symbol, if defined, indicates that the compiler supports  
?C: \_\_builtin\_mul\_overflow for multiplying integers with overflow checks.  
?C:  
?H:#\$d\_builtin\_add\_overflow  
HAS\_BUILTIN\_ADD\_OVERFLOW /\*\*/  
?H:#\$d\_builtin\_sub\_overflow HAS\_BUILTIN\_SUB\_OVERFLOW /\*\*/  
?H:#\$d\_builtin\_mul\_overflow HAS\_BUILTIN\_MUL\_OVERFLOW /\*\*/  
?H:  
?F:!try  
?LINT:set d\_builtin\_add\_overflow d\_builtin\_sub\_overflow d\_builtin\_mul\_overflow  
: Look for GCC-style \_\_builtin\_add\_overflow  
case "\$d\_builtin\_add\_overflow" in  
")  
echo "  
echo "Checking whether your compiler can handle \_\_builtin\_add\_overflow ..." >&4  
\$cat >try.c <<'EOCP'  
int main(void) {  
const unsigned int uint\_max = ~0u;  
int target\_int = 0;  
if (\_\_builtin\_add\_overflow(1, 2, &target\_int) || target\_int != 3) {  
return 1;  
}  
if (!\_\_builtin\_add\_overflow((int)(uint\_max >> 1), 1, &target\_int)) {  
return 1;  
}  
if (!\_\_builtin\_add\_overflow(uint\_max, -1, &target\_int)) {  
return 1;  
}



```

    }
    return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_add_overflow."
    val="$define"
else
    echo
    "Your C compiler doesn't seem to understand __builtin_add_overflow."
    val="$undef"
fi
;;
*) val="$d_builtin_add_overflow" ;;
esac

set d_builtin_add_overflow
eval $setvar
$rm_try

: Look for GCC-style __builtin_sub_overflow
case "$d_builtin_sub_overflow" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_sub_overflow ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    const unsigned int uint_max = ~0u;
    int target_int = 0;
    if (__builtin_sub_overflow(1, -2, &target_int) || target_int != 3) {
        return 1;
    }
    if (!__builtin_sub_overflow(-(int)(uint_max >> 1), 2, &target_int)) {
        return 1;
    }
    if (!__builtin_sub_overflow(uint_max, 1, &target_int)) {
        return 1;
    }
    return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_sub_overflow."
    val="$define"
else
    echo "Your C compiler doesn't seem to understand __builtin_sub_overflow."

```

```

        val="$undef"
    fi
    ;;
*) val="$d_builtin_sub_overflow" ;;
esac

set d_builtin_sub_overflow
eval $setvar
$rm_try

: Look for GCC-style __builtin_mul_overflow
case "$d_builtin_mul_overflow" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_mul_overflow ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    const unsigned int uint_max = ~0u;
    int target_int = 0;
    if (__builtin_mul_overflow(2, 3, &target_int) || target_int != 6) {
        return 1;
    }
    if (!__builtin_mul_overflow((int)(uint_max >> 1), 2, &target_int)) {
        return 1;
    }
    if (!__builtin_mul_overflow(uint_max, 1, &target_int)) {
        return 1;
    }
    return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_mul_overflow."
    val="$define"
else
    echo "Your C compiler doesn't seem to understand __builtin_mul_overflow."
    val="$undef"
fi
;;
*) val="$d_builtin_mul_overflow"
;;
esac

set d_builtin_mul_overflow
eval $setvar
$rm_try

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_builtin\_overflow.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getppid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_getppid.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:07:45 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_getppid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getppid:

?S: This variable conditionally defines the HAS\_GETPPID symbol, which

?S: indicates to the C program that the getppid() routine is available

?S: to get the parent process ID.

?S:.

?C:HAS\_GETPPID :

?C: This symbol,

if defined, indicates that the getppid routine is

?C: available to get the parent process ID.

?C:.

?H:#\$d\_getppid HAS\_GETPPID /\*\*/

?H:.

?LINT:set d\_getppid

: see if getppid exists

set getppid d\_getppid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getppid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_umask.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_umask.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:14:50 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_umask: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_umask:  
?S: This variable conditionally defines the HAS\_UMASK symbol, which  
?S: indicates to the C program that the umask() routine is available.  
?S: to set and get the value of the file creation mask.  
?S:.  
?C:HAS\_UMASK :  
?C: This  
symbol, if defined, indicates that the umask routine is  
?C: available to set and get the value of the file creation mask.  
?C:.  
?H:#\$d\_umask HAS\_UMASK /\*\*/  
?H:.  
?LINT:set d\_umask  
: see if umask exists  
set umask d\_umask  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_umask.U

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?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2001 Jarkko Hietaniemi  
?RCS:  
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?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_dbmunitproto: Hasproto i\_dbm

?MAKE: -pick add \$@ %<

?S:d\_dbminiproto:

?S: This variable conditionally defines the HAS\_DBMINIT\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the dbminit() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_DBMINIT\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the dbminit() function. Otherwise, it is up

?C: to the program to supply one. A good guess is

?C: extern

```
int dbminit(char *);
```

?C:.

?H:#\$d\_dbminiproto HAS\_DBMINIT\_PROTO /\*\*/

?H:.

?LINT:set d\_dbminiproto

: see if prototype for dbminit is available

```
echo " "
```

```
set d_dbminiproto dbminit $i_dbm dbm.h
```

```
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d_dbminiproto.U
```

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?RCS: \$Id\$

?RCS:

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?RCS:

?RCS: \$Log: i\_sysmman.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:11:20 ram

?RCS: patch16: created

?RCS:

?X:

?X: Look wether <sys/mman.h> needs to be included.

?X:

?MAKE:i\_sysmman: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_sysmman:

?S: This variable conditionally defines the I\_SYS\_MMAN symbol,

?S: and indicates whether a C program should include <sys/mman.h>.

?S:.

?C:I\_SYS\_MMAN:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/mman.h>.

?C:.

?H:#\$i\_sysmman I\_SYS\_MMAN /\*\*/

?H:.

?LINT:set

i\_sysmman

: see if sys/mman.h has to be included

set sys/mman.h i\_sysmman

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_sysmman.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwent\_r getpwent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwent\_r:

?S: This variable conditionally defines the HAS\_GETPWENT\_R symbol,

?S: which indicates to the C program that the getpwent\_r()

?S: routine is available.

?S:.

?S:getpwent\_r\_proto:

?S: This variable encodes the prototype of getpwent\_r.

?S: It is zero if d\_getpwent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwent\_r

?S: is defined.

?S:.

?C:HAS\_GETPWENT\_R:

?C: This symbol, if defined, indicates that the getpwent\_r routine

?C: is available to

getpwent re-entrantly.

?C:.

?C:GETPWENT\_R\_PROTO:

?C: This symbol encodes the prototype of getpwent\_r.

```

?C: It is zero if d_getpwent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getpwent_r
?C: is defined.
?C:.
?H:#$d_getpwent_r HAS_GETPWENT_R /**/
?H:#define GETPWENT_R_PROTO $getpwent_r_proto /**/
?H:.
?T:try hdrs d_getpwent_r_proto
: see if getpwent_r exists
set getpwent_r d_getpwent_r
eval $inlibc
case "$d_getpwent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_pwd pwd.h"
case "$d_getpwent_r_proto:$susetheads" in
":define") d_getpwent_r_proto=define
set d_getpwent_r_proto getpwent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getpwent_r_proto" in
define)
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, size_t, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=I_SBWR ;;
esac
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, int, struct passwd**);'
./protochk
"$extern_C $try" $hdrs && getpwent_r_proto=I_SBIR ;;
esac
case "$getpwent_r_proto" in
"|0) try='struct passwd* getpwent_r(struct passwd*, char*, size_t);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=S_SBW ;;
esac
case "$getpwent_r_proto" in
"|0) try='struct passwd* getpwent_r(struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=S_SBI ;;
esac
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=I_SBI ;;
esac
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, int, FILE**);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=I_SBIH ;;
esac
case "$getpwent_r_proto" in

```

```

"|0) d_getpwent_r=undef
getpwent_r_proto=0
echo "Disabling getpwent_r, cannot determine prototype." >&4 ;;
*) case "$getpwent_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwent_r_proto="REENTRANT_PROTO_$getpwent_r_proto" ;;
esac
echo
"Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getpwent_r has no prototype, not using it." >&4 ;;
esac
d_getpwent_r=undef
getpwent_r_proto=0
;;
esac
;;
*) getpwent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_getpwent_r.U
```

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?RCS: \$Id: d\_time.U,v 3.0.1.2 1995/07/25 14:07:43 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_time.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:07:43 ram

?RCS: patch56: typo fix, sytem -> system

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:16:38 ram

?RCS: patch36: now uses new Typedef unit to compute type information (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:



```

?X: Maybe <sys/types.h> should be included?
?X:INC: i_systypes
?MAKE:d_time timetype: Csym Setvar Findhdr Myread Typedef
?MAKE: -pick
add $@ %<
?S:d_time:
?S: This variable conditionally defines the HAS_TIME symbol, which indicates
?S: that the time() routine exists. The time() routine is normally
?S: provided on UNIX systems.
?S:.
?S:timetype:
?S: This variable holds the type returned by time(). It can be long,
?S: or time_t on BSD sites (in which case <sys/types.h> should be
?S: included). Anyway, the type Time_t should be used.
?S:.
?C:HAS_TIME (TIMER):
?C: This symbol, if defined, indicates that the time() routine exists.
?C:.
?C:Time_t (TIMETYPE):
?C: This symbol holds the type returned by time(). It can be long,
?C: or time_t on BSD sites (in which case <sys/types.h> should be
?C: included).
?C:.
?H:#$d_time HAS_TIME /**/
?H:#define Time_t $timetype /* Time type */
?H:.
?LINT:set d_time
: see if time exists
echo " "
?X: MPE/iX needs this protection of hint values.
?X: See d_sterror.U for more explanation.
if test "X$d_time" = X -o X"$timetype" = X; then
    if set time val -f d_time; eval $csym; $val;
then
    echo 'time() found.' >&4
    val="$define"
    rp="What is the type returned by time() on this system?"
    set time_t timetype long stdio.h sys/types.h
    eval $typedef_ask
    else
    echo 'time() not found, hope that will do.' >&4
    val="$undef"
    timetype='int';
    fi
    set d_time
    eval $setvar
fi

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/d\_time.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: manfmt.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: manfmt.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 16:11:57 ram

?RCS: patch61: don't ask for AFS when they choose to not install pages

?RCS:

?RCS: Revision 3.0.1.4 1995/09/25 09:16:52 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:39:20 ram

?RCS: patch49: new installmanfmt and AFS-lookup for formatted man pages

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS:

Revision 3.0.1.2 1994/08/29 16:30:31 ram

?RCS: patch32: now uses installation prefix for default setting

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:09:22 ram

?RCS: patch10: allows for L1 man page extension (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:manfmt manfmtexp installmanfmt: Getfile Loc Oldconfig cat manext \

spackage Prefixit prefixexp Prefixup afs test

?MAKE: -pick add \$@ %<

?Y:TOP

?S:manfmt:

?S: This variable contains the name of the directory in which formatted

?S: manual pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command. Note

?S: that you may have to do ~name substitution. Use manfmtexp otherwise.

?S:.

?S:manfmtexp:

?S: This is the same as the manfmt variable, but is filename expanded

?S: at configuration time, for programs not willing to deal with it at  
 ?S: run-time.  
 ?S:.  
 ?S:installmanfmt:  
 ?S: This variable is really  
 the same as manfmtexp, unless you are using  
 ?S: AFS in which case it points to the read/write location whereas  
 ?S: mansrcexp only points to the read-only access location. For extra  
 ?S: portability, you should only use this variable within your makefiles.  
 ?S:.  
 ?LINT:change manext  
 ?T:lookpath  
 : determine where manual pages go  
 set manfmt manfmt  
 eval \$prefixit  
 \$cat <<EOM

\$spackage has pre-formatted manual pages. If you don't want these installed,  
 answer 'none' to the next question.

```
EOM
case "$manfmt" in
")
  lookpath="$prefixexp/catman/man1 $prefixexp/man/cat1"
  lookpath="$lookpath $prefixexp/catman/u_man/man1"
  lookpath="$lookpath $prefixexp/catman/l_man/man1"
  lookpath="$lookpath $prefixexp/catman/cat1 /usr/catman/local/man1"
  lookpath="$lookpath /usr/catman/man1 /usr/man/cat1"
  lookpath="$lookpath /usr/catman/mann /usr/catman/l_man/man1"
  lookpath="$lookpath /usr/catman/u_man/man1 /usr/catman/man1"
  dflt=`./loc . none $lookpath`
  set dflt
  eval $prefixup
  ;;
*) dflt="$manfmt"
  ;;
esac
fn=dn~
rp='Where
do pre-formatted manual pages go?'
./getfile
if test "X$manfmtexp" != "X$sansexp"; then
  installmanfmt="
fi
manfmt="$ans"
manfmtexp="$sansexp"
if $safs && $test "$manfmt"; then
  $cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installmanfmt" in
") dflt=`echo $manfmtexp | sed 's#^/afs/#/afs/.#`;;
*) dflt="$installmanfmt";;
esac
fn=de~
rp='Where will pre-formatted man pages be installed?'
./getfile
installmanfmt="$ans"
else
installmanfmt="$manfmtexp"
fi
```

```
case "$manfmt" in
") manext='0';;
*l) manext=l;;
*n) manext=n;;
*o) manext=l;;
*p) manext=n;;
*C) manext=C;;
*L) manext=L;;
*L1) manext=L1;;
*) manext=1;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/manfmt.U
```

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?RCS:

?MAKE:d\_\_fwalk: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_\_fwalk:

?S: This variable conditionally defines HAS\_\_FWALK if \_fwalk() is

?S: available to apply a function to all the file handles.

?S:.

?C:HAS\_\_FWALK:

?C: This symbol, if defined, indicates that the \_fwalk system call is

?C: available to apply a function to all the file handles.

?C:.

?H:#\$d\_\_fwalk HAS\_\_FWALK /\*\*/

?H:.

?LINT:set d\_\_fwalk

: see if \_fwalk exists

set fwalk d\_\_fwalk

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_\_fwalk.U

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Oldsym.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:06:58 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit follows the creation of the config.sh file. It adds some

?X: special symbols: defines from patchlevel.h file if any and CONFIG,

?X: which is set to true. Then, we try to keep all the new symbols that

?X: may come from a hint file or a previous config.sh file.

?X:

?MAKE:Oldsym:

Config\_sh Options test hint src sed sort uniq

?MAKE: -pick add \$@ %<

?T:CONFIG sym tmp

?F:!UU

: add special variables

```
$test -f $src/patchlevel.h && \
awk '/^#define/ {printf "%s=%s\n", $2, $3}' $src/patchlevel.h >>config.sh
echo "CONFIG=true" >>config.sh
```

: propagate old symbols

```
if $test -f UU/config.sh; then
```

```
?X: Make sure each symbol is unique in oldconfig.sh
```

```
<UU/config.sh $sort | $uniq >UU/oldconfig.sh
```

```
?X:
```

```
?X: All the symbols that appear twice come only from config.sh (hence the
```

```
?X: two config.sh in the command line). These symbols will be removed by
```

```
?X: the uniq -u command. The oldsyms file thus contains all the symbols
```

```
?X: that did not appear in the produced config.sh (Larry Wall).
```

```
?X:
```

```
?X: Do not touch the -u flag of uniq. This means you too, Jarkko.
```

```
?X:
```

```
$sed -n 's/^\([a-zA-Z_0-9]*\)=.*/\1/p' \
```

```
config.sh config.sh UU/oldconfig.sh |
```

```
$sort | $uniq -u >UU/oldsyms
```

```
set X `cat UU/oldsyms`
```

```
shift
```

```
case $# in
```

```
0) ;;
```

```
*)
```

```
cat <<EOM
```

Hmm... You had some extra variables I don't know about...I'll

try to keep 'em...

EOM

```
echo ": Variables propagated from previous config.sh file." >>config.sh
```

```
for sym in `cat UU/oldsyms`; do
```

```
echo " Propagating $hint variable ""$""$sym..."
```

```
eval 'tmp=""${sym}""'
```

```
echo "$tmp" | \
```

```
sed -e "s/^\(\"\"/g" -e "s/^\$sym=/'" -e "s/$/'" >>config.sh
```

```
done
```

```
::
```

```
esac
```

```
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Oldsym.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: yacc.U,v 3.0.1.1 1994/05/13 15:28:48 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: yacc.U,v \$  
?RCS: Revision 3.0.1.1 1994/05/13 15:28:48 ram  
?RCS: patch27: added byacc as another alternative (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:10:03 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:yacc yaccflags: Guess Myread Oldconfig byacc bison cat test \_exe  
?MAKE: -pick add \$@ %<  
?S:yacc:  
?S: This variable holds the name of the compiler compiler we  
?S: want to use in the Makefile. It can be yacc, byacc, or bison -y.  
?S:.  
?S:yaccflags:  
?S: This  
variable contains any additional yacc flags desired by the  
?S: user. It is up to the Makefile to use this.  
?S:.  
?T:comp  
: determine compiler compiler  
case "\$yacc" in  
")  
dflt=yacc;;  
\*)  
dflt="\$yacc";;  
esac  
echo " "  
comp='yacc'  
if \$test -f "\$byacc\$\_exe"; then  
dflt="\$byacc"  
comp="byacc or \$comp"  
fi  
if \$test -f "\$bison\$\_exe"; then  
comp="\$comp or bison -y"  
fi  
rp="Which compiler compiler (\$comp) shall I use?"  
./myread  
yacc="\$ans"  
case "\$yacc" in  
\*bis\*)  
case "\$yacc" in  
\*-y\*) ;;

```

*)
yacc="$yacc -y"
echo "(Adding -y option to bison to get yacc-compatible behavior.)"
;;
esac
;;
esac

```

```

@if yaccflags
: see if we need extra yacc flags
dflt="$yaccflags"
case "$dflt" in
") dflt=none;;
esac
$cat <<EOH

```

Your yacc program may need extra flags to normally process the parser sources. Do NOT specify any -d or -v flags here, since those are explicitly known by the various Makefiles. However, if your machine has strange/undocumented options (like -Sr# on SCO to specify the maximum number of grammar rules), then please add them here. To use no flags, specify the word "none".

```

EOH
rp="Any additional yacc flags?"
./myread
case "$ans" in
none) yaccflags="";;
*) yaccflags="$ans";;
esac

```

@end

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/yacc.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_su_chown.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:

```



```

?RCS: $Log: d_su_chown.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:40 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_su_chown: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_su_chown (d_rootchown):
?S: This variable conditionally defines the SU_CHOWN symbol, which
?S: indicates to the C program that only root can chown() the owner
?S: of a file.
?S:.
?C:SU_CHOWN (ROOT_CHOWN):
?C: This symbol, if defined, indicates that the system allows only root
?C: can
?C: change the owner of a file with chown().
?C:.
?H:#$d_su_chown SU_CHOWN /**/
?H:.
?LINT:set d_su_chown
: see if 'chown()' is restricted.
: but not too hard, as it is late and I am tired. -- HMS
echo " "
if set setreuid val -f d_su_chown; eval $csym; $val; then
echo 'It looks like only root can chown() the owner of a file.' >&4
val="$define"
else
echo 'It looks like root or the owner can chown() a file away.' >&4
val="$undef"
fi
set d_su_chown
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_su_chown.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_msgrcv.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgrcv.U,v $

```

?RCS: Revision 3.0 1993/08/18 12:06:40 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_msgrcv: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_msgrcv:  
?S: This variable conditionally defines the HAS\_MSGRCV symbol, which  
?S: indicates to the C program that the msgrcv() routine is available.  
?S:.  
?C:HAS\_MSGRCV:  
?C: This symbol, if defined, indicates that the msgrcv() routine is  
?C: available to extract a message from the message queue.  
?C:.  
?H:#\$d\_msgrcv  
HAS\_MSGRCV /\*\*/  
?H:.  
?LINT:set d\_msgrcv  
: see if msgrcv exists  
set msgrcv d\_msgrcv  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_msgrcv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setrgid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_setrgid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:14 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setrgid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setrgid:  
?S: This variable conditionally defines the HAS\_SETRGID symbol, which  
?S: indicates to the C program that the setrgid() routine is available  
?S: to change the real gid of the current program.  
?S:.  
?C:HAS\_SETRGID (SETRGID):

?C: This symbol, if defined, indicates that the setrgid routine is available  
?C: to change the real gid of the current program.  
?C:.  
?H:#\$d\_setrgid HAS\_SETRGID /\*\*/  
?H:.  
?LINT:set d\_setrgid  
: see if setrgid exists  
set setrgid d\_setrgid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setrgid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Extras.U,v\$  
?RCS:  
?RCS: Copyright (c) 2001, Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:extras: Myread Oldconfig Setvar rm  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:extras:  
?S: This variable holds a list of extra modules to install.  
?S:.  
: See if we want extra modules installed  
echo " "  
case "\$extras" in  
") dflt='n';;  
\*) dflt='y';;  
esac  
cat <<EOM

Perl can be built with extra modules or bundles of modules which will be fetched from the CPAN and installed alongside Perl.

Notice that you will need access to the CPAN; either via the Internet, or a local copy, for example a CD-ROM or a local CPAN mirror. (You will be asked later to configure the CPAN.pm module which will in turn do the installation of the rest of the extra modules or bundles.)

Notice also that if the modules require any external software such as libraries and headers (the libz library and the zlib.h header for the Compress::Zlib module, for example) you MUST have any such software



```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_fcntl.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_fcntl: Inlibc
?MAKE: -pick add $@ %<
?S:d_fcntl:
?S: This variable conditionally defines the HAS_FCNTL symbol, and indicates
?S: whether the fcntl() function exists
?S:.
?C:HAS_FCNTL:
?C: This symbol, if defined, indicates to the C program that
?C: the fcntl() function exists.
?C:.
?H:#$d_fcntl HAS_FCNTL /**/
?H:.
?LINT:set d_fcntl
:
  see if this is an fcntl system
set fcntl d_fcntl
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_fcntl.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Extractall.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Extractall.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:00:43 ram

```

```

?RCS: patch61: created
?RCS:
?X:
?X: If extraction has been requested, load the configuration file, perform
?X: the extraction and exit.
?X:
?X: This unit was originally a part of Options.U. It had to be removed from
?X: it to prevent a dependency cycle: Extract -> src -> Options -> Extract
?X: The Begin.U unit now requires us before beginning to do anything
?X: interesting, to ensure
proper semantics. -- RAM, 15/03/96
?X:
?MAKE:Extractall: Extract Options
?MAKE: -pick wipe $@ %<
: extract files and exit if asked to do so
case "$extractsh" in
true)
?X: Undo the forced silent=true when -S was supplied, by probing realsilent
?X: which was set iff -s was also given. See Options.U for details.
case "$realsilent" in
true) ;;
*) exec 1>&4;;
esac
case "$config_sh" in
") config_sh='config.sh';;
esac
echo " "
echo "Fetching answers from $config_sh..."
cd ..
. $config_sh
?X: extract has to be run from the top directory, not within UU.
. UU/optdef.sh
echo " "
?X: extract has to be run from the top directory, not within UU.
. UU/extract
rm -rf UU
echo "Extraction done."
exit 0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/Extractall.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_semget.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_semget.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:05 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_semget: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_semget:  
?S: This variable conditionally defines the HAS\_SEMGET symbol, which  
?S: indicates to the C program that the semget() routine is available.  
?S:.  
?C:HAS\_SEMGET:  
?C: This symbol, if defined, indicates that the semget() routine is  
?C: available to get a set of semaphores.  
?C:.  
?H:#\$d\_semget  
HAS\_SEMGET /\*\*/  
?H:.  
?LINT:set d\_semget  
: see if semget exists  
set semget d\_semget  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_semget.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_systypes.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_systypes.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:41 ram  
?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:
?X:
?X: Look wether <sys/types.h> needs to be included.
?X:
?MAKE:i_systypes: Inhdr
?MAKE: -pick add $@ %<
?S:i_systypes:
?S: This variable conditionally defines the I_SYS_TYPES symbol,
?S: and indicates whether a C program should include <sys/types.h>.
?S:.
?C:I_SYS_TYPES (I_SYSTYPES):
?C: This symbol, if defined, indicates to the C program
that it should
?C: include <sys/types.h>.
?C:.
?H:#$i_systypes I_SYS_TYPES /**/
?H:.
?LINT:set i_systypes
: see if sys/types.h has to be included
set sys/types.h i_systypes
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_systypes.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Tye McQueen <tye@metronet.com> added safe setuid script checks.
?RCS:
?RCS: $Log: d_dosuid.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:33:03 ram
?RCS: patch61: moved unit to TOP via a ?Y: layout directive
?RCS: patch61: tell them /dev/fd is not about floppy disks
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:12:08 ram
?RCS: patch36: added checks for secure setuid scripts (Tye McQueen)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:55 ram

```



```

?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_dosuid
d_suidsafe: cat contains ls rm test Myread Setvar \
Oldconfig Guess package hint
?MAKE: -pick add $@ %<
?S:d_suidsafe:
?S: This variable conditionally defines SETUID_SCRIPTS_ARE_SECURE_NOW
?S: if setuid scripts can be secure. This test looks in /dev/fd/.
?S:.
?S:d_dosuid:
?S: This variable conditionally defines the symbol DOSUID, which
?S: tells the C program that it should insert setuid emulation code
?S: on hosts which have setuid #! scripts disabled.
?S:.
?C:SETUID_SCRIPTS_ARE_SECURE_NOW:
?C: This symbol, if defined, indicates that the bug that prevents
?C: setuid scripts from being secure is not present in this kernel.
?C:.
?C:DOSUID:
?C: This symbol, if defined, indicates that the C program should
?C: check the script that it is executing for setuid/setgid bits, and
?C: attempt to emulate setuid/setgid on systems that have disabled
?C: setuid #! scripts because the kernel can't do it securely.
?C: It is up to the package designer to make sure that this emulation
?C: is done securely.
Among other things, it should do an fstat on
?C: the script it just opened to make sure it really is a setuid/setgid
?C: script, it should make sure the arguments passed correspond exactly
?C: to the argument on the #! line, and it should not trust any
?C: subprocesses to which it must pass the filename rather than the
?C: file descriptor of the script to be executed.
?C:.
?H:#$d_suidsafe SETUID_SCRIPTS_ARE_SECURE_NOW /**/
?H:#$d_dosuid DOSUID /**/
?H:.
?Y:TOP
?F:!reflect
?LINT: set d_suidsafe
?LINT: set d_dosuid
: see if setuid scripts can be secure
$cat <<EOM

```

Some kernels have a bug that prevents setuid #! scripts from being secure. Some sites have disabled setuid #! scripts because of this.

First let's decide if your kernel supports secure setuid #! scripts.  
(If setuid #! scripts would be secure but have been disabled anyway,

don't say that they are secure if asked.)

EOM

```
val="$undef"
if $test -d /dev/fd; then
echo "#!$ls" >reflect
chmod +x,u+s reflect
./reflect >flect
2>&1
if $contains "/dev/fd" flect >/dev/null; then
echo "Congratulations, your kernel has secure setuid scripts!" >&4
val="$define"
else
$cat <<EOM
```

If you are not sure if they are secure, I can check but I'll need a username and password different from the one you are using right now. If you don't have such a username or don't want me to test, simply enter 'none'.

EOM

```
rp='Other username to test security of setuid scripts with?'
dflt='none'
. ./myread
case "$ans" in
n|none)
case "$d_suidsafesafe" in
") echo "I'll assume setuid scripts are *not* secure." >&4
dflt=n;;
"$undef")
echo "Well, the $hint value is *not* secure." >&4
dflt=n;;
*) echo "Well, the $hint value *is* secure." >&4
dflt=y;;
esac
;;
*)
$rm -f reflect flect
echo "#!$ls" >reflect
chmod +x,u+s reflect
echo >flect
chmod a+w flect
echo "'su' will (probably) prompt you for '$ans's password.'"
su $ans -c './reflect >flect'
if $contains "/dev/fd" flect
>/dev/null; then
echo "Okay, it looks like setuid scripts are secure." >&4
dflt=y
```

```

else
  echo "I don't think setuid scripts are secure." >&4
  dflt=n
fi
;;
esac
rp='Does your kernel have *secure* setuid scripts?'
./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
fi
else
echo "I don't think setuid scripts are secure (no /dev/fd directory)." >&4
echo "(That's for file descriptors, not floppy disks.)"
val="$undef"
fi
set d_suidsaf
eval $setvar

$rm -f reflect flect

: now see if they want to do setuid emulation
echo " "
val="$undef"
case "$d_suidsaf" in
"$define")
val="$undef"
echo "No need to emulate SUID scripts since they are secure here." >& 4
;;
*)
$cat <<EOM
Some systems have disabled setuid scripts, especially systems where
setuid scripts cannot be secure. On systems where setuid scripts have
been disabled, the setuid/setgid bits on scripts are currently
useless. It is possible for $package to detect those bits
and emulate
setuid/setgid in a secure fashion. This emulation will only work if
setuid scripts have been disabled in your kernel.

EOM
case "$d_dosuid" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
rp="Do you want to do setuid/setgid emulation?"
./myread

```

```
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
;;
esac
set d_dosuid
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_dosuid.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorman1dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorman1dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorman1dir vendorman1direxp installvendorman1dir: man1dir Getfile \

Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorman1dir:

?S: This variable contains the name of the directory for man1

?S: pages. It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors

who distribute perl may wish to place their own

?S: man1 pages in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorman1direxp:

?S: This variable is the ~name expanded version of vendorman1dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorman1dir="

?S:installvendorman1dir:

?S: This variable is really the same as vendorman1direxp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installvendorman1dir

: Set the vendorman1dir variables

```
case "$vendorprefix" in
```

```
) vendorman1dir="
```

```
vendorman1direxp="
```

```
;;
```

```
*) : determine where vendor-supplied manual pages go.
```

```
case "$vendorman1dir" in
```

```
) dflt=`echo "$man1dir" | $sed "s#^$prefix#$vendorprefix#"` ;;
```

```
*) dflt=$vendorman1dir ;;
```

```
esac
```

```
case "$dflt" in
```

```
"|" ) dflt=none ;;
```

```
esac
```

```
fn=nd~+
```

```
rp='Pathname for
```

```
the vendor-supplied manual section 1 pages?'
```

```
./getfile
```

```
vendorman1dir="$ans"
```

```
vendorman1direxp="$ansexp"
```

```
;;
```

```
esac
```

: Use ' ' for none so value is preserved next time through Configure

```
$test X"$vendorman1dir" = "X" && vendorman1dir=' '
```

```
prefixvar=vendorman1dir
```

```
./installprefix
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorman1dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_htonl.U,v \$

```

?RCS: Revision 3.0.1.2 1994/08/29 16:09:25 ram
?RCS: patch32: now properly handles htonl() and friends when macros (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:45:00 ram
?RCS: patch23: now also check for htonl() macro (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:22 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_htonl: Inlibc Setvar i_niin i_sysin cat rm contains \
  cppstdin cppflags cppminus
?MAKE: -pick add $@ %<
?S:d_htonl:
?S: This variable conditionally
  defines HAS_HTONL if htonl() and its
?S: friends are available to do network order byte swapping.
?S:.
?C:HAS_HTONL (HTONL):
?C: This symbol, if defined, indicates that the htonl() routine (and
?C: friends htons() ntohl() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_HTONS (HTONS):
?C: This symbol, if defined, indicates that the htons() routine (and
?C: friends htonl() ntohl() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_NTOHL (NTOHL):
?C: This symbol, if defined, indicates that the ntohl() routine (and
?C: friends htonl() htons() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_NTOHS (NTOHS):
?C: This symbol, if defined, indicates that the ntohs() routine (and
?C: friends htonl() htons() ntohl()) are available to do network
?C: order byte swapping.
?C:.
?H:#$d_htonl HAS_HTONL /**/
?H:#$d_htonl HAS_HTONS /**/
?H:#$d_htonl HAS_NTOHL /**/
?H:#$d_htonl HAS_NTOHS /**/
?H:.
?F:!htonl.c
?LINT:set d_htonl
:
  see if htonl --and friends-- exists
val="
set htonl val

```

eval \$inlibc

: Maybe they are macros.

```
case "$sval" in
$undef)
$cat >htonl.c <<EOM
#include <stdio.h>
#include <sys/types.h>
#$i_niin I_NETINET_IN
#$i_sysin I_SYS_IN
#ifdef I_NETINET_IN
#include <netinet/in.h>
#endif
#ifdef I_SYS_IN
#include <sys/in.h>
#endif
#ifdef htonl
printf("Defined as a macro.");
#endif
EOM
$cpptest $cpptest $cpptest < htonl.c >htonl.E 2>/dev/null
if $contains 'Defined as a macro' htonl.E >/dev/null 2>&1; then
val="$define"
echo "But it seems to be defined as a macro." >&4
fi
$rm -f htonl.?
;;
esac
set d_htonl
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_htonl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:uselongdouble: Myread Oldconfig Setvar cat test usemorebits

?MAKE: -pick add \$@ %<

?Y:TOP

?S:uselongdouble:

?S: This variable conditionally defines the USE\_LONG\_DOUBLE symbol,

?S: and indicates that long doubles should be used when available.

?S:.

?C:USE\_LONG\_DOUBLE:

?C: This symbol, if defined, indicates that long doubles should

?C: be used when available.

?C:.

?H:%<:#ifndef USE\_LONG\_DOUBLE

?H:%<:#\$uselongdouble USE\_LONG\_DOUBLE /\*\*/

?H:%<:#endif

?H:.

?LINT:extern ccflags

?LINT:use usemorebits

?F!:uselongdouble.cbu

: Check for uselongdouble support

case "\$ccflags" in

\*-DUSE\_LONG\_DOUBLE\*|-DUSE\_MORE\_BITS\*) uselongdouble="\$define" ;;

esac

case "\$uselongdouble" in

\$define|true|[yY]\*) dflt='y';;

\*)

dflt='n';;

esac

cat <<EOM

Perl can be built to take advantage of long doubles which

(if available) may give more accuracy and range for floating point numbers.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

rp="Try to use long doubles if available?"

./myread

case "\$ans" in

y|Y) val="\$define" ;;

\*) val="\$undef" ;;

esac

set uselongdouble

eval \$setvar

case "\$uselongdouble" in

true|[yY]\*) uselongdouble="\$define" ;;

esac

: Look for a hint-file generated 'call-back-unit'. If the

: user has specified that long doubles should be used,

: we may need to set or change some other defaults.

if \$test -f uselongdouble.cbu; then

echo "Your platform has some specific hints regarding long doubles, using them..."



```

    ./uselongdouble.cbu
else
    case "$uselongdouble" in
$define)
    $cat <<EOM
(Your platform does not have any specific hints for long doubles.)
EOM
;;
    esac
fi

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/uselongdbl.U
```

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?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:perladmin: cf\_email Oldconfig Myread cat

?MAKE: -pick add \$@ %<

?Y:TOP

?S:perladmin:

?S: Electronic mail address of the perl5 administrator.

?S:.

: Ask e-mail of administrator

\$cat <<EOM

If you or somebody else will be maintaining perl at your site, please fill in the correct e-mail address here so that they may be contacted if necessary. Currently, the "perlbug" program included with perl will send mail to this address in addition to perlbug@perl.org. You may enter "none" for no administrator.

EOM

```
case "$perladmin" in
```

```
) dflt="$cf_email";;
```

```
*) dflt="$perladmin";;
```

```
esac
```

```
rp='Perl administrator e-mail address'
```

```
./myread
```

```
perladmin="$ans"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/perladmin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: rcs_branch.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: rcs_branch.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:40 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:rcs_branch: Myread contains Loc
?MAKE: -pick add $@ %<
?S:rcs_branch:
?S: This variable will hold "true" if rcs can take the -b<revision>
?S: option, which can make Life Easier on those folks who like to run
?S: rcsdiff manually.
?S:.
?T:xxx
: Tra la la la la
echo " "
echo "Checking to see if RCS understands the -b switch..." >&4
xxx=`./loc
rcs "$pth`
case "$xxx" in
")
rcs_branch=false
echo "Oh. You don't seem to have RCS here."
;;
*)
rcs > rcsbranch.out 2>&1
if $contains 'b\[rev\]' rcsbranch.out >/dev/null 2>&1 ; then
rcs_branch=true
echo "Nice! Your RCS is spiffy!"
else
rcs_branch=false
echo "Well, at least you have RCS. You know, a newer version is available."
fi
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```

### 5.32.1~rc1/dist/U/rcs\_branch.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: man3dir.U,v 3.1 1999/07/08 20:52:19 doughera Exp doughera \$

?RCS:

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?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: man3dir.U,v \$

?RCS: Revision 3.1 1999/07/08 20:52:19 doughera

?RCS: Updated for perl5.005\_5x

?RCS:

?RCS: Revision 3.0.1.1 1997/02/28 16:10:34 ram

?RCS: patch61: created

?RCS:

?X: This was originally specific to perl5. Since perl5 has man pages that

?X: go in both man1/ and man3/ directories, we need both man1dir

?X: and man3dir. This unit is basically dist's mansrc.U with

?X: man3 used instead

of man everywhere.

?X: I then added various tests because perl5 has \*lots\* of man3

?X: pages with long file names. -- ADO

?X:

?MAKE:man3dir man3direxp man3ext installman3dir: cat nroff Loc Oldconfig \

sed man1dir package package Getfile Setprefixvar Prefixit Prefixup \

d\_flexfnam privlib Myread test

?MAKE: -pick add \$@ %<

?Y:TOP

?D:man3dir="

?S:man3dir:

?S: This variable contains the name of the directory in which manual

?S: source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S:.

?D:man3direxp="

?S:man3direxp:

?S: This variable is the same as the man3dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installman3dir="

?S:installman3dir:

?S: This variable is really the same as man3direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: man3direxp only

points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?S:man3ext:

?S: This variable contains the extension that the manual page should

?S: have: one of 'n', 'l', or '3'. The Makefile must supply the 'l'.

?S: See man3dir.

?S:.

?T:prog tdfmt

?LINT:change prefixvar

?LINT:set man3direxp

: determine where library module manual pages go

set man3dir man3dir none

eval \$prefixit

\$cat <<EOM

\$spackage has manual pages for many of the library modules.

EOM

```
case "$nroff" in
```

```
nroff)
```

```
$cat <<'EOM'
```

However, you don't have nroff, so they're probably useless to you.

EOM

```
case "$man3dir" in
```

```
") man3dir="none";;
```

```
esac;;
```

```
esac
```

```
case "$d_flexfnam" in
```

```
undef)
```

```
$cat <<'EOM'
```

However, your system can't handle the long file names like File::Basename.3.

EOM

```
case "$man3dir" in
```

```
") man3dir="none";;
```

```
esac;;
```

```
esac
```

echo "If you don't want the manual sources installed, answer 'none'."

?X: In 5.005\_57 and earlier, I had the following notes:

?X:

We do not use /usr/local/man/man3 because some man programs will

?X: only show the /usr/local/man/man3 contents, and not the system ones,

?X: thus man less will show the perl module less.pm, but not the system

?X: less command. We might also conflict with Tcl man pages.

?X: However, something like /opt/perl/man/man3 is fine.

?X:

?X: However, opinion seems to be shifting such that 'man POSIX' ought

?X: to just work. -- Andy Dougherty July 8, 1999

?X:

?X: remove any trailing -3.0 or other version indication from \$package

```
prog=`echo $package | $sed 's/-*[0-9.]*$//`
```

```
case "$man3dir" in
```

```
) dflt=`echo "$man1dir" | $sed -e 's/man1/man3/g' -e 's/man\.1/man\.3/g`
```

```
if $test -d "$privlib/man/man3"; then
```

```
cat <<EOM >&4
```

WARNING: Previous versions of perl installed man3 pages into

\$privlib/man/man3. This version will suggest a

new default of \$dflt.

EOM

```
tdflt=$dflt
```

```
dflt='n'
```

```
rp='Do you wish to preserve the old behavior?(y/n)'
```

```
./myread
```

```
case "$ans" in
```

```
y*) dflt="$privlib/man/man3"
```

```
::
```

```
*) dflt=$tdflt ;;
```

```
esac
```

```
fi
```

```
::
```

```
*) dflt="$man3dir" ;;
```

```
esac
```

```
case "$dflt" in
```

```
' ') dflt=none ;;
```

```
esac
```

```
echo " "
```

```
fn=dn+~
```

```
rp="Where do the $package library man pages (source) go?"
```

```
./getfile
```

```
prefixvar=man3dir
```

```
./setprefixvar
```

```
case "$man3dir" in
```

```
) man3dir=' '
```

```
installman3dir=";;
```

```
esac
```

: What suffix to use on installed man pages

```
case "$man3dir" in
```

```
' )
```

```

man3ext='0'
;;
*)
rp="What suffix should be used for the $package library man pages?"
case "$man3ext" in
") case "$man3dir" in
*3) dflt=3 ;;
*3p) dflt=3p ;;
*3pm) dflt=3pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L3) dflt=L3;;
*) dflt=3;;
esac
;;
*) dflt="$man3ext";;
esac
./myread
man3ext="$ans"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/man3dir.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getspnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getspnam\_r getsppnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_shadow extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getspnam\_r:

?S: This variable conditionally defines the HAS\_GETSPNAM\_R symbol,

?S: which indicates to the C program that the getsppnam\_r()

?S: routine is available.

?S:.

?S:getsppnam\_r\_proto:

?S: This variable encodes the prototype of getspnam\_r.

?S: It is zero if d\_getspnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getspnam\_r

?S: is defined.

?S:.

?C:HAS\_GETSPNAM\_R:

?C: This symbol, if defined, indicates that the getspnam\_r routine

?C: is available

to getspnam re-entrantly.

?C:.

?C:GETSPNAM\_R\_PROTO:

?C: This symbol encodes the prototype of getspnam\_r.

?C: It is zero if d\_getspnam\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getspnam\_r

?C: is defined.

?C:.

?H:#\$d\_getspnam\_r HAS\_GETSPNAM\_R /\*\*/

?H:#define GETSPNAM\_R\_PROTO \$getspnam\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getspnam\_r\_proto

: see if getspnam\_r exists

set getspnam\_r d\_getspnam\_r

eval \$inlibc

case "\$d\_getspnam\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_shadow shadow.h"

case "\$d\_getspnam\_r\_proto:\$usetthreads" in

":define") d\_getspnam\_r\_proto=define

set d\_getspnam\_r\_proto getspnam\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_getspnam\_r\_proto" in

define)

case "\$getspnam\_r\_proto" in

"|0) try='int getspnam\_r(const char\*, struct spwd\*, char\*, size\_t, struct spwd\*\*);'

./protochk "\$extern\_C \$try" \$hdrs && getspnam\_r\_proto=I\_CSBWR ;;

esac

case "\$getspnam\_r\_proto" in

"|0) try='struct spwd\* getspnam\_r(const char\*, struct

spwd\*, char\*, int);'

./protochk "\$extern\_C \$try" \$hdrs && getspnam\_r\_proto=S\_CSBI ;;

esac

case "\$getspnam\_r\_proto" in

"|0) d\_getspnam\_r=undef

getspnam\_r\_proto=0

echo "Disabling getspnam\_r, cannot determine prototype." >&4 ;;

\* ) case "\$getspnam\_r\_proto" in

```

REENTRANT_PROTO*) ;;
*) getspname_r_proto="REENTRANT_PROTO_${getspnam_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getspnam_r has no prototype, not using it." >&4 ;;
esac
d_getspnam_r=undef
getspnam_r_proto=0
;;
esac
;;
*) getspname_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/threads/d_getspnam_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Hasproto.U \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a \$hasproto string that is used internally

?X: by Configure to check if this system has a prototype for a

?X: particular function

?X:

?X: To use it, say something like:

?X: set d\_getnetent\_proto getnetent \$i\_netdb netdb.h

?X: eval \$hasproto

?X: Or, for more complicated sets of headers, do something like

?X: hdrs="\$define sys/types.h

?X: \$i\_systemtime sys/time.h

?X: \$i\_sysselect sys/select.h

?X: \$i\_netdb netdb.h"

?X: set d\_getnetent\_proto getnetent \$hdrs

?X: eval \$hasproto

?X:

?X: There is also an 'escape' hatch built in. If you have a pair

?X: of args 'literal 'stuff' then 'stuff' gets included literally

?X: into the test program. See Protochk.U for more details.



```

?X:
?MAKE:Hasproto:
  Setvar cppstdin cppflags cppminus contains rm_try test
?MAKE: -pick add $@ %<
?T:func varname
?F:!try.c
?V:hasproto
: Define hasproto macro for Configure internal use
hasproto='varname=$1; func=$2; shift; shift;
while $test $# -ge 2; do
  case "$1" in
  $define) echo "#include <$2>";;
  literal) echo "$2" ;;
  esac ;
    shift 2;
done > try.c;
$cppstdin $cppflags $cppminus < try.c > tryout.c 2>/dev/null;
if $contains "$func.*(" tryout.c >/dev/null 2>&1; then
  echo "$func() prototype found.";
  val="$define";
else
  echo "$func() prototype NOT found.";
  val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try tryout.c'

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/Hasproto.U
```

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```
?RCS: $Id: package.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: package.U,v $
```

```
?RCS: Revision 3.0.1.3 1994/10/29 16:27:21 ram
```

```
?RCS: patch36: beware of non-ascii character sets when translating case
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1993/11/10 17:37:02 ram
```

```

?RCS: patch14: skip definition of spackage if not otherwise used
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:11:10 ram
?RCS: patch10: added spackage, suitable for starting sentences
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:28 ram
?RCS: Baseline for dist 3.0
netwide release.
?RCS:
?MAKE:package spackage: Nothing
?MAKE: -pick wipe $@ %<
?S:package:
?S: This variable contains the name of the package being constructed.
?S: It is primarily intended for the use of later Configure units.
?S:.
?S:spackage:
?S: This variable contains the name of the package being constructed,
?S: with the first letter uppercased, i.e. suitable for starting
?S: sentences.
?S:.
?X: dist-4 has defined PACKAGE: here, which clashes with perly.h
?X: as package is a reserved keyword in perl
?T:first last
: set package name
package='<PACKAGENAME>'
@if spackage
first=`echo $package | sed -e 's/^(.).*\1/'`
last=`echo $package | sed -e 's/^(.*)\1/'`
?X:
?X: So early in the Configure script, we don't have ./tr set up and can't
?X: include Tr in our dependency or that would create a cycle. Therefore,
?X: we have to somehow duplicate the work done in Tr. That's life.
?X:
case ""echo AbyZ | tr '[:lower:]' '[:upper:]' 2>/dev/null""`echo AbyZ | tr '[:upper:]' '[:lower:]'
2>/dev/null` in
ABYZ-abyz) spackage=`echo $first | tr '[:lower:]' '[:upper:]'`$last;;
*) spackage=`echo $first | tr '[a-z]' '[A-Z]'`$last;;
esac
@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/package.U

```

No license file was found, but licenses were detected in source scan.

/\*

```

* $Id: rename.C,v 3.0.1.1 1994/01/24 13:58:42 ram Exp ram $

```

\*

```

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* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*
* $Log: rename.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:42 ram
* patch16: created
*
*/

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/C/fake/rename.C

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_times.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:07:50 ram
?RCS: patch56: typo fix, sytem -> system
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:14:00 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: What is the type returned by times() ?
?X:
?X: Force inclusion of <sys/types.h>
?X:INC: i_systypes
?MAKE:d_times clocktype: Csym Myread Typedef i_systimes
?MAKE: -pick
add $@ %<
?S:d_times:

```

?S: This variable conditionally defines the HAS\_TIMES symbol, which indicates  
?S: that the times() routine exists. The times() routine is normally  
?S: provided on UNIX systems. You may have to include <sys/times.h>.  
?S:.

?S:clocktype:

?S: This variable holds the type returned by times(). It can be long,  
?S: or clock\_t on BSD sites (in which case <sys/types.h> should be  
?S: included).

?S:.

?C:HAS\_TIMES (TIMES):

?C: This symbol, if defined, indicates that the times() routine exists.

?C: Note that this became obsolete on some systems (SUNOS), which now

?C: use getrusage(). It may be necessary to include <sys/times.h>.

?C:.

?C:Clock\_t (CLOCKTYPE):

?C: This symbol holds the type returned by times(). It can be long,

?C: or clock\_t on BSD sites (in which case <sys/types.h> should be

?C: included).

?C:.

?H:#\$d\_times HAS\_TIMES /\*\*/

?H:#define Clock\_t \$clocktype /\* Clock time \*/

?H:.

?T:val inc

: see if times exists

echo " "

if set times val -f d\_times; eval \$csym;

\$val; then

echo 'times() found.' >&4

d\_times="\$define"

inc="

case "\$i\_systimes" in

"\$define") inc='sys/times.h';;

esac

set clock\_t clocktype long stdio.h sys/types.h \$inc

eval \$typedef

dflt="\$clocktype"

echo " "

rp="What type is returned by times() on this system?"

. ./myread

clocktype="\$ans"

else

echo 'times() NOT found, hope that will do.' >&4

d\_times="\$undef"

?X: The following is needed for typedef (won't like an empty variable)

clocktype='int'

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_times.U

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?RCS: \$Id\$

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?RCS:

?MAKE:d\_faststdio: Setvar \  
d\_stdstdio d\_stdio\_ptr\_lval d\_stdio\_cnt\_lval d\_stdio\_ptr\_lval\_sets\_cnt

?MAKE: -pick add \$@ %<

?MAKE: -pick add \$@ %<

?S:d\_faststdio:

?S: This variable conditionally defines the HAS\_FAST\_STDIO symbol,

?S: which indicates to the C program that the "fast stdio" is available

?S: to manipulate the stdio buffers directly.

?S:.

?C:HAS\_FAST\_STDIO:

?C: This symbol, if defined, indicates that the "fast stdio"

?C: is available to manipulate the stdio buffers directly.

?C:.

?H:#\$d\_faststdio HAS\_FAST\_STDIO /\*\*/

?H:.

?LINT:set d\_faststdio

: see if fast\_stdio exists

val="\$undef"

case "\$d\_stdstdio:\$d\_stdio\_ptr\_lval" in

"\$define:\$define")

case "\$d\_stdio\_cnt\_lval\$d\_stdio\_ptr\_lval\_sets\_cnt" in

\*\$define\*)

echo "You

seem to have 'fast stdio' to directly manipulate the stdio buffers." >& 4

val="\$define"

::

esac

::

esac

set d\_faststdio

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_faststdio.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: fpostype.U,v 3.0.1.2 1994/08/29 16:20:52 ram Exp \$

```

?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: fpostype.U,v $
?RCS: Revision 3.0.1.2 1994/08/29 16:20:52 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:59:59 ram
?RCS: patch30: created
?RCS:
?MAKE:fpostype: Myread Typedef
?MAKE: -pick add $@ %<
?S:fpostype:
?S: This variable defines Fpos_t to be something like fpos_t, long,
?S: uint, or whatever type is used to declare file positions in libc.
?S:.
?C:Fpos_t:
?C: This symbol holds
the type used to declare file positions in libc.
?C: It can be fpos_t, long, uint, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Fpos_t $fpostype /* File position type */
?H:.
?LINT:set fpostype
: see what type file positions are declared as in the library
rp="What is the type for file position used by fsetpos()?"
set fpos_t fpostype long stdio.h sys/types.h
eval $typedef_ask

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/typedefs/fpostype.U
No license file was found, but licenses were detected in source scan.

```

```

?RCS: Copyright (c) 2016 Dagfinn Ilmari Mannsker & H.Merijn Brand
?RCS:
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_siginfo_si_errno d_siginfo_si_pid d_siginfo_si_uid d_siginfo_si_addr d_siginfo_si_status
d_siginfo_si_band d_siginfo_si_value d_siginfo_si_fd: d_sigaction pidtype uidtype Hasfield_t

```

?MAKE: -pick add \$@ %<

?S:d\_siginfo\_si\_errno:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_ERRNO symbol,  
?S: which indicates that the siginfo\_t struct has the si\_errno member.  
?S:.

?S:d\_siginfo\_si\_pid:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_PID symbol,  
?S: which indicates that the siginfo\_t struct has the si\_pid member.  
?S:.

?S:d\_siginfo\_si\_uid:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_UID symbol,  
?S: which indicates that the siginfo\_t struct has the si\_uid member.  
?S:.

?S:d\_siginfo\_si\_addr:  
?S: This  
variable conditionally defines the HAS\_SIGINFO\_SI\_ADDR symbol,  
?S: which indicates that the siginfo\_t struct has the si\_addr member.  
?S:.

?S:d\_siginfo\_si\_status:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_STATUS symbol,  
?S: which indicates that the siginfo\_t struct has the si\_status member.  
?S:.

?S:d\_siginfo\_si\_band:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_BAND symbol,  
?S: which indicates that the siginfo\_t struct has the si\_band member.  
?S:.

?S:d\_siginfo\_si\_value:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_VALUE symbol,  
?S: which indicates that the siginfo\_t struct has the si\_value member.  
?S:.

?S:d\_siginfo\_si\_fd:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_FD symbol,  
?S: which indicates that the siginfo\_t struct has the si\_fd member.  
?S:.

?C:HAS\_SIGINFO\_SI\_ERRNO:  
?C: This symbol, if defined, indicates that siginfo\_t has the  
?C: si\_errno member  
?C:.

?C:HAS\_SIGINFO\_SI\_PID:  
?C: This  
symbol, if defined, indicates that siginfo\_t has the  
?C: si\_pid member  
?C:.

?C:HAS\_SIGINFO\_SI\_UID:  
?C: This symbol, if defined, indicates that siginfo\_t has the  
?C: si\_uid member  
?C:.

?C:HAS\_SIGINFO\_SI\_ADDR:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_addr member

?C:.

?C:HAS\_SIGINFO\_SI\_STATUS:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_status member

?C:.

?C:HAS\_SIGINFO\_SI\_BAND:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_band member

?C:.

?C:HAS\_SIGINFO\_SI\_VALUE:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_value member

?C:.

?C:HAS\_SIGINFO\_SI\_FD:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_fd member

?C:.

?H:#\$d\_siginfo\_si\_errno HAS\_SIGINFO\_SI\_ERRNO /\*\*/

?H:#\$d\_siginfo\_si\_pid HAS\_SIGINFO\_SI\_PID /\*\*/

?H:#\$d\_siginfo\_si\_uid HAS\_SIGINFO\_SI\_UID /\*\*/

?H:#\$d\_siginfo\_si\_addr HAS\_SIGINFO\_SI\_ADDR /\*\*/

?H:#\$d\_siginfo\_si\_status HAS\_SIGINFO\_SI\_STATUS /\*\*/

?H:#\$d\_siginfo\_si\_band HAS\_SIGINFO\_SI\_BAND /\*\*/

?H:#\$d\_siginfo\_si\_value HAS\_SIGINFO\_SI\_VALUE /\*\*/

?H:#\$d\_siginfo\_si\_fd HAS\_SIGINFO\_SI\_FD /\*\*/

?H:.

:

see what siginfo fields we have

case "\$d\_sigaction" in

"\$define")

echo "Checking if your siginfo\_t has si\_errno field...">&4

set d\_siginfo\_si\_errno siginfo\_t int si\_errno \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_pid field...">&4

set d\_siginfo\_si\_pid siginfo\_t \$pidtype si\_pid \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_uid field...">&4

set d\_siginfo\_si\_uid siginfo\_t \$uidtype si\_uid \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_addr field...">&4

set d\_siginfo\_si\_addr siginfo\_t "void \*" si\_addr \$d\_sigaction signal.h

eval \$hasfield\_t;



```

echo "Checking if your siginfo_t has si_status field...">&4
set d_siginfo_si_status siginfo_t int si_status $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_band field...">&4
set
d_siginfo_si_band siginfo_t long si_band $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_value field...">&4
set d_siginfo_si_value siginfo_t "union sigval" si_value $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_fd field...">&4
set d_siginfo_si_fd siginfo_t int si_fd $d_sigaction signal.h
eval $hasfield_t;

;;
*)
d_siginfo_si_errno="$undef"
d_siginfo_si_pid="$undef"
d_siginfo_si_uid="$undef"
d_siginfo_si_addr="$undef"
d_siginfo_si_status="$undef"
d_siginfo_si_band="$undef"
d_siginfo_si_value="$undef"
d_siginfo_si_fd="$undef"
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_siginfo\_si.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fchdir: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchdir:

?S: This variable conditionally defines the HAS\_FCHDIR symbol, which

?S: indicates to the C program that the fchdir() routine is available.

?S:.

?C:HAS\_FCHDIR:

?C: This symbol, if defined, indicates that the fchdir routine is

?C: available to change directory using a file descriptor.

?C:.

?H:#\$d\_fchdir HAS\_FCHDIR /\*\*/

?H:.

?LINT:set d\_fchdir

: see if fchdir exists

set fchdir d\_fchdir

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fchdir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ulimit.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_ulimit.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_ulimit: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ulimit:

?S: This variable conditionally defines HAS\_ULIMIT if ulimit() is

?S: available to get the user limits.

?S:.

?C:HAS\_ULIMIT (ULIMIT):

?C: This symbol, if defined, indicates that the ulimit system call is

?C: available to get the user limits.

?C:.

?H:#\$d\_ulimit HAS\_ULIMIT /\*\*/

?H:.

?LINT:set

d\_ulimit

: see if ulimit exists

set ulimit d\_ulimit

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_ulimit.U

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?RCS: \$Id: i\_stdlib.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: i\_stdlib.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:27 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_stdlib: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_stdlib:

?S: This variable conditionally defines the I\_STDLIB symbol, which

?S: indicates to the C program that <stdlib.h> exists and should

?S: be included.

?S:.

?C:I\_STDLIB:

?C: This symbol, if defined, indicates that <stdlib.h> exists and should

?C: be included.

?C:.

?H:#\$i\_stdlib I\_STDLIB /\*\*/

?H:.

?LINT:set

i\_stdlib

: see if stdlib is available

set stdlib.h i\_stdlib

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_stdlib.U

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

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 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?MAKE:d\_getspnam: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_getspnam:  
 ?S: This variable conditionally defines HAS\_GETSPNAM if getsppnam() is  
 ?S: available to retrieve SysV shadow password entries by name.  
 ?S:.  
 ?C:HAS\_GETSPNAM:  
 ?C: This symbol, if defined, indicates that the getsppnam system call is  
 ?C: available to retrieve SysV shadow password entries by name.  
 ?C:.  
 ?H:#\$d\_getspnam HAS\_GETSPNAM /\*\*/  
 ?H:.  
 ?LINT:set d\_getspnam  
 : see if getsppnam exists  
 set getsppnam d\_getspnam  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getspnam.U

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 ?RCS:  
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 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: d\_castneg.U,v \$  
 ?RCS: Revision 3.0.1.2 1995/05/12 12:11:21 ram  
 ?RCS: patch54: made sure cc and cflags are conditional dependencies  
 ?RCS: patch54: added improved test case for Interactive Unix  
 ?RCS:  
 ?RCS: Revision 3.0.1.1 1994/10/29 16:10:50 ram  
 ?RCS: patch36: don't forget to tell user about compilation failures (ADO)  
 ?RCS: patch36: declare signal handler correctly using 'signal\_t' (ADO)  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:05:47 ram  
 ?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:
?X:
?X: Can
    the compiler cast negative / odd floats to unsigned values.
?X:
?MAKE:d_castneg castflags: cat +cc +ccflags rm_try Setvar signal_t
?MAKE: -pick add $@ %<
?S:d_castneg:
?S: This variable conditionally defines CASTNEG, which indicates
?S: whether the C compiler can cast negative float to unsigned.
?S:.
?S:castflags:
?S: This variable contains a flag that precise difficulties the
?S: compiler has casting odd floating values to unsigned long:
?S: 0 = ok
?S: 1 = couldn't cast < 0
?S: 2 = couldn't cast >= 0x80000000
?S: 4 = couldn't cast in argument expression list
?S:.
?C:CASTNEGFLOAT:
?C: This symbol is defined if the C compiler can cast negative
?C: numbers to unsigned longs, ints and shorts.
?C:.
?C:CASTFLAGS:
?C: This symbol contains flags that say what difficulties the compiler
?C: has casting odd floating values to unsigned long:
?C: 0 = ok
?C: 1 = couldn't cast < 0
?C: 2 = couldn't cast >= 0x80000000
?C: 4 = couldn't cast in argument expression list
?C:.
?H:#$d_castneg CASTNEGFLOAT /**/
?H:#define
    CASTFLAGS $castflags /**/
?H:.
?F:!try
?LINT:set d_castneg
: check for ability to cast negative floats to unsigned
echo " "
echo 'Checking whether your C compiler can cast negative float to unsigned.' >&4
$cat >try.c <<EOCP
#include <sys/types.h>
#include <signal.h>
$signal_t blech() { exit(7); }
$signal_t blech_in_list() { exit(4); }
unsigned long dummy_long(p) unsigned long p; { return p; }
unsigned int dummy_int(p) unsigned int p; { return p; }
unsigned short dummy_short(p) unsigned short p; { return p; }

```

```

int main()
{
double f = -123.;
unsigned long along;
unsigned int aint;
unsigned short ashort;
int result = 0;

signal(SIGFPE, blech);
along = (unsigned long)f;
aint = (unsigned int)f;
ashort = (unsigned short)f;
if (along != (unsigned long)-123)
result |= 1;
if (aint != (unsigned int)-123)
result |= 1;
if (ashort != (unsigned short)-123)
result |= 1;
f = (double)0x40000000;
f = f + f;
along = 0;
along = (unsigned long)f;
if
(along != 0x80000000)
result |= 2;
f -= 1.;
along = 0;
along = (unsigned long)f;
if (along != 0x7fffffff)
result |= 1;
f += 2.;
along = 0;
along = (unsigned long)f;
if (along != 0x80000001)
result |= 2;
if (result)
exit(result);
?X:
?X: The following is a test for Interactive Unix Version 4.1, which
?X: has an 'improved' compiler which can correctly cast negative
?X: floats in expression lists, but apparently not in argument lists.
?X: Contributed by Winfried Koenig <win@incom.rhein-main.de>
?X:
signal(SIGFPE, blech_in_list);
f = 123.;
along = dummy_long((unsigned long)f);
aint = dummy_int((unsigned int)f);
ashort = dummy_short((unsigned short)f);

```

```

if (along != (unsigned long)123)
    result |= 4;
if (aint != (unsigned int)123)
    result |= 4;
if (ashort != (unsigned short)123)
    result |= 4;
exit(result);

}
EOCP
if $cc $ccflags -o try try.c >/dev/null 2>&1; then
    ./try
    castflags=$?
else
    echo "(I can't seem to compile the test program--assuming it can't)"
    castflags=7
fi
case
"$castflags" in
0) val="$define"
    echo "Yup, it can."
    ;;
*) val="$undef"
    echo "Nope, it can't."
    ;;
esac
set d_castneg
eval $setvar
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_castneg.U
```

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```
?RCS: $Id: d_pause.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_pause.U,v $
```

?RCS: Revision 3.0.1.1 1994/08/29 16:09:54 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_pause: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_pause:  
?S: This variable conditionally defines the HAS\_PAUSE symbol, which  
?S: indicates to the C program that the pause() routine is available  
?S: to suspend a process until a signal is received.  
?S:.  
?C:HAS\_PAUSE :  
?C: This symbol,  
if defined, indicates that the pause routine is  
?C: available to suspend a process until a signal is received.  
?C:.  
?H:#\$d\_pause HAS\_PAUSE /\*\*/  
?H:.  
?LINT:set d\_pause  
: see if pause exists  
set pause d\_pause  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_pause.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_poll.U 15 2006-08-30 18:21:51Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_poll.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:38:17 ram  
?RCS: patch61: mention that <poll.h> can be included if HAS\_POLL defined  
?RCS:  
?RCS: Revision 3.0.1.1 1995/01/11 15:26:31 ram  
?RCS: patch45: created  
?RCS:  
?MAKE:d\_poll: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_poll:  
?S: This variable conditionally defines the HAS\_POLL symbol, which



?S: indicates to the C program that the poll() routine is available  
?S: to poll active file descriptors.  
?S:.  
?C:HAS\_POLL  
:  
?C: This symbol, if defined, indicates that the poll routine is  
?C: available to poll active file descriptors. Please check I\_POLL and  
?C: I\_SYS\_POLL to know which header should be included as well.  
?C:.  
?H:#\$d\_poll HAS\_POLL /\*\*/  
?H:.  
?LINT:set d\_poll  
: see if poll exists  
set poll d\_poll  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_poll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: models.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: models.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:13:17 ram  
?RCS: patch61: added ?F: metalint hint  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:02:39 ram  
?RCS: patch6: added default for large  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:17 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:models split small medium large huge: test cat Myread sysman Oldconfig \  
Loc contains rm  
?MAKE: -pick add \$@ %<  
?S:models:  
?S: This variable contains  
the list of memory models supported by this  
?S: system. Possible component values are none, split, unsplit, small,

?S: medium, large, and huge. The component values are space separated.

?S:.

?S:split:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program that will run in separate I and D space, for those

?S: machines that support separation of instruction and data space. It is

?S: up to the Makefile to use this.

?S:.

?S:small:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a small memory model. It is up to

?S: the Makefile to use this.

?S:.

?S:medium:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a medium memory model. If the

?S: medium model is not supported, contains the flag to produce large

?S: model programs. It is up to the Makefile to use this.

?S:.

?S:large:

?S: This variable contains a flag

which will tell the C compiler and loader

?S: to produce a program running with a large memory model. It is up to

?S: the Makefile to use this.

?S:.

?S:huge:

?S: This variable contains a flag which will tell the C compiler and loader

?S: to produce a program running with a huge memory model. If the

?S: huge model is not supported, contains the flag to produce large

?S: model programs. It is up to the Makefile to use this.

?S:.

?T:unsplit tans modelcc

?F:!pdp11

?D:large="

?LINT:extern cc

: see what memory models we can support

case "\$models" in

")

?X: We may not use Cppsym or we get a circular dependency through cc.

?X: But this should work regardless of which cc we eventually use.

```
$cat >pdp11.c <<'EOP'
```

```
int main() {
```

```
#ifdef pdp11
```

```
exit(0);
```

```
#else
```

```
exit(1);
```

```
#endif
```

```
}
```

EOP

?X: Run cc in a subshell in case they don't have a 'cc' command.

?X: Presumably they do have gcc or something.

```
case "$cc" in
") modelcc="$cc" ;;
*) modelcc="cc" ;;
esac
( $modelcc -o pdp11 pdp11.c ) >/dev/null 2>&1
if
$test -f pdp11 && ./pdp11 2>/dev/null; then
dflt='unsplit split'
else
tans=`./loc . X /lib/small /lib/large /usr/lib/small /usr/lib/large /lib/medium /usr/lib/medium /lib/huge`
case "$tans" in
X) dflt='none';;
*) if $test -d /lib/small || $test -d /usr/lib/small; then
dflt='small'
else
dflt="
fi
if $test -d /lib/medium || $test -d /usr/lib/medium; then
dflt="$dflt medium"
fi
if $test -d /lib/large || $test -d /usr/lib/large; then
dflt="$dflt large"
fi
if $test -d /lib/huge || $test -d /usr/lib/huge; then
dflt="$dflt huge"
fi
esac
fi;;
*) dflt="$models";;
esac
$cat <<EOM
```

Some systems have different model sizes. On most systems they are called small, medium, large, and huge. On the PDP11 they are called unsplit and split. If your system doesn't support different memory models, say "none". If you wish to force everything to one memory model, say "none" here and put the appropriate flags later when it asks you for other cc and ld flags.

Venix systems may wish to put "none" and let the compiler figure things out. (In the following question multiple model names should be space separated.)

The default for most systems is "none".

EOM

rp="Which memory models are supported?"

```

./myread
models="$ans"

case "$models" in
none)
small="
medium="
large="
huge="
unsplit="
split="
;;
*split)
case "$split" in
") if $contains '-i' $sysman/ld.1 >/dev/null 2>&1 || \
    $contains '-i' $sysman/cc.1 >/dev/null 2>&1; then
dflt='-i'
else
dflt='none'
fi;;
*) dflt="$split";;
esac
rp="What flag indicates separate I and D space?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
split="$tans"
unsplit="";;
*large*|*small*|*medium*|*huge*)
case "$models" in
*large*)
case "$large" in
") dflt='-M!';;
*) dflt="$large";;
esac
rp="What flag indicates large model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
large="$tans";;
*) large="";;
esac
case "$models"

```

```

in
*huge*) case "$huge" in
  ") dflt='-Mh';;
  *) dflt="$huge";;
esac
rp="What flag indicates huge model?"
./myread
tans="$sans"
case "$tans" in
  none) tans="";
esac
huge="$tans";;
*) huge="$large";;
esac
case "$models" in
*medium*) case "$medium" in
  ") dflt='-Mm';;
  *) dflt="$medium";;
esac
rp="What flag indicates medium model?"
./myread
tans="$sans"
case "$tans" in
  none) tans="";
esac
medium="$tans";;
*) medium="$large";;
esac
case "$models" in
*small*) case "$small" in
  ") dflt='none';;
  *) dflt="$small";;
esac
rp="What flag indicates small model?"
./myread
tans="$sans"
case "$tans" in
  none) tans="";
esac
small="$tans";;
*) small="";;
esac
;;
*)
echo "Unrecognized memory models--you may have to edit Makefile.SH" >&4
;;
esac
$rm -f pdp11.* pdp11

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/models.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setservent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_setservent\_r setservent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_setservent\_r:

?S: This variable conditionally defines the HAS\_SETSERVENT\_R symbol,

?S: which indicates to the C program that the setservent\_r()

?S: routine is available.

?S:.

?S:setservent\_r\_proto:

?S: This variable encodes the prototype of setservent\_r.

?S: It is zero if d\_setservent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setservent\_r

?S: is defined.

?S:.

?C:HAS\_SETSERVENT\_R:

?C: This symbol, if defined, indicates that the setservent\_r routine

?C: is

available to setservent re-entrantly.

?C:.

?C:SETSERVENT\_R\_PROTO:

?C: This symbol encodes the prototype of setservent\_r.

?C: It is zero if d\_setservent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setservent\_r

?C: is defined.

?C:.

?H:#\$d\_setservent\_r HAS\_SETSERVENT\_R /\*\*/

?H:#define SETSERVENT\_R\_PROTO \$setservent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_setservent\_r\_proto

: see if setservent\_r exists

set setservent\_r d\_setservent\_r

eval \$inlibc

case "\$d\_setservent\_r" in

"\$define")

```

hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_setservent_r_proto:$usethreads" in
":define") d_setservent_r_proto=define
set d_setservent_r_proto setservent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setservent_r_proto" in
define)
case "$setservent_r_proto" in
"|0) try='int setservent_r(int, struct servent_data*);'
./prochck "$extern_C $try" $hdrs && setservent_r_proto=I_ID ;;
esac
case "$setservent_r_proto" in
"|0) try='void
setservent_r(int, struct servent_data*);'
./prochck "$extern_C $try" $hdrs && setservent_r_proto=V_ID ;;
esac
case "$setservent_r_proto" in
"|0) d_setservent_r=undef
setservent_r_proto=0
echo "Disabling setservent_r, cannot determine prototype." >&4 ;;
* ) case "$setservent_r_proto" in
REENTRANT_PROTO*) ;;
*) setservent_r_proto="REENTRANT_PROTO_$setservent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setservent_r has no prototype, not using it." >&4 ;;
esac
d_setservent_r=undef
setservent_r_proto=0
;;
esac
;;
*) setservent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_setservent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2014, H.Merijn Brand

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_dladdr.U,v \$

?RCS:

?MAKE:d\_dladdr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_dladdr:

?S: This variable conditionally defines the HAS\_DLADDR symbol, which  
?S: indicates to the C program that the dladdr() routine is available  
?S: to get a stack trace.

?S:.

?C:HAS\_DLADDR:

?C: This symbol, if defined, indicates that the dladdr() routine is  
?C: available to query dynamic linker information for an address.  
?C: The <dlfcn.h> header must be included to use this routine.

?C:.

?H:#\$d\_dladdr HAS\_DLADDR /\*\*/

?H:.

?LINT:set d\_dladdr

:

see if dladdr exists

set dladdr d\_dladdr

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_dladdr.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_memrchr: Inlibc Hasproto d\_gnulibc

?MAKE: -pick add \$@ %<

?S:d\_memrchr:

?S: This variable conditionally defines the HAS\_MEMRCHR symbol, which

?S: indicates to the C program that the memrchr() routine is available

?S: to return a pointer to the last occurrence of a byte in a memory

?S: area (or NULL if not found).

?S:.

?C:HAS\_MEMRCHR:

?C: This symbol, if defined, indicates that the memrchr routine is



```

?C: available to return a pointer to the last occurrence of a byte in
?C: a memory area (or NULL if not found).
?C:.
?H:#$d_memrchr HAS_MEMRCHR /**/
?H:.
?T:d_memrchr_proto xx1 xx2 xx3 xx4
?LINT:set d_memrchr
: see if memrchr exists
: We need both a prototype in string.h and the symbol in libc.
echo " "
d_memrchr_proto="
xx1="#$d_gnulibc HAS_GNULIBC"
xx2='#if defined(HAS_GNULIBC)
  && !defined(_GNU_SOURCE)'
xx3='# define _GNU_SOURCE'
xx4='#endif'
set d_memrchr_proto memrchr literal "$xx1" literal "$xx2" literal "$xx3" literal "$xx4" define string.h
eval $hasproto
case "$d_memrchr_proto" in
  define) # see if memrchr exists
    set memrchr d_memrchr
    eval $inlibc
    ;;
  *) val=$undef
    set d_memrchr
    eval $setvar
    ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_memrchr.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_tzmin.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_tzmin.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:16:58 ram
?RCS: patch36: call ./bsd explicitly instead of relying on PATH
?RCS:

```

```

?RCS: Revision 3.0 1993/08/18 12:07:49 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_tzmin: contains cppstdin cppminus timeincl rm Setvar Guess
?MAKE: -pick add $@ %<
?S:d_tzmin:
?S: This symbol conditionally defines TZ_MINUTESWEST if the system uses
?S: tz_minuteswest in time header instead of timezone.
?S:.
?C:TZ_MINUTESWEST:
?C: This
symbol is defined if this system uses tz_minuteswest
?C: in time header instead of timezone.
?C: If not defined, you may have to use struct timeb and ftime() rather
?C: than the new gettimeofday() system call.
?C:.
?H:#$d_tzmin TZ_MINUTESWEST /**/
?H:.
?LINT:set d_tzmin
: see if tz_minuteswest is defined in time header
echo " "
val="$undef"
$cppstdin $cppminus < $timeincl > try 2>&1
if $contains 'tz_minuteswest' try >/dev/null 2>&1; then
echo "You have tz_minuteswest defined in $timeincl rather than timezone." >&4
val="$define"
elif $contains 'timezone' try >/dev/null 2>&1; then
echo "You have timezone defined in $timeincl rather than tz_minuteswest." >&4
else
echo "Your $timeincl file looks strange." >&4
fi
if ./bsd; then
case "$d_tzmin" in
"$undef") echo "(Maybe your system is an USG one after all?)";;
esac
fi
set d_tzmin
eval $setvar
$rm -f try

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_tzmin.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fma: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fma:  
?S: This variable conditionally defines the HAS\_FMA symbol, which  
?S: indicates to the C program that the fma() routine is available.  
?S:.  
?C:HAS\_FMA:  
?C: This symbol, if defined, indicates that the fma routine is  
?C: available to do the multiply-add function.  
?C:.  
?H:#\$d\_fma HAS\_FMA /\*\*/  
?H:.  
?LINT:set d\_fma  
: see if fma exists  
set fma d\_fma  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fma.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_safemcpy.U,v 3.0.1.5 1997/02/28 15:41:12 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_safemcpy.U,v \$  
?RCS: Revision 3.0.1.5 1997/02/28 15:41:12 ram  
?RCS: patch61: improved overlapping copy check  
?RCS: patch61: comfort them if they have memmove  
?RCS: patch61: added ?F: metalint hint  
?RCS:  
?RCS: Revision 3.0.1.4 1995/07/25 13:58:46 ram  
?RCS: patch56: re-arranged compile line to include ldflags before objects  
?RCS:  
?RCS: Revision 3.0.1.3 1995/03/21 08:47:26 ram  
?RCS: patch52: swapped two first arguments of memcopy() calls  
?RCS:  
?RCS:  
Revision 3.0.1.2 1994/10/29 16:15:10 ram  
?RCS: patch36: added 'ldflags' to the test compile line (ADO)  
?RCS:

```

?RCS: Revision 3.0.1.1 1994/05/06 14:53:12 ram
?RCS: patch23: ensure string is not optimized in read-only memory (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_safemcpy: Compile cat d_memcpy rm_try run \
d_memmove i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_safemcpy:
?S: This variable conditionally defines the HAS_SAFE_MEMCPY symbol if
?S: the memcpy() routine can do overlapping copies.
?S: For overlapping copies, memmove() should be used, if available.
?S:.
?C:HAS_SAFE_MEMCPY (SAFE_MEMCPY):
?C: This symbol, if defined, indicates that the memcpy routine is available
?C: to copy potentially overlapping memory blocks. If you need to
?C: copy overlapping memory blocks, you should check HAS_MEMMOVE and
?C: use memmove() instead, if available.
?C:.
?H:#$d_safemcpy HAS_SAFE_MEMCPY /**/
?H:.
?F:!try
?LINT:
set d_safemcpy
: can memcpy handle overlapping blocks?
echo " "
?X: assume the worst
val="$undef"
case "$d_memmove" in
"$define") echo "I'll use memmove() instead of memcpy() for overlapping copies." ;;
*) case "$d_memcpy" in
"$define")
echo "Checking to see if memcpy() can do overlapping copies..." >&4
$cat >try.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>try.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif

```

```

#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

/* Copy "abcde..." string to char abc[] so that gcc doesn't
   try to store the string in read-only memory. */
memcpy(abc, "abcdefghijklmnopqrstuvwxy0123456789", 36);

for (align = 7; align >=
0; align--) {
for (len = 36; len; len--) {
b = buf+align;
memcpy(b, abc, len);
for (off = 1; off <= len; off++) {
memcpy(b+off, b, len);
memcpy(b, b+off, len);
if (memcmp(b, abc, len))
exit(1);
}
}
}
exit(0);
}
EOCP
set try
if eval $compile_ok; then
if $run ./try 2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "It can't, sorry."
fi
else
echo "(I can't compile the test program, so we'll assume not...)"
fi
;;

```

```
esac
$rm_try
;;
esac
set d_safemcpy
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_safemcpy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sjis2jis.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_sjis2jis.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:25 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_sjis2jis: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_sjis2jis:
```

```
?S: This variable conditionally defines the HAS_SJIS2JIS symbol, which
```

```
?S: indicates to the C program that the sjis2jis() routine is available
```

```
?S: to convert SJIS to JIS.
```

```
?S:.
```

```
?C:HAS_SJIS2JIS:
```

```
?C: This symbol, if defined, indicates that the sjis2jis routine is
```

```
?C: available
```

```
to convert SJIS to JIS.
```

```
?C:.
```

```
?H:#$d_sjis2jis HAS_SJIS2JIS /**/
```

```
?H:.
```

```
?LINT:set d_sjis2jis
```

```
: see if sjis2jis exists
```

```
set sjis2jis d_sjis2jis
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sjis2jis.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Whoa.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:21:21 ram
?RCS: patch61: whoa script now starts with leading "startsh"
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:02:01 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to warn the user in case a change into a variable is noticed.
?X:
?X: To use this
    unit, $was must hold the old value that has changed. Upon
?X: exit, the two variables $td and $tu are set to the correct value for
?X: respectively defining or undefining a variable. For instance, if $vas was
?X: $undef, but now $var is $define, after calling . whoa, you should use
?X: eval "$var=\$tu" to finally set $var to the correct value. See unit Inlibc.
?X:
?MAKE:Whoa: Myread startsh hint
?MAKE: -pick add $@ %<
?F:./whoa
?T:var was
?LINT:change td tu
: set up the script used to warn in case of inconsistency
cat <<EOS >whoa
$startsh
EOS
cat <<'EOSC' >>whoa
dflt=y
echo " "
echo "*** WHOA THERE!!! ***" >&4
echo "  The $hint value for \$var on this machine was \"\$was\!" >&4
rp="  Keep the $hint value?"
```

```
./myread
case "$ans" in
y) td=$was; tu=$was;;
esac
EOSC
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Whoa.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_inetd.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

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?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_inetd.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:23 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_inetd: cat test package Myread Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_inetd:
```

```
?S: This symbol conditionally defines USE_INETD which indicates to the C
```

```
?S: program that the initial socket connection will be done via inetd.
```

```
?S:.
```

```
?C:USE_INETD (INETD):
```

```
?C: This symbol if defined indicates to the C program that inetd will be
```

```
?C: in charge of the
```

```
initial socket connection. The file descriptors 0 and
```

```
?C: 1 have been dup()ed from the original connected socket descriptor and
```

```
?C: are ready for send() and recv().
```

```
?C:.
```

```
?H:#$d_inetd USE_INETD /**/
```

```
?H:.
```

```
?LINT:set d_inetd
```

```
: ask whether initial socket connection is to be done via inetd
```

```
echo " "
```

```
dflt=n
```

```
case "$d_inetd" in
```

```
") if $test -f /etc/inetd.conf; then
```

```
  $cat <<EOM
```

```
Your system provides a so called "Internet super-server", the inetd daemon.
```



Network services like ftp or rlogin are usually handled via ftpd and rlogind daemons. Without inetd, these daemons must always be running for the service to be on. On the contrary, inetd listens to specific ports defined in file /etc/inetd.conf and will run the appropriate daemon upon request. This scheme avoids eating up the process table and memory with useless daemons.

I can set up things so that internet connections for \$package will be done using inetd, in which case you will have to edit /etc/inetd.conf to add some specific informations.

```
EOM
  dflt=y
else
  $cat
<<EOM
```

I do not see any trace of a configuration file for inetd, hence I assume your system does not support the so called "Internet super-server". This means \$package will need to have a daemon process running on this machine to allow network connections.

```
EOM
fi;;
*) case "$d_inetd" in
"$define") dflt=y;;
esac;;
esac
rp='Do you wish to use inetd for network connections?'
. ./myread
val="$undef"
case "$ans" in
y*|Y*) val="$define";;
esac
set d_inetd
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_inetd.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
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```

?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: man1dir.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 16:10:29 ram  
?RCS: patch61: created  
?RCS:  
?X:  
?X: This was originally specific to perl5. Since perl5 has man pages that  
?X: go in both man1/ and man3/ directories, we need both man1dir  
?X: and man3dir. This unit is basically dist's mansrc.U with  
?X: man1 used instead of man everywhere.  
?X:  
?MAKE:man1dir man1direxp man1ext installman1dir: afs cat nroff Loc Oldconfig \  
package test Getfile Prefixit prefixexp  
Prefixup sysman Myread  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:man1dir:  
?S: This variable contains the name of the directory in which manual  
?S: source pages are to be put. It is the responsibility of the  
?S: Makefile.SH to get the value of this into the proper command.  
?S: You must be prepared to do the ~name expansion yourself.  
?S:.  
?S:man1direxp:  
?S: This variable is the same as the man1dir variable, but is filename  
?S: expanded at configuration time, for convenient use in makefiles.  
?S:.  
?S:installman1dir:  
?S: This variable is really the same as man1direxp, unless you are using  
?S: AFS in which case it points to the read/write location whereas  
?S: man1direxp only points to the read-only access location. For extra  
?S: portability, you should only use this variable within your makefiles.  
?S:.  
?S:man1ext:  
?S: This variable contains the extension that the manual page should  
?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.  
?S: See man1dir.  
?S:.  
?T:lookpath  
: determine  
where manual pages go  
set man1dir man1dir none  
eval \$prefixit  
\$cat <<EOM  
  
\$package has manual pages available in source form.  
EOM

```

case "$nroff" in
nroff)
echo "However, you don't have nroff, so they're probably useless to you."
case "$man1dir" in
") man1dir="none";;
esac;;
esac
echo "If you don't want the manual sources installed, answer 'none'."
case "$man1dir" in
' ') dflt=none
;;
")
lookpath="$prefixexp/man/man1 $prefixexp/man/l_man/man1"
lookpath="$lookpath $prefixexp/man/p_man/man1"
lookpath="$lookpath $prefixexp/man/u_man/man1"
lookpath="$lookpath $prefixexp/man/man.1"
?X: Experience has shown people expect man1dir to be under prefix,
?X: so we now always put it there. Users who want other behavior
?X: can answer interactively or use a command line option.
?X: Does user have System V-style man paths.
case "$sysman" in
*/?_man*) dflt=`./loc . $prefixexp/l_man/man1 $lookpath` ;;
*) dflt=`./loc . $prefixexp/man/man1 $lookpath` ;;
esac
set dflt
eval $prefixup
;;
*)
dflt="$man1dir"
;;
esac
echo " "
fn=dn+~
rp="Where do the main $spackage manual pages (source) go?"
./getfile
if $test "X$man1direxp" != "X$ansexp"; then
installman1dir="
fi
man1dir="$sans"
man1direxp="$ansexp"
case "$man1dir" in
") man1dir=' '
installman1dir="";;
esac
if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which

manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installman1dir" in
") dflt=`echo $man1direxp | sed 's#^/afs/#/afs/#^';`
*) dflt="$installman1dir";;
esac
fn=de~
rp='Where will man pages be installed?'
./getfile
installman1dir="$ans"
else
installman1dir="$man1direxp"
fi
```

: What suffix to use on installed man pages

```
case "$man1dir" in
')
man1ext='0'
;;
*)
rp="What suffix should be used for the main $spackage man pages?"
case "$man1ext" in
") case "$man1dir" in
*1) dflt=1 ;;
*1p)
dflt=1p ;;
*1pm) dflt=1pm ;;
*l) dflt=l;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L1) dflt=L1;;
*) dflt=1;;
esac
;;
*) dflt="$man1ext";;
esac
./myread
man1ext="$ans"
;;
esac
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/man1.dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_mkdtmp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkdtmp:

?S: This variable conditionally defines the HAS\_MKDTEMP symbol, which

?S: indicates to the C program that the mkdtmp() routine is available

?S: to exclusively create a uniquely named temporary directory.

?S:.

?C:HAS\_MKDTEMP :

?C: This symbol, if defined, indicates that the mkdtmp routine is

?C: available to exclusively create a uniquely named temporary directory.

?C:.

?H:#\$d\_mkdtmp HAS\_MKDTEMP /\*\*/

?H:.

?LINT:set d\_mkdtmp

: see if mkdtmp exists

set mkdtmp d\_mkdtmp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_mkdtmp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_socket.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:46:00 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:04 ram

?RCS: patch16: can now safely declare private nm\_extract in dependencies

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_socket d\_oldsock d\_sockpair socketlib sockethdr: contains libc \

echo n c nm\_opt nm\_extract Inlibc Csym \_a

?MAKE: -pick add \$@ %<

?S:d\_socket:

?S: This

variable conditionally defines HAS\_SOCKET, which indicates

?S: that the BSD socket interface is supported.

?S:.

?S:d\_sockpair:

?S: This variable conditionally defines the HAS\_SOCKETPAIR symbol, which

?S: indicates that the BSD socketpair() is supported.

?S:.

?S:d\_oldsock:

?S: This variable conditionally defines the OLDSOCKET symbol, which

?S: indicates that the BSD socket interface is based on 4.1c and not 4.2.

?S:.

?S:socketlib:

?S: This variable has the names of any libraries needed for socket support.

?S:.

?S:sockethdr:

?S: This variable has any cpp -I flags needed for socket support.

?S:.

?C:HAS\_SOCKET (SOCKET):

?C: This symbol, if defined, indicates that the BSD socket interface is

?C: supported.

?C:.

?C:HAS\_SOCKETPAIR (SOCKETPAIR):

?C: This symbol, if defined, indicates that the BSD socketpair() call is

?C: supported.

?C:.

?C:USE\_OLDSOCKET (OLDSOCKET):

?C: This symbol, if defined, indicates that the 4.1c BSD socket interface

?C: is supported instead of the 4.2/4.3 BSD

socket interface. For instance,

?C: there is no setsockopt() call.

?C:.

?H:#\$d\_socket HAS\_SOCKET /\*\*/

?H:#\$d\_sockpair HAS\_SOCKETPAIR /\*\*/

?H:#\$d\_oldsock USE\_OLDSOCKET /\*\*/

?H:.

?T:val

?LINT:use libc

```

?LINT:set d_socketpair
: see whether socket exists
socketlib=""
sockethdr=""
echo " "
$echo $n "Hmm... $c" >&4
if set socket val -f d_socket; eval $csym; $val; then
echo "Looks like you have Berkeley networking support." >&4
d_socket="$define"
?X: now check for advanced features
if set setsockopt val -f; eval $csym; $val; then
d_oldsock="$undef"
else
echo "...but it uses the old 4.1c interface, rather than 4.2" >&4
d_oldsock="$define"
fi
else
?X: HP-UX, for one, puts all the socket stuff in socklib.o. Note that if we
?X: come here on HP-UX, then we must have used nm to get symbols, or we really
?X: don't have sockets anyway...
if $contains socklib libc.list >/dev/null 2>&1; then
echo "Looks like you have Berkeley networking support." >&4
d_socket="$define"
: we will have
to assume that it supports the 4.2 BSD interface
d_oldsock="$undef"
else
echo "You don't have Berkeley networking in libc$_a..." >&4
?X: look for an optional networking library
if test -f /usr/lib/libnet$_a; then
?X: space between two '(' needed for ksh
( (nm $nm_opt /usr/lib/libnet$_a | eval $nm_extract) || \
ar t /usr/lib/libnet$_a) 2>/dev/null >> libc.list
if $contains socket libc.list >/dev/null 2>&1; then
echo "...but the Wollongong group seems to have hacked it in." >&4
socketlib="-lnet"
sockethdr="-I/usr/netinclude"
d_socket="$define"
?X: now check for advanced features
if $contains setsockopt libc.list >/dev/null 2>&1; then
d_oldsock="$undef"
else
echo "...using the old 4.1c interface, rather than 4.2" >&4
d_oldsock="$define"
fi
else
echo "or even in libnet$_a, which is peculiar." >&4
d_socket="$undef"

```

```
d_oldsock="$undef"
fi
else
echo "or anywhere else I see." >&4
d_socket="$undef"
d_oldsock="$undef"
fi
fi
fi
```

@if

```
HAS_SOCKETPAIR || d_socketpair
: see if socketpair exists
set socketpair d_socketpair
eval $inlibc
```

@end

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d_socket.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysmode.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysmode: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysmode:

?S: This variable conditionally defines the I\_SYSMODE symbol,

?S: and indicates whether a C program should include <sys/mode.h>.

?S:.

?C:I\_SYSMODE:

?C: This symbol, if defined, indicates that <sys/mode.h> exists and

?C: should be included.

?C:.

?H:#\$i\_sysmode I\_SYSMODE /\*\*/

?H:.

?LINT:set i\_sysmode

: see if this is a sys/mode.h system

```
set sys/mode.h i_sysmode
```

```
eval $inhdr
```

Found in path(s):



\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_sysmode.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_machcthr: Inhdr usethreads

?MAKE: -pick add \$@ %<

?S:i\_machcthr:

?S: This variable conditionally defines the I\_MACH\_CTHREADS symbol,

?S: and indicates whether a C program should include <mach/cthreads.h>.

?S:.

?C:I\_MACH\_CTHREADS:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <mach/cthreads.h>.

?C:.

?H:#\$i\_machcthr I\_MACH\_CTHREADS /\*\*/

?H:.

: see if mach cthreads are available

if test "X\$usethreads" = "X\$define"; then

set mach/cthreads.h i\_machcthr

eval \$inhdr

else

i\_machcthr="\$undef"

fi

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/i\_machcthr.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: libdbm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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```

?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libdbm.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:56:57 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:libdbm: test Loc libpth _a
?MAKE: -pick add $@ %<
?S:libdbm:
?S: This variable contains the argument to pass to the loader in order
?S: to get the dbm library routines. If there is no dbm or ndbm
?S: library, it is null.
?S:.
?T:xxx
:
  see if we should include -ldb
echo " "
if $test -r /usr/lib/libndbm$_a || $test -r /usr/local/lib/libndbm$_a ; then
  echo "-ldb found." >&4
  libdbm='-ldb'
elif $test -r /usr/lib/libdbm$_a || $test -r /usr/local/lib/libdbm$_a ; then
  echo "-ldb found." >&4
  libdbm='-ldb'
else
  xxx=`./loc libdbm$_a x $libpth`
  case "$xxx" in
  x)
    echo "No dbm library found." >&4
    libdbm=""
    ;;
  *)
    echo "DBM library found in $xxx." >&4
    libdbm="$xxx"
    ;;
  esac
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libdbm.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setlocale_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:

```

?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_setlocale\_r setlocale\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_locale extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_setlocale\_r:  
?S: This variable conditionally defines the HAS\_SETLOCALE\_R symbol,  
?S: which indicates to the C program that the setlocale\_r()  
?S: routine is available.  
?S:.  
?S:setlocale\_r\_proto:  
?S: This variable encodes the prototype of setlocale\_r.  
?S: It is zero if d\_setlocale\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setlocale\_r  
?S: is defined.  
?S:.  
?C:HAS\_SETLOCALE\_R:  
?C: This symbol, if defined, indicates that the setlocale\_r routine  
?C: is  
available to setlocale re-entrantly.  
?C:.  
?C:SETLOCALE\_R\_PROTO:  
?C: This symbol encodes the prototype of setlocale\_r.  
?C: It is zero if d\_setlocale\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setlocale\_r  
?C: is defined.  
?C:.  
?H:#\$d\_setlocale\_r HAS\_SETLOCALE\_R /\*\*/  
?H:#define SETLOCALE\_R\_PROTO \$setlocale\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_setlocale\_r\_proto  
: see if setlocale\_r exists  
set setlocale\_r d\_setlocale\_r  
eval \$inlibc  
case "\$d\_setlocale\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_locale locale.h"  
case "\$d\_setlocale\_r\_proto:\$usethreads" in  
":define") d\_setlocale\_r\_proto=define  
set d\_setlocale\_r\_proto setlocale\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_setlocale\_r\_proto" in  
define)

```

case "$setlocale_r_proto" in
"|0) try='int setlocale_r(int, const char*, char*, int);'
./protochk "$extern_C $try" $hdrs && setlocale_r_proto=I_ICBI ;;
esac
case "$setlocale_r_proto" in
"|0) d_setlocale_r=undef
setlocale_r_proto=0
echo
"Disabling setlocale_r, cannot determine prototype." >&4 ;;
*) case "$setlocale_r_proto" in
REENTRANT_PROTO*) ;;
*) setlocale_r_proto="REENTRANT_PROTO_$setlocale_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setlocale_r has no prototype, not using it." >&4 ;;
esac
d_setlocale_r=undef
setlocale_r_proto=0
;;
esac
;;
*) setlocale_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_setlocale_r.U

```

No license file was found, but licenses were detected in source scan.

```

# $Id: errnolist.a,v 3.0 1993/08/18 12:04:35 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
# You may redistribute only under the terms of the Artistic Licence,
# as specified in the README file that comes with the distribution.
# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
# of the source tree for dist 4.0.
#
# Original Author: Harlan Stenn <harlan@mumps.pfcs.com>
#
# $Log: errnolist.a,v $
# Revision 3.0 1993/08/18 12:04:35 ram
# Baseline for dist 3.0 netwide release.

```

```

#
#
# This is a simple-minded awk script to generate an initialization for
# sys_errnolist on systems that don't have it.
# This file now depends only on sys/errno.h error numbers under maxerr being
# in order. It will complain and die if not. NOTE: It will still produce
# a compilable output file, even with errors, so you
# must check the output.

BEGIN {
    format = "\t\"%s\", \n"
    printf("/**\n** This is a generated file. Do NOT edit it unless you really have to...\n*/\n\n")
    printf("char *sys_errnolist[] = {\n")
    maxerr = 89
}

$1=="#define" {
    if(count > maxerr || substr($2,1,1) != "E")
        next # we're not interested
    if($3 < count) { # this is bad
        printf("Fatal error: %s out of order at %s\n", \
            FILENAME, $2) > "/dev/tty"
        exit 1
    }
    # fill in the blanks
    while($3 > count) {
        dummy=sprintf("EDUMMY%d",count)
        printf(format,dummy)
        count++
    }
    printf(format,$2)
    count++
}

END {
    printf("\t0\n");
}

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/errnolist.a
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_inetpton: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_inetpton:

?S: This variable conditionally defines the HAS\_INETPTON symbol,

?S: which indicates to the C program that the inet\_pton() function

?S: is available.

?S:.

?C:HAS\_INETPTON:

?C: This symbol, if defined, indicates that the inet\_pton() function

?C: is available to parse IPv4 and IPv6 strings.

?C:.

?H:#\$d\_inetpton HAS\_INETPTON /\*\*/

?H:.

?LINT:set d\_inetpton

: see if inet\_pton exists

set inet\_pton d\_inetpton

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_inetpton.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethbynm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_gethbynm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethbyname: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethbyname (d\_gethbynm d\_gethstby):

?S: This variable conditionally defines the HAS\_GETHOSTBYNAME symbol, which

?S: indicates to the C program that the gethostbyname() routine is available

?S: to look up host names in some data base or other.

?S:.

?C:HAS\_GETHOSTBYNAME (GETHOSTBYNAME):

?C: This  
symbol, if defined, indicates that the gethostbyname() routine is  
?C: available to look up host names in some data base or other.  
?C:.  
?H:#\$d\_gethbyname HAS\_GETHOSTBYNAME /\*\*/  
?H:.  
?LINT:set d\_gethbyname  
: see if gethostbyname exists  
set gethostbyname d\_gethbyname  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_gethbynm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: libyacc.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: libyacc.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:09:19 ram  
?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/13 15:27:12 ram  
?RCS: patch27: added yacc case (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/06 15:09:01 ram  
?RCS: patch23: now uses full library path instead of -l notation  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24 14:13:49 ram  
?RCS: patch16: un-obsolete this unit for smooth yacc compilations  
?RCS:  
?RCS:  
Revision 3.0 1993/08/18 12:09:04 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:libyacc: Loc yacc libpth \_a  
?MAKE: -pick add \$@ %<  
?S:libyacc:  
?S: This variable contains the argument to pass to the loader in order  
?S: to get the yacc library routines. If there is no yacc or yacc

```

?S: library, it is null.
?S:.
?T:xxx
: see if we should include -ly
echo " "
case "$yacc" in
*byacc*)
echo "You are using byacc, so I won't look for a yacc library." >&4
libyacc="
;;
*yacc)
xxx=`./loc liby$_a x $libpth`
case "$xxx" in
x)
echo "No yacc library found." >&4
libyacc="
;;
*)
echo "yacc library found in $xxx." >&4
libyacc="$xxx"
;;
esac
;;
*bison*)
echo "You are using bison, so I won't look for a yacc library." >&4
libyacc="
;;
*)
echo "You don't seem to have yacc, so I won't look for the yacc library." >&4
libyacc="
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libyacc.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: usenm.U,v 3.0.1.1 1997/02/28 16:26:40 ram Exp $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

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```

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```

```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:

```



```

?RCS: $Log: usenm.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 16:26:40 ram
?RCS: patch61: don't use nm with the GNU C library
?RCS: patch61: added support for Linux shared libs
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:usenm runnm nm_opt nm_so_opt: cat test Myread Oldconfig myuname grep \
nm d_gnulibc osname egrep rsrc
?MAKE: -pick add $@ %<
?S:usenm:
?S: This variable contains 'true' or 'false' depending
whether the
?S: nm extraction is wanted or not.
?S:.
?S:runnm:
?S: This variable contains 'true' or 'false' depending whether the
?S: nm extraction should be performed or not, according to the value
?S: of usenm and the flags on the Configure command line.
?S:.
?S:nm_opt:
?S: This variable holds the options that may be necessary for nm.
?S:.
?S:nm_so_opt:
?S: This variable holds the options that may be necessary for nm
?S: to work on a shared library but that can not be used on an
?S: archive library. Currently, this is only used by Linux, where
?S: nm --dynamic is *required* to get symbols from an ELF library which
?S: has been stripped, but nm --dynamic is *fatal* on an archive library.
?S: Maybe Linux should just always set usenm=false.
?S:.
: see if nm is to be used to determine whether a symbol is defined or not
?X: If there is enough inquiries, it might be worth to wait for the nm
?X: extraction. Otherwise, the C compilations might be a better deal.
?X:
?X: Don't bother if we're
using GNU libc -- skimo
?LINT:extern PASE
case "$usenm" in
")
dflt="
case "$d_gnulibc" in
"$define")
echo " "
echo "nm probably won't work on the GNU C Library." >&4
dflt=n
;;

```

```

esac
case "$dflt" in
")
if $test "$osname" = aix -a "X$PASE" != "Xdefine" -a ! -f /lib/syscalls.exp; then
echo " "
echo "Whoops! This is an AIX system without /lib/syscalls.exp!" >&4
echo "'nm' won't be sufficient on this system." >&4
dflt=n
fi
;;
esac
case "$dflt" in
") dflt=`$grep 'inlibc|csym' $src/Configure | wc -l 2>/dev/null`
if $test $dflt -gt 20; then
dflt=y
else
dflt=n
fi
;;
esac
*)
case "$usenm" in
true|$define) dflt=y;;
*) dflt=n;;
esac
;;
esac
$cat <<EOM

```

I can use `$nm` to extract the symbols from your C libraries. This is a time consuming task which may generate huge output on the disk (up to 3 megabytes) but that should make the symbols extraction faster. The alternative is to skip the 'nm' extraction part and to compile a small test program instead to determine whether each symbol is present. If you have a fast C compiler and/or if your 'nm' output cannot be parsed, this may be the best solution.

You probably shouldn't let me use 'nm' if you are using the GNU C Library.

```

EOM
rp="Shall I use $nm to extract C symbols from the libraries?"
./myread
case "$ans" in
[Nn]*) usenm=false;;
*) usenm=true;;
esac

```

?X: Name extraction is to be run if 'nm' usage is wanted and if no -r flag  
?X: was provided to configure (in which case we simply re-use the previous  
?X: values).

```
runnm=$usenm
case "$reuseval" in
true) runnm=false;;
esac
```

: nm options which may be necessary

```
case "$nm_opt" in
") if $test -f /mach_boot; then
  nm_opt=" # Mach
elif $test -d /usr/ccs/lib; then
  nm_opt='-p' # Solaris (and SunOS?)
elif $test -f /dgux; then
  nm_opt='-p' # DG-UX
elif $test -f /lib64/rld; then
  nm_opt='-p' # 64-bit Irix
else
  nm_opt="
fi;;
esac
```

: nm options which may be necessary for shared libraries but illegal

: for archive

libraries. Thank you, Linux.

```
case "$nm_so_opt" in
") case "$myuname" in
*linux*|gnu*)
  if $nm --help | $grep 'dynamic' > /dev/null 2>&1; then
    nm_so_opt='--dynamic'
  fi
  ;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/usenm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wifstat.U,v 3.0.1.3 1997/02/28 15:47:43 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_wifstat.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:47:43 ram

?RCS: patch61: added a ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 14:09:10 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.1 1995/03/21 08:47:46 ram

?RCS: patch52: created

?RCS:

?MAKE:d\_wifstat: Compile d\_uwait Oldconfig cat rm

?MAKE: -pick add \$@ %<

?S:d\_wifstat:

?S: This symbol conditionally defines USE\_WIFSTAT

if the C program can

?S: safely use the WIFxxx macros with the kind of wait() parameter

?S: declared in the program (see UNION\_WAIT), or if it can't. Should

?S: only matter on HP-UX, where the macros are incorrectly written and

?S: therefore cause programs using them with an 'union wait' variable

?S: to not compile properly.

?S:.

?C:USE\_WIFSTAT:

?C: This symbol, if defined, indicates to the C program that the argument

?C: for the WIFxxx set of macros such as WIFSIGNALED or WIFEXITED can

?C: be of the same kind as the one used to hold the wait() status. Should

?C: only matter on HP-UX, where the macros are incorrectly written and

?C: therefore cause programs using them with an 'union wait' variable

?C: to not compile properly. See also UNION\_WAIT.

?C:.

?H:#\$d\_wifstat USE\_WIFSTAT /\*\*/

?H:.

?T:type

?F:!foo

: see if we can use WIFxxx macros

echo " "

case "\$d\_wifstat" in

"\$define") echo "As before, you can safely use WIFEXITED and friends!" >&4;;

"\$undef") echo "You still can't use WIFEXITED

and friends!" >&4;;

\*)

echo "Let's see whether you can use the WIFEXITED(status) macro and its"

case "\$d\_uwait" in

"\$define") type='union wait';;

```

*) type='int';;
esac
echo "friends with status declared as '$type status'..."
$cat >foo.c <<EOCP
#include <sys/types.h>
#include <sys/wait.h>

int main()
{
    $type status;
    int e = 0;

#ifdef WIFEXITED
    if (WIFEXITED(status))
        printf("\n");
    exit(0);
#else
    exit(2);
#endif
}
EOCP
d_wifstat="$undef"
set foo
if eval $compile; then
    if ./foo >/dev/null; then
        echo "Great! Looks like we can use the WIFxxx macros." >&4
        d_wifstat="$define"
    else
        echo "You don't seem to have WIFxxx macros, but that's ok." >&4
    fi
else
    echo "Apparently you can't use WIFxxx macros properly." >&4
fi
$rm -f foo.* foo core
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_wifstat.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strtol.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strtol.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:39 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strtol: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtol:  
?S: This variable conditionally defines the HAS\_STRTOL symbol, which  
?S: indicates to the C program that the strtol() routine is available  
?S: to provide better numeric string conversion than atoi() and friends.  
?S:.  
?C:HAS\_STRTOL (STRTOL):  
?C: This symbol, if defined, indicates that  
the strtol routine is available  
?C: to provide better numeric string conversion than atoi() and friends.  
?C:.  
?H:#\$d\_strtol HAS\_STRTOL /\*\*/  
?H:.  
?LINT:set d\_strtol  
: see if strtol exists  
set strtol d\_strtol  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strtol.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_memory.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_memory.U,v \$  
?RCS: Revision 3.0.1.3 1994/06/20 07:01:55 ram  
?RCS: patch30: cosmetic changes  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/13 15:23:56 ram  
?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

```

?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:02:25 ram
?RCS: patch23: avoid conflicts with <string.h>
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:22 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_memory: Inhdr strings cppstdin
cppflags cppminus contains rm Setvar
?MAKE: -pick add $@ %<
?S:i_memory:
?S: This variable conditionally defines the I_MEMORY symbol, and indicates
?S: whether a C program should include <memory.h>.
?S:.
?C:I_MEMORY:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <memory.h>.
?C:.
?H:#$i_memory I_MEMORY /**/
?H:.
?LINT:set i_memory
?X:
?X: Unfortunately, the definitions of memory functions sometimes
?X: conflict with those in <string.h>. We'll assume that if
?X: <string.h> contains memcpy, then we don't need memory.h
?X:
: see if memory.h is available.
val="
set memory.h val
eval $inhdr

: See if it conflicts with string.h
case "$val" in
$define)
case "$strings" in
") ;;
*)
$cppstdin $cppflags $cppminus < $strings > mem.h
if $contains 'memcpy' mem.h >/dev/null 2>&1; then
echo " "
echo "We won't be including <memory.h>."
val="$undef"
fi
$rm -f mem.h
;;
esac
esac
set i_memory

```

eval \$setvar

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_memory.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_systimes.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_systimes.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_systimes: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_systimes:

?S: This variable conditionally defines the I\_SYS\_TIMES symbol, and indicates

?S: whether a C program should include <sys/times.h>.

?S:.

?C:I\_SYS\_TIMES (I\_SYSTIMES):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/times.h>.

?C:.

?H:#\$i\_systimes I\_SYS\_TIMES /\*\*/

?H:.

?LINT:set

i\_systimes

: see if this is a sys/times.h system

set sys/times.h i\_systimes

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_systimes.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_static\_inline.U,v \$

?RCS:

?RCS: Copyright (c) 2010 Andrew Dougherty

?RCS:



?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafayette.edu>  
?RCS:  
?MAKE:d\_static\_inline perl\_static\_inline: Compile Setvar gccversion \  
cat echo run hint rm rm\_try  
?MAKE:-pick add \$@ %<  
?S:d\_static\_inline:  
?S: This variable conditionally defines the HAS\_STATIC\_INLINE symbol,  
?S: which indicates that the C compiler supports C99-style static  
?S: inline. That is, the function can't be called from another  
?S: translation unit.  
?S:.  
?S:perl\_static\_inline:  
?S: This variable defines the PERL\_STATIC\_INLINE  
symbol to  
?S: the best-guess incantation to use for static inline functions.  
?S: Possibilities include  
?S: static inline (c99)  
?S: static \_\_inline\_\_ (gcc -ansi)  
?S: static \_\_inline (MSVC)  
?S: static \_inline (older MSVC)  
?S: static (c89 compilers)  
?S:.  
?C:HAS\_STATIC\_INLINE :  
?C: This symbol, if defined, indicates that the C compiler supports  
?C: C99-style static inline. That is, the function can't be called  
?C: from another translation unit.  
?C:.  
?C:PERL\_STATIC\_INLINE:  
?C: This symbol gives the best-guess incantation to use for static  
?C: inline functions. If HAS\_STATIC\_INLINE is defined, this will  
?C: give C99-style inline. If HAS\_STATIC\_INLINE is not defined,  
?C: this will give a plain 'static'. It will always be defined  
?C: to something that gives static linkage.  
?C: Possibilities include  
?C: static inline (c99)  
?C: static \_\_inline\_\_ (gcc -ansi)  
?C: static \_\_inline (MSVC)  
?C: static \_inline (older MSVC)  
?C: static  
(c89 compilers)  
?C:.  
?H:#\$d\_static\_inline HAS\_STATIC\_INLINE /\*\*/

```

?H:#define PERL_STATIC_INLINE $perl_static_inline /**/
?H:.
?LINT:set d_static_inline
?T:inline xxx
?F:!try
: see what flavor, if any, of static inline is supported
echo " "
echo "Checking to see if your system supports static inline..."
?X: Build two programs. The first uses static inline in file a.c and
?X: should work. The second also includes b.c which tries to link against
?X: the static function in a.c. This should fail.
?X:.
$cat > try.c <<'EOCP'
#include <stdlib.h>
extern int f_via_a(int x);
extern int f_via_b(int x);
int main(int argc, char **argv)
{
    int y;

    y = f_via_a(0);
#ifdef USE_B
    y = f_via_b(0);
#endif
    if (y == 42) {
        return EXIT_SUCCESS;
    }
    else {
        return EXIT_FAILURE;
    }
}
EOCP
$cat > a.c <<'EOCP'
static INLINE int f(int x) {
    int y;
    y = x + 42;
    return y;
}

int f_via_a(int x)
{
    return f(x);
}
EOCP
$cat > b.c <<'EOCP'
extern int f(int x);

int

```

```
f_via_b(int x)
{
    return f(x);
}
EOCP
```

# Respect a hint (or previous) value for perl\_static\_inline, if there is one.

```
case "$perl_static_inline" in
") # Check the various possibilities, and break out on success.
# For gcc, prefer __inline__, which will still permit
# cflags.SH to add in -ansi.
case "$gccversion" in
") xxx="__inline__ __inline__";
*) xxx="__inline__ inline __inline__";
esac
for inline in $xxx; do
set try -DINLINE=$inline a.c
if eval $compile && $run ./try; then
# Now make sure there is no external linkage of static
# functions
set try -DINLINE=$inline -DUSE_B a.c b.c
if eval $compile && $run ./try; then
$echo "Your compiler supports static $inline, " >&4
$echo "but it also creates an external definition," >&4
$echo "so I won't use it." >&4
val=$undef
else
$echo "Your compiler supports static $inline." >&4
val=$define
perl_static_inline="static $inline";
break;
fi
else
$echo
"Your compiler does NOT support static $inline." >&4
val="$undef"
fi
done
;;
*inline*) # Some variant of inline exists.
echo "Keeping your $hint value of $perl_static_inline."
val=$define
;;
static) # No inline capabilities
echo "Keeping your $hint value of $perl_static_inline."
val=$undef
;;
*) # Unrecognized previous value -- blindly trust the supplied
```

```

# value and hope it makes sense. Use old value for
# d_static_inline, if there is one.
echo "Keeping your $hint value of $perl_static_inline."
case "$d_static_inline" in
  ") val=$define ;;
  *) val=$d_static_inline ;;
esac
;;
esac
# Fallback to plain 'static' if nothing worked.
case "$perl_static_inline" in
  ")
  perl_static_inline="static"
  val=$undef
  ;;
esac
set d_static_inline
eval $setvar
$rm -f a.[co] b.[co]
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_static_inline.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: privlib.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: privlib.U,v \$

?RCS: Revision 3.1 1999/07/08 18:32:29 doughera

?RCS: Updated for perl5.005\_5x

?RCS:

?RCS: Revision 3.0.1.4 1995/09/25 09:17:09 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:44:23 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:31:52 ram

?RCS:  
patch32: now uses installation prefix

?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:12:34 ram

?RCS: patch10: added support for /local/lib (WED)

?RCS: patch10: prompt phrasing made more explicit (WED)

?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:privlib privlibexp installprivlib: package cat Getfile Oldconfig \  
Setprefixvar Prefixit version installstyle binexp

?MAKE: -pick add \$@ %<

?Y:TOP

?D:privlib="

?S:privlib:  
?S: This variable contains the eventual value of the PRIVLIB symbol,  
?S: which is the name of the private library for this package. It may  
?S: have a ~ on the front. It is up to the makefile to eventually create  
?S: this directory while performing installation (with ~ substitution).  
?S:.

?D:privlibexp="

?S:privlibexp:  
?S: This variable is the ~name expanded version of privlib, so that you  
?S: may use it directly in Makefiles or shell scripts.  
?S:.

?D:installprivlib="

?S:installprivlib:  
?S: This variable  
is really the same as privlibexp but may differ on  
?S: those systems using AFS. For extra portability, only this variable  
?S: should be used in makefiles.  
?S:.

?C:PRIVLIB:  
?C: This symbol contains the name of the private library for this package.  
?C: The library is private in the sense that it needn't be in anyone's  
?C: execution path, but it should be accessible by the world. The program  
?C: should be prepared to do ~ expansion.  
?C:.

?C:PRIVLIB\_EXP:  
?C: This symbol contains the ~name expanded version of PRIVLIB, to be used  
?C: in programs that are not prepared to deal with ~ expansion at run-time.  
?C:.

?H:#define PRIVLIB "\$privlib" /\*\*/  
?H:#define PRIVLIB\_EXP "\$privlibexp" /\*\*/  
?H:.

?LINT:change prefixvar

?LINT:set installprivlib

```

?LINT:set privlib
?LINT:set privlibexp
: determine where private library files go
: Usual default is /usr/local/lib/perl5/$version.
: Also allow things like /opt/perl/lib/$version, since
: /opt/perl/lib/perl5... would be redundant.
: The default "style"
  setting is made in installstyle.U
case "$installstyle" in
*lib/perl5*) set dflt privlib lib/$package/$version ;;
*) set dflt privlib lib/$version ;;
esac
eval $prefixit
$cat <<EOM

```

There are some auxiliary files for \$package that need to be put into a private library directory that is accessible by everyone.

```

EOM
?X: Force dependency on bin.U
fn=$binexp
fn=d~+
rp='Pathname where the private library files will reside?'
./getfile
prefixvar=privlib
./setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/privlib.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_strxfrm.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_strxfrm.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:12:04 ram
?RCS: patch32: created by ADO
?RCS:

```

?MAKE:d\_strxfrm: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strxfrm:  
?S: This variable conditionally defines HAS\_STRXFRM if strxfrm() is  
?S: available to transform strings.  
?S:.  
?C:HAS\_STRXFRM:  
?C: This symbol, if defined, indicates that the strxfrm() routine is  
?C: available to transform  
strings.  
?C:.  
?H:#\$d\_strxfrm HAS\_STRXFRM /\*\*/  
?H:.  
?LINT:set d\_strxfrm  
: see if strxfrm exists  
set strxfrm d\_strxfrm  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strxfrm.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_log1p: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_log1p:

?S: This variable conditionally defines the HAS\_LOG1P symbol, which

?S: indicates to the C program that the logp1() routine is available

?S: to compute  $\log(1 + x)$  for values of  $x$  close to zero.

?S:.

?C:HAS\_LOG1P:

?C: This symbol, if defined, indicates that the log1p routine is

?C: available to do the logarithm of 1 plus argument function.

?C:.

?H:#\$d\_log1p HAS\_LOG1P /\*\*/  
?H:.

?LINT:set d\_log1p

: see if log1p exists

set log1p d\_log1p

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_log1p.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_pwd.U,v 3.0.1.2 1995/07/25 14:10:57 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
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?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: i\_pwd.U,v \$  
?RCS: Revision 3.0.1.2 1995/07/25 14:10:57 ram  
?RCS: patch56: use setvar so hint file values can override our guesses (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:03:27 ram  
?RCS: patch23: had forgotten cppminus in cppstdin test (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:25 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit checks whether there is a pwd system or not  
?X:  
?MAKE:i\_pwd d\_pwquota d\_pwage d\_pwchange  
d\_pwclass d\_pwexpire \  
d\_pwgecos d\_pwpasswd d\_pwcomment: \  
contains rm cppstdin cppflags cppminus Inhdr Findhdr Setvar  
?MAKE: -pick add \$@ %<  
?S:i\_pwd:  
?S: This variable conditionally defines I\_PWD, which indicates  
?S: to the C program that it should include <pwd.h>.  
?S:.  
?S:d\_pwquota:  
?S: This variable conditionally defines PWQUOTA, which indicates  
?S: that struct passwd contains pw\_quota.  
?S:.  
?S:d\_pwage:  
?S: This variable conditionally defines PWAGE, which indicates  
?S: that struct passwd contains pw\_age.  
?S:.  
?S:d\_pwchange:  
?S: This variable conditionally defines PWCHANGE, which indicates  
?S: that struct passwd contains pw\_change.  
?S:.  
?S:d\_pwclass:  
?S: This variable conditionally defines PWCLASS, which indicates



?S: that struct passwd contains pw\_class.  
?S:.  
?S:d\_pwexpire:  
?S: This variable conditionally defines PWEXPIRE, which indicates  
?S: that struct passwd contains pw\_expire.  
?S:.  
?S:d\_pwcomment:  
?S: This variable conditionally defines PWCOMMENT, which indicates  
?S: that  
struct passwd contains pw\_comment.  
?S:.  
?S:d\_pwgecos:  
?S: This variable conditionally defines PWGECOS, which indicates  
?S: that struct passwd contains pw\_gecos.  
?S:.  
?S:d\_pwpasswd:  
?S: This variable conditionally defines PWPASSWD, which indicates  
?S: that struct passwd contains pw\_passwd.  
?S:.  
?C:I\_PWD:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <pwd.h>.  
?C:.  
?C:PWQUOTA:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_quota.  
?C:.  
?C:PWAGE:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_age.  
?C:.  
?C:PWCHANGE:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_change.  
?C:.  
?C:PWCLASS:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_class.  
?C:.  
?C:PWEXPIRE:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_expire.  
?C:.  
?C:PWCOMMENT:  
?C: This  
symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_comment.  
?C:.

```

?C:PWGECOS:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_gecos.
?C:.
?C:PWPASSWD:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_passwd.
?C:.
?H:#$i_pwd I_PWD /**/
?H:#$d_pwquota PWQUOTA /**/
?H:#$d_pwage PWAGE /**/
?H:#$d_pwchange PWCHANGE /**/
?H:#$d_pwclass PWCLASS /**/
?H:#$d_pwexpire PWEXPIRE /**/
?H:#$d_pwcomment PWCOMMENT /**/
?H:#$d_pwgecos PWGECOS /**/
?H:#$d_pwpasswd PWPASSWD /**/
?H:.
?LINT: set i_pwd d_pwquota d_pwage d_pwchange d_pwclass d_pwexpire d_pwcomment
?LINT: set d_pwgecos d_pwpasswd
?T:xxx
: see if this is a pwd.h system
set pwd.h i_pwd
eval $inhdr

case "$i_pwd" in
$define)
xxx=`./findhdr pwd.h`
$cpstdin $cppflags $cppminus < $xxx >$.h

if $contains 'pw_quota' $.h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwquota
eval $setvar

if $contains 'pw_age'
$.h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwage
eval $setvar

if $contains 'pw_change' $.h >/dev/null 2>&1; then

```

```
val="$define"
else
val="$undef"
fi
set d_pwchange
eval $setvar

if $contains 'pw_class' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwclass
eval $setvar

if $contains 'pw_expire' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwexpire
eval $setvar

if $contains 'pw_comment' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwcomment
eval $setvar

if $contains 'pw_gecos' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwgecos
eval $setvar

if $contains 'pw_passwd' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwpasswd
eval $setvar

$rm -f $$h
```

```

;;
*)
val="$undef";
set d_pwquota; eval $setvar
set d_pwage; eval $setvar
set d_pwchange; eval $setvar
set d_pwclass; eval $setvar
set
d_pwexpire; eval $setvar
set d_pwcomment; eval $setvar
set d_pwgecos; eval $setvar
set d_pwpasswd; eval $setvar
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_pwd.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vaprot0.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>

?RCS:

?RCS: \$Log: vaprot0.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:17:16 ram

?RCS: patch16: definition of \_V now appears only when needed

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:59 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:vaprot0: prototype i\_stdarg Setvar

?MAKE: -pick add \$@ %<

?S:vaprot0:

?S: This variable conditionally defines CAN\_VAPROTO on systems supporting

?S: prototype

declaration of functions with a variable number of

?S: arguments. See also prototype.

?S:.

?C:CAN\_VAPROTO ~ %<:

?C: This variable is defined on systems supporting prototype declaration  
 ?C: of functions with a variable number of arguments.  
 ?C:.  
 ?C: \_V:  
 ?C: This macro is used to declare function parameters in prototypes for  
 ?C: functions with a variable number of parameters. Use double parentheses.  
 ?C: For example:  
 ?C:  
 ?C: int printf \_V((char \*fmt, ...));  
 ?C:  
 ?C: Remember to use the plain simple \_() macro when declaring a function  
 ?C: with no variable number of arguments, since it might be possible to  
 ?C: have a non-effect \_V() macro and still get prototypes via \_().  
 ?C:.

```
?H:?%<:#$vaprototo CAN_VAPROTO /**/
?H:?_V:#ifdef CAN_VAPROTO
?H:?_V:#define _V(args) args
?H:?_V:#else
?H:?_V:#define _V(args) ()
?H:?_V:#endif
?H:
?LINT:set vaprototo
: see if prototypes support variable argument declarations
echo " "
case "$prototype$i_stdarg" in
$define$define)
echo "It appears we'll be able
to prototype varargs functions." >&4
val="$define"
;;
*)
echo "Too bad... We won't be using prototyped varargs functions..." >&4
val="$undef"
;;
esac
set vaprototo
eval $setvar
```

Found in path(s):  
 \* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/vaprototo.U  
 No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
 ?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:sitehtml1dir sitehtml1direxp installsitehtml1dir: Getfile \  
 Setprefixvar prefix siteprefix html1dir sed

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitehtml1dir="

?S:sitehtml1dir:

?S: This variable contains the name of the directory in which site-specific

?S: html source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S: The standard distribution will put nothing in this directory.

?S: After perl

has been installed, users may install their own local

?S: html pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitehtml1direxp="

?S:sitehtml1direxp:

?S: This variable is the same as the sitehtml1dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsitehtml1dir="

?S:installsitehtml1dir:

?S: This variable is really the same as sitehtml1direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: html1direxp only points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installsitehtml1dir

?LINT:set sitehtml1dir

?LINT:set sitehtml1direxp

: determine where add-on html pages go

: There is no standard location, so try to copy the previously-selected

: directory structure for the core html pages.

case "\$sitehtml1dir" in

)

    dflt=`echo "\$html1dir" | \$sed "s#^\$prefix#\$siteprefix#"` ;;

\*)    dflt=\$sitehtml1dir ;;

esac

case "\$dflt" in

"| ") dflt=none ;;

```
esac
fn=dn+~
rp='Pathname where the site-specific html pages should be installed?'
./getfile
prefixvar=sitehtml1dir
./setprefixvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/sitehtml1dir.U
```

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fpgetround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fpgetround:

?S: This variable conditionally defines HAS\_FPGETROUND if fpgetround()

?S: is available to get the floating point rounding mode.

?S:.

?C:HAS\_FPGETROUND:

?C: This symbol, if defined, indicates that the fpgetround routine is

?C: available to get the floating point rounding mode.

?C:.

?H:#\$d\_fpgetround HAS\_FPGETROUND /\*\*\*/

?H:.

?LINT:set d\_fpgetround

: see if fpgetround exists

set fpgetround d\_fpgetround

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_fpgetround.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_telldirproto: Hasproto i\_systypes i\_dirent

```

?MAKE: -pick add $@ %<
?S:d_telldirproto:
?S: This variable conditionally defines the HAS_TELLDIR_PROTO symbol,
?S: which indicates to the C program that the system provides
?S: a prototype for the telldir() function. Otherwise, it is
?S: up to the program to supply one.
?S:.
?C:HAS_TELLDIR_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the telldir() function. Otherwise, it is up
?C: to the program to supply one. A good guess
is
?C: extern long telldir(DIR*);
?C:.
?H:#$d_telldirproto HAS_TELLDIR_PROTO /**/
?H:.
?LINT:set d_telldirproto
: see if prototype for telldir is available
echo " "
set d_telldirproto telldir $i_systypes sys/types.h $i_dirent dirent.h
eval $hasproto

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d_telldirproto.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: sysman.U,v 3.0.1.2 1994/06/20 07:08:43 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: sysman.U,v $
?RCS: Revision 3.0.1.2 1994/06/20 07:08:43 ram
?RCS: patch30: now explicitly states that /usr/man/man1 is the default
?RCS: patch30: added /usr/local/man/man1 to the search list
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:13:50 ram
?RCS: patch10: added support for /local/man/man1 (WAD)
?RCS: patch10: added temporary syspath variable to cut down on line length
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:55 ram
?RCS: Baseline for dist 3.0 worldwide

```



```

release.
?RCS:
?MAKE:sysman: test Loc Oldconfig
?MAKE: -pick add $@ %<
?S:sysman:
?S: This variable holds the place where the manual is located on this
?S: system. It is not the place where the user wants to put his manual
?S: pages. Rather it is the place where Configure may look to find manual
?S: for unix commands (section 1 of the manual usually). See mansrc.
?S:.
?T:syspath
: determine where manual pages are on this system
echo " "
case "$sysman" in
")
syspath='/usr/share/man/man1 /usr/man/man1'
syspath="$syspath /usr/man/mann /usr/man/man1 /usr/man/local/man1"
syspath="$syspath /usr/man/u_man/man1"
syspath="$syspath /usr/catman/u_man/man1 /usr/man/l_man/man1"
syspath="$syspath /usr/local/man/u_man/man1 /usr/local/man/l_man/man1"
syspath="$syspath /usr/man/man.L /local/man/man1 /usr/local/man/man1"
sysman=`./loc . /usr/man/man1 $syspath`
;;
esac
if $test -d "$sysman"; then
echo "System manual is in $sysman." >&4
else
echo "Could not find manual pages in source form."
>&4
fi

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/sysman.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_nl\_langinfo: Inlibc i\_langinfo

?MAKE: -pick add \$@ %<

?S:d\_nl\_langinfo:

?S: This variable conditionally defines the HAS\_NL\_LANGINFO symbol, which

?S: indicates to the C program that the nl\_langinfo() routine is available.

?S:  
?C:HAS\_NL\_LANGINFO:  
?C: This symbol, if defined, indicates that the nl\_langinfo routine is  
?C: available to return local data. You will also need <langinfo.h>  
?C: and therefore I\_LANGINFO.  
?C:.  
?H:#\$d\_nl\_langinfo HAS\_NL\_LANGINFO /\*\*/  
?H:.  
?LINT:set d\_nl\_langinfo  
?LINT:use i\_langinfo  
: see if nl\_langinfo exists  
set nl\_langinfo d\_nl\_langinfo  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_nl\_langinfo.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_exp2: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_exp2:

?S: This variable conditionally defines the HAS\_EXP2 symbol, which

?S: indicates to the C program that the exp2() routine is available.

?S:.

?C:HAS\_EXP2:

?C: This symbol, if defined, indicates that the exp2 routine is

?C: available to do the 2\*\*x function.

?C:.

?H:#\$d\_exp2 HAS\_EXP2 /\*\*/  
?H:.

?LINT:set d\_exp2

: see if exp2 exists

set exp2 d\_exp2

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_exp2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_scalbnl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_scalbnl:

?S: This variable conditionally defines the HAS\_SCALBNL symbol, which

?S: indicates to the C program that the scalbnl() routine is available.

?S: If ilogbl is also present we can emulate frexpl.

?S:.

?C:HAS\_SCALBNL:

?C: This symbol, if defined, indicates that the scalbnl routine is

?C: available. If ilogbl is also present we can emulate frexpl.

?C:.

?H:#\$d\_scalbnl HAS\_SCALBNL /\*\*/

?H:.

?LINT:set d\_scalbnl

: see if scalbnl exists

set scalbnl d\_scalbnl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_scalbnl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_dlfcn.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_dlfcn.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:21:53 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:i\_dlfcn: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_dlfcn:

?S: This variable conditionally defines the I\_DLFCN symbol, which

?S: indicates to the C program that <dlfcn.h> exists and should

?S: be included.

?S:  
?C:I\_DLFCN:  
?C: This symbol, if defined, indicates that <dlfcn.h> exists  
and should  
?C: be included.  
?C:.  
?H:#\$i\_dlfcn I\_DLFCN /\*\*/  
?H:.  
?LINT:set i\_dlfcn  
: see if dlfcn is available  
set dlfcn.h i\_dlfcn  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_dlfcn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_chroot.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_chroot.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:17 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_chroot: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_chroot:  
?S: This variable conditionally defines the HAS\_CHROOT symbol, which  
?S: indicates to the C program that the chroot() routine is available.  
?S:.  
?C:HAS\_CHROOT :  
?C: This symbol, if defined, indicates that the chroot routine  
is  
?C: available.  
?C:.  
?H:#\$d\_chroot HAS\_CHROOT /\*\*/  
?H:.  
?LINT:set d\_chroot

```
: see if chroot exists
set chroot d_chroot
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_chroot.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2004 H.Merijn Brand
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_strlcat: Inlibc Hasproto d_gnulibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_strlcat:
```

```
?S: This variable conditionally defines the HAS_STRLCAT symbol, which
```

```
?S: indicates to the C program that the strlcat () routine is available.
```

```
?S:.
```

```
?C:HAS_STRLCAT:
```

```
?C: This symbol, if defined, indicates that the strlcat () routine is
```

```
?C: available to do string concatenation.
```

```
?C:.
```

```
?H:#$d_strlcat HAS_STRLCAT /**/
```

```
?H:.
```

```
?T:d_strlcat_proto xx1 xx2 xx3 xx4
```

```
?LINT:set d_strlcat
```

```
: see if strlcat exists
```

```
: We need both a prototype in string.h and the symbol in libc.
```

```
echo " "
```

```
d_strlcat_proto="
```

```
xx1="#$d_gnulibc HAS_GNULIBC"
```

```
xx2='#if defined(HAS_GNULIBC) && !defined(_GNU_SOURCE)'
```

```
xx3='# define _GNU_SOURCE'
```

```
xx4='#endif'
```

```
set d_strlcat_proto
```

```
strlcat literal "$xx1" literal "$xx2" literal "$xx3" literal "$xx4" define string.h
```

```
eval $hasproto
```

```
case "$d_strlcat_proto" in
```

```
define) # see if strlcat exists
```

```
set strlcat d_strlcat
```

```
eval $inlibc
```

```
::
```

```
*) val=$undef
```

```
set d_strlcat
```

```
eval $setvar
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_strlcat.U
```

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```
?RCS: $Id: d_ftrncate.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_ftrncate.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:07 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_ftrncate: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_ftrncate (d_ftruncate):
```

```
?S: This variable conditionally defines the HAS_FTRUNCATE symbol, which
```

```
?S: indicates to the C program that the ftruncate() subroutine exists.
```

```
?S:.
```

```
?C:HAS_FTRUNCATE:
```

```
?C: This symbol, if defined, indicates that the ftruncate() subroutine
```

```
?C: exists.
```

```
?C:.
```

```
?H:#$d_ftrncate
```

```
HAS_FTRUNCATE /**/
```

```
?H:.
```

```
?LINT:set d_ftrncate
```

```
: see if ftruncate exists
```

```
set ftruncate d_ftrncate
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_ftrncate.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strcoll.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_strcoll.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:12:01 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_strcoll: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strcoll:  
?S: This variable conditionally defines HAS\_STRCOLL if strcoll() is  
?S: available to compare strings using collating information.  
?S:.  
?C:HAS\_STRCOLL:  
?C: This symbol, if defined, indicates that the strcoll routine  
is  
?C: available to compare strings using collating information.  
?C:.  
?H:#\$d\_strcoll HAS\_STRCOLL /\*\*/  
?H:.  
?LINT:set d\_strcoll  
: see if strcoll exists  
set strcoll d\_strcoll  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strcoll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Myinit.U,v \$

?RCS: Revision 3.0.1.1 1994/10/31 09:47:29 ram  
?RCS: patch44: leading comment states this unit comes before option processing  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: If you want to initialize any default values, copy this unit to your  
?X: personal U directory and add the assignments to the end. This file  
?X: is included after variables are initialized but before any old  
?X: config.sh file is read in and before  
any Configure switch processing.  
?X:  
?MAKE:Myinit: Init  
?MAKE: -pick add \$@ %<  
?LINT: nocomment

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Myinit.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2001 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_strftime: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strftime:  
?S: This variable conditionally defines the HAS\_STRFTIME symbol, which  
?S: indicates to the C program that the strftime() routine is available.  
?S:.  
?C:HAS\_STRFTIME:  
?C: This symbol, if defined, indicates that the strftime routine is  
?C: available to do time formatting.  
?C:.  
?H:#\$d\_strftime HAS\_STRFTIME /\*\*/  
?H:.  
?LINT:set d\_strftime  
: see if strftime exists  
set strftime d\_strftime  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-



5.32.1~rc1/U/perl/d\_strftime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_getnent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getnent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getnent:

?S: This variable conditionally defines HAS\_GETNETENT if getnetent() is

?S: available to look up network names in some data base or another.

?S:.

?C:HAS\_GETNETENT:

?C: This symbol, if defined, indicates that the getnetent() routine is

?C: available to look up network names in some data base

or another.

?C:.

?H:#\$d\_getnent HAS\_GETNETENT /\*\*/

?H:.

?LINT:set d\_getnent

: see if getnetent exists

set getnetent d\_getnent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/modified/d\_getnent.U

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?RCS:

?MAKE:d\_lgamma: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lgamma:

?S: This variable conditionally defines the HAS\_LGAMMA symbol, which

?S: indicates to the C program that the lgamma() routine is available

?S: for the log gamma function. See also d\_tgamma and d\_lgamma\_r.

?S:.

?C:HAS\_LGAMMA:

?C: This symbol, if defined, indicates that the lgamma routine is

?C: available to do the log gamma function. See also HAS\_TGAMMA and

?C: HAS\_LGAMMA\_R.

?C:.

?H:#\$d\_lgamma HAS\_LGAMMA /\*\*/

?H:.

?LINT:set d\_lgamma

: see if lgamma exists

set lgamma d\_lgamma

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_lgamma.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:use64bitint use64bitall archname64: Myread Oldconfig Setvar test \  
usemorebits longsize cflags d\_quad uquadtype Compile rm\_try run

?MAKE: -pick add \$@ %<

?Y:TOP

?S:use64bitint:

?S: This variable conditionally defines the USE\_64\_BIT\_INT symbol,

?S: and indicates that 64-bit integer types should be used

?S: when available. The minimal possible 64-bitness

?S: is employed, just enough to get 64-bit integers into Perl.

?S: This may mean using for example "long longs", while your memory

?S: may still be limited to 2 gigabytes.

?S:.

?S:use64bitall:

?S: This variable conditionally defines the USE\_64\_BIT\_ALL symbol,

?S: and indicates that 64-bit integer types should be used

?S: when available. The maximal

possible

?S: 64-bitness is employed: LP64 or ILP64, meaning that you will

?S: be able to use more than 2 gigabytes of memory. This mode is

?S: even more binary incompatible than USE\_64\_BIT\_INT. You may not

?S: be able to run the resulting executable in a 32-bit CPU at all or

?S: you may need at least to reboot your OS to 64-bit mode.

```

?S:.
?S:archname64:
?S: This variable is used for the 64-bitness part of $archname.
?S:.
?C:USE_64_BIT_INT:
?C: This symbol, if defined, indicates that 64-bit integers should
?C: be used when available. If not defined, the native integers
?C: will be employed (be they 32 or 64 bits). The minimal possible
?C: 64-bitness is used, just enough to get 64-bit integers into Perl.
?C: This may mean using for example "long longs", while your memory
?C: may still be limited to 2 gigabytes.
?C:.
?C:USE_64_BIT_ALL:
?C: This symbol, if defined, indicates that 64-bit integers should
?C: be used when available. If not defined, the native integers
?C: will be used (be
?C: they 32 or 64 bits). The maximal possible
?C: 64-bitness is employed: LP64 or ILP64, meaning that you will
?C: be able to use more than 2 gigabytes of memory. This mode is
?C: even more binary incompatible than USE_64_BIT_INT. You may not
?C: be able to run the resulting executable in a 32-bit CPU at all or
?C: you may need at least to reboot your OS to 64-bit mode.
?C:.
?H:%<:#ifndef USE_64_BIT_INT
?H:%<:#$use64bitint USE_64_BIT_INT /**/
?H:%<:#endif
?H:%<:#ifndef USE_64_BIT_ALL
?H:%<:#$use64bitall USE_64_BIT_ALL /**/
?H:%<:#endif
?H:.
?INIT:archname64="
?LINT:extern ccflags
?LINT:use usemorebits
?LINT:extern use64bits
?LINT:extern uselonglong
?LINT:extern uselonglongs
?LINT:extern use64bitints
?LINT:extern use64bitsint
?LINT:extern use64bitsall
?T:libcquad
?F:!try
?F:!use64bitint.cbu
?F:!use64bitall.cbu
: Do we want 64bit support
case "$uselonglong" in
"$define"|true|[yY]*)
cat <<EOM >&4

```

\*\*\* Configure -Duselonglong is deprecated, using -Duse64bitint instead.

```
EOM
use64bitint="$define"
;;
esac
case
"$use64bits" in
"$define"|true|[yY]*)
cat <<EOM >&4
```

\*\*\* Configure -Duse64bits is deprecated, using -Duse64bitint instead.

```
EOM
use64bitint="$define"
;;
esac
case "$use64bitints" in
"$define"|true|[yY]*)
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitints, using -Duse64bitint instead.

```
EOM
use64bitint="$define"
;;
esac
case "$use64bitsint" in
"$define"|true|[yY]*)
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitsint, using -Duse64bitint instead.

```
EOM
use64bitint="$define"
;;
esac
case "$uselonglongs" in
"$define"|true|[yY]*)
cat <<EOM >&4
```

\*\*\* There is no Configure -Duselonglongs, using -Duse64bitint instead.

```
EOM
use64bitint="$define"
;;
esac
case "$use64bitsall" in
"$define"|true|[yY]*)
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitsall, using -Duse64bitall instead.

```
EOM
```

```

use64bitall="$define"
;;
esac

case "$ccflags" in
*-DUSE_LONG_LONG*|*-DUSE_64_BIT_INT*|*-DUSE_64_BIT_ALL*) use64bitint="$define";;
esac
case "$use64bitall" in
"$define"|true|[yY]*)
use64bitint="$define" ;;
esac

case "$longsize" in
8) cat <<EOM

```

You have natively 64-bit long integers.

```

EOM
val="$define"
;;
*) case "$use64bitint" in
"$define"|true|[yY]*) dflt='y';;
*) dflt='n';;
esac
case "$d_quad" in
"$define") ;;
*) dflt='n' ;;
esac
cat <<EOM

```

Perl can be built to take advantage of 64-bit integer types on some systems. To do so, Configure can be run with `-Duse64bitint`. Choosing this option will most probably introduce binary incompatibilities.

If this doesn't make any sense to you, just accept the default `'$dflt'`. (The default has been chosen based on your configuration.)

```

EOM
rp="Try to use 64-bit integers, if available?"
./myread
case "$ans" in
[yY]*) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set use64bitint
eval $setvar

case "$use64bitall" in

```

```

"$define"|true|[yY]*) dflt='y' ;;
*) case "$longsize" in
  8) dflt='y' ;;
  *) dflt='n' ;;
  esac
;;
esac
cat <<EOM

```

You may also

choose to try maximal 64-bitness. It means using as much 64-bitness as possible on the platform. This in turn means even more binary incompatibilities. On the other hand, your platform may not have any more 64-bitness available than what you already have chosen.

If this doesn't make any sense to you, just accept the default '\$dflt'. (The default has been chosen based on your configuration.)

EOM

```

rp='Try to use maximal 64-bit support, if available?'
. ./myread
case "$ans" in
[yY]*) val="$define" ;;
*) val="$undef" ;;
esac
set use64bitall
eval $setvar
case "$use64bitall" in
"$define")
case "$use64bitint" in
"$undef")
cat <<EOM

```

Since you have chosen a maximally 64-bit build, I'm also turning on the use of 64-bit integers.

EOM

```

use64bitint="$define" ;;
esac
;;
esac

```

```

: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a 64-bit perl is to be built,
: we may need to set or change some other defaults.
if $test -f use64bitint.cbu; then
echo "Your
platform has some specific hints regarding 64-bit integers, using them..."
. ./use64bitint.cbu
fi

```

```

case "$use64bitint" in
"$define"|true|[yY]*)
: This test was common to all the OpenBSD forks, and seems harmless for
: other platforms:
echo " "
echo "Checking if your C library has broken 64-bit functions..." >&4
cat >try.c <<EOCP
#include <stdio.h>
typedef $uquadtype myULL;
int main (void)
{
    struct {
double d;
myULL u;
    } *p, test[] = {
{4294967303.15, 4294967303ULL},
{4294967294.2, 4294967294ULL},
{4294967295.7, 4294967295ULL},
{0.0, 0ULL}
    };
    for (p = test; p->u; p++) {
myULL x = (myULL)p->d;
if (x != p->u) {
    printf("buggy\n");
    return 0;
}
}
    printf("ok\n");
    return 0;
}
EOCP
set try
if eval $compile_ok; then
    libcquad=`$run ./try`
    echo "Your C library's 64-bit functions are $libcquad."
else
    echo "(I can't seem to compile the test program.)"
    echo "Assuming that your C library's 64-bit functions are ok."
    libcquad="ok"
fi
$rm_try

case
"$libcquad" in
    buggy*)
cat >&4 <<EOM

```

\*\*\* You have a C library with broken 64-bit functions.

```
*** 64-bit support does not work reliably in this configuration.
*** Please rerun Configure without -Duse64bitint and/or -Dusemorebits.
*** Cannot continue, aborting.
```

```
EOM
```

```
exit 1
;;
esac
case "$longsize" in
4) case "$archname64" in
    ") archname64=64int ;;
    esac
    ;;
    esac
;;
esac
```

```
: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a maximally 64-bit perl is to be built,
: we may need to set or change some other defaults.
if $test -f use64bitall.cbu; then
echo "Your platform has some specific hints regarding 64-bit builds, using them..."
. ./use64bitall.cbu
fi
case "$use64bitall" in
"$define"|true|[yY]*)
case "$longsize" in
4) case "$archname64" in
    "|64int) archname64=64all ;;
    esac
    ;;
    esac
;;
esac
```

```
case "$d_quad:$use64bitint" in
$undef:$define)
cat >&4 <<EOF
```

```
*** You have chosen to use 64-bit
integers,
*** but none can be found.
*** Please rerun Configure without -Duse64bitint and/or -Dusemorebits.
*** Cannot continue, aborting.
```

```
EOF
```

```
exit 1
;;
```



esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/use64bits.U

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?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extractall.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:00:43 ram

?RCS: patch61: created

?RCS:

?X:

?X: If extraction has been requested, load the configuration file, perform

?X: the extraction and exit.

?X:

?X: This unit was originally a part of Options.U. It had to be removed from

?X: it to prevent a dependency cycle: Extract -> src -> Options -> Extract

?X: The Begin.U unit now requires us before beginning to do anything

?X: interesting, to ensure proper semantics. -- RAM, 15/03/96

?X:

?MAKE:Extractall:

Extract Options

?MAKE: -pick wipe \$@ %<

: extract files and exit if asked to do so

case "\$extractsh" in

true)

?X: Undo the forced silent=true when -S was supplied, by probing realsilent

?X: which was set iff -s was also given. See Options.U for details.

case "\$realsilent" in

true) ;;

\*) exec 1>&4;;

esac

case "\$config\_sh" in

") config\_sh='config.sh';;

esac

echo " "

echo "Fetching answers from \$config\_sh..."

cd ..

```

. $config_sh
test "$override" && . /optdef.sh
echo " "
?X: extract has to be run from the top directory, not within UU.
. UU/extract
rm -rf UU
echo "Extraction done."
exit 0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Extractall.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_accesssx: Inlibc
?MAKE: -pick add $@ %<
?S:d_accesssx:
?S: This variable conditionally defines the HAS_ACCESSSX symbol, which
?S: indicates to the C program that the accessx() routine is available.
?S:
?C:HAS_ACCESSSX :
?C: This symbol, if defined, indicates that the accessx routine is
?C: available to do extended access checks.
?C:
?H:#$d_accesssx HAS_ACCESSSX /**/
?H:
?LINT:set d_accesssx
: see if accesssx exists
set accesssx d_accesssx
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/acl/d_accesssx.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_castneg.U,v 3.0.1.2 1995/05/12 12:11:21 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_castneg.U,v \$  
?RCS: Revision 3.0.1.2 1995/05/12 12:11:21 ram  
?RCS: patch54: made sure cc and cflags are conditional dependencies  
?RCS: patch54: added improved test case for Interactive Unix  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:10:50 ram  
?RCS: patch36: don't forget to tell user about compilation failures (ADO)  
?RCS: patch36: declare signal handler correctly using 'signal\_t' (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:47 ram  
?RCS: Baseline  
for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: Can the compiler cast negative / odd floats to unsigned values.  
?X:  
?MAKE:d\_castneg castflags: cat Compile rm\_try Setvar signal\_t run i\_stdlib  
?MAKE: -pick add \$@ %<  
?S:d\_castneg:  
?S: This variable conditionally defines CASTNEG, which indicates  
?S: whether the C compiler can cast negative float to unsigned.  
?S:.  
?S:castflags:  
?S: This variable contains a flag that precise difficulties the  
?S: compiler has casting odd floating values to unsigned long:  
?S: 0 = ok  
?S: 1 = couldn't cast < 0  
?S: 2 = couldn't cast >= 0x80000000  
?S: 4 = couldn't cast in argument expression list  
?S:.  
?C:CASTNEGFLOAT:  
?C: This symbol is defined if the C compiler can cast negative  
?C: numbers to unsigned longs, ints and shorts.  
?C:.  
?C:CASTFLAGS:  
?C: This symbol contains flags that say what difficulties the compiler  
?C: has casting odd floating values to unsigned long:  
?C: 0 = ok  
?C: 1 = couldn't cast < 0  
?C: 2 = couldn't cast >= 0x80000000  
?C: 4 = couldn't

```

cast in argument expression list
?C:.
?H:#$d_castneg CASTNEGFLOAT /**/
?H:#define CASTFLAGS $castflags /**/
?H:.
?F:!try
?LINT:set d_castneg
: check for ability to cast negative floats to unsigned
echo " "
echo 'Checking whether your C compiler can cast negative float to unsigned.' >&4
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <sys/types.h>
#include <signal.h>
$signal_t blech(int s) { exit(7); }
$signal_t blech_in_list(int s) { exit(4); }
unsigned long dummy_long(unsigned long p) { return p; }
unsigned int dummy_int(unsigned int p) { return p; }
unsigned short dummy_short(unsigned short p) { return p; }
int main()
{
double f;
unsigned long along;
unsigned int aint;
unsigned short ashort;
int result = 0;
char str[16];

/* Frustrate gcc-2.7.2's optimizer which failed this test with
   a direct f = -123. assignment. gcc-2.8.0 reportedly
   optimized the whole file away
*/
/* Store the number in a writable
string for gcc to pass to
sscanf under HP-UX.
*/
sprintf(str, "-123");
sscanf(str, "%lf", &f); /* f = -123.; */

signal(SIGFPE, blech);
along = (unsigned long)f;
aint = (unsigned int)f;
ashort = (unsigned short)f;
if (along != (unsigned long)-123)

```

```

    result |= 1;
if (aint != (unsigned int)-123)
    result |= 1;
if (ashort != (unsigned short)-123)
    result |= 1;
sprintf(str, "1073741824.");
sscanf(str, "%lf", &f); /* f = (double)0x40000000; */
f = f + f;
along = 0;
along = (unsigned long)f;
if (along != 0x80000000)
    result |= 2;
f -= 1.;
along = 0;
along = (unsigned long)f;
if (along != 0x7fffffff)
    result |= 1;
f += 2.;
along = 0;
along = (unsigned long)f;
if (along != 0x80000001)
    result |= 2;
if (result)
    exit(result);
?X:
?X: The following is a test for Interactive Unix Version 4.1, which
?X: has an 'improved' compiler which can correctly cast negative
?X: floats in expression lists, but apparently not in argument lists.
?X: Contributed by Winfried Koenig
<win@incom.rhein-main.de>
?X:
signal(SIGFPE, blech_in_list);
sprintf(str, "123.");
sscanf(str, "%lf", &f); /* f = 123.; */
along = dummy_long((unsigned long)f);
aint = dummy_int((unsigned int)f);
ashort = dummy_short((unsigned short)f);
if (along != (unsigned long)123)
    result |= 4;
if (aint != (unsigned int)123)
    result |= 4;
if (ashort != (unsigned short)123)
    result |= 4;
exit(result);

}
EOCP
set try

```

```

if eval $compile_ok; then
  $run ./try 2>/dev/null
  castflags=$?
else
  echo "(I can't seem to compile the test program--assuming it can't)"
  castflags=7
fi
case "$castflags" in
0) val="$define"
  echo "Yup, it can."
  ;;
*) val="$undef"
  echo "Nope, it can't."
  ;;
esac
set d_castneg
eval $setvar
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_castneg.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: warnflags.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>

?RCS:

?RCS: \$Log: warnflags.U,v \$

?RCS: Revision 3.0 1993/08/18 12:10:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:warnflags: cat cc contains Myread Guess Oldconfig Findhdr

?MAKE: -pick add \$@ %<

?S:warnflags:

?S: This variable contains any additional C compiler flags to generate

?S: warnings from the compiler. It is up to the Makefile to use this.

?S:.

: offer additional

warning flags for compilation

```
$cat <<EOH
```

You may wish to compile with extra compiler warnings enabled.

Note that doing so enhances your chance of receiving your free set of steak knives, particularly if you find any bugs and report them.

If you don't want extra warnings, answer "none".

```
EOH
```

```
case "$warnflags" in
") case "$cc" in
*gcc*)
dflt="-Wall -Wno-comment"
if $contains 'fprintf' `./findhdr stdio.h` >/dev/null 2>&1; then
:
else
dflt="$dflt -Wno-implicit"
fi
;;
*) dflt="none";;
esac
;;
') dflt="none";;
*) dflt="$warnflags";;
esac
```

```
rp="Any $cc flags to enable warnings?"
```

```
./myread
```

```
case "$ans" in
none) warnflags=' ';;
*) warnflags="$ans";;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/warnflags.U
```

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_dup3: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_dup3:  
?S: This variable conditionally defines HAS\_DUP3 if dup3() is  
?S: available to duplicate file descriptors.  
?S:.  
?C:HAS\_DUP3:  
?C: This symbol, if defined, indicates that the dup3 routine is  
?C: available to duplicate file descriptors.  
?C:.  
?H:#\$d\_dup3 HAS\_DUP3 /\*\*/  
?H:.  
?LINT:set d\_dup3  
: see if dup3 exists  
set dup3 d\_dup3  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_dup3.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: installprefix.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: installprefix.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?RCS:

?MAKE:installprefix installprefixexp: Getfile Loc \  
Oldconfig afs cat package prefix

?MAKE: -pick add \$@ %<

?MAKE: -pick add \$@ %<

?S:installprefix:

?S: This variable holds the name of the directory below which

?S: "make install" will install the package. For most users, this

?S: is the same

as prefix. However, it is useful for

?S: installing the software into a different (usually temporary)

?S: location after which it can be bundled up and moved somehow

?S: to the final location specified by prefix.



?S:.

?S:installprefixexp:

?S: This variable holds the full absolute path of installprefix

?S: with all ~-expansion done.

?S:.

: determine installation prefix for where package is to be installed.

if \$afs; then

\$cat <<EOM

Since you are running AFS, I need to distinguish the directory in which files will reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installprefix" in
```

```
) dflt=`echo $prefix | sed 's#^/afs/#/afs/#^`;;
```

```
*) dflt="$installprefix";;
```

```
esac
```

else

\$cat <<EOM

In some special cases, particularly when building \$package for distribution, it is convenient to distinguish the directory in which files should be installed from the directory (\$prefix) in which they will eventually reside. For most users, these two directories are the same.

EOM

```
case "$installprefix" in
```

```
) dflt=$prefix ;;
```

```
*) dflt=$installprefix;;
```

```
esac
```

fi

fn=d~

rp='What installation prefix should I use for installing files?'

./getfile

installprefix="\$ans"

installprefixexp="\$ansexp"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/installprefix.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_dbm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_dbm.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:48:20 ram  
?RCS: patch61: added I\_RPCSVCSVC\_DBM check  
?RCS:  
?RCS: Revision 3.0.1.1 1995/05/12 12:16:05 ram  
?RCS: patch54: made more robust by checking both header and lib (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:15 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_dbm i\_rpcsvcsvcdbm: Inhdr Inlibc Setvar  
?MAKE: -pick add \$@ %<  
?S:i\_dbm (d\_odbm):  
?S: This variable conditionally defines  
the I\_DBM symbol, which  
?S: indicates to the C program that <dbm.h> exists and should  
?S: be included.  
?S:.  
?S:i\_rpcsvcsvcdbm:  
?S: This variable conditionally defines the I\_RPCSVCSVC\_DBM symbol, which  
?S: indicates to the C program that <rpcsvc/dbm.h> exists and should  
?S: be included. Some System V systems might need this instead of <dbm.h>.  
?S:.  
?C:I\_DBM (HAS\_ODBM ODBM):  
?C: This symbol, if defined, indicates that <dbm.h> exists and should  
?C: be included.  
?C:.  
?C:I\_RPCSVCSVC\_DBM:  
?C: This symbol, if defined, indicates that <rpcsvc/dbm.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_dbm I\_DBM /\*\*/  
?H:#\$i\_rpcsvcsvcdbm I\_RPCSVCSVC\_DBM /\*\*/  
?H:.  
?T:d\_dbmclose  
?LINT:set i\_dbm i\_rpcsvcsvcdbm  
: see if dbm.h is available  
?X: We might just have the header, not the library.  
?X: We look for dbmclose() rather than dbmunit() because  
?X: some versions of SCO Unix have -ldb, but are missing dbmclose(). -- ADO  
?X: Some System V systems have <rpcsvc/dbm.h> instead of <dbm.h>.  
: see if dbmclose exists

```

set dbmclose
d_dbmclose
eval $inlibc

case "$d_dbmclose" in
$define)
set dbm.h i_dbm
eval $inhdr
case "$i_dbm" in
$define)
val="$undef"
set i_rpcsvcdbm
eval $setvar
;;
*) set rpcsvc/dbm.h i_rpcsvcdbm
eval $inhdr
;;
esac
;;
*) echo "We won't be including <dbm.h>"
val="$undef"
set i_dbm
eval $setvar
val="$undef"
set i_rpcsvcdbm
eval $setvar
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_dbm.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_remainder: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_remainder:

?S: This variable conditionally defines the HAS\_REMAINDER symbol, which

?S: indicates to the C program that the remainder() routine is available.

?S:.

?C:HAS\_REMAINDER:

?C: This symbol, if defined, indicates that the remainder routine is

?C: available to return the floating-point remainder.

?C:.

?H:#\$d\_remainder HAS\_REMAINDER /\*\*/

```
?H:
?LINT:set d_remainder
: see if remainder exists
set remainder d_remainder
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_remainder.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysresrc.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_sysresrc.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:34 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: Look wether <sys/resource.h> needs to be included
```

```
?X:
```

```
?MAKE:i_sysresrc: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_sysresrc:
```

```
?S: This variable conditionally defines the I_SYS_RESOURCE symbol,
```

```
?S: and indicates whether a C program should include <sys/resource.h>.
```

```
?S:.
```

```
?C:I_SYS_RESOURCE (I_SYSRESOURCE):
```

```
?C: This symbol, if defined, indicates
```

```
to the C program that it should
```

```
?C: include <sys/resource.h>.
```

```
?C:.
```

```
?H:#$i_sysresrc I_SYS_RESOURCE /**/
```

```
?H:.
```

```
?LINT:set i_sysresrc
```

```
: see if sys/resource.h has to be included
```

```
set sys/resource.h i_sysresrc
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```

5.32.1~rc1/dist/U/i\_sysresrc.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_termio.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_termio.U,v $
?RCS: Revision 3.0.1.4 1994/10/29 16:20:54 ram
?RCS: patch36: call ./usg and ./Cpplib explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0.1.3 1994/08/29 16:26:38 ram
?RCS: patch32: don't include all three I_* symbols in config.h
?RCS: patch32: (had forgotten to undo this part last time)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:25:03 ram
?RCS: patch27: undone ADO's fix in previous patch since it was useless
?RCS:
?RCS:
Revision 3.0.1.1 1994/05/06 15:05:23 ram
?RCS: patch23: now include all three defines in config.h (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:44 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_termio i_sgty i_termios: test Inlibc Cpplib Guess Setvar Findhdr Warn run
?MAKE: -pick add $@ %<
?S:i_termio:
?S: This variable conditionally defines the I_TERMIO symbol, which
?S: indicates to the C program that it should include <termio.h> rather
?S: than <sgty.h>.
?S:.
?S:i_termios:
?S: This variable conditionally defines the I_TERMIOS symbol, which
?S: indicates to the C program that the POSIX <termios.h> file is
?S: to be included.
?S:.
?S:i_sgty:
?S: This variable conditionally defines the I_SGTTY symbol, which
?S: indicates to the C program that it should include <sgty.h> rather
?S: than <termio.h>.
?S:.
```

?C:I\_TERMIO:

?C: This symbol, if defined, indicates that the program should include

?C: <termio.h> rather than <sgtty.h>. There are also differences in

?C: the

ioctl() calls that depend on the value of this symbol.

?C:.

?C:I\_TERMIOS:

?C: This symbol, if defined, indicates that the program should include

?C: the POSIX termios.h rather than sgtty.h or termio.h.

?C: There are also differences in the ioctl() calls that depend on the

?C: value of this symbol.

?C:.

?C:I\_SGTTY:

?C: This symbol, if defined, indicates that the program should include

?C: <sgtty.h> rather than <termio.h>. There are also differences in

?C: the ioctl() calls that depend on the value of this symbol.

?C:.

?H:#\$i\_termio I\_TERMIO /\*\*/

?H:#\$i\_termios I\_TERMIOS /\*\*/

?H:#\$i\_sgtty I\_SGTTY /\*\*/

?H:.

?T:val2 val3

?LINT:set i\_termio i\_sgtty i\_termios

: see if this is a termio system

val="\$undef"

val2="\$undef"

val3="\$undef"

?X: Prefer POSIX-approved termios.h over all else

if \$test `./findhdr termios.h`; then

set tcsetattr i\_termios

eval \$inlibc

val3="\$i\_termios"

fi

echo " "

case "\$val3" in

"\$define") echo "You have POSIX termios.h... good!" >&4;

\*)

if ./Cppsymb pyr; then

case "`\$run /bin/universe`" in

ucb) if \$test `./findhdr sgtty.h`; then

val2="\$define"

echo "<sgtty.h> found." >&4

else

echo "System is pyramid with BSD universe."

./warn "<sgtty.h> not found--you could have problems."

fi;;

\*) if \$test `./findhdr termio.h`; then

val="\$define"

```

echo "<termio.h> found." >&4
else
echo "System is pyramid with USG universe."
./warn "<termio.h> not found--you could have problems."
fi;;
esac
?X: Start with USG to avoid problems if both usg/bsd was guessed
elif ./usg; then
if $test `./findhdr termio.h`; then
echo "<termio.h> found." >&4
val="$define"
elif $test `./findhdr sgtty.h`; then
echo "<sgtty.h> found." >&4
val2="$define"
else
./warn "Neither <termio.h> nor <sgtty.h> found--cross fingers!"
fi
else
if $test `./findhdr sgtty.h`; then
echo "<sgtty.h> found." >&4
val2="$define"
elif $test `./findhdr termio.h`; then
echo "<termio.h>
found." >&4
val="$define"
else
./warn "Neither <sgtty.h> nor <termio.h> found--cross fingers!"
fi
fi;;
esac
set i_termio; eval $setvar
val=$val2; set i_sgtty; eval $setvar
val=$val3; set i_termios; eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/i_termio.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: html1dir.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

```

?RCS:
?RCS: $Log: html1dir.U,v $
?RCS:
?MAKE:html1dir html1direxp installhtml1dir: cat Loc Myread \
  spackage test Getfile Setprefixvar Prefixit Prefixup
?MAKE: -pick add $@ %<
?Y:TOP
?D:html1dir="
?S:html1dir:
?S: This variable contains the name of the directory in which html
?S: source pages are to be put. This directory is for pages
?S: that describe whole programs, not libraries or modules. It
?S: is intended to correspond roughly to section 1 of the Unix
?S: manuals.
?S:.
?D:html1direxp="
?S:html1direxp:
?S: This
  variable is the same as the html1dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installhtml1dir="
?S:installhtml1dir:
?S: This variable is really the same as html1direxp, unless you are
?S: using a different installprefix. For extra portability, you
?S: should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set html1direxp
?LINT:set installhtml1dir
: determine where html pages for programs go
set html1dir html1dir none
eval $prefixit
$cat <<EOM

```

If you wish to install html files for programs in \$spackage, indicate the appropriate directory here. To skip installing html files, answer "none".

```

EOM
case "$html1dir" in
  "|none|$undef|' ') dflt=none ;;
  *) dflt=$html1dir ;;
esac
fn=dn+~
rp="Directory for the main $spackage html pages?"
./getfile
prefixvar=html1dir
./setprefixvar

```



: Use ' ' for none so value is preserved next time through Configure

\$test X"\$html1dir" = "X" && html1dir=' '

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/html1dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_safemcpy.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 15:41:12 ram

?RCS: patch61: improved overlapping copy check

?RCS: patch61: comfort them if they have memmove

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.4 1995/07/25 13:58:46 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.3 1995/03/21 08:47:26 ram

?RCS: patch52: swapped two first arguments of memcopy() calls

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:15:10

ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:53:12 ram

?RCS: patch23: ensure string is not optimized in read-only memory (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_safemcpy: cat d\_memcopy +cc +optimize +ccflags +libs +ldflags rm \  
d\_memmove i\_memory i\_stdlib i\_string i\_unistd Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_safemcpy:

?S: This variable conditionally defines the HAS\_SAFE\_MEMCPY symbol if

?S: the memcopy() routine can do overlapping copies.

?S:.

```

?C:HAS_SAFE_MEMCPY (SAFE_MEMCPY):
?C: This symbol, if defined, indicates that the memcpy routine is available
?C: to copy potentially overlapping memory blocks. Otherwise you should
?C: probably use memmove() or memcpy(). If neither is defined, roll your
?C: own version.
?C:.
?H:#$d_safemcpy HAS_SAFE_MEMCPY /**/
?H:.
?F:!safemcpy
?LINT: set d_safemcpy
: can memcpy handle overlapping blocks?
?X:
  assume the worst
  val="$undef"
  case "$d_memcpy" in
  "$define")
  echo " "
  echo "Checking to see if your memcpy() can do overlapping copies..." >&4
  $cat >foo.c <<EOCP
  #$i_memory I_MEMORY
  #$i_stdlib I_STDLIB
  #$i_string I_STRING
  #$i_unistd I_UNISTD
  EOCP
  $cat >>foo.c <<'EOCP'
  #include <stdio.h>
  #ifdef I_MEMORY
  # include <memory.h>
  #endif
  #ifdef I_STDLIB
  # include <stdlib.h>
  #endif
  #ifdef I_STRING
  # include <string.h>
  #else
  # include <strings.h>
  #endif
  #ifdef I_UNISTD
  # include <unistd.h> /* Needed for NetBSD */
  #endif
  int main()
  {
  char buf[128], abc[128];
  char *b;
  int len;
  int off;
  int align;

```

```

/* Copy "abcde..." string to char abc[] so that gcc doesn't
   try to store the string in read-only memory. */
memcpy(abc, "abcdefghijklmnopqrstuvwxy0123456789", 36);

for (align = 7; align >= 0; align--) {
  for (len = 36; len; len--) {
    b = buf+align;
    memcpy(b, abc, len);
    for (off = 1; off <= len; off++) {
      memcpy(b+off, b, len);
      memcpy(b, b+off, len);
      if (memcmp(b, abc, len))
        exit(1);
    }
  }
}
exit(0);
}
EOCP
if
$cc $optimize $cflags $ldflags \
  -o safemcpy foo.c $libs >/dev/null 2>&1; then
if ./safemcpy 2>/dev/null; then
  echo "Yes, it can."
  val="$define"
else
  echo "It can't, sorry."
  case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
esac
fi
else
  echo "(I can't compile the test program, so we'll assume not...)"
  case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
esac
fi
;;
esac
$rm -f foo.* safemcpy core
set d_safemcpy
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_safemcpy.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmget.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_shmget.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:20 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_shmget: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_shmget:  
?S: This variable conditionally defines the HAS\_SHMGET symbol, which  
?S: indicates to the C program that the shmget() routine is available.  
?S:.  
?C:HAS\_SHMGET:  
?C: This symbol, if defined, indicates that the shmget() routine is  
?C: available to request a shared memory segment from  
the kernel.  
?C:.  
?H:#\$d\_shmget HAS\_SHMGET /\*\*/  
?H:.  
?LINT:set d\_shmget  
: see if shmget exists  
set shmget d\_shmget  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_shmget.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Guess.U,v 3.0.1.5 1995/07/25 13:37:14 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
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?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: Guess.U,v \$

?RCS: Revision 3.0.1.5 1995/07/25 13:37:14 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 15:53:55 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: call ./xenix explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0.1.3 1993/12/15 08:14:35 ram  
?RCS: patch15: variable d\_bsd was not always set properly  
?RCS:  
?RCS: Revision 3.0.1.2 1993/08/30 08:57:14 ram  
?RCS:  
patch8: fixed comment which wrongly attributed the usrincl symbol  
?RCS: patch8: no more ugly messages when no /usr/include/ctype.h  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/27 14:37:37 ram  
?RCS: patch7: added support for OSF/1 machines  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:57 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit hazards some guesses as to what the general nature of the system  
?X: is. The information it collects here is used primarily to establish default  
?X: answers to other questions.  
?X:  
?MAKE:Guess d\_eunice d\_xenix d\_bsd: cat test echo n c contains \  
rm Loc eunicefix tr sysroot  
?MAKE: -pick add \$@ %<  
?S:d\_eunice:  
?S: This variable conditionally defines the symbols EUNICE and VAX, which  
?S: alerts the C program that it must deal with idiosyncrasies of VMS.  
?S:.  
?S:d\_xenix:  
?S: This variable conditionally defines the symbol XENIX, which alerts  
?S: the C program that it runs under Xenix.  
?S:.  
?S:d\_bsd:  
?S: This symbol conditionally defines the  
symbol BSD when running on a  
?S: BSD system.  
?S:.  
?C:EUNICE:  
?C: This symbol, if defined, indicates that the program is being compiled  
?C: under the EUNICE package under VMS. The program will need to handle  
?C: things like files that don't go away the first time you unlink them,  
?C: due to version numbering. It will also need to compensate for lack  
?C: of a respectable link() command.

```

?C:.
?X: Should we define VMS here? Is Eunice actually used anymore?
?X:?C:VMS:
?X:?C: This symbol, if defined, indicates that the program is running under
?X:?C: VMS. It is currently only set in conjunction with the EUNICE symbol.
?X:?C:.
?C:XENIX:
?C: This symbol, if defined, indicates that the program is running under
?C: Xenix (at least 3.0 ?).
?C:.
?X: We don't use BSD in the perl source. It's too vague, and already
?X: defined in some header files anyway (e.g. NetBSD). This just gives
?X: us a spurious redefinition error upon compilation.
?X: --Andy Dougherty Feb 11, 1998
?X: ?C:BSD:
?X:
?C: This symbol, if defined, indicates that the program is running under
?X: ?C: a BSD system.
?X: ?C:.
?H:#$d_eunice EUNICE /**/
?X:?H:#$d_eunice VMS /**/
?H:#$d_xenix XENIX /**/
?X: ?H:#$d_bsd BSD /**/
?H:.
?F:./bsd ./usg ./v7 ./osf1 ./eunice ./xenix ./venix ./os2
?T:xxx
: make some quick guesses about what we are up against
echo " "
$echo $n "Hmm... $c"
echo exit 1 >bsd
echo exit 1 >usg
echo exit 1 >v7
echo exit 1 >osf1
echo exit 1 >eunice
echo exit 1 >xenix
echo exit 1 >venix
echo exit 1 >os2
d_bsd="$undef"
?X:
?X: Do not use 'usrinc', or we get a circular dependency. because
?X: usrinc is defined in usrinc.U, which relies on us...
?X:
$cat $sysroot/usr/include/signal.h $sysroot/usr/include/sys/signal.h >foo 2>/dev/null
if test -f /osf_boot || $contains 'OSF/1' $sysroot/usr/include/ctype.h >/dev/null 2>&1
then
echo "Looks kind of like an OSF/1 system, but we'll see..."
echo exit 0 >osf1
elif test `echo abc | $tr a-z A-Z` = Abc ; then

```

```

xxx=`./loc addbib blurfl $pth`
if $test
-f $xxx; then
echo "Looks kind of like a USG system with BSD features, but we'll see..."
echo exit 0 >bsd
echo exit 0 >usg
else
if $contains SIGTSTP foo >/dev/null 2>&1 ; then
echo "Looks kind of like an extended USG system, but we'll see..."
else
echo "Looks kind of like a USG system, but we'll see..."
fi
echo exit 0 >usg
fi
elif $contains SIGTSTP foo >/dev/null 2>&1 ; then
echo "Looks kind of like a BSD system, but we'll see..."
d_bsd="$define"
echo exit 0 >bsd
else
echo "Looks kind of like a Version 7 system, but we'll see..."
echo exit 0 >v7
fi
case "$eunicefix" in
*unixtovms*)
$cat <<'EOI'
There is, however, a strange, musty smell in the air that reminds me of
something...hmm...yes...I've got it...there's a VMS nearby, or I'm a Blit.
EOI
echo exit 0 >eunice
d_eunice="$define"
: it so happens the Eunice I know will not run shell scripts in Unix format
;;
*)
echo " "
echo "Congratulations. You aren't running Eunice."
d_eunice="$undef"
;;
esac
: Detect
OS2. The p_ variable is set above in the Head.U unit.
: Note that this also -- wrongly -- detects e.g. dos-djgpp, which also uses
: semicolon as a patch separator
case "$p_" in
:) ;;
*)
$cat <<'EOI'
I have the feeling something is not exactly right, however...don't tell me...
lemme think...does HAL ring a bell?...no, of course, you're only running OS/2!

```

(Or you may be running DOS with DJGPP.)

```
EOI
echo exit 0 >os2
;;
esac
if test -f /xenix; then
echo "Actually, this looks more like a XENIX system..."
echo exit 0 >xenix
d_xenix="$define"
else
echo " "
echo "It's not Xenix..."
d_xenix="$undef"
fi
chmod +x xenix
$eunicefix xenix
if test -f /venix; then
echo "Actually, this looks more like a VENIX system..."
echo exit 0 >venix
else
echo " "
if ./xenix; then
: null
else
echo "Nor is it Venix..."
fi
fi
chmod +x bsd usg v7 osf1 eunice xenix venix os2
$eunicefix bsd usg v7 osf1 eunice xenix venix os2
$rm -f foo
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Guess.U
```

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?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_fd\_set.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:33:16 ram



?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1994/06/20 06:57:23 ram

?RCS: patch30: extended scope for fd\_set checks (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:06:27 ram

?RCS: patch16: comments for HAS\_FD\_\* symbols were not consistent

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_fd\_set d\_fd\_macros d\_fds\_bits: cat +cc +ccflags rm Oldconfig  
 \  
 d\_socket i\_systime i\_sysselect i\_syssock

?MAKE: -pick add \$@ %<

?S:d\_fd\_set:

?S: This variable contains the eventual value of the HAS\_FD\_SET symbol,  
 ?S: which indicates if your C compiler knows about the fd\_set typedef.

?S:.

?S:d\_fd\_macros:

?S: This variable contains the eventual value of the HAS\_FD\_MACROS symbol,  
 ?S: which indicates if your C compiler knows about the macros which  
 ?S: manipulate an fd\_set.

?S:.

?S:d\_fds\_bits:

?S: This variable contains the eventual value of the HAS\_FDS\_BITS symbol,  
 ?S: which indicates if your fd\_set typedef contains the fds\_bits member.  
 ?S: If you have an fd\_set typedef, but the dweebs who installed it did  
 ?S: a half-fast job and neglected to provide the macros to manipulate  
 ?S: an fd\_set, HAS\_FDS\_BITS will let us know how to fix the gaffe.

?S:.

?C:HAS\_FD\_SET:

?C: This symbol, when defined, indicates presence of the fd\_set typedef  
 ?C: in <sys/types.h>

?C:.

?C:HAS\_FD\_MACROS:

?C: This symbol, when defined, indicates presence of the macros used  
 to  
 ?C: manipulate an fd\_set.

?C:.

?C:HAS\_FDS\_BITS:

?C: This symbol, when defined, indicates presence of the fds\_bits member in  
 ?C: fd\_set. This knowledge is useful if fd\_set is available but the macros  
 ?C: aren't.

?C:.

?H:#\$d\_fd\_set HAS\_FD\_SET /\*\*/  
 ?H:#\$d\_fd\_macros HAS\_FD\_MACROS /\*\*/  
 ?H:#\$d\_fds\_bits HAS\_FDS\_BITS /\*\*/

```
?H:
?F:!fd_set
: check for fd_set items
$cat <<EOM
```

Checking to see how well your C compiler handles fd\_set and friends ...

EOM

?X: The FD\_SET macros can be in strange places. On some SysV-based

?X: systems, they are in <sys/bsdtypes.h>, which is included (perhaps)

?X: by <sys/socket.h>. We won't force people to include

?X: <sys/bsdtypes.h> because it might introduce other

?X: incompatibilities.

```
$cat >fd_set.c <<EOCP
```

```
#$i_systime I_SYS_TIME
```

```
#$i_sysselect I_SYS_SELECT
```

```
#$d_socket HAS_SOCKET
```

```
#$i_syssock I_SYS_SOCKET
```

```
#include <sys/types.h>
```

```
#ifdef HAS_SOCKET
```

```
#ifdef I_SYS_SOCKET
```

```
#include <sys/socket.h> /* Might include <sys/bsdtypes.h> */
```

```
#endif
```

```
#endif
```

```
#ifdef I_SYS_TIME
```

```
#include
```

```
<sys/time.h>
```

```
#endif
```

```
#ifdef I_SYS_SELECT
```

```
#include <sys/select.h>
```

```
#endif
```

```
int main() {
```

```
fd_set fds;
```

```
#ifdef TRYBITS
```

```
if(fds.fds_bits);
```

```
#endif
```

```
#if defined(FD_SET) && defined(FD_CLR) && defined(FD_ISSET) && defined(FD_ZERO)
```

```
exit(0);
```

```
#else
```

```
exit(1);
```

```
#endif
```

```
}
```

```
EOCP
```

```
if $cc $ccflags -DTRYBITS -o fd_set fd_set.c >fd_set.out 2>&1 ; then
```

```
d_fds_bits="$define"
```

```
d_fd_set="$define"
```

```
echo "Well, your system knows about the normal fd_set typedef..." >&4
```

```
if ./fd_set; then
  echo "and you have the normal fd_set macros (just as I'd expect)." >&4
  d_fd_macros="$define"
else
  $cat >&4 <<'EOM'
```

but not the normal fd\_set macros! Gaaack! I'll have to cover for you.

EOM

```
  d_fd_macros="$undef"
fi
else
  $cat <<'EOM'
```

Hmm, your compiler has some difficulty with fd\_set. Checking further...

EOM

```
if $cc $ccflags -o fd_set fd_set.c >fd_set.out 2>&1 ; then
  d_fds_bits="$undef"
  d_fd_set="$define"
  echo "Well, your system has some sort of fd_set available..." >&4
  if ./fd_set; then
    echo "and you have the
normal fd_set macros." >&4
    d_fd_macros="$define"
  else
    $cat <<'EOM'
```

but not the normal fd\_set macros! Gross! More work for me...

EOM

```
  d_fd_macros="$undef"
fi
else
  echo "Well, you got zip. That's OK, I can roll my own fd_set stuff." >&4
  d_fd_set="$undef"
  d_fds_bits="$undef"
  d_fd_macros="$undef"
fi
fi
$rm -f fd_set*
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_fd_set.U
```

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Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_strtouq.U
```

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_stdbool.U
```

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_strtoll.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_union\_semun.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_isnan.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_isless.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_ptrdiff\_t.U

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_nl\_langinfo\_1.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_pthread\_y.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fpos64\_t.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/ebcdic/ebcdic.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_cplusplus.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_futimes.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fcntl\_can\_lock.U

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_prctl.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_signbit.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_off64\_t.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_dlssymun.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_isfinite.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_libm\_lib\_version.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_pthratrj.U

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_strtoull.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_longlong.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_isinf.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/threads/d\_pthread\_atfork.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/time\_size.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/d\_isnormal.U

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?RCS:

?MAKE:longdbl\_inbytes longdbl\_nbytes double\_inbytes double\_nbytes: Inlibc \

cat Compile run rm\_try Setvar echo d\_longdbl \

doublekind doublesize longdblkind longdblsize

?MAKE: -pick add \$@ %<

?S:longdbl\_inbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the long double precision infinity.

?S:.

?S:longdbl\_nbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the long double precision not-a-number.

?S:.

?S:double\_inbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the double precision infinity.

?S:.

?S:double\_nbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for

the double precision not-a-number.

?S:.

?C:DOUBLEINBYTES:

?C: This symbol, if defined, is a comma-separated list of

?C: hexadecimal bytes for the double precision infinity.

?C:.

?C:DOUBLENANBYTES:

?C: This symbol, if defined, is a comma-separated list of

?C: hexadecimal bytes (0xHH) for the double precision not-a-number.

?C:.

?C:LONGDBLINBYTES:

?C: This symbol, if defined, is a comma-separated list of

?C: hexadecimal bytes for the long double precision infinity.

?C:.

?C:LONGDBLNANBYTES:

```

?C: This symbol, if defined, is a comma-separated list of
?C: hexadecimal bytes (0xHH) for the long double precision not-a-number.
?C:.
?H:#define DOUBLEINFBYTES $doubleinfbytes /**/
?H:#define DOUBLENANBYTES $doublenanbytes /**/
?H:#define LONGDBLINFBYTES $longdblinfbytes /**/
?H:#define LONGDBLNANBYTES $longdblnanbytes /**/
?H:.
?F:!try
: Check what kind of inf/nan your system has
$echo "Checking the kind of infinities and nans you have..." >&4
$echo "(The following tests may crash. That's
okay.)" >&4
$cat >try.c <<EOP
#define DOUBLESIZE $doublesize
#$d_longdbl HAS_LONG_DOUBLE
#ifdef HAS_LONG_DOUBLE
#define LONG_DOUBLESIZE $longdblsize
#define LONG_DOUBLEKIND $longdblkind
#endif
#include <math.h>
#include <string.h>
#include <stdio.h>
/* Note that whether the sign bit is on or off
* for NaN depends on the CPU/FPU, and possibly
* can be affected by the build toolchain.
*
* For example for older MIPS and HP-PA 2.0 the quiet NaN is:
* 0x7f, 0xf7, 0xff, 0xff, 0xff, 0xff, 0xff, 0xff
* 0x7f, 0xf4, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
* (respectively) as opposed to the more usual
* 0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
*
* Pre-IEEE-754 floating point format do not even have inf/nan support
* at all. They might have a "max" value (DBL_MAX), which may be deadly
* to even mention, causing immediate SIGFPE or equivalent: this is
* the case with VAX floating point, for example.
*/
static void bytes(void *v, unsigned int n) {
    unsigned char *p = (unsigned
char *)v;
    int i;
    for (i = 0; i < n; i++) {
        printf("0x%02x%s", p[i], i < n - 1 ? ", " : "\n");
    }
}
int main(int argc, char *argv[]) {
    /* We cannot use 1.0/0.0 and 0.0/0.0 (with L suffixes for long double)

```

```

* because some compilers are 'smart' and not only warn but refuse to
* compile such 'illegal' values. */
double dinf = exp(1e9);
double dnan = sqrt(-1.0);
#ifdef HAS_LONG_DOUBLE
long double ldinf = (long double)exp(1e9);
long double ldnan = (long double)sqrt(-1.0);
# if LONG_DOUBLEKIND == 3 || LONG_DOUBLEKIND == 4
/* the 80-bit long doubles might have garbage in their excess bytes */
memset((char *)&ldinf + 10, '\0', LONG_DOUBLESIZE - 10);
memset((char *)&ldnan + 10, '\0', LONG_DOUBLESIZE - 10);
# endif
if (argc == 2) {
switch (argv[1][0]) {
case '1': bytes(&dinf, sizeof(dinf)); break;
case '2': bytes(&dnan, sizeof(dnan)); break;
case '3': bytes(&ldinf, sizeof(ldinf)); break;
case '4': bytes(&ldnan, sizeof(ldnan)); break;
}
}
return 0;
}
EOP
set try
if eval $compile; then
doubleinfbytes=`$run ./try 1`
doublenanbytes=`$run ./try 2`
case "$d_longdbl" in
$define)
longdblinfoytes=`$run ./try 3`
longdblinfoytes=`$run ./try 4`
;;
esac
else
# Defaults in case the above test program failed.
case "$doublekind" in
1) # IEEE 754 32-bit LE
doubleinfbytes='0x00, 0x00, 0xf0, 0x7f'
doublenanbytes='0x00, 0x00, 0xf8, 0x7f'
;;
2) # IEEE 754 32-bit BE
doubleinfbytes='0x7f, 0xf0, 0x00, 0x00'
doublenanbytes='0x7f, 0xf8, 0x00, 0x00'
;;
3) # IEEE 754 64-bit LE
doubleinfbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0, 0x7f'
doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8, 0x7f'

```

```

;;
4) # IEEE 754 64-bit BE
   doubleinbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
   doublenanbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
   ;;
5) # IEEE 754 128-bit LE
   doubleinbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0,
0x7f'
   doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8,
0x7f'
   ;;
6) # IEEE 754 128-bit BE
   doubleinbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
   doublenanbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
   ;;
7) # IEEE 754 64-bit mixed: 32-bit LEs in BE
   doubleinbytes='0x00, 0x00, 0xf0, 0x7f, 0x00, 0x00, 0x00, 0x00'
   doublenanbytes='0x00, 0x00, 0xf8, 0x7f, 0x00, 0x00, 0x00, 0x00'
   ;;
8) # IEEE 754 64-bit mixed: 32-bit BEs in LE
   doubleinbytes='0x00, 0x00, 0x00, 0x00, 0x7f, 0xf0, 0x00, 0x00'
   doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x7f, 0xf8, 0x00, 0x00'
   ;;
9|10|11|12|13|14) # VAX/Cray/IBM floating point formats, no inf/nan.
   doubleinbytes=$undef
   doublenanbytes=$undef
   ;;
*) # No idea.
   doubleinbytes=$undef
   doublenanbytes=$undef
   ;;
esac
case "$longdblkind" in
1) # IEEE 754 128-bit LE
   longdblifbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xff,
0x7f'
   longdblnanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff,
0x7f'
   ;;
2) # IEEE 754 128-bit BE
   longdblifbytes='0x7f, 0xff, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
   longdblnanbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
   ;;
3) # IEEE 754 80-bit LE, 12 or 16 bytes (x86)

```



```

case "$longdblsize" in
12) # x86 32-bit (96 bits, or 4 x 32, or 12 x 8)
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff, 0x7f, 0x00, 0x00'
    longdblfnbytes='0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0xc0, 0xff, 0x7f, 0x00, 0x00'
    ;;
16) # x86_64
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xc0, 0xff, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
*) # No idea.
    longdblfnbytes=$undef
    longdblfnbytes=$undef
    ;;
esac
;;
4) # IEEE 754 80-bit BE, 12 or 16 bytes
case "$longdblsize" in
12) # 32-bit system
    longdblfnbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
    longdblfnbytes='0x7f, 0xff, 0xc0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
    ;;
16) # 64-bit system
    longdblfnbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblfnbytes='0x7f,
0xff, 0xc0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
    ;;
*) # No idea.
    longdblfnbytes=$undef
    longdblfnbytes=$undef
    ;;
esac
;;
5) # 128-bit LE-LE "double double"
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0,
0x7f'
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8,
0x7f'
    ;;
6) # 128-bit BE-BE "double double"
    longdblfnbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblfnbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;

```

```

7) # 128-bit LE-BE "double double"
    longdblinfobytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblinfoanbytes='0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0xf8, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
    ;;
8) # 128-bit BE-LE "double double"
    longdblinfobytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblinfoanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
9|10|11|12|13|14) # VAX/Cray/IBM floating point formats, no inf/nan.
    longdblinfobytes=$undef
    longdblinfoanbytes=$undef
    ;;
*) # No idea.
    longdblinfobytes=$undef
    longdblinfoanbytes=$undef
    ;;
esac
fi
# In case the program crashed the values are empty, turn them undef.
case "$doubleinfobytes" in
") doubleinfobytes=$undef ;;
esac
case "$doubleinfoanbytes" in
") doubleinfoanbytes=$undef ;;
esac
case "$longdblinfobytes" in
") longdblinfobytes=$undef ;;
esac
case "$longdblinfoanbytes" in
") longdblinfoanbytes=$undef ;;
esac
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/infnan.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_ustat.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?MAKE:i\_ustat: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_ustat:  
?S: This variable conditionally defines the I\_USTAT symbol, and indicates  
?S: whether a C program should include <ustat.h>.  
?S:.  
?C:I\_USTAT:  
?C: This symbol, if defined, indicates that <ustat.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_ustat I\_USTAT /\*\*/  
?H:.  
?LINT:set i\_ustat  
: see if this is a ustat.h system  
set ustat.h i\_ustat  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/i\_ustat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_fp\_class.U,v \$  
?RCS:  
?RCS: Copyright (c) 1998 Jarkko Hietaniemi  
?RCS:  
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?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_fp\_class: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_fp\_class:  
?S: This variable conditionally defines the I\_FP\_CLASS symbol, and indicates  
?S: whether a C program should include <fp\_class.h>.  
?S:.  
?C:I\_FP\_CLASS:  
?C: This symbol, if defined, indicates that <fp\_class.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_fp\_class I\_FP\_CLASS /\*\*/  
?H:.  
?LINT:set i\_fp\_class  
: see if this is a fp\_class.h system  
set fp\_class.h i\_fp\_class  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_fp\_class.U

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?RCS:

?MAKE:d\_scalbn: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_scalbn:

?S: This variable conditionally defines the HAS\_SCALBN symbol, which

?S: indicates to the C program that the scalbn() routine is available.

?S:.

?C:HAS\_SCALBN:

?C: This symbol, if defined, indicates that the scalbn routine is

?C: available to multiply floating-point number by integral power

?C: of radix.

?C:.

?H:#\$d\_scalbn HAS\_SCALBN /\*\*/

?H:.

?LINT:set d\_scalbn

: see if scalbn exists

set scalbn d\_scalbn

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_scalbn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lockf.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_lockf.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:36 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_lockf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lockf:

?S: This variable conditionally defines HAS\_LOCKF if lockf() is

?S: available to do file locking.

?S:.

?C:HAS\_LOCKF (LOCKF):

?C: This symbol, if defined, indicates that the lockf routine is

?C: available to do file locking.

?C:.

?H:#\$d\_lockf

```
HAS_LOCKF /**/
```

?H:.

?LINT:set d\_lockf

: see if lockf exists

```
set lockf d_lockf
```

```
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_lockf.U

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?RCS:

?MAKE:d\_acosh: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_acosh:

?S: This variable conditionally defines the HAS\_ACOSH symbol, which

?S: indicates to the C program that the acosh() routine is available.

?S:.

?C:HAS\_ACOSH:

?C: This symbol, if defined, indicates that the acosh routine is

?C: available to do the inverse hyperbolic cosine function.

?C:.

?H:#\$d\_acosh HAS\_ACOSH /\*\*/

?H:.

?LINT:set d\_acosh

: see if acosh exists

```
set acosh d_acosh
```

```
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_acosh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_sigsetjmp.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:44:33 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_sigsetjmp: Setvar cat +cc +ccflags +ldflags libs rm

?MAKE: -pick add \$@ %<

?S:d\_sigsetjmp:

?S: This variable conditionally defines the HAS\_SIGSETJMP symbol,  
?S: which indicates that the sigsetjmp() routine  
is available to  
?S: call setjmp() and optionally save the process's signal mask.

?S:.

?C:HAS\_SIGSETJMP:

?C: This variable indicates to the C program that the sigsetjmp()  
?C: routine is available to save the calling process's registers  
?C: and stack environment for later use by siglongjmp(), and  
?C: to optionally save the process's signal mask. See  
?C: Sigjmp\_buf, Sigsetjmp, and Siglongjmp.

?C:.

?C:Sigjmp\_buf:

?C: This is the buffer type to be used with Sigsetjmp and Siglongjmp.

?C:.

?C:Sigsetjmp:

?C: This macro is used in the same way as sigsetjmp(), but will invoke  
?C: traditional setjmp() if sigsetjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?C:Siglongjmp:

?C: This macro is used in the same way as siglongjmp(), but will invoke  
?C: traditional longjmp() if siglongjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?H:?%<:#\$d\_sigsetjmp HAS\_SIGSETJMP /\*\*/  
?H:?%<:#ifdef HAS\_SIGSETJMP  
?H:?%<:#define Sigjmp\_buf sigjmp\_buf  
?H:?%<:#define Sigsetjmp(buf,save\_mask) sigsetjmp((buf),(save\_mask))

```

?H:%<:#define
Siglongjmp(buf,retval) siglongjmp((buf),(retval))
?H:%<:#else
?H:%<:#define Sigjmp_buf jmp_buf
?H:%<:#define Sigsetjmp(buf,save_mask) setjmp((buf))
?H:%<:#define Siglongjmp(buf,retval) longjmp((buf),(retval))
?H:%<:#endif
?H:.
?W:%<:Sigjmp_buf Sigsetjmp Siglongjmp
?F:!set
?LINT:set d_sigsetjmp
: see if sigsetjmp exists
?X: We can't check for these symbols with Inlibc because sigsetjmp
?X: is (sometimes? always?) a macro under GCC
echo " "
case "$d_sigsetjmp" in
")
$cat >set.c <<'EOP'
#include <setjmp.h>
sigjmp_buf env;
int set = 1;
int main()
{
if (sigsetjmp(env,1))
exit(set);
set = 0;
siglongjmp(env, 1);
exit(1);
}
EOP
if $cc $ccflags $ldflags -o set set.c $libs > /dev/null 2>&1 ; then
if ./set >/dev/null 2>&1; then
echo "POSIX sigsetjmp found." >&4
val="$define"
else
$cat >&4 <<EOM
Uh-Oh! You have POSIX sigsetjmp and siglongjmp, but they do not work properly!!
I'll ignore them.
EOM
val="$undef"
fi
else
echo "sigsetjmp not found."
>&4
val="$undef"
fi
;;
*) val="$d_sigsetjmp"

```

```
case "$d_sigsetjmp" in
$define) echo "POSIX sigsetjmp found." >&4;;
$undef) echo "sigsetjmp not found." >&4;;
esac
;;
esac
set d_sigsetjmp
eval $setvar
$rm -f set.c set
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_sigsetjmp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which can be doted in order to extract

?X: .SH files with variable substitutions.

?X:

?X: When running Configure from a remote directory (\$src  
is not !),

?X: then the files will be created in that directory, so beware!

?X:

?MAKE:Extract: Mkdirp src

?MAKE: -pick add \$@ %<

?F:./extract

?T:CONFIG SRC dir file

: script used to extract .SH files with variable substitutions



```

cat >extract <<EOS
CONFIG=true
SRC="$src"
EOS
cat >>extract <<'EOS'
echo "Doing variable substitutions on .SH files..."
if test -f "$SRC/MANIFEST"; then
  set x `awk '{print $1}' <$SRC/MANIFEST | grep '\.SH`
else
  echo "(Looking for .SH files under the source directory.)"
  set x `(cd "$SRC"; find . -name "*.SH" -print)`
fi
shift
case $# in
0) set x `(cd "$SRC"; echo *.SH)`; shift;;
esac
if test ! -f "$SRC/$1"; then
  shift
fi
for file in $*; do
  case "$SRC" in
".")
  case "$file" in
*/*)
  dir=`expr X$file : 'X\(.*)/'`
  file=`expr X$file : 'X.*^\(.*)'`
  (cd $dir && . ./file)
  ;;
*)
  . ./file
  ;;
esac
;;
*)
?X:
?X: When running Configure remotely ($src is not '.'), we cannot source
?X: the files directly, since that would wrongly cause
?X: the extraction
?X: where the source lie instead of withing the current directory. Therefore,
?X: we need to 'sh <file' then, which is okay since they will source the
?X: existing config.sh file. It's not possible to use:
?X: ../src/Configure -S -O -Dsomething
?X: unfortunately since no new config.sh with the -Dsomething override
?X: will be created before running the .SH files. A minor buglet.
?X:
?X: Note that we must create the directory hierarchy ourselves if it does
?X: not exist already, and that is done through a shell emulation of the
?X: 'mkdir -p' command. We don't want to use the $installdir metaconfig

```

?X: symbol here since that would require too much to be configured for  
?X: this simple extraction task that may happen quickly with 'Configure -S'.

?X: -- RAM, 18/03/96

?X:

```
case "$file" in
*/*)
dir=`expr X$file : 'X\(.*)/'`
file=`expr X$file : 'X.*\(.*)'`
./mkdirp $dir
sh <"$SRC/$dir/$file"
;;
*)
sh <"$SRC/$file"
;;
esac
;;
esac
done
if
test -f "$SRC/config_h.SH"; then
if test ! -f config.h; then
?X: oops, they left it out of MANIFEST, probably, so do it anyway.
sh <"$SRC/config_h.SH"
fi
fi
EOS
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Extract.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysfile.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysfile.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:11:36 ram

?RCS: patch56: removed <> characters from comment, per metalint suggestion

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:01:23 ram

?RCS: patch6: added default for i\_sysfile

```

?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:31 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_sysfile: h_sysfile Inhdr Setvar
?MAKE: -pick add $@ %<
?S:i_sysfile:
?S: This variable conditionally defines
the I_SYS_FILE symbol, and indicates
?S: whether a C program should include <sys/file.h> to get R_OK and friends.
?S:.
?C:I_SYS_FILE (I_SYSFILE):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/file.h> to get definition of R_OK and friends.
?C:.
?H:#$i_sysfile I_SYS_FILE /**/
?H:.
?T:val
?D:i_sysfile="
?LINT:change h_sysfile
?LINT:set i_sysfile
: see if this is a sys/file.h system
val="
set sys/file.h val
eval $inhdr

: do we need to include sys/file.h ?
case "$val" in
"$define")
echo " "
if $h_sysfile; then
val="$define"
echo "We'll be including <sys/file.h>." >&4
else
val="$undef"
echo "We won't be including <sys/file.h>." >&4
fi
;;
*)
h_sysfile=false
;;
esac
set i_sysfile
eval $setvar

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/i_sysfile.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
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?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_isnanl: Inlibc
?MAKE: -pick add $@ %<
?S:d_isnanl:
?S: This variable conditionally defines the HAS_ISNANL symbol, which
?S: indicates to the C program that the isnanl() routine is available.
?S:.
?C:HAS_ISNANL:
?C: This symbol, if defined, indicates that the isnanl routine is
?C: available to check whether a long double is a NaN.
?C:.
?H:#$d_isnanl HAS_ISNANL /**/
?H:.
?LINT:set d_isnanl
: see if isnanl exists
set isnanl d_isnanl
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d_isnanl.U
```

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```
?RCS: $Id$
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_nanosleep: Inlibc
?MAKE: -pick add $@ %<
?S:d_nanosleep:
?S: This variable conditionally defines HAS_NANOSLEEP
?S: if nanosleep() is available to sleep with 1E-9 sec accuracy.
?S:.
?C:HAS_NANOSLEEP:
```

?C: This symbol, if defined, indicates that the nanosleep  
?C: system call is available to sleep with 1E-9 sec accuracy.  
?C:.  
?H:#\$d\_nanosleep HAS\_NANOSLEEP /\*\*/  
?H:.  
?LINT:set d\_nanosleep  
: see if nanosleep exists  
set nanosleep d\_nanosleep  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_nanosleep.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrps.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_getgrps.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:08 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_getgrps: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getgrps:  
?S: This variable conditionally defines the HAS\_GETGROUPS symbol, which  
?S: indicates to the C program that the getgroups() routine is available  
?S: to get the list of process groups.  
?S:.  
?C:HAS\_GETGROUPS (GETGROUPS):  
?C: This symbol, if defined, indicates that the getgroups()  
routine is  
?C: available to get the list of process groups. If unavailable, multiple  
?C: groups are probably not supported.  
?C:.  
?H:#\$d\_getgrps HAS\_GETGROUPS /\*\*/  
?H:.  
?LINT:set d\_getgrps  
: see if getgroups exists  
set getgroups d\_getgrps  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getgrps.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror.U,v 3.0.1.3 1994/05/13 15:20:27 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_strerror.U,v \$

?RCS: Revision 3.0.1.3 1994/05/13 15:20:27 ram

?RCS: patch27: now uses new macro support for cleaner Strerror def

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 14:58:26 ram

?RCS: patch23: renamed strerror into Strerror to protect name space (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:56 ram

?RCS: patch16: protected code looking for sys\_errnolist[] with @if

?RCS: patch16: added default value for d\_syserrlst

?RCS:

?RCS: Revision

3.0 1993/08/18 12:07:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_syserrlst d\_syserrlst: Csym Findhdr

?MAKE: -pick add \$@ %<

?S:d\_syserrlst:

?S: This variable conditionally defines HAS\_SYS\_ERRLIST if sys\_errlist[] is

?S: available to translate error numbers to strings.

?S:.

?S:d\_syserrlst:

?S: This variable conditionally defines HAS\_SYS\_ERRNOLIST if sys\_errnolist[]

?S: is available to translate error numbers to the symbolic name.

?S:.

?C:HAS\_SYS\_ERRLIST (SYSERRLIST):

?C: This symbol, if defined, indicates that the sys\_errlist array is

?C: available to translate error numbers to strings. The extern int

?C: sys\_nerr gives the size of that table.

?C:.

?C:HAS\_SYS\_ERRNOLIST (SYSERRNOLIST):

?C: This symbol, if defined, indicates that the sys\_errnolist array is

```

?C: available to translate an errno code into its symbolic name (e.g.
?C: ENOENT). The extern int sys_nerrno gives the size of that table.
?C:.
?H:#$d_syserrlst HAS_SYS_ERRLIST /**/
?H:#$d_sysearnlst HAS_SYS_ERRNOLIST /**/
?H:.
?D:d_sysearnlst="
?T:val
:
see if sys_errlist[] exists
echo " "
if test "X$d_syserrlst" = X; then
if set sys_errlist val -a d_syserrlst; eval $csym; $val; then
echo "You have sys_errlist[], so we could roll our own strerror."
d_syserrlst="$define"
else
echo "You don't have sys_errlist[], so strerror() is welcome."
d_syserrlst="$undef"
fi
fi
@if d_sysearnlst || HAS_SYS_ERRNOLIST
if set sys_errnolist val -a d_sysearnlst; eval $csym; $val; then
echo "(Symbolic error codes can be fetched via the sys_errnolist[] array.)"
d_sysearnlst="$define"
else
echo "(However, I can't extract the symbolic error code out of errno.)"
d_sysearnlst="$undef"
fi
@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/modified/d_strerror.U

```

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```

?RCS: $Id: perlpath.U,v 3.0.1.2 1995/09/25 09:17:04 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
?RCS: In accordance with clause 7 of dist's modified Artistic License:
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: perlpath.U,v $
?RCS:

```

```

?RCS: Special perl5 unit -- we haven't installed perl yet.
?RCS:
?RCS: Revision 3.0.1.2 1995/09/25 09:17:04 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:33:53 ram
?RCS: patch45: can now use Loc variables since path stripping is deferred
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:32 ram
?RCS: Baseline for dist
3.0 netwide release.
?RCS:
?X:
?X: The purpose of this unit is to locate perl good enough to construct a #!
?X:
?MAKE:perlpath: cat Getfile Loc Myread Oldconfig initialinstalllocation \
startperl version versiononly
?MAKE: -pick add $@ %<
?Y:TOP
?S:perlpath:
?S: This variable contains the eventual value of the PERLPATH symbol,
?S: which contains the name of the perl interpreter to be used in
?S: shell scripts and in the "eval 'exec'" idiom. This variable is
?S: not necessarily the pathname of the file containing the perl
?S: interpreter; you must append the executable extension (_exe) if
?S: it is not already present. Note that Perl code that runs during
?S: the Perl build process cannot reference this variable, as Perl
?S: may not have been installed, or even if installed, may be a
?S: different version of Perl.
?S:.
?C:PERLPATH:
?C: This symbol contains the name of the perl interpreter to be
?C: used in shell scripts and in the "eval 'exec'" idiom.
?C:.
?H:#define PERLPATH "$perlpath" /**/
?H:.
:
figure best path for perl in scripts
case "$perlpath" in
")
case "$versiononly" in
"$define") perlpath="$initialinstalllocation/perl$version";;
*) perlpath="$initialinstalllocation/perl";;
esac
case "$startperl" in
*!*) ;;
*)
$cat <<EOH

```



I will use the "eval 'exec'" idiom to start Perl on your system.  
I can use the full path of your Perl binary for this purpose, but  
doing so may cause problems if you want to share those scripts and  
Perl is not always in a standard place (\$initialinstalllocation/perl).

EOH

```
dflt="$initialinstalllocation/perl"
rp="What path shall I use in \"eval 'exec'\"?"
. ./myread
perlpath="$ans"
;;
esac
;;
esac
case "$startperl" in
*!*) ;;
*) echo "I'll use $perlpath in \"eval 'exec'\"";;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/perlpath.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: charorder.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:07:08 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:chorder\_int chorder\_short chorder\_long: Myread cat +cc +ccflags rm

?MAKE: -pick add \$@ %<

?S:chorder\_short (d\_cos d\_bos):

?S: Holds the value describing the byte ordering of characters in a short.

?S: On a Big-Endian machine, that would be "c0c1".

?S:.

```

?S:chorder_int
(charoder):
?S: Holds the value describing the byte ordering of characters in an int.
?S: For instance, on a Big-Endian machine, this would be: "c0c1c2c3".
?S:.
?S:chorder_long (d_col d_bol):
?S: Holds the value describing the byte ordering of characters in a long.
?S: On a 64 bits Big-Endian machine, that would yield: "c0c1c2c3c4c5c6c7".
?S:.
?C:CHAR_ORDER_SHORT:
?C: Holds the byte ordering of characters in a short. It's a string
?C: value like "c0c1" on a Big-Endian machine.
?C:.
?C:CHAR_ORDER_INT:
?C: Holds the byte ordering of characters in an int. It's a string
?C: value like "c0c1c2c3" on a Big-Endian machine.
?C:.
?C:CHAR_ORDER_LONG:
?C: Holds the byte ordering of characters in a long. It's a string
?C: value like "c0c1c2c3c4c5c6c7" on a 64 bits Big-Endian machine.
?C:.
?H:#define CHAR_ORDER_SHORT "$chorder_short" /* byte order in a short */
?H:#define CHAR_ORDER_INT "$chorder_int" /* byte order in an int */
?H:#define CHAR_ORDER_LONG "$chorder_long" /* byte order in a long */
?H:.
?F:!byteorder
:
    check for character ordering
echo " "
echo "Checking out byte order..." >&4
$cat >byteorder.c <<'EOCP'
#include <stdio.h>

main(argc, argv)
int argc;
char *argv[]; {
int i;
int max;
union {
short u_s;
int u_i;
long u_l;
char u_c[sizeof(long)];
} u;
switch (argv[1][0]) {
case 'l':
u.u_l = 0L;
/* HMS: ASSERT: sizeof(long) < 10. */

```

```

for(i = 0; i < sizeof(long); ++i) {
    u.u_l *= 0x100L;
    u.u_l += (0xc0 + i);
}
max = sizeof(long);
break;
case 's':
    u.u_s = 0;
    /* HMS: ASSERT: sizeof(short) < 10. */
    for(i = 0; i < sizeof(short); ++i) {
        u.u_s *= 0x100L;
        u.u_s += (0xc0 + i);
    }
    max = sizeof(short);
    break;
case 'i':
    u.u_i = 0;
    /* RAM: ASSERT: sizeof(int) < 10. */
    for(i = 0; i < sizeof(int); ++i) {
        u.u_l *= 0x100L;
        u.u_l += (0xc0 + i);
    }
    max = sizeof(int);
    break;
default:
    max = 0;
    break;
}
for(i = 0; i < max; i++) {
    printf("%x", u.u_c[i] & 0x00FF);
}
printf("\n");
exit(0);
}
EOCP
if $cc $ccflags -o
byteorder byteorder.c >/dev/null 2>&1 ; then
: null statement
@if chorder_short
    chorder_short=`./byteorder s`
@end
@if chorder_int
    chorder_int=`./byteorder i`
@end
@if chorder_long
    chorder_long=`./byteorder l`
@end
else

```

```

$cat <<EOM
(I can't seem to get my test program to work. Guessing 32 bits big-endian.)
EOM
  chorder_short="c0c1"
  chorder_int="c0c1c2c3"
  chorder_long="c0c1c2c3"
fi
@if chorder_short
dflt=$chorder_short
rp="What is the order of characters in a short?"
./myread
chorder_short="$ans"
@end
@if chorder_int
dflt=$chorder_int
rp="What is the order of characters in an int?"
./myread
chorder_int="$ans"
@end
@if chorder_long
dflt=$chorder_long
rp="What is the order of characters in a long?"
./myread
chorder_long="$ans"
@end
$rm -f byteorder* core

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/charorder.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setpgrp.U,v 3.0.1.3 1997/02/28 15:44:16 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_setpgrp.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:44:16 ram
?RCS: patch61: obsoleted USE_BSDGRP in favor of USE_BSD_SETPGRP
?RCS: patch61: another unit now also defines a USE_BSD_GETPGRP
?RCS: patch61: fallback for test program failure improved
?RCS:

```

```

?RCS: Revision 3.0.1.2 1995/07/25 13:59:30 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:15:37 ram
?RCS: patch36: added
'ldflags' to the test compile line (ADO)
?RCS: patch36: call ./usg explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setpgrp d_bsdsetpgrp: cat rm_try +cc +libs +ccflags \
+ldflags Inlibc Guess Setvar i_unistd i_stdlib run
?MAKE: -pick add $@ %<
?S:d_setpgrp:
?S: This variable conditionally defines HAS_SETPGRP if setpgrp() is
?S: available to set the current process group.
?S:.
?S:d_bsdsetpgrp (d_bsdpggrp):
?S: This variable conditionally defines USE_BSD_SETPGRP if
?S: setpgrp needs two arguments whereas USG one needs none.
?S: See also d_setpgid for a POSIX interface.
?S:.
?C:HAS_SETPGRP (SETPGRP):
?C: This symbol, if defined, indicates that the setpgrp routine is
?C: available to set the current process group.
?C:.
?C:USE_BSD_SETPGRP (USE_BSDPGRP BSDPGRP):
?C: This symbol, if defined, indicates that setpgrp needs two
?C: arguments whereas USG one needs none. See also HAS_SETPGID
?C: for
a POSIX interface.
?C:.
?H:#$d_setpgrp HAS_SETPGRP /**/
?H:#$d_bsdsetpgrp USE_BSD_SETPGRP /**/
?H:.
?T:xxx
?F:!try
?LINT:set d_setpgrp d_bsdsetpgrp
: see if setpgrp exists
set setpgrp d_setpgrp
eval $inlibc

@if USE_BSD_SETPGRP || d_bsdsetpgrp
case "$d_setpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of setpgrp is in use..."

```

```

$cat >try.c <<EOP
#include <stdio.h>
#ifdef I_UNISTD
#include <sys/types.h>
#endif
#include <unistd.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
if (getuid() == 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (-1 == setpgrp(1, 1))
exit(0);
#else
if (setpgrp() != -1)
exit(0);
#endif
exit(1);
}
EOP
if $cc -o try -DTRY_BSD_PGRP $ccflags $ldflags try.c $libs >/dev/null 2>&1 && $run ./try; then
echo 'You have to use setpgrp(pid,pgrp) instead of setpgrp().' >&4
val="$define"
elif $cc -o try $ccflags $ldflags try.c $libs
>/dev/null 2>&1 && $run ./try; then
echo 'You have to use setpgrp() instead of setpgrp(pid,pgrp).' >&4
val="$undef"
else
echo "(I can't seem to compile and run the test program.)"
if ./usg; then
xxx="a USG one, i.e. you use setpgrp()."
else
# SVR4 systems can appear rather BSD-ish.
case "$i_unistd" in
$undef)
xxx="a BSD one, i.e. you use setpgrp(pid,pgrp)."
val="$define"
;;
$define)
xxx="probably a USG one, i.e. you use setpgrp()."
val="$undef"

```

```

;;
esac
fi
echo "Assuming your setpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set d_bsdsetpgrp
eval $setvar
$rm_try
@end

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_setpgrp.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Typedef.U,v 3.0.1.3 1995/07/25 13:42:07 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: Typedef.U,v $
?RCS: Revision 3.0.1.3 1995/07/25 13:42:07 ram
?RCS: patch56: added backslash escapes within evals to prevent space problems
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:01:16 ram
?RCS: patch36: don't clobber visible 'val' variable, use 'varval' instead
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:05:14 ram
?RCS: patch32: created
?RCS:
?X:
?X: This unit checks for the definition of a given typedef.
?X:
?X: To use it, say:
?X: set typedef
?X: val_t default [includes]
?X: eval $typedef
?X:
?MAKE:Typedef: cppstdin cppminus cppflags rm sed contains Oldconfig Myread
?MAKE: -pick add $@ %<

```

?LINT:define typedef

?LINT:define typedef\_ask

?V:typedef typedef\_ask

?S:typedef:

?S: This shell variable is used internally by Configure to check

?S: whether a given typedef is defined or not. A typical use is:

?S: set typedef val\_t default [includes]

?S: eval \$typedef

?S: That will return val\_t set to default if the typedef was not found,

?S: to typedef otherwise. If no includes are specified, look in sys/types.h.

?S:.

?S:typedef\_ask:

?S: This shell variable is used internally by Configure to check

?S: whether a given typedef is defined or not. If it is not defined,

?S: this will call the ./myread script to prompt for an answer.

?S: It is intended to be used to avoid unnecessary prompts.

?S: A typical use is

?S: rp="What is the type for file position used by fseek()?"

?S: set fpos\_t fpostype long stdio.h sys/types.h

?S: eval \$typedef\_ask

?S: This

will set fpostype=fpos\_t, if fpos\_t is available. Otherwise

?S: it will call myread with a default of 'long', and a prompt of \$rp.

?S:.

?T:type var def inclist varval inc

?F:!temp.c

: define an is-a-typedef? function

```
typedef='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;
case "$inclist" in
"" ) inclist="sys/types.h";;
esac;
eval "varval=\$$var";
case "$varval" in
"" )
$rm -f temp.c;
for inc in $inclist; do
echo "#include <$inc>" >>temp.c;
done;
?X: Maybe it's a #define instead of a typedef.
echo "#ifdef $type" >> temp.c;
echo "printf(\"We have $type\");" >> temp.c;
echo "#endif" >> temp.c;
$cpstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;
if $contains $type temp.E >/dev/null 2>&1; then
eval "$var=\$type";
else
eval "$var=\$def";
fi;
```



```

$rm -f temp.?.;
*) eval "$var=\$varval";;
esac'

```

?X: Originally, I eval'd \$typedef and then checked the results against

?X: \$type. Unfortunately, it then became complicated to check

?X: whether you are re-using

an old config.sh value, and the logic got

?X: so convoluted it became easier to just copy the function above

?X: and alter it slightly. A.D. 3/1998

: define an is-a-typedef? function that prompts if the type is not available.

```

typedef_ask='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;

```

```

case "$inclist" in

```

```

"" ) inclist="sys/types.h";;

```

```

esac;

```

```

eval "varval=\$$var";

```

```

case "$varval" in

```

```

"" )

```

```

    $rm -f temp.c;

```

```

    for inc in $inclist; do

```

```

        echo "#include <$inc>" >>temp.c;

```

```

    done;

```

?X: Maybe it's a #define instead of a typedef.

```

    echo "#ifdef $type" >> temp.c;

```

```

    echo "printf(\"We have $type\");" >> temp.c;

```

```

    echo "#endif" >> temp.c;

```

```

    $cpstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;

```

```

    echo " " ;

```

```

    echo "$rp" | $sed -e "s/What is/Looking for/" -e "s/?.?/?";

```

```

    if $contains $type temp.E >/dev/null 2>&1; then

```

```

        echo "$type found." >&4;

```

```

        eval "$var=\$type";

```

```

    else

```

```

        echo "$type NOT found." >&4;

```

```

        dflt="$def";

```

```

        . ./myread ;

```

```

        eval "$var=\$ans";

```

```

    fi;

```

```

    $rm -f temp.?.;

```

```

*) eval "$var=\$varval";;

```

```

esac'

```

Found

in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/Typedef.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getprior.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getprior.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:16 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getprior: Inlibc
?MAKE: -pick add $@ %<
?S:d_getprior:
?S: This variable conditionally defines HAS_GETPRIORITY if getpriority()
?S: is available to get a process's priority.
?S:.
?C:HAS_GETPRIORITY (GETPRIORITY):
?C: This symbol, if defined, indicates that the getpriority routine is
?C: available to get a process's priority.
?C:.
?H:#$d_getprior
HAS_GETPRIORITY /**/
?H:.
: see if getpriority exists
?LINT:set d_getprior
set getpriority d_getprior
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_getprior.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_ctime_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_ctime_r ctime_r_proto: Inlibc Protochk Hasproto i_systypes \
usethreads i_time i_systime extern_C
?MAKE: -pick add $@ %<

```

?S:d\_ctime\_r:  
 ?S: This variable conditionally defines the HAS\_CTIME\_R symbol,  
 ?S: which indicates to the C program that the ctime\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S:ctime\_r\_proto:  
 ?S: This variable encodes the prototype of ctime\_r.  
 ?S: It is zero if d\_ctime\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ctime\_r  
 ?S: is defined.  
 ?S:.  
 ?C:HAS\_CTIME\_R:  
 ?C: This symbol, if defined, indicates that the ctime\_r routine  
 ?C: is available to ctime re-entrantly.  
 ?C:.  
 ?C:CTIME\_R\_PROTO:  
 ?C: This  
 symbol encodes the prototype of ctime\_r.  
 ?C: It is zero if d\_ctime\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ctime\_r  
 ?C: is defined.  
 ?C:.  
 ?H:#\$d\_ctime\_r HAS\_CTIME\_R /\*\*/  
 ?H:#define CTIME\_R\_PROTO \$ctime\_r\_proto /\*\*/  
 ?H:.  
 ?T:try hdrs d\_ctime\_r\_proto  
 : see if ctime\_r exists  
 set ctime\_r d\_ctime\_r  
 eval \$inlibc  
 case "\$d\_ctime\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_time time.h \$i\_systime sys/time.h"  
 case "\$d\_ctime\_r\_proto:\$usethreads" in  
 ":define") d\_ctime\_r\_proto=define  
 set d\_ctime\_r\_proto ctime\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_ctime\_r\_proto" in  
 define)  
 case "\$ctime\_r\_proto" in  
 "|0) try='char\* ctime\_r(const time\_t\*, char\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && ctime\_r\_proto=B\_SB ;;  
 esac  
 case "\$ctime\_r\_proto" in  
 "|0) try='char\* ctime\_r(const time\_t\*, char\*, int);'  
 ./protochk "\$extern\_C \$try" \$hdrs && ctime\_r\_proto=B\_SBI ;;  
 esac

```

case "$ctime_r_proto" in
"|0) try='int ctime_r(const
time_t*, char*);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=I_SB ;;
esac
case "$ctime_r_proto" in
"|0) try='int ctime_r(const time_t*, char*, int);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=I_SBI ;;
esac
case "$ctime_r_proto" in
"|0) d_ctime_r=undef
ctime_r_proto=0
echo "Disabling ctime_r, cannot determine prototype." >&4 ;;
*) case "$ctime_r_proto" in
REENTRANT_PROTO*) ;;
*) ctime_r_proto="REENTRANT_PROTO_${ctime_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "ctime_r has no prototype, not using it." >&4 ;;
esac
d_ctime_r=undef
ctime_r_proto=0
;;
esac
;;
*) ctime_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_ctime_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_wcstombs.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_wcstombs.U,v $
```

?RCS: Revision 3.0 1993/08/18 12:08:03 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_wcstombs: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wcstombs:  
?S: This variable conditionally defines the HAS\_WCSTOMBS symbol, which  
?S: indicates to the C program that the wcstombs() routine is available  
?S: to convert wide character strings to multibyte strings.  
?S:.  
?C:HAS\_WCSTOMBS:  
?C: This symbol, if defined, indicates that the wcstombs  
routine is  
?C: available to convert wide character strings to multibyte strings.  
?C:.  
?H:#\$d\_wcstombs HAS\_WCSTOMBS /\*\*/  
?H:.  
?LINT:set d\_wcstombs  
: see if wcstombs exists  
set wcstombs d\_wcstombs  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_wcstombs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: scriptdir.U,v 3.1 1999/07/09 18:20:13 doughera Exp doughera \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: scriptdir.U,v \$  
?RCS: Revision 3.1 1999/07/09 18:20:13 doughera  
?RCS: Updated for installprefix  
?RCS:  
?RCS: Revision 3.0.1.3 1995/09/25 09:17:15 ram  
?RCS: patch59: unit is now forced to the top of Configure, if possible  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/30 14:46:13 ram  
?RCS: patch49: can now handle installation prefix changes (from WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/08/29 16:32:04 ram

?RCS: patch32: now uses installation prefix  
?RCS:  
?RCS:  
Revision 3.0 1993/08/18 12:09:45 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:scriptdir scriptdirexp installscript: cat test Getfile Loc \  
Oldconfig +bin Prefixit Setprefixvar prefixexp Prefixup  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?D:scriptdir="  
?S:scriptdir:  
?S: This variable holds the name of the directory in which the user wants  
?S: to put publicly scripts for the package in question. It is either  
?S: the same directory as for binaries, or a special one that can be  
?S: mounted across different architectures, like /usr/share. Programs  
?S: must be prepared to deal with ~name expansion.  
?S:.  
?D:scriptdirexp="  
?S:scriptdirexp:  
?S: This variable is the same as scriptdir, but is filename expanded  
?S: at configuration time, for programs not wanting to bother with it.  
?S:.  
?S:installscript:  
?S: This variable is usually the same as scriptdirexp, unless you are on  
?S: a system running AFS, in which case they may differ slightly. You  
?S: should always use this variable  
within your makefiles for portability.  
?S:.  
?C:SCRIPTDIR:  
?C: This symbol holds the name of the directory in which the user wants  
?C: to put publicly executable scripts for the package in question. It  
?C: is often a directory that is mounted across diverse architectures.  
?C: Programs must be prepared to deal with ~name expansion.  
?C:.  
?C:SCRIPTDIR\_EXP:  
?C: This is the same as SCRIPTDIR, but is filename expanded at  
?C: configuration time, for use in programs not prepared to do  
?C: ~name substitutions at run-time.  
?C:.  
?H:#define SCRIPTDIR "\$scriptdir" /\*\*/  
?H:#define SCRIPTDIR\_EXP "\$scriptdirexp" /\*\*/  
?H:.  
?T:installscriptdir  
?LINT:change prefixvar  
?LINT:set scriptdir  
?LINT:set scriptdirexp  
: determine where public executable scripts go

```

set scriptdir scriptdir
eval $prefixit
case "$scriptdir" in
")
dflt="$bin"
: guess some guesses
$test -d /usr/share/scripts && dflt=/usr/share/scripts
$test -d /usr/share/bin && dflt=/usr/share/bin
$test -d /usr/local/script && dflt=/usr/local/script
$test
-d /usr/local/scripts && dflt=/usr/local/scripts
$test -d $prefixexp/script && dflt=$prefixexp/script
set dflt
eval $prefixup
;;
*) dflt="$scriptdir"
;;
esac
$cat <<EOM

```

Some installations have a separate directory just for executable scripts so that they can mount it across multiple architectures but keep the scripts in one spot. You might, for example, have a subdirectory of /usr/share for this. Or you might just lump your scripts in with all your other executables.

```

EOM
fn=d~
rp='Where do you keep publicly executable scripts?'
./getfile
if $test "X$ansexp" != "X$scriptdirexp"; then
installscript="
fi
installscriptdir="
prefixvar=scriptdir
./setprefixvar
: A little fix up for an irregularly named variable.
installscript="$installscriptdir"

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/installdirs/scriptdir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_shm.U,v 3.0 1993/08/18 12:07:17 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_shm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_shm: test d\_shmctl d\_shmget d\_shmat d\_shmdt Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_shm:

?S: This variable conditionally defines the HAS\_SHM symbol, which

?S: indicates that the entire shm\*(2) library is present.

?S:.

?C:HAS\_SHM:

?C: This symbol, if defined, indicates that the entire shm\*(2) library is

?C: supported.

?C:.

?H:#\$d\_shm HAS\_SHM /\*\*/

?H:.

?T:h\_shm

?LINT:set

d\_shm

: see how much of the 'shm\*(2)' library is present.

h\_shm=true

echo " "

case "\$d\_shmctl\$d\_shmget\$d\_shmat\$d\_shmdt" in

\*\$undef\*) h\_shm=false;;

esac

case "\$osname" in

freebsd)

case "`ipcs 2>&1`" in

"SVID shared memory"\*"not configured"\*)

echo "Your \$osname does not have the shm\*(2) configured." >&4

h\_shm=false

val="\$undef"

set shmctl d\_shmctl

eval \$setvar

set shmget d\_shmget

eval \$setvar

set shmat d\_shmat

eval \$setvar

set shmdt d\_shmdt

eval \$setvar

::

esac

::



```

esac
: we could also check for sys/ipc.h ...
if $h_shm && $test `./findhdr sys/shm.h`; then
  echo "You have the full shm*(2) library." >&4
  val="$define"
else
  echo "You don't have the full shm*(2) library." >&4
  val="$undef"
fi
set d_shm
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_shm.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_drand48proto: Hasproto i\_stdlib i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_drand48proto:

?S: This variable conditionally defines the HAS\_DRAND48\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the drand48() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_DRAND48\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the drand48() function. Otherwise, it is up

?C: to the program to supply one. A good guess

is

?C: extern double drand48(void);

?C:.

?H:#\$d\_drand48proto HAS\_DRAND48\_PROTO /\*\*/

?H:.

?LINT:set d\_drand48proto

: see if prototype for drand48 is available

echo " "

set d\_drand48proto drand48 \$i\_stdlib stdlib.h \$i\_unistd unistd.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/d\_drاند48proto.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_atanh: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_atanh:

?S: This variable conditionally defines the HAS\_ATANH symbol, which

?S: indicates to the C program that the atanh() routine is available.

?S:.

?C:HAS\_ATANH:

?C: This symbol, if defined, indicates that the atanh routine is

?C: available to do the inverse hyperbolic tangent function.

?C:.

?H:#\$d\_atanh HAS\_ATANH /\*\*/

?H:.

?LINT:set d\_atanh

: see if atanh exists

set atanh d\_atanh

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_atanh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Nothing.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Nothing.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The purpose of this file is to supply an empty target for the private

?X: Makefile built by metaconfig to order the units.

?X:

?MAKE:Nothing: Head

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Nothing.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: patchlevel.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:18:41 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:patchlevel: package baserev test rsrc

?MAKE: -pick add \$@ %<

?T:Revision

?S:patchlevel:

?S: The patchlevel level of this package.

?S: The value of patchlevel comes from the patchlevel.h file.

?S:.

: get the patchlevel

echo " "

echo "Getting the current patchlevel..." >&4

if \$test -r

  \$src/patchlevel.h;then

  patchlevel=`awk \

  '^#[ ]\*define[ ][\*]PATCHLEVEL/ {print \$3}' \

  < \$src/patchlevel.h`

else

  patchlevel=0

fi

echo "(You have \$package \$baserev PL\$patchlevel.)"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

### 5.32.1~rc1/dist/U/patchlevel.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_crypt.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_crypt.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:31:47 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:52 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_crypt cryptlib: Loc test xlibpth libpth Csym Setvar _a Inlibc
?MAKE: -pick add $@ %<
?S:d_crypt:
?S: This variable conditionally defines the CRYPT symbol, which
?S: indicates to the C program that the crypt() routine is available
?S: to
encrypt passwords and the like.
?S:.
?S:cryptlib:
?S: This variable holds -lcrypt or the path to a libcrypt.a archive if
?S: the crypt() function is not defined in the standard C library. It is
?S: up to the Makefile to use this.
?S:.
?C:HAS_CRYPT (CRYPT):
?C: This symbol, if defined, indicates that the crypt routine is available
?C: to encrypt passwords and the like.
?C:.
?H:#$d_crypt HAS_CRYPT /**/
?H:.
?LINT:set d_crypt
?T:val
: see if crypt exists
echo " "
set crypt d_crypt
eval $inlibc
case "$d_crypt" in
$define) cryptlib=" ;;
*) if set crypt val -f d_crypt; eval $csym; $val; then
```

```

echo 'crypt() found.' >&4
val="$define"
cryptlib=""
else
cryptlib=`./loc Slibcrypt$_a "" $xlibpth`
if $test -z "$cryptlib"; then
  cryptlib=`./loc Mlibcrypt$_a "" $xlibpth`
else
  cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
  cryptlib=`./loc Llibcrypt$_a "" $xlibpth`
else
  cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
  cryptlib=`./loc libcrypt$_a ""
$libpth`
else
  cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
  echo 'crypt() NOT found.' >&4
  val="$undef"
else
  val="$define"
fi
fi
set d_crypt
eval $setvar
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_crypt.U

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS:

?X:

?X: This unit is just a quick shorthand for the compile command

?X: to be used in all the other metaconfig units.

?X:

?MAKE:Compile: +cc +optimize +ccflags +ldflags +libs

?MAKE: -pick add \$@ %<

?LINT:define compile compile\_ok

?V:compile compile\_ok mc\_file

?S:compile:

?S: This shell variable is used internally

by Configure to provide

?S: a convenient shorthand for the typical compile command, namely

?S: \$cc \$optimize \$ccflags \$ldflags -o \$1 \$1.c \$libs > /dev/null 2>&1

?S: Note that the output filename does not include the \_exe

?S: extension. Instead we assume that the linker will be

?S: "helpful" and automatically appending the correct suffix.

?S: OS/2 users will apparently need to supply the -Zexe flag to

?S: get this behavior.

?S:

?S: To use this variable, say something like:

?S: echo 'int main() { exit(0); }' > try.c

?S: set try

?S: if eval \$compile; then

?S: echo "success" # and do whatever . . .

?S: else

?S: echo "failure" # and do whatever . . .

?S: fi

?S: To add extra flags cc flags (e.g. -DWHATEVER) just put them

?S: in \$\*, e.g.

?S: set try -DTRY\_THIS\_FLAG

?S:.

?S:compile\_ok:

?S: This shell variable is used internally by Configure to provide

?S: a convenient shorthand for the typical compile command that you

?S: expect to work ok. It is the same as \$compile,

except we

?S: deliberately let the user see any error messages.

?S:.

: define a shorthand compile call

```
compile='
mc_file=$1;
shift;
```

```
$cc -o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs > /dev/null 2>&1;
: define a shorthand compile call for compilations that should be ok.
compile_ok='
mc_file=$1;
shift;
$cc -o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs;'
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Compile.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_drand48\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_drand48\_r drand48\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_stdlib extern\_C

?MAKE:-pick add \$@ %<

?S:d\_drand48\_r:

?S: This variable conditionally defines the HAS\_DRAND48\_R symbol,

?S: which indicates to the C program that the drand48\_r()

?S: routine is available.

?S:.

?S:drand48\_r\_proto:

?S: This variable encodes the prototype of drand48\_r.

?S: It is zero if d\_drand48\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_drand48\_r

?S: is defined.

?S:.

?C:HAS\_DRAND48\_R:

?C: This symbol, if defined, indicates that the drand48\_r routine

?C: is available to drand48 re-entrantly.

?C:.

?C:DRAND48\_R\_PROTO:

?C: This

symbol encodes the prototype of drand48\_r.

?C: It is zero if d\_drand48\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_drand48\_r

?C: is defined.

?C:.

?H:#d\_drand48\_r HAS\_DRAND48\_R /\*\*/

?H:#define DRAND48\_R\_PROTO \$drand48\_r\_proto /\*\*/

?H:.

```

?T:try hdrs d_drاند48_r_proto
: see if drاند48_r exists
set drاند48_r d_drاند48_r
eval $inlibc
case "$d_drاند48_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_stdlib stdlib.h"
case "$d_drاند48_r_proto:$usethreads" in
":define") d_drاند48_r_proto=define
set d_drاند48_r_proto drاند48_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_drاند48_r_proto" in
define)
case "$drاند48_r_proto" in
"|0) try='int drاند48_r(struct drاند48_data*, double*);'
./protochk "$extern_C $try" $hdrs && drاند48_r_proto=I_ST ;;
esac
case "$drاند48_r_proto" in
"|0) d_drاند48_r=undef
drاند48_r_proto=0
echo "Disabling drاند48_r, cannot determine prototype." >&4 ;;
* ) case
"$drاند48_r_proto" in
REENTRANT_PROTO*) ;;
*) drاند48_r_proto="REENTRANT_PROTO_$drاند48_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "drاند48_r has no prototype, not using it." >&4 ;;
esac
d_drاند48_r=undef
drاند48_r_proto=0
;;
esac
;;
*) drاند48_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_drاند48_r.U

```

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```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_ndbm.U,v $
?RCS: Revision 3.0.1.1 1995/05/12 12:16:53 ram
?RCS: patch54: made more robust by checking both header and lib (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:23 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_ndbm: Inhdr Inlibc Setvar
?MAKE:-pick add $@ %<
?S:i_ndbm (d_ndbm):
?S: This variable conditionally defines the I_NDBM symbol, which
?S: indicates to the C program that <ndbm.h> exists and should
?S: be included.
?S:.
?C:I_NDBM (HAS_NDBM NDBM):
?C: This
symbol, if defined, indicates that <ndbm.h> exists and should
?C: be included.
?C:.
?H:#$i_ndbm I_NDBM /**/
?H:.
?T:t_ndbm d_dbm_open
?LINT:set i_ndbm
: see if ndbm.h is available
?X: t_ndbm is a tentative check. We might just have the .h, not the lib -- ADO
set ndbm.h t_ndbm
eval $inhdr
case "$t_ndbm" in
$define)
: see if dbm_open exists
set dbm_open d_dbm_open
eval $inlibc
case "$d_dbm_open" in
$undef)
t_ndbm="$undef"
echo "We won't be including <ndbm.h>"
;;
esac

```

```
;;
esac
val="$t_ndbm"
set i_ndbm
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_ndbm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_tzname.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_tzname.U,v $
?RCS: Revision 3.0.1.2 1994/08/29 16:14:43 ram
?RCS: patch32: forgot to set proper value in the val variable
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:57:55 ram
?RCS: patch30: created
?RCS:
?MAKE:d_tzname: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_tzname:
?S: This variable conditionally defines HAS_TZNAME if tzname[] is
?S: available to access timezone names.
?S:.
?C:HAS_TZNAME:
?C: This symbol, if defined, indicates that the tzname[]
array is
?C: available to access timezone names.
?C:.
?H:#$d_tzname HAS_TZNAME /**/
?H:.
?LINT:set d_tzname
: see if tzname[] exists
echo " "
if set tzname val -a d_tzname; eval $csym; $val; then
val="$define"
echo 'tzname[] found.' >&4
else
```

```
val="$undef"
echo 'tzname[] NOT found.' >&4
fi
set d_tzname
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_tzname.U
```

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?RCS: \$Id: groupstype.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: groupstype.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 16:18:08 ram

?RCS: patch36: no longer uses Setvar to set 'groupstype' (ADO)

?RCS: patch36: typo fix in the word 'argument' (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:00:18 ram

?RCS: patch30: created by ADO

?RCS:

?MAKE:groupstype: gidtype d\_getgrps Myread Oldconfig Findhdr cat d\_setgrps

?MAKE: -pick add \$@ %<

?INIT:groupstype=""

?S:groupstype:

?S: This

variable defines Groups\_t to be something like gid\_t, int,

?S: ushort, or whatever type is used for the second argument to

?S: getgroups() and setgroups(). Usually, this is the same as

?S: gidtype (gid\_t), but sometimes it isn't.

?S:.

?C:Groups\_t (GROUPSTYPE):

?C: This symbol holds the type used for the second argument to

?C: getgroups() and setgroups(). Usually, this is the same as

?C: gidtype (gid\_t) , but sometimes it isn't.

?C: It can be int, ushort, gid\_t, etc...

?C: It may be necessary to include <sys/types.h> to get any

?C: typedef'ed information. This is only required if you have

```

?C: getgroups() or setgroups()..
?C:.
?H:%<:#if defined(HAS_GETGROUPS) || defined(HAS_SETGROUPS)
?H:%<:#define Groups_t $groupstype /* Type for 2nd arg to [sg]etgroups() */
?H:%<:#endif
?H:.
?W:%<:getgroups HAS_GETGROUPS setgroups HAS_SETGROUPS
: Find type of 2nd arg to 'getgroups()' and 'setgroups()'
echo " "
case "$d_getgrps$d_setgrps" in
*define*)
case
"$groupstype" in
") dflt="$gidtype" ;;
*) dflt="$groupstype" ;;
esac
$cat <<EOM

```

What type of pointer is the second argument to getgroups() and setgroups()?  
Usually this is the same as group ids, \$gidtype, but not always.

```

EOM
rp='What type pointer is the second argument to getgroups() and setgroups()?'
./myread
groupstype="$ans"
;;
*) groupstype="$gidtype";;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/groupstype.U

```

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```

?RCS: $Id$
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cpp_stuff.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:30:48 ram
?RCS: patch61: added cute quoting trick for wild stringify support
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:08:24 ram

```

?RCS: patch36: now uses cppstdin instead of plain cpp for consistency (ADO)  
?RCS: patch36: remove temporary files when done  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:36 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:cpp\_stuff cpp\_quote: cat contains cppstdin cppflags cppminus rm Warn \  
package  
?MAKE: -pick  
add \$@ %<  
?S:cpp\_stuff:  
?S: This variable contains an identification of the catenation mechanism  
?S: used by the C preprocessor.  
?S:.  
?S:cpp\_quote:  
?S: This variable is set to either "" or " depending on whether the  
?S: pre-processor pre-dates ANSI or not. It is used in the production of  
?S: the SQuoTe() and EQuoTe() macros, and was introduced to overcome a bug  
?S: in gcc 3.x whereby the pre-processor complained loudly about the  
?S: unterminated strings.  
?S:.  
?C:CAT2:  
?C: This macro catenates 2 tokens together.  
?C:.  
?C:CAT3:  
?C: This macro catenates 3 tokens together.  
?C:.  
?C:CAT4:  
?C: This macro catenates 4 tokens together.  
?C:.  
?C:CAT5:  
?C: This macro catenates 5 tokens together.  
?C:.  
?C:STRINGIFY:  
?C: This macro surrounds its token with double quotes.  
?C:.  
?C:SCAT2:  
?C: This macro catenates 2 tokens together and stringifies the result.  
?C:.  
?C:SCAT3:  
?C: This macro catenates 3 tokens together and stringifies the result.  
?C:.  
?C:SCAT4:  
?C: This macro catenates 4 tokens  
together and stringifies the result.  
?C:.  
?C:SCAT5:  
?C: This macro catenates 5 tokens together and stringifies the result.

```

?C:.
?H:%<:#if $cpp_stuff == 1
?H:?CAT2:#define CAT2(a,b)a/**/b
?H:?CAT3:#define CAT3(a,b,c)a/**/b/**/c
?H:?CAT4:#define CAT4(a,b,c,d)a/**/b/**/c/**/d
?H:?CAT5:#define CAT5(a,b,c,d,e)a/**/b/**/c/**/d/**/e
?H:?STRINGIFY:#define STRINGIFY(a)"a"
?H:%<:#define SQuote(a){cpp_quote}a
?H:%<:#define EQuote(a)a${cpp_quote}
?H:?SCAT2:#define SCAT2(a,b)EQuote(SQuote(a)b)
?H:?SCAT3:#define SCAT3(a,b,c)EQuote(SQuote(a)b/**/c)
?H:?SCAT4:#define SCAT4(a,b,c,d)EQuote(SQuote(a)b/**/c/**/d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e)EQuote(SQuote(a)b/**/c/**/d/**/e)
?H:%<:#endif
?H:%<:#if $cpp_stuff == 42
?X: The additional level of indirection enables these macros to be
?X: used as arguments to other macros. See K&R 2nd ed., page 231.
?H:%<:#define CaTiFy(a,b) a ## b
?H:%<:#define CAT2(a,b) CaTiFy(a,b)
?H:?CAT3:#define CAT3(a,b,c) CAT2(CaTiFy(a,b),c)
?H:?CAT4:#define CAT4(a,b,c,d)
CAT2(CaTiFy(a,b), CaTiFy(c,d))
?H:?CAT5:#define CAT5(a,b,c,d,e) CAT2(CAT2(CaTiFy(a,b), CaTiFy(c,d)), e)
?H:%<:#define StGiFy(a)# a
?H:?STRINGIFY:#define STRINGIFY(a)StGiFy(a)
?H:?SCAT2:#define SCAT2(a,b)StGiFy(a) StGiFy(b)
?H:?SCAT3:#define SCAT3(a,b,c)StGiFy(a) StGiFy(b) StGiFy(c)
?H:?SCAT4:#define SCAT4(a,b,c,d)StGiFy(a) StGiFy(b) StGiFy(c) StGiFy(d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e)StGiFy(a) StGiFy(b) StGiFy(c) StGiFy(d) StGiFy(e)
?H:%<:#endif
?H:%<:#if $cpp_stuff != 1 && $cpp_stuff != 42
?H:%<:#include "Bleth: How does this C preprocessor catenate tokens?"
?H:%<:#endif
?H:.
?W:%<:CAT2 CAT3 CAT4 CAT5 STRINGIFY SCAT2 SCAT3 SCAT4 SCAT5
?F:!cpp_stuff.c
?LINT:known StGiFy EQuote SQuote CaTiFy
: how do we catenate cpp tokens here?
echo " "
echo "Checking to see how your cpp does stuff like catenate tokens..." >&4
cpp_quote="
$cat >cpp_stuff.c <<'EOCP'
#define RCAT(a,b)a/**/b
#define ACAT(a,b)a ## b
RCAT(Rei,ser)
ACAT(Cir,cus)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out

```

```

2>&1
if $contains 'Circus' cpp_stuff.out >/dev/null 2>&1; then
echo "Oh! Smells like ANSI's been here."
echo "We can catify or stringify, separately or together!"
cpp_stuff=42
elif $contains 'Reiser' cpp_stuff.out >/dev/null 2>&1; then
echo "Ah, yes! The good old days!"
cpp_stuff=1
$cat >cpp_stuff.c <<'EOCP'
#define SQuoTe(a)"a
#define EQuoTe(a)a"
#define CAT2(a,b)EQuoTe(SQuoTe(a)b)
CAT2(Vic,tory)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out 2>&1
if $contains ""Victory"" cpp_stuff.out >/dev/null 2>&1; then
echo "I'll resort to a cute trick to also be able to stringify."
cpp_quote=""
else
$cat <<EOM
However, in the good old days we don't know how to stringify and
catify at the same time...
@if SCAT2 || SCAT3 || SCAT4 || SCAT5
You might have to edit the values of the SCAT[2-5] macros in config.h...
@else
Hopefully, $package does not need this feature.
@end
EOM
fi
else
./warn <<EOM
I can't seem to be able to catenate tokens with your cpp.
@if
CAT2 || CAT3 || CAT4 || CAT5 || SCAT2 || SCAT3 || SCAT4 || SCAT5
You're going to have to edit the values of the following
macros in config.h:

@if CAT2 || CAT3 || CAT4 || CAT5
CAT[2-5]
@end
@if SCAT2 || SCAT3 || SCAT4 || SCAT5
SCAT[2-5]
@end

in order to let me compile.
@end
EOM
cpp_stuff="/* Help! How do we handle cpp_stuff? *//"

```

fi

```
$rm -f cpp_stuff.*
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cpp_stuff.U
```

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```
?RCS: $Id: d_fd_set.U,v 3.0.1.3 1997/02/28 15:33:16 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_fd_set.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 15:33:16 ram
```

```
?RCS: patch61: added ?F: metalint hint
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1994/06/20 06:57:23 ram
```

```
?RCS: patch30: extended scope for fd_set checks (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/01/24 14:06:27 ram
```

```
?RCS: patch16: comments for HAS_FD_* symbols were not consistent
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:06:02 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_fd_set d_fd_macros
```

```
d_fds_bits: Compile cat rm_try Oldconfig \
```

```
d_socket i_systeme i_sysselect i_stdlib run
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_fd_set:
```

```
?S: This variable contains the eventual value of the HAS_FD_SET symbol,
```

```
?S: which indicates if your C compiler knows about the fd_set typedef.
```

```
?S:.
```

```
?S:d_fd_macros:
```

```
?S: This variable contains the eventual value of the HAS_FD_MACROS symbol,
```

```
?S: which indicates if your C compiler knows about the macros which
```

```
?S: manipulate an fd_set.
```

```
?S:.
```

```
?S:d_fds_bits:
```

```
?S: This variable contains the eventual value of the HAS_FDS_BITS symbol,
```

```
?S: which indicates if your fd_set typedef contains the fds_bits member.
```

```
?S: If you have an fd_set typedef, but the dweebs who installed it did
```



?S: a half-fast job and neglected to provide the macros to manipulate  
 ?S: an fd\_set, HAS\_FDS\_BITS will let us know how to fix the gaffe.  
 ?S:.  
 ?C:HAS\_FD\_SET:  
 ?C: This symbol, when defined, indicates presence of the fd\_set typedef  
 ?C: in <sys/types.h>  
 ?C:.  
 ?C:HAS\_FD\_MACROS:  
 ?C: This symbol, when defined,  
 indicates presence of the macros used to  
 ?C: manipulate an fd\_set.  
 ?C:.  
 ?C:HAS\_FDS\_BITS:  
 ?C: This symbol, when defined, indicates presence of the fds\_bits member in  
 ?C: fd\_set. This knowledge is useful if fd\_set is available but the macros  
 ?C: aren't.  
 ?C:.  
 ?H:#\$d\_fd\_set HAS\_FD\_SET /\*\*/  
 ?H:#\$d\_fd\_macros HAS\_FD\_MACROS /\*\*/  
 ?H:#\$d\_fds\_bits HAS\_FDS\_BITS /\*\*/  
 ?H:.  
 ?F:!try  
 : check for fd\_set items  
 \$cat <<EOM

Checking to see how well your C compiler handles fd\_set and friends ...

EOM

?X: The FD\_SET macros can be in strange places. On some SysV-based  
 ?X: systems, they are in <sys/bsdtypes.h>, which is included (perhaps)  
 ?X: by <sys/socket.h>. We won't force people to include  
 ?X: <sys/bsdtypes.h> because it might introduce other  
 ?X: incompatibilities.

\$cat >try.c <<EOCP

```

#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#i_systime I_SYS_TIME
#i_sysselect I_SYS_SELECT
#$d_socket HAS_SOCKET
#include <sys/types.h>
#ifdef HAS_SOCKET
#include <sys/socket.h> /* Might include <sys/bsdtypes.h>
*/
#endif
#ifdef I_SYS_TIME
#include <sys/time.h>
#endif

```

```

#ifdef I_SYS_SELECT
#include <sys/select.h>
#endif
int main() {
    fd_set fds;

#ifdef TRYBITS
    if(fds.fds_bits);
#endif

#if defined(FD_SET) && defined(FD_CLR) && defined(FD_ISSET) && defined(FD_ZERO)
    exit(0);
#else
    exit(1);
#endif
}
EOCP
set try -DTRYBITS
if eval $compile; then
    d_fds_bits="$define"
    d_fd_set="$define"
    echo "Well, your system knows about the normal fd_set typedef..." >&4
    if $run ./try; then
        echo "and you have the normal fd_set macros (just as I'd expect)." >&4
        d_fd_macros="$define"
    else
        $cat >&4 <<'EOM'
but not the normal fd_set macros! Gaaack! I'll have to cover for you.
EOM
        d_fd_macros="$undef"
    fi
else
    $cat <<'EOM'
Hmm, your compiler has some difficulty with fd_set. Checking further...
EOM
    set try
    if eval $compile; then
        d_fds_bits="$undef"
        d_fd_set="$define"
        echo "Well, your system has some sort of fd_set available..." >&4
        if $run ./try; then
            echo "and you have the normal
fd_set macros." >&4
            d_fd_macros="$define"
        else
            $cat <<'EOM'
but not the normal fd_set macros! Gross! More work for me...
EOM

```

```

    d_fd_macros="$undef"
fi
else
echo "Well, you got zip. That's OK, I can roll my own fd_set stuff." >&4
d_fd_set="$undef"
d_fds_bits="$undef"
d_fd_macros="$undef"
fi
fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_fd_set.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:usefaststdio: Myread Oldconfig Setvar rsrc

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usefaststdio:

?S: This variable conditionally defines the USE\_FAST\_STDIO symbol,

?S: and indicates that Perl should be built to use 'fast stdio'.

?S: Defaults to define in Perls 5.8 and earlier, to undef later.

?S:.

?C:USE\_FAST\_STDIO:

?C: This symbol, if defined, indicates that Perl should

?C: be built to use 'fast stdio'.

?C: Defaults to define in Perls 5.8 and earlier, to undef later.

?C:.

?H:?%<:#ifndef USE\_FAST\_STDIO

?H:?%<:#\$usefaststdio USE\_FAST\_STDIO /\*\*/

?H:?%<:#endif

?H:.

?T:xversion

?LINT:set usefaststdio

: Check if faststdio is requested and available

case "\$usefaststdio" in

\$define|true|[yY]\*)

xversion=`awk

/define[ ]+PERL\_VERSION/ {print \$3}' \$src/patchlevel.h`

case "\$xversion" in

```

[68]) dflt='y' ;;
*) dflt='n' ;;
esac
;;
*) dflt='n';;
esac
cat <<EOM

```

Perl can be built to use 'fast stdio', which means using the stdio library but also directly manipulating the stdio buffers to enable faster I/O. Using stdio is better for backward compatibility (especially for Perl extensions), but on the other hand since Perl 5.8 the 'perlio' interface has been preferred instead of stdio.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

```

rp='Use the "fast stdio" if available?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*)   val="$undef" ;;
esac
set usefaststdio
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/usefaststdio.U

```

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```

?RCS: $Id: d_semop.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_semop.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:05 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_semop: Inlibc
?MAKE: -pick add $@ %<
?S:d_semop:
?S: This variable conditionally defines the HAS_SEMOP symbol, which

```

?S: indicates to the C program that the semop() routine is available.

?S:.

?C:HAS\_SEMOP:

?C: This symbol, if defined, indicates that the semop() routine is

?C: available to execute semaphore operations.

?C:.

?H:#\$d\_semop

HAS\_SEMOP /\*\*/

?H:.

?LINT:set d\_semop

: see if semop exists

set semop d\_semop

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_semop.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2005 H.Merijn Brand

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_unsetenv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_unsetenv:

?S: This variable conditionally defines the HAS\_UNSETENV symbol, which

?S: indicates to the C program that the unsetenv () routine is available.

?S:.

?C:HAS\_UNSETENV:

?C: This symbol, if defined, indicates that the unsetenv () routine is

?C: available for use.

?C:.

?H:#\$d\_unsetenv HAS\_UNSETENV /\*\*/

?H:.

?LINT:set d\_unsetenv

: see if unsetenv exists

set unsetenv d\_unsetenv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_unsetenv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: patchlevel.U,v 3.0.1.1 1997/02/28 16:18:41 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: patchlevel.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:18:41 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:patchlevel revision version subversion \  
perl\_patchlevel version\_patchlevel\_string \  
api\_revision api\_version api\_subversion api\_versionstring: \  
package test rsrc echo awk osname

?MAKE: -pick

add \$@ %<

?S:revision:

?S: The value of revision comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "5".

?S: In patchlevel.h, this is referred to as "PERL\_REVISION".

?S:.

?S:patchlevel:

?S: The patchlevel level of this package.

?S: The value of patchlevel comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "6".

?S: In patchlevel.h, this is referred to as "PERL\_VERSION".

?S:.

?S:subversion:

?S: The subversion level of this package.

?S: The value of subversion comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "1".

?S: In patchlevel.h, this is referred to as "PERL\_SUBVERSION".

?S: This is unique to perl.

?S:.

?S:version:

?S: The full version number of this package, such as 5.6.1 (or 5\_6\_1).

?S: This combines revision, patchlevel, and subversion to get the

?S: full version number, including any possible subversions.

?S: This is suitable for use as a directory name, and hence is

?S: filesystem

dependent.

?S:.

?S:api\_revision:

?S: The three variables, api\_revision, api\_version, and

?S: api\_subversion, specify the version of the oldest perl binary

?S: compatible with the present perl. In a full version string

?S: such as '5.6.1', api\_revision is the '5'.

?S: Prior to 5.5.640, the format was a floating point number,

?S: like 5.00563.

?S:

?S: perl.c:incpush() and lib/lib.pm will automatically search in

?S: \$sitelib/. for older directories back to the limit specified

?S: by these api\_ variables. This is only useful if you have a

?S: perl library directory tree structured like the default one.

?S: See INSTALL for how this works. The versioned site\_perl

?S: directory was introduced in 5.005, so that is the lowest

?S: possible value. The version list appropriate for the current

?S: system is determined in inc\_version\_list.U.

?S:

?S: XXX To do: Since compatibility can depend on compile time

?S: options (such as bincompat, longlong, etc.) it should

?S: (perhaps) be set by

Configure, but currently it isn't.

?S: Currently, we read a hard-wired value from patchlevel.h.

?S: Perhaps what we ought to do is take the hard-wired value from

?S: patchlevel.h but then modify it if the current Configure

?S: options warrant. patchlevel.h then would use an #ifdef guard.

?S:.

?S:api\_version:

?S: The three variables, api\_revision, api\_version, and

?S: api\_subversion, specify the version of the oldest perl binary

?S: compatible with the present perl. In a full version string

?S: such as '5.6.1', api\_version is the '6'. See api\_revision for

?S: full details. As a special case, 5.5.0 is rendered in the

?S: old-style as 5.005. (In the 5.005\_0x maintenance series,

?S: this was the only versioned directory in \$sitelib.)

?S:.

?S:api\_subversion:

?S: The three variables, api\_revision, api\_version, and

?S: api\_subversion, specify the version of the oldest perl binary

?S: compatible with the present perl. In a full version string

?S: such as '5.6.1', api\_subversion is the

'1'. See api\_revision for

?S: full details.

?S:.

?S:api\_versionstring:

?S: This variable combines api\_revision, api\_version, and

?S: api\_subversion in a format such as 5.6.1 (or 5\_6\_1) suitable

?S: for use as a directory name. This is filesystem dependent.

?S:.

?S:perl\_patchlevel:

?S: This is the Perl patch level, a numeric change identifier,

?S: as defined by whichever source code maintenance system

?S: is used to maintain the patches; currently Perforce.

?S: It does not correlate with the Perl version numbers or

?S: the maintenance versus development dichotomy except

?S: by also being increasing.

?S:.

?S:version\_patchlevel\_string:

?S: This is a string combining version, subversion and

?S: perl\_patchlevel (if perl\_patchlevel is non-zero).

?S: It is typically something like

?S: 'version 7 subversion 1' or

?S: 'version 7 subversion 1 patchlevel 11224'

?S: It is computed here to avoid duplication of code in myconfig.SH

?S: and lib/Config.pm.

?S:.

?LINT:extern LC\_ALL

?LINT:extern LANGUAGE

:

```

get the patchlevel
echo " "
echo "Getting the current patchlevel..." >&4
if $test -r $src/patchlevel.h;then
revision=`awk '/define[ ]+PERL_REVISION/ {print $3}' $src/patchlevel.h`
patchlevel=`awk '/define[ ]+PERL_VERSION/ {print $3}' $src/patchlevel.h`
subversion=`awk '/define[ ]+PERL_SUBVERSION/ {print $3}' $src/patchlevel.h`
api_revision=`awk '/define[ ]+PERL_API_REVISION/ {print $3}' $src/patchlevel.h`
api_version=`awk '/define[ ]+PERL_API_VERSION/ {print $3}' $src/patchlevel.h`
api_subversion=`awk '/define[ ]+PERL_API_SUBVERSION/ {print $3}' $src/patchlevel.h`
perl_patchlevel=`egrep ',(MAINT|SMOKE)[0-9][0-9]*"' $src/patchlevel.h|tail -1|sed 's/[^0-9]//g`
else
revision=0
patchlevel=0
subversion=0
api_revision=0
api_version=0
api_subversion=0
perl_patchlevel=0
$echo "(You do not have patchlevel.h. Eek.)"
fi
: Define a handy string here to avoid duplication in myconfig.SH and configpm.
version_patchlevel_string="version $patchlevel subversion $subversion"
case
"$perl_patchlevel" in
0|") ;;

```



```

*) perl_patchlevel=`echo $perl_patchlevel | sed 's/.*/^'`
   version_patchlevel_string="$version_patchlevel_string patch $perl_patchlevel"
   ;;
esac

```

```

$echo "(You have $package $version_patchlevel_string.)"

```

```

case "$osname" in
dos|vms)
: XXX Should be a Configure test for double-dots in filenames.
version=`echo $revision $patchlevel $subversion | \
  $awk '{ printf "%d_%d_%d", $1, $2, $3 }`
api_versionstring=`echo $api_revision $api_version $api_subversion | \
  $awk '{ printf "%d_%d_%d", $1, $2, $3 }`
;;
*)
version=`echo $revision $patchlevel $subversion | \
  $awk '{ printf "%d.%d.%d", $1, $2, $3 }`
api_versionstring=`echo $api_revision $api_version $api_subversion | \
  $awk '{ printf "%d.%d.%d", $1, $2, $3 }`
;;
esac
: Special case the 5.005_xx maintenance series, which used 5.005
: without any subversion label as a subdirectory in $sitelib
if test "${api_revision}${api_version}${api_subversion}" = "550"; then
  api_versionstring='5.005'
fi

```

Found

in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/patchlevel.U

```

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?RCS: Copyright (c) 2016 Dagfinn Ilmari Mannsker & H.Merijn Brand

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X:

?X: This unit produces a variable that is intended to be eval'ed in

?X: order to define/undefine a symbol. A consistency check is made

?X: regarding any previous value and a warning is issued if there

?X: is any discrepancy.

?X:

?X: To use it, say:

```

?X: set d_siginfo_si_errno siginfo_t int si_errno $d_sigaction signal.h

```

```

?X: eval $hasfield_t;

```

```

?X:
?MAKE:Hasfield_t: test Compile rm_try Setvar
?MAKE: -pick add $@ %<
?LINT:define hasfield_t
?S:hasfield_t:
?S: Internal macro for Configure
?S:.
?V:hasfield_t:
?T:varname struct type field
: Define hasfield_t macro for Configure internal use
hasfield_t='varname=$1; struct=$2; type=$3; field=$4; shift; shift; shift; shift;
while $test $# -ge 2; do
    case
"$1" in
$define) echo "#include <$2>";;
    esac ;
    shift 2;
done > try.c;
echo "int main () { $struct foo; $type bar = foo.$field; }" >> try.c;
set try;
if eval $compile; then
    val="$define";
else
    val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Hasfield_t.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_portable.U,v 3.0.1.2 1995/01/11 15:28:52 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
?RCS: In accordance with clause 7 of dist's modified Artistic License:
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_portable.U,v $
?RCS: Revision 3.0.1.2 1995/01/11 15:28:52 ram
?RCS: patch45: executable path stripping moved to the end in Config_sh.U

```

?RCS:  
?RCS: Revision 3.0.1.1 1993/12/15 08:21:17 ram  
?RCS: patch15: did not strip variables properly when needed  
?RCS: patch15: now also strips down variables from trylist  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:48 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
This is the same as the dist version, except I don't bother  
?X: prompting people since it makes no difference for perl5,  
?X: and only confuses people.  
?X:  
?X: The Loc unit is wanted to get the definition of all the locating variables.  
?X:  
?MAKE:d\_portable: Loc Oldconfig  
?MAKE: -pick add \$@ %<  
?S:d\_portable:  
?S: This variable conditionally defines the PORTABLE symbol, which  
?S: indicates to the C program that it should not assume that it is  
?S: running on the machine it was compiled on.  
?S:.  
?C:PORTABLE:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: not assume that it is running on the machine it was compiled on.  
?C: The program should be prepared to look up the host name, translate  
?C: generic filenames, use PATH, etc.  
?C:.  
?H:#\$d\_portable PORTABLE /\*\*/  
?H:.  
?D:d\_portable="  
: decide how portable to be. Allow command line overrides.  
case "\$d\_portable" in  
"\$undef") ;;  
\*) d\_portable="\$define" ;;  
esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_portable.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Warn.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Extract.U,v \$  
?X:  
?X: This unit produces a shell script which can be run in order to emit  
?X: an important warning to the user, which will be remembered and shown  
?X: at the end of the Configure run as well.  
?X:  
?X: A typical use would be:  
?X:  
?X: ./warn <<EOM  
?X: Problem with your C compiler: can't turn debugging on.  
?X: EOM  
?X:  
?X: or:  
?X:  
?X: ./warn "Problem with your C compiler: can't turn debugging on."  
?X:  
?X: Which will both display to the user:  
?X:  
?X: \*\*\*  
WARNING:  
?X: \*\*\* Problem with your C compiler: can't turn debugging on.  
?X: \*\*\*  
?X:  
?MAKE:Warn: startsh eunicefix  
?MAKE: -pick add \$@ %<  
?F:./warn  
: script used to emit important warnings  
cat >warn <<EOS  
\$startsh  
?X: Read the whole warning message from stdin into a temporary file  
?X: when no argument was supplied.  
if test \$# -gt 0; then  
echo "\$@" >msg  
else  
cat >msg  
fi  
?X: Emit the warning, prefixing all lines with '\*\*\* '  
echo "\*\*\* WARNING:" >&4  
sed -e 's/^/\*\*\* /' <msg >&4  
echo "\*\*\* " >&4  
?X: Save the warning in the logs, which will be shown again at the end  
cat msg >>config.msg  
echo " " >>config.msg  
rm -f msg

EOS  
chmod +x warn  
\$eunicefix warn

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Warn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setprior.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_setprior.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:11 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setprior: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setprior:  
?S: This variable conditionally defines HAS\_SETPRIORITY if setpriority()  
?S: is available to set a process's priority.  
?S:.  
?C:HAS\_SETPRIORITY (SETPRIORITY):  
?C: This symbol, if defined, indicates that the setpriority routine is  
?C: available to set a process's priority.  
?C:.  
?H:#\$d\_setprior  
HAS\_SETPRIORITY /\*\*/  
?H:.  
?LINT:set d\_setprior  
: see if setpriority exists  
set setpriority d\_setprior  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setprior.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2000,2014 Jarkko Hietaniemi  
?RCS:

?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_fpclassify d\_fp\_classify: Inlibc cat Compile rm\_try Setvar  
?MAKE: -pick add \$@ %<  
?X:the short story is that C99 says use fpclassify. But the story is confused  
?X:by systems "partially C99" (or fully "pre C99") which either user fpclassify  
?X:but with different return values, or they use fp\_classify (with the expected)  
?X:return values, or they use some other spelling of \*fp\*class\* (sometimes even  
?X:without the \*fp\* part), with yet another set(s) of return values ...  
?S:d\_fpclassify:  
?S: This variable conditionally defines the HAS\_FPCLASSIFY symbol, which  
?S: indicates to the C program that the fpclassify() routine is available.  
?S:.  
?S:d\_fp\_classify:  
?S: This variable conditionally defines the HAS\_FP\_CLASSIFY  
symbol, which  
?S: indicates to the C program that the fp\_classify() routine is available.  
?S:.  
?C:HAS\_FPCLASSIFY:  
?C: This symbol, if defined, indicates that the fpclassify routine is  
?C: available to classify doubles. Available for example in HP-UX.  
?C: The returned values are defined in <math.h> and are  
?C:  
?C: FP\_NORMAL Normalized  
?C: FP\_ZERO Zero  
?C: FP\_INFINITE Infinity  
?C: FP\_SUBNORMAL Denormalized  
?C: FP\_NAN NaN  
?C:  
?C:.  
?C:HAS\_FP\_CLASSIFY:  
?C: This symbol, if defined, indicates that the fp\_classify routine is  
?C: available to classify doubles. The values are defined in <math.h>  
?C:  
?C: FP\_NORMAL Normalized  
?C: FP\_ZERO Zero  
?C: FP\_INFINITE Infinity  
?C: FP\_SUBNORMAL Denormalized  
?C: FP\_NAN NaN  
?C:  
?C:.  
?H:#\$d\_fpclassify HAS\_FPCLASSIFY /\*\*/  
?H:#\$d\_fp\_classify HAS\_FP\_CLASSIFY /\*\*/  
?H:.  
?LINT:set d\_fpclassify  
?LINT:set d\_fp\_classify  
: check for fpclassify

```

?X:classified (Comment by jhi)
?X:fpclassify i_math
?X:fp_classify i_math
?X:fpclass i_math
i_ieeefp i_fp
?X:fp_class i_math i_fp_class
?X: No i_fp_class yet. But the systems that have
?X: this (Tru64 and IRIX) both had <fp_class.h>
?X:class i_math
echo "Checking to see if you have fpclassify..." >&4
$cat >try.c <<EOCP
#include <math.h>
int main() { return fpclassify(1.0) == FP_NORMAL ? 0 : 1; }
EOCP
set try
if eval $compile; then
val="$define"
echo "You have fpclassify."
else
val="$undef"
echo "You do not have fpclassify."
fi
$rm_try
set d_fpclassify
eval $setvar

: see if fp_classify exists
set fp_classify d_fp_classify
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_fpclassify.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_semctl.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_semctl.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:04 ram
?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:  
?MAKE:d\_semctl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_semctl:  
?S: This variable conditionally defines the HAS\_SEMCTL symbol, which  
?S: indicates to the C program that the semctl() routine is available.  
?S:.  
?C:HAS\_SEMCTL:  
?C: This symbol, if defined, indicates that the semctl() routine is  
?C: available to perform semaphore control operations.  
?C:.  
?H:#\$d\_semctl  
HAS\_SEMCTL /\*\*/  
?H:.  
?LINT:set d\_semctl  
: see if semctl exists  
set semctl d\_semctl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_semctl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpgid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1996, Andy Dougherty  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_getpgid.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 15:33:44 ram  
?RCS: patch61: created  
?RCS:  
?MAKE:d\_getpgid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getpgid:  
?S: This variable conditionally defines the HAS\_GETPGID symbol, which  
?S: indicates to the C program that the getpgid(pid) function  
?S: is available to get the process group id.  
?S:.  
?C:HAS\_GETPGID:  
?C: This symbol, if defined, indicates to the C program



that  
?C: the getpgid(pid) function is available to get the  
?C: process group id.  
?C:.  
?H:#\$d\_getpgid HAS\_GETPGID /\*\*/  
?H:.  
?LINT:set d\_getpgid  
: see if getpgid exists  
set getpgid d\_getpgid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_getpgid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_crypt.U,v \$  
?RCS:  
?RCS: Copyright (c) 2002 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_crypt: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_crypt:  
?S: This variable conditionally defines the I\_CRYPT symbol, and indicates  
?S: whether a C program should include <crypt.h>.  
?S:.  
?C:I\_CRYPT:  
?C: This symbol, if defined, indicates that <crypt.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_crypt I\_CRYPT /\*\*/  
?H:.  
?LINT:set i\_crypt  
: see if this is a crypt.h system  
set crypt.h i\_crypt  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_crypt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the WRITEME file.  
?RCS:  
?MAKE:d\_writev: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_writev:  
?S: This variable conditionally defines the HAS\_WRITEV symbol, which  
?S: indicates to the C program that the writev() routine is available.  
?S:.  
?C:HAS\_WRITEV:  
?C: This symbol, if defined, indicates that the writev routine is  
?C: available to do scatter writes.  
?C:.  
?H:#\$d\_writev HAS\_WRITEV /\*\*/  
?H:.  
?LINT:set d\_writev  
: see if writev exists  
set writev d\_writev  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_writev.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_euc2jis.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_euc2jis.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:58 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_euc2jis: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_euc2jis:  
?S: This variable conditionally defines the HAS\_EUC2JIS symbol, which  
?S: indicates to the C program that the euc2jis() routine is available  
?S: to convert EUC to JIS.  
?S:.  
?C:HAS\_EUC2JIS:

?C: This symbol, if defined, indicates that the euc2jis routine is

?C: available to convert

EUC to JIS.

?C:.

?H:#\$d\_euc2jis HAS\_EUC2JIS /\*\*/

?H:.

?LINT:set d\_euc2jis

: see if euc2jis exists

set euc2jis d\_euc2jis

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_euc2jis.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_msem\_lck.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_msem\_lck.U,v \$

?MAKE:d\_msem\_lck: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_msem\_lck:

?S: This variable conditionally defines HAS\_MSEM\_LOCK if msem\_lock() is

?S: available, thereby indicating kernel support for memory semaphores.

?S:.

?C:HAS\_MSEM\_LOCK:

?C: This symbol, if defined, indicates that memory semaphores are

?C: available to protect mmap()'ed regions.

?C:.

?H:#\$d\_msem\_lck HAS\_MSEM\_LOCK /\*\*/

?H:.

?LINT:set d\_msem\_lck

: see if msem\_lock exists

set

msem\_lock d\_msem\_lck

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_msem\_lck.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setlnbuf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_setlnbuf.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:11:57 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_setlinebuf: Inlibc
?MAKE: -pick add $@ %<
?S:d_setlinebuf:
?S: This variable conditionally defines the HAS_SETLINEBUF symbol, which
?S: indicates to the C program that the setlinebuf() routine is available
?S: to change stderr or stdout from block-buffered or unbuffered
to a
?S: line-buffered mode.
?S:.
?C:HAS_SETLINEBUF :
?C: This symbol, if defined, indicates that the setlinebuf routine is
?C: available to change stderr or stdout from block-buffered or unbuffered
?C: to a line-buffered mode.
?C:.
?H:#$d_setlinebuf HAS_SETLINEBUF /**/
?H:.
?LINT:set d_setlinebuf
: see if setlinebuf exists
set setlinebuf d_setlinebuf
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_setlnbuf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorprefix.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1999 Andy Dougherty
?RCS:
```

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: vendorprefix.U,v \$  
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera  
?RCS: Initial revision  
?RCS:  
?MAKE:usevendorprefix vendorprefix vendorprefixexp +oldvendorprefix: \  
Getfile Loc Oldconfig cat prefix Myread  
?MAKE: -pick add \$@ %<  
?S:usevendorprefix:  
?S: This variable tells whether the vendorprefix  
?S: and consequently other vendor\* paths are in use.  
?S:.  
?S:vendorprefix:  
?S: This variable holds the full absolute path of the directory below  
?S: which  
the vendor will install add-on packages.  
?S: See INSTALL for usage and examples.  
?S:.  
?S:vendorprefixexp:  
?S: This variable holds the full absolute path of the directory below  
?S: which the vendor will install add-on packages. Derived from vendorprefix.  
?S:.  
?S:oldvendorprefix:  
?S: This variable is set non-null if the vendorprefix was previously defined  
?S: and gets set to a new value. Used internally by Configure only.  
?S:.  
: Set the vendorprefix variables  
\$cat <<EOM

The installation process will also create a directory for  
vendor-supplied add-ons. Vendors who supply perl with their system  
may find it convenient to place all vendor-supplied files in this  
directory rather than in the main distribution directory. This will  
ease upgrades between binary-compatible maintenance versions of perl.

Of course you may also use these directories in whatever way you see  
fit. For example, you might use them to access modules shared over a  
company-wide network.

The default answer should be  
fine for most people.

This causes further questions about vendor add-ons to be skipped  
and no vendor-specific directories will be configured for perl.

EOM

```
rp='Do you want to configure vendor-specific add-on directories?'
case "$usevendorprefix" in
define|true|[yY]*) dflt=y ;;
*) : User may have set vendorprefix directly on Configure command line.
case "$vendorprefix" in
'|' ) dflt=n ;;
*) dflt=y ;;
esac
;;
esac
./myread
case "$ans" in
[yY]*) fn=d~+
rp='Installation prefix to use for vendor-supplied add-ons?'
case "$vendorprefix" in
") dflt="$prefix" ;;
*) dflt=$vendorprefix ;;
esac
./getfile
: XXX Prefixit unit does not yet support siteprefix and vendorprefix
oldvendorprefix="
case "$vendorprefix" in
") ;;
*) case "$ans" in
"$prefix") ;;
*) oldvendorprefix="$prefix";;
esac
;;
esac
usevendorprefix="$define"
vendorprefix="$ans"
vendorprefixexp="$sansexp"
;;
*) usevendorprefix="$undef"
vendorprefix="
vendorprefixexp="
;;
esac
```

Found in path(s):

\*

/opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/installdirs/vendorprefix.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

```

?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_class: Inlibc
?MAKE: -pick add $@ %<
?S:d_class:
?S: This variable conditionally defines the HAS_CLASS symbol, which
?S: indicates to the C program that the class() routine is available.
?S:.
?C:HAS_CLASS:
?C: This symbol, if defined, indicates that the class routine is
?C: available to classify doubles. Available for example in AIX.
?C: The returned values are defined in <float.h> and are:
?C:
?C: FP_PLUS_NORM Positive normalized, nonzero
?C: FP_MINUS_NORM Negative normalized, nonzero
?C: FP_PLUS_DENORM Positive denormalized, nonzero
?C: FP_MINUS_DENORM Negative denormalized, nonzero
?C: FP_PLUS_ZERO +0.0
?C: FP_MINUS_ZERO -0.0
?C: FP_PLUS_INF +INF
?C: FP_MINUS_INF -INF
?C: FP_NANS Signaling
    Not a Number (NaNS)
?C: FP_NANQ Quiet Not a Number (NaNQ)
?C:.
?H:#$d_class HAS_CLASS /**/
?H:.
?LINT:set d_class
: see if class exists
set class d_class
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/U/perl/d_class.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_scandir.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of

```

?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_scandir.U,v \$  
?RCS: Revision 3.0.1.1 1994/01/24 14:06:35 ram  
?RCS: patch16: created  
?RCS:  
?MAKE:d\_scandir: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_scandir:  
?S: This variable conditionally defines HAS\_SCANDIR if scandir() is  
?S: available to scan a directory.  
?S:.  
?C:HAS\_SCANDIR:  
?C: This symbol, if defined, indicates that the scandir routine is  
?C: available to scan a directory.  
?C:.  
?H:#\$d\_scandir HAS\_SCANDIR /\*\*/  
?H:.  
?LINT:set d\_scandir  
: see if  
scandir exists  
set scandir d\_scandir  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_scandir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wait3.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_wait3.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:01 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_wait3: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wait3:  
?S: This variable conditionally defines the HAS\_WAIT3 symbol, which



?S: indicates to the C program that the wait3() subroutine exists.

?S:.

?C:HAS\_WAIT3:

?C: This symbol, if defined, indicates that the wait3() subroutine

?C: exists.

?C:.

?H:#\$d\_wait3 HAS\_WAIT3 /\*\*/

?H:.

?LINT:set d\_wait3

:

see if 'wait3()' exists

set wait3 d\_wait3

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_wait3.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_tmpnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_tmpnam\_r tmpnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads extern\_C

?MAKE: -pick add \$@ %<

?S:d\_tmpnam\_r:

?S: This variable conditionally defines the HAS\_TMPNAM\_R symbol,

?S: which indicates to the C program that the tmpnam\_r()

?S: routine is available.

?S:.

?S:tmpnam\_r\_proto:

?S: This variable encodes the prototype of tmpnam\_r.

?S: It is zero if d\_tmpnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_tmpnam\_r

?S: is defined.

?S:.

?C:HAS\_TMPNAM\_R:

?C: This symbol, if defined, indicates that the tmpnam\_r routine

?C: is available to tmpnam re-entrantly.

?C:.

?C:TMPNAM\_R\_PROTO:

?C: This

```

symbol encodes the prototype of tmpnam_r.
?C: It is zero if d_tmpnam_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_tmpnam_r
?C: is defined.
?C:.
?H:#$d_tmpnam_r HAS_TMPNAM_R /**/
?H:#define TMPNAM_R_PROTO $tmpnam_r_proto /**/
?H:.
?T:try hdrs d_tmpnam_r_proto
: see if tmpnam_r exists
set tmpnam_r d_tmpnam_r
eval $inlibc
case "$d_tmpnam_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h "
case "$d_tmpnam_r_proto:$usethreads" in
":define") d_tmpnam_r_proto=define
set d_tmpnam_r_proto tmpnam_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_tmpnam_r_proto" in
define)
case "$tmpnam_r_proto" in
"|0) try='char* tmpnam_r(char*);'
./protochk "$extern_C $try" $hdrs && tmpnam_r_proto=B_B ;;
esac
case "$tmpnam_r_proto" in
"|0) d_tmpnam_r=undef
tmpnam_r_proto=0
echo "Disabling tmpnam_r, cannot determine prototype." >&4 ;;
* ) case "$tmpnam_r_proto" in
REENTRANT_PROTO*) ;;
*) tmpnam_r_proto="REENTRANT_PROTO_$tmpnam_r_proto"
;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "tmpnam_r has no prototype, not using it." >&4 ;;
esac
d_tmpnam_r=undef
tmpnam_r_proto=0
;;
esac
;;
*) tmpnam_r_proto=0

```

```
;;  
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_tmpnam_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getpgrp2.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: d_getpgrp2.U,v $  
?RCS: Revision 3.0 1993/08/18 12:06:15 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d_getpgrp2: Inlibc  
?MAKE: -pick add $@ %<  
?S:d_getpgrp2:  
?S: This variable conditionally defines the HAS_GETPGRP2 symbol, which  
?S: indicates to the C program that the getpgrp2() (as in DG/UX) routine  
?S: is available to get the current process group.  
?S:.  
?C:HAS_GETPGRP2 (GETPGRP2):  
?C: This symbol, if defined, indicates that the  
?C: getpgrp2() (as in DG/UX)  
?C: routine is available to get the current process group.  
?C:.  
?H:#$d_getpgrp2 HAS_GETPGRP2 /**/  
?H:.  
?LINT:set d_getpgrp2  
: see if getpgrp2 exists  
set getpgrp2 d_getpgrp2  
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_getpgrp2.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: usethreads.U,v $  
?RCS:
```

?RCS: Copyright (c) 1998-2000 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: usethreads.U,v \$  
?RCS:  
?MAKE:usethreads useithreads use5005threads d\_oldpthreads usereentrant: \  
Myread Oldconfig Setvar test cat patchlevel  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:usethreads:  
?S: This variable conditionally defines the USE\_THREADS symbol,  
?S: and indicates that Perl should be built to use threads.  
?S:.  
?S:useithreads:  
?S: This variable conditionally defines the USE\_ITHREADS symbol,  
?S: and indicates that Perl should be built to use the interpreter-based  
?S: threading implementation.  
?S:.  
?S:use5005threads:  
?S: This variable conditionally defines the USE\_5005THREADS symbol,  
?S: and indicates that Perl should be built to use the 5.005-based  
?S: threading implementation.  
Only valid up to 5.8.x.  
?S:.  
?X: I'm putting old\_pthreads in this unit because it might eventually  
?X: be part of an automatic determination to see if we can use threads  
?X: at all.  
?S:d\_oldpthreads:  
?S: This variable conditionally defines the OLD\_PTHREADS\_API symbol,  
?S: and indicates that Perl should be built to use the old  
?S: draft POSIX threads API. This is only potentially meaningful if  
?S: usethreads is set.  
?S:.  
?S:usereentrant:  
?S: This variable conditionally defines the USE\_REENTRANT\_API symbol,  
?S: which indicates that the thread code may try to use the various  
?S: \_r versions of library functions. This is only potentially  
?S: meaningful if usethreads is set and is very experimental, it is  
?S: not even prompted for.  
?S:.  
?C:USE\_ITHREADS:  
?C: This symbol, if defined, indicates that Perl should be built to  
?C: use the interpreter-based threading implementation.  
?C:.  
?C:USE\_5005THREADS:  
?C: This symbol, if defined, indicates that Perl should be built to

?C: use the 5.005-based  
threading implementation.

?C: Only valid up to 5.8.x.

?C:.

?C:USE\_THREADS:

?C: This symbol, if defined, indicates that Perl should  
?C: be built to use threads. At present, it is a synonym for  
?C: USE\_5005THREADS for perl older than 5.8 and USE\_ITHREADS  
?C: for 5.8.x and newer, but eventually the source ought to be  
?C: changed to use this to mean `_any_` threading implementation.

?C:.

?C:OLD\_PTHREADS\_API:

?C: This symbol, if defined, indicates that Perl should  
?C: be built to use the old draft POSIX threads API.

?C:.

?C:USE\_REENTRANT\_API:

?C: This symbol, if defined, indicates that Perl should  
?C: try to use the various `_r` versions of library functions.  
?C: This is extremely experimental.

?C:.

```
?H:#$use5005threads USE_5005THREADS /**/
?H:#$useithreads USE_ITHREADS /**/
?H:?%<:#if defined(USE_5005THREADS) && !defined(USE_ITHREADS)
?H:?%<:#define USE_THREADS /* until src is revised*/
?H:?%<:#endif
?H:#$d_oldpthreads OLD_PTHREADS_API /**/
?H:#$usereentrant USE_REENTRANT_API /**/
?H:
?X:
    [hmb] Removed LINT for use5005threads, useithreads, and
?X:     usereentrant, as LINT is only run on bleed
?LINT:set usethreads d_oldpthreads
?INIT:: set usethreads on the Configure command line to enable threads.
?INIT:usereentrant='undef'
?F:!usethreads.cbu
: Do we want threads support and if so, what type
?X: We should really have some explanatory text here, and some
?X: automatic setting of sensible defaults.
case "$usethreads" in
$define|true|[yY]*)    dflt='y';;
*)    # Catch case where user specified ithreads or 5005threads but
    # forgot -Dusethreads (A.D. 4/2002)
    case "$useithreads$use5005threads" in
    *$define*) dflt='y';;
    *) dflt='n';;
    esac
;;
esac
```

```
cat <<EOM
```

Perl can be built to offer a form of threading support on some systems  
To do so, Configure can be run with `-Dusethreads`.

Note that Perl built with threading support runs slightly slower  
and uses slightly more memory than plain Perl.

If this doesn't make  
any sense to you, just accept the default `'$dflt'`.

```
EOM
```

```
rp='Build a threading Perl?'
```

```
./myread
```

```
case "$ans" in
```

```
y|Y) val="$define" ;;
```

```
*) val="$undef" ;;
```

```
esac
```

```
set usethreads
```

```
eval $setvar
```

```
if $test $patchlevel -lt 9; then
```

```
case "$usethreads" in
```

```
$define)
```

```
: Default to ithreads unless overridden on command line or with
```

```
: old config.sh
```

```
dflt='y'
```

```
case "$use5005threads" in
```

```
$define|true|[yY]*)
```

```
echo "5.005 threads are no longer supported"
```

```
exit 1
```

```
::
```

```
esac
```

```
case "$useithreads" in
```

```
$undef|false|[nN]*) dflt='n';
```

```
esac
```

```
rp='Use the newer interpreter-based ithreads?'
```

```
./myread
```

```
case "$ans" in
```

```
y|Y) val="$define" ;;
```

```
*) val="$undef" ;;
```

```
esac
```

```
set useithreads
```

```
eval $setvar
```

```
: Now set use5005threads to the opposite value.
```

```
case "$useithreads" in
```

```
$define) val="$undef" ;;
```

```
*) val="$define" ;;
```

```
esac
```

```

set use5005threads
eval $setvar
;;
*)
useithreads="$undef"
use5005threads="$undef"
;;
esac

```

?X: This is not supposed to be possible but with some trickery, maybe.

```

case "$useithreads$use5005threads" in
"$define$define")
$cat >&4 <<EOM

```

You cannot have both the itreads and the 5.005 threads enabled at the same time. Disabling the 5.005 threads since they are much less stable than the itreads.

```

EOM
use5005threads="$undef"
;;
esac

```

```

else
: perl-5.9.x and later

```

```

if test X"$usetreads" = "X$define"; then
case "$use5005threads" in
$define|true|[yY]*)
$cat >&4 <<EOM

```

5.005 threads has been removed for 5.10. Perl will be built using itreads.

```

EOM
;;
esac
fi

use5005threads="$undef"
useithreads="$usetreads"
fi

```

?X: Check out what kind of threads API we have

```

case "$d_oldpthreads" in
") : Configure tests would be welcome here. For now, assume undef.
val="$undef" ;;
*) val="$d_oldpthreads" ;;

```

```
esac
set d_oldpthreads
eval $setvar
```

?X: In general, -lpthread needs to come before -lc but after other  
?X: libraries such as -lgdbm and such like. We assume here that -lc  
?X: is present in libswanted. If that  
fails to be true, then this  
?X: can be changed to add pthread to the very end of libswanted.

```
: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a threading perl is to be built,
: we may need to set or change some other defaults.
if $test -f usethreads.cbu; then
    echo "Your platform has some specific hints regarding threaded builds, using them..."
    . ./usethreads.cbu
else
    case "$usethreads" in
    "$define"|true|[yY]*)
        $cat <<EOM
        (Your platform does not have any specific hints for threaded builds.
        Assuming POSIX threads, then.)
        EOM
        ;;
    esac
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/usethreads.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_unistd.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_unistd.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_unistd: Inhdr
?MAKE: -pick add $@ %<
```



?S:i\_unistd:  
?S: This variable conditionally defines the I\_UNISTD symbol, and indicates  
?S: whether a C program should include <unistd.h>.  
?S:.  
?C:I\_UNISTD:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <unistd.h>.  
?C:.  
?H:#\$i\_unistd I\_UNISTD /\*\*/  
?H:.  
?LINT:set  
i\_unistd  
: see if this is a unistd.h system  
set unistd.h i\_unistd  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_unistd.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: fpostype.U,v \$  
?RCS: Revision 3.0.1.2 1994/08/29 16:20:52 ram  
?RCS: patch32: now uses new Typedef unit to compute type information  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 06:59:59 ram  
?RCS: patch30: created  
?RCS:  
?MAKE:fpostype: Myread Typedef  
?MAKE: -pick add \$@ %<  
?S:fpostype:  
?S: This variable defines Fpos\_t to be something like fpost\_t, long,  
?S: uint, or whatever type is used to declare file positions in libc.  
?S:.  
?C:Fpos\_t:  
?C: This symbol holds the type used to declare file positions  
in libc.  
?C: It can be fpos\_t, long, uint, etc... It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Fpos\_t \$fpostype /\* File position type \*/

?H:.

: see what type file positions are declared as in the library

set fpos\_t fpostype long stdio.h sys/types.h

eval \$typedef

echo " "

dflt="\$fpostype"

rp="What is the type for file position used by fsetpos()?"

./myread

fpostype="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/fpostype.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_quadmath: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_quadmath:

?S: This variable conditionally defines I\_QUADMATH, which indicates

?S: to the C program that it should include <quadmath.h>.

?S:.

?C:I\_QUADMATH:

?C: This symbol, if defined, indicates that <quadmath.h> exists and

?C: should be included.

?C:.

?H:#\$i\_quadmath I\_QUADMATH /\*\*/

?H:.

?LINT:set i\_quadmath

: see if this is a quadmath.h system

set quadmath.h i\_quadmath

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_quadmath.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lstat.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_lstat.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:28 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_lstat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lstat:

?S: This variable conditionally defines HAS\_LSTAT if lstat() is

?S: available to do file stats on symbolic links.

?S:.

?C:HAS\_LSTAT (LSTAT):

?C: This symbol, if defined, indicates that the lstat routine is

?C: available to do file stats on symbolic links.

?C:.

?H:#\$d\_lstat HAS\_LSTAT /\*\*/

?H:.

?LINT:set

d\_lstat

: see if lstat exists

set lstat d\_lstat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_lstat.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lrint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lrint:

?S: This variable conditionally defines the HAS\_LRINT symbol, which

?S: indicates to the C program that the lrint() routine is available

?S: to return the integral value closest to a double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LRINT:

?C: This symbol, if defined, indicates that the lrint routine is

?C: available to return the integral value closest to a double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_lrint HAS\_LRINT /\*\*/

?H:.

?LINT:set d\_lrint

: see if lrint exists

set lrint d\_lrint

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_lrint.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getnameinfo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getnameinfo:

?S: This variable conditionally defines the HAS\_GETNAMEINFO symbol,

?S: which indicates to the C program that the getnameinfo() function

?S: is available.

?S:.

?C:HAS\_GETNAMEINFO:

?C: This symbol, if defined, indicates that the getnameinfo() function

?C: is available for use.

?C:.

?H:#\$d\_getnameinfo HAS\_GETNAMEINFO /\*\*/

?H:.

?LINT:set d\_getnameinfo

: see if getnameinfo exists

set getnameinfo d\_getnameinfo

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getnameinfo.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setreuid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_setreuid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:13 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setreuid d\_setresuid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setreuid:  
?S: This variable conditionally defines HAS\_SETREUID if setreuid() is  
?S: available to change the real and effective uid of the current  
?S: process.  
?S:.  
?S:d\_setresuid:  
?S: This variable conditionally defines HAS\_SETREUID if setresuid() is  
?S: available to change  
the real, effective and saved uid of the current  
?S: process.  
?S:.  
?C:HAS\_SETREUID (SETREUID):  
?C: This symbol, if defined, indicates that the setreuid routine is  
?C: available to change the real and effective uid of the current  
?C: process.  
?C:.  
?C:HAS\_SETRESUID (SETRESUID):  
?C: This symbol, if defined, indicates that the setresuid routine is  
?C: available to change the real, effective and saved uid of the current  
?C: process.  
?C:.  
?H:#\$d\_setreuid HAS\_SETREUID /\*\*/  
?H:#\$d\_setresuid HAS\_SETRESUID /\*\*/  
?H:.  
?LINT:set d\_setreuid d\_setresuid  
: see if setreuid exists  
set setreuid d\_setreuid  
eval \$inlibc  
set setresuid d\_setresuid  
eval \$inlibc  
  
Found in path(s):  
\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-  
5.32.1~rc1/dist/U/d\_setreuid.U  
No license file was found, but licenses were detected in source scan.  
  
?RCS: \$Id: libnm.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libnm.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:08:26 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libnm: test Loc libpth \_a

?MAKE: -pick add \$@ %<

?S:libnm:

?S: This variable contains the argument to pass to the loader in order

?S: to get the new math library routines. If there is no new math

?S: library, it is null.

?S:.

?T:ans

?O:

use libswanted='-lnm' instead (see libs.U).

: see if we should include -lnm

echo " "

if \$test -r /usr/lib/libnm\$\_a || \$test -r /usr/local/lib/libnm\$\_a ; then

echo "New math library found." >&4

libnm='-lnm'

else

ans=`./loc libnm\$\_a x \$libpth`

case "\$ans" in

x)

echo "No nm library found--the normal math library will have to do." >&4

libnm=""

::

\*)

echo "New math library found in \$ans." >&4

libnm="\$ans"

::

esac

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libnm.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_memccpy.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_memccpy.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:31 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_memccpy: Inlibc
?MAKE: -pick add $@ %<
?S:d_memccpy:
?S: This variable conditionally defines the HAS_MEMCCPY symbol, which
?S: indicates to the C program that the memccpy() routine is available
?S: to copy a character into a block of memory.
?S:.
?C:HAS_MEMCCPY (MEMCCPY):
?C: This symbol, if defined, indicates that the memccpy routine
is available
?C: to copy a character into a block of memory. Otherwise you should
?C: roll your own.
?C:.
?H:#$d_memccpy HAS_MEMCCPY /**/
?H:.
?LINT:set d_memccpy
: see if memccpy exists
set memccpy d_memccpy
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_memccpy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_chown.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
```

?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_chown.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:14 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_chown: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_chown:  
?S: This variable conditionally defines the HAS\_CHOWN symbol, which  
?S: indicates to the C program that the chown() routine is available.  
?S:.  
?C:HAS\_CHOWN :  
?C: This symbol, if defined, indicates that the chown routine is  
?C: available.  
?C:.  
?H:#\$d\_chown  
HAS\_CHOWN /\*\*/  
?H:.  
?LINT:set d\_chown  
: see if chown exists  
set chown d\_chown  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_chown.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: sig\_name.U,v \$  
?RCS: Revision 3.0.1.5 1997/02/28 16:21:25 ram  
?RCS: patch61: brand new algorithm for sig\_name and (new!) sig\_num  
?RCS:  
?RCS: Revision 3.0.1.4 1995/07/25 14:14:54 ram  
?RCS: patch56: added <asm/signal.h> lookup for linux



?RCS:  
?RCS: Revision 3.0.1.3 1995/05/12 12:24:11 ram  
?RCS: patch54: now looks for <linux/signal.h> too (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20 07:06:57 ram  
?RCS: patch30: final echo was missing to close awk-printed string  
?RCS:  
?RCS: Revision 3.0.1.1  
1994/05/06 15:17:55 ram  
?RCS: patch23: signal list now formatted to avoid scroll-ups (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:47 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:sig\_name sig\_name\_init sig\_num sig\_num\_init sig\_count sig\_size: \  
awk Signal Oldconfig rm  
?MAKE: -pick add \$@ %<  
?S:sig\_name:  
?S: This variable holds the signal names, space separated. The leading  
?S: SIG in signal name is removed. A ZERO is prepended to the  
?S: list. This is currently not used.  
?S:.  
?S:sig\_name\_init:  
?S: This variable holds the signal names, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NAME definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0. The leading SIG in signal names  
?S: is removed. See sig\_num.  
?S:.  
?S:sig\_num:  
?S: This variable holds the signal numbers, space separated. A ZERO is  
?S: prepended to the list (corresponding to the fake SIGZERO), and  
?S: the list is terminated  
with a 0. Those numbers correspond to  
?S: the value of the signal listed in the same place within the  
?S: sig\_name list.  
?S:.  
?S:sig\_num\_init:  
?S: This variable holds the signal numbers, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NUM definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0.  
?S:.  
?S:sig\_count (sig\_name.U):  
?S: This variable holds a number larger than the largest valid  
?S: signal number. This is usually the same as the NSIG macro.  
?S:.  
?S:sig\_size:

?S: This variable contains the number of elements of the sig\_name  
?S: and sig\_num arrays, excluding the final NULL entry.  
?S:.  
?C:SIG\_NAME:  
?C: This symbol contains a list of signal names in order of  
?C: signal number. This is intended  
?C: to be used as a static array initialization, like this:  
?C: char \*sig\_name[] = { SIG\_NAME };  
?C: The signals in the list are separated with commas, and each signal  
?C: is surrounded by double  
?C: quotes. There is no leading SIG in the signal  
?C: name, i.e. SIGQUIT is known as "QUIT".  
?C: Gaps in the signal numbers (up to NSIG) are filled in with NUMnn,  
?C: etc., where nn is the actual signal number (e.g. NUM37).  
?C: The signal number for sig\_name[i] is stored in sig\_num[i].  
?C: The last element is 0 to terminate the list with a NULL. This  
?C: corresponds to the 0 at the end of the sig\_num list.  
?C:.  
?C:SIG\_NUM:  
?C: This symbol contains a list of signal numbers, in the same order as the  
?C: SIG\_NAME list. It is suitable for static array initialization, as in:  
?C: int sig\_num[] = { SIG\_NUM };  
?C: The signals in the list are separated with commas, and the indices  
?C: within that list and the SIG\_NAME list match, so it's easy to compute  
?C: the signal name from a number or vice versa at the price of a small  
?C: dynamic linear lookup.  
?C: Duplicates are allowed, but are moved to the end of the list.  
?C: The signal number corresponding to sig\_name[i] is sig\_number[i].  
?C: if (i  
?C: < NSIG) then sig\_number[i] == i.  
?C: The last element is 0, corresponding to the 0 at the end of  
?C: the sig\_name list.  
?C:.  
?C:SIG\_COUNT:  
?C: This variable contains a number larger than the largest  
?C: signal number. This is usually the same as the NSIG macro.  
?C:.  
?C:SIG\_SIZE:  
?C: This variable contains the number of elements of the sig\_name  
?C: and sig\_num arrays, excluding the final NULL entry.  
?C:.  
?H:#define SIG\_NAME \$sig\_name\_init /\*\*/  
?H:#define SIG\_NUM \$sig\_num\_init /\*\*/  
?H:#define SIG\_COUNT \$sig\_count /\*\*/  
?H:#define SIG\_SIZE \$sig\_size /\*\*/  
?H:.  
?T:i doinit  
?F:!= !signal\_cmd

?X: signal.cmd creates a file signal.lst which has two columns:  
 ?X: NAME number, e.g.  
 ?X: HUP 1  
 ?X: The list is sorted on signal number, with duplicates moved to  
 ?X: the end..

: generate list of signal names

```
echo " "
case "$sig_name_init" in
  ") doinit=yes ;;
  *) case "$sig_num_init" in
      "|*,*) doinit=yes ;;
      esac ;;
  esac
case "$doinit" in
yes)
  echo "Generating a list of signal names and
  numbers..." >&4
  . ./signal_cmd
  sig_count=`$awk '/^NSIG/ { printf "%d", $2 }' signal.lst`
  sig_name=`$awk 'BEGIN { printf "ZERO " }
  !/^NSIG/ { printf "%s ", $1 }' signal.lst`
  sig_num=`$awk 'BEGIN { printf "0 " }
  !/^NSIG/ { printf "%d ", $2 }' signal.lst`
  sig_name_init=`$awk 'BEGIN { printf "\"ZERO\", " }
  !/^NSIG/ { printf "\"%s\", ", $1 }
  END { printf "0\n" }' signal.lst`
  sig_num_init=`$awk 'BEGIN { printf "0, " }
  !/^NSIG/ { printf "%d, ", $2 }
  END { printf "0\n" }' signal.lst`
  ;;
esac
echo "The following $sig_count signals are available:"
echo " "
echo $sig_name | $awk \
'BEGIN { linelen = 0 }
{
for (i = 1; i <= NF; i++) {
name = "SIG" $i " "
linelen = linelen + length(name)
if (linelen > 70) {
printf "\n"
linelen = length(name)
}
printf "%s", name
}
printf "\n"
}'
sig_size=`echo $sig_name | awk '{print NF}'`
```

\$rm -f signal signal.c signal.awk signal.lst signal\_cmd

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sig\_name.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_mntent.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_mntent: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_mntent:

?S: This variable conditionally defines the I\_MNTENT symbol, and indicates

?S: whether a C program should include <mntent.h>.

?S:.

?C:I\_MNTENT:

?C: This symbol, if defined, indicates that <mntent.h> exists and

?C: should be included.

?C:.

?H:#\$i\_mntent I\_MNTENT /\*\*/

?H:.

?LINT:set i\_mntent

: see if this is a mntent.h system

set mntent.h i\_mntent

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_mntent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: gidtype.U,v \$

?RCS: Revision 3.0.1.3 1994/08/29 16:21:44 ram

?RCS: patch32: now uses new Typedef unit to compute type information

?RCS: patch32: removed useless usage of Setvar (for now)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:21:07 ram

?RCS: patch27: added lint hint

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:01:51 ram

?RCS: patch23: protected gidtype setting via setvar (ADO)

?RCS: patch23: made Gid\_t comment more explicit (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:11 ram

?RCS:

Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:gidtype: Myread Typedef Findhdr

?MAKE: -pick add \$@ %<

?S:gidtype:

?S: This variable defines Gid\_t to be something like gid\_t, int,

?S: ushort, or whatever type is used to declare the return type

?S: of getgid(). Typically, it is the type of group ids in the kernel.

?S:.

?C:Gid\_t (GIDTYPE):

?C: This symbol holds the return type of getgid() and the type of

?C: argument to setrgid() and related functions. Typically,

?C: it is the type of group ids in the kernel. It can be int, ushort,

?C: uid\_t, etc... It may be necessary to include <sys/types.h> to get

?C: any typedef'ed information.

?C:.

?H:#define Gid\_t \$gidtype /\* Type for getgid(), etc... \*/

?H:.

?T:xxx

: see what type gids are declared as in the kernel

set gid\_t gidtype xxx stdio.h sys/types.h

eval \$typedef

case "\$gidtype" in

xxx)

xxx=`./findhdr sys/user.h`

set `grep 'groups\[NGROUPS\];' "\$xxx" 2>/dev/null` unsigned short

case \$1 in

unsigned) dflt="\$1 \$2" ;;

\*) dflt="\$1"

::

esac

::

\*) dflt="\$gidtype";;

esac

echo " "

rp="What is the type for group ids returned by getgid()?"

```
./myread
gidtype="$sans"
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/gidtype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017-2018, H.Merijn Brand

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_mkostemp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkostemp:

?S: This variable conditionally defines HAS\_MKOSTEMP if mkostemp() is

?S: available to exclusively create and open a uniquely named (with a

?S: suffix) temporary file.

?S:.

?C:HAS\_MKOSTEMP:

?C: This symbol, if defined, indicates that the mkostemp routine is

?C: available to exclusively create and open a uniquely named (with a

?C: suffix) temporary file.

?C:.

?H:#\$d\_mkostemp HAS\_MKOSTEMP /\*\*/

?H:.

?LINT:set d\_mkostemp

: see if mkostemp exists

set mkostemp d\_mkostemp

eval \$inlibc

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_mkostemp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_whoami.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: i\_whoami.U,v \$  
 ?RCS: Revision 3.0.1.1 1993/08/25 14:02:21 ram  
 ?RCS: patch6: added default for i\_whoami  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:08:50 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:i\_whoami: Inhdr  
 ?MAKE: -pick add \$@ %<  
 ?S:i\_whoami (d\_whoami):  
 ?S: This variable conditionally defines the I\_WHOAMI symbol, which  
 ?S: indicates to the C program that it should include <whoami.h>.  
 ?S:.  
 ?C:I\_WHOAMI (WHOAMI):  
 ?C: This symbol,  
 if defined, indicates that the program may include  
 ?C: <whoami.h>.  
 ?C:.  
 ?H:#\$i\_whoami I\_WHOAMI /\*\*/  
 ?H:.  
 ?D:i\_whoami="  
 ?LINT:set i\_whoami  
 : see if there is a whoami.h file  
 set whoami.h i\_whoami  
 eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_whoami.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: uidtype.U,v 3.0.1.3 1994/08/29 16:33:25 ram Exp \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,  
 ?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?RCS: \$Log: uidtype.U,v \$  
 ?RCS: Revision 3.0.1.3 1994/08/29 16:33:25 ram  
 ?RCS: patch32: now uses new Typedef unit to compute type information  
 ?RCS:

?RCS: Revision 3.0.1.2 1994/06/20 07:09:36 ram

?RCS: patch30: comment for uidtype referred to the obsoleted symbol

?RCS:

?RCS: Revision 3.0.1.1 1994/05/13 15:28:27 ram

?RCS: patch27: made conformant to its gidtype.U companion

?RCS: patch27: question now explicitly mentions getuid()

?RCS:

?RCS: Revision 3.0 1993/08/18  
12:09:56 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:uidtype: Myread Typedef Findhdr

?MAKE: -pick add \$@ %<

?S:uidtype:

?S: This variable defines Uid\_t to be something like uid\_t, int,  
?S: ushort, or whatever type is used to declare user ids in the kernel.

?S:.

?C:Uid\_t (UIDTYPE):

?C: This symbol holds the type used to declare user ids in the kernel.

?C: It can be int, ushort, uid\_t, etc... It may be necessary to include  
?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Uid\_t \$uidtype /\* UID type \*/

?H:.

?T:xxx

: see what type uids are declared as in the kernel

echo " "

echo "Looking for the type for user ids returned by getuid()."

set uid\_t uidtype xxx stdio.h sys/types.h

eval \$typedef

case "\$uidtype" in

xxx)

xxx=`./findhdr sys/user.h`

set `grep '\_ruid;' "\$xxx" 2>/dev/null` unsigned short

case \$1 in

unsigned) dflt="\$1 \$2" ;;

\*) dflt="\$1" ;;

esac

;;

\*) dflt="\$uidtype";;

esac

case "\$uidtype" in

uid\_t) echo "uid\_t found." ;;

\*) rp="What

is the type for user ids returned by getuid()?"

./myread

uidtype="\$ans"

;;



esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/typedefs/uidtype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_gdbm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_gdbm.U,v \$

?RCS: Revision 3.0.1.1 1995/05/12 12:16:39 ram

?RCS: patch54: made more robust by checking both header and lib (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:19 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_gdbm: Inhdr Inlibc Setvar

?MAKE: -pick add \$@ %<

?S:i\_gdbm (d\_gdbm):

?S: This variable conditionally defines the I\_GDBM symbol, which

?S: indicates to the C program that <gdbm.h> exists and should

?S: be included.

?S:.

?C:I\_GDBM

(HAS\_GDBM):

?C: This symbol, if defined, indicates that <gdbm.h> exists and should

?C: be included.

?C:.

?H:#\$i\_gdbm I\_GDBM /\*\*/

?H:.

?T:t\_gdbm d\_gdbm\_open

?LINT:set i\_gdbm

: see if gdbm.h is available

?X: t\_gdbm is a tentative check. We might just have the .h, not the lib -- ADO

set gdbm.h t\_gdbm

eval \$inhdr

case "\$t\_gdbm" in

\$define)

: see if gdbm\_open exists

set gdbm\_open d\_gdbm\_open

```

eval $inlibc
case "$d_gdbm_open" in
$undef)
t_gdbm="$undef"
echo "We won't be including <gdbm.h>"
;;
esac
;;
esac
val="$t_gdbm"
set i_gdbm
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_gdbm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setprotoent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_setprotoent\_r setprotoent\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_setprotoent\_r:

?S: This variable conditionally defines the HAS\_SETPROTOENT\_R symbol,

?S: which indicates to the C program that the setprotoent\_r()

?S: routine is available.

?S:.

?S:setprotoent\_r\_proto:

?S: This variable encodes the prototype of setprotoent\_r.

?S: It is zero if d\_setprotoent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setprotoent\_r

?S: is defined.

?S:.

?C:HAS\_SETPROTOENT\_R:

?C: This symbol, if defined, indicates that the setprotoent\_r  
routine

?C: is available to setprotoent re-entrantly.

?C:.

?C:SETPROTOENT\_R\_PROTO:

?C: This symbol encodes the prototype of setprotoent\_r.

?C: It is zero if d\_setprotoent\_r is undef, and one of the

```

?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setprotoent_r
?C: is defined.
?C:.
?H:#$d_setprotoent_r HAS_SETPROTOENT_R /**/
?H:#define SETPROTOENT_R_PROTO $setprotoent_r_proto /**/
?H:.
?T:try hdrs d_setprotoent_r_proto
: see if setprotoent_r exists
set setprotoent_r d_setprotoent_r
eval $inlibc
case "$d_setprotoent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_setprotoent_r_proto:$usethreads" in
":define") d_setprotoent_r_proto=define
set d_setprotoent_r_proto setprotoent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setprotoent_r_proto" in
define)
case "$setprotoent_r_proto" in
"|0) try='int setprotoent_r(int, struct protoent_data*);'
./prochck "$extern_C $try" $hdrs && setprotoent_r_proto=I_ID ;;
esac
case "$setprotoent_r_proto"
in
"|0) try='void setprotoent_r(int, struct protoent_data*);'
./prochck "$extern_C $try" $hdrs && setprotoent_r_proto=V_ID ;;
esac
case "$setprotoent_r_proto" in
"|0) d_setprotoent_r=undef
setprotoent_r_proto=0
echo "Disabling setprotoent_r, cannot determine prototype." >&4 ;;
* ) case "$setprotoent_r_proto" in
REENTRANT_PROTO*) ;;
*) setprotoent_r_proto="REENTRANT_PROTO_$setprotoent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setprotoent_r has no prototype, not using it." >&4 ;;
esac
d_setprotoent_r=undef
setprotoent_r_proto=0
;;
esac

```

```
;;
*) setprotoent_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_setprotoent_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_voidsig.U,v 3.0.1.3 1995/05/12 12:12:46 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_voidsig.U,v $
?RCS: Revision 3.0.1.3 1995/05/12 12:12:46 ram
?RCS: patch54: made cppflags dependency optional
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:20:35 ram
?RCS: patch32: now sets signal_t only once d_voidsig is known (WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:59:54 ram
?RCS: patch30: now properly sets signal_t when re-using previous value
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_voidsig
signal_t: rm contains cppstdin cppminus +cppflags test Myread \
Oldconfig Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_voidsig:
?S: This variable conditionally defines VOIDSIG if this system
?S: declares "void (*signal(...))()" in signal.h. The old way was to
?S: declare it as "int (*signal(...))()".
?S:.
?S:signal_t:
?S: This variable holds the type of the signal handler (void or int).
?S:.
?C:VOIDSIG:
?C: This symbol is defined if this system declares "void (*signal(...))()" in
?C: signal.h. The old way was to declare it as "int (*signal(...))()". It
```

?C: is up to the package author to declare things correctly based on the

?C: symbol.

?C:.

?C:Signal\_t (SIGNAL\_T):

?C: This symbol's value is either "void" or "int", corresponding to the

?C: appropriate return type of a signal handler. Thus, you can declare

?C: a signal handler using "Signal\_t (\*handler())", and define the

?C: handler using "Signal\_t handler(sig)".

?C:.

?H:#\$d\_voidsig VOIDSIG /\*\*/

?H:#define

Signal\_t \$signal\_t /\* Signal handler's return type \*/

?H:.

?T:xxx

?LINT:set d\_voidsig

: see if signal is declared as pointer to function returning int or void

echo " "

xxx=`./findhdr signal.h`

\$test "\$xxx" && \$cppstdin \$cppminus \$cppflags < \$xxx >\$.tmp 2>/dev/null

if \$contains 'int.\*\\*[ ]\*signal' \$.tmp >/dev/null 2>&1 ; then

echo "You have int (\*signal())() instead of void." >&4

val="\$undef"

elif \$contains 'void.\*\\*[ ]\*signal' \$.tmp >/dev/null 2>&1 ; then

echo "You have void (\*signal())()." >&4

val="\$define"

elif \$contains 'extern[ ]\*[\(]\*\[ ]\*signal' \$.tmp >/dev/null 2>&1 ; then

echo "You have int (\*signal())() instead of void." >&4

val="\$undef"

?X: This next test is kind of sloppy, but it catches Linux

?X: which has a

?X: typedef void (\*\_\_sig\_handler\_t) (int) ;

?X: A better fix would be to compile a C program with the proper

?X: prototype, but since nearly everyone uses void, we'll just go with

?X: this.

elif \$contains 'void.\*\\*.\*sig' \$.tmp >/dev/null 2>&1 ; then

echo "You

have void (\*signal())()." >&4

val="\$define"

else

case "\$d\_voidsig" in

)

echo "I can't determine whether signal handler returns void or int..." >&4

dflt=void

rp="What type does your signal handler return?"

./myread

case "\$ans" in

v\*) val="\$define";;

\*) val="\$undef";;

```

esac;;
"$define")
echo "As you already told me, signal handler returns void." >&4
val="$define"
;;
*) echo "As you already told me, signal handler returns int." >&4
val="$undef"
;;
esac
fi
set d_voidsig
eval $setvar
case "$d_voidsig" in
"$define") signal_t="void";;
*) signal_t="int";;
esac
$rm -f $$tmp

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/d_voidsig.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endservent\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_endservent\_r endservent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_endservent\_r:

?S: This variable conditionally defines the HAS\_ENDSERVENT\_R symbol,

?S: which indicates to the C program that the endservent\_r()

?S: routine is available.

?S:.

?S:endservent\_r\_proto:

?S: This variable encodes the prototype of endservent\_r.

?S: It is zero if d\_endservent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endservent\_r

?S: is defined.

?S:.

?C:HAS\_ENDSERVENT\_R:

?C: This symbol, if defined, indicates that the endservent\_r routine

?C: is

```

available to endservent re-entrantly.
?C:.
?C:ENDSERVENT_R_PROTO:
?C: This symbol encodes the prototype of endservent_r.
?C: It is zero if d_endservent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endservent_r
?C: is defined.
?C:.
?H:#$d_endservent_r HAS_ENDSERVENT_R /**/
?H:#define ENDSERVENT_R_PROTO $endservent_r_proto /**/
?H:.
?T:try hdrs d_endservent_r_proto
: see if endservent_r exists
set endservent_r d_endservent_r
eval $inlibc
case "$d_endservent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_endservent_r_proto:$usethreads" in
":define") d_endservent_r_proto=define
set d_endservent_r_proto endservent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_endservent_r_proto" in
define)
case "$endservent_r_proto" in
"|0) try='int endservent_r(struct servent_data*);'
./prochck "$extern_C $try" $hdrs && endservent_r_proto=I_D ;;
esac
case "$endservent_r_proto" in
"|0) try='void endservent_r(struct
servent_data*);'
./prochck "$extern_C $try" $hdrs && endservent_r_proto=V_D ;;
esac
case "$endservent_r_proto" in
"|0) d_endservent_r=undef
endservent_r_proto=0
echo "Disabling endservent_r, cannot determine prototype." >&4 ;;
* ) case "$endservent_r_proto" in
REENTRANT_PROTO*) ;;
*) endservent_r_proto="REENTRANT_PROTO_$endservent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endservent_r has no prototype, not using it." >&4 ;;

```

```
esac
d_endservent_r=undef
endservent_r_proto=0
;;
esac
;;
*) endservent_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_endservent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_timegm: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_timegm:

?S: This variable conditionally defines the HAS\_TIMEGM symbol, which

?S: indicates to the C program that the timegm () routine is available.

?S:.

?C:HAS\_TIMEGM:

?C: This symbol, if defined, indicates that the timegm routine is

?C: available to do the opposite of gmtime ()

?C:.

?H:#\$d\_timegm HAS\_TIMEGM /\*\*/

?H:.

?LINT:set d\_timegm

: see if timegm exists

set timegm d\_timegm

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_timegm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ctermid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:



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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_ctermid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_ctermid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ctermid:  
?S: This variable conditionally defines CTERMID if ctermid() is  
?S: available to generate filename for terminal.  
?S:.  
?C:HAS\_CTERMID (CTERMID):  
?C: This symbol, if defined, indicates that the ctermid routine is  
?C: available to generate filename for terminal.  
?C:.  
?H:#\$d\_ctermid  
HAS\_CTERMID /\*\*/  
?H:.  
?LINT:set d\_ctermid  
: see if ctermid exists  
set ctermid d\_ctermid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_ctermid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_fcntl.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_fcntl.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:18 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_fcntl: h\_fcntl h\_sysfile +i\_sysfile Inhdr Setvar

```

?MAKE: -pick add $@ %<
?S:i_fcntl:
?S: This variable controls the value of I_FCNTL (which tells
?S: the C program to include <fcntl.h>).
?S:.
?C:I_FCNTL (HDR_O_STUFF FCNTL):
?C: This manifest constant tells the C program to include <fcntl.h>.
?C:.
?H:#$i_fcntl I_FCNTL /**/
?H:.
?T:val
?X:
    Make line lists +i_sysfile to ensure tests for <sys/file.h> will be
?X: conducted prior tests for <fcntl.h>, hence making sure the h_sysfile
?X: variable is correctly set when we reach that unit.
?LINT:set i_fcntl
?LINT:use i_sysfile
?LINT:change h_fcntl
: see if fcntl.h is there
val="
set fcntl.h val
eval $inhdr

: see if we can include fcntl.h
case "$val" in
"$define")
    echo " "
    if $h_fcntl; then
        val="$define"
        echo "We'll be including <fcntl.h>." >&4
    else
        val="$undef"
    fi
    if $h_sysfile; then
        echo "We don't need to include <fcntl.h> if we include <sys/file.h>." >&4
    else
        echo "We won't be including <fcntl.h>." >&4
    fi
fi
;;
*)
h_fcntl=false
val="$undef"
;;
esac
set i_fcntl
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_fcntl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: cppfilecom.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>

?RCS:

?RCS: \$Log: cppfilecom.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cppfilecom cppstdinflags d\_cppignhdrs d\_cppcanstdin: \  
contains package test Myread Oldconfig Loc Setvar cpp cc cat rm

?MAKE: -pick add \$@ %<

?S:cppfilecom:

?S: This variable contains the first part of the string which will invoke

?S: the C preprocessor a file

and produce to standard output, preserving

?S: comments. Typical value of "cc -E -C" or "/lib/cpp -C".

?S:.

?S:cppstdinflags:

?S: This variable contains any flags necessary to get cppfilecom to read

?S: from the standard input.

?S:.

?S:d\_cppignhdrs:

?S: This symbol conditionally defines CPP\_IGN\_HDRS if CPP\_FILE\_COM ignores

?S: \*.h files.

?S:.

?S:d\_cppcanstdin:

?S: This symbol conditionally defines CPP\_CAN\_STDIN if CPP\_FILE\_COM can

?S: read standard input directly.

?S:.

?C:CPP\_FILE\_COM (CPPFILECOM):

?C: This symbol contains the first part of the string which will invoke

?C: the C preprocessor a file and produce to standard output, preserving

?C: comments. Typical value of "cc -E -C" or "/lib/cpp -C".

?C:.

?C:CPP\_STDIN\_FLAGS (CPPSTDINFLAGS):

?C: This variable contains any flags necessary to get CPP\_FILE\_COM to

```

?C: read from the standard input.
?C:.
?C:CPP_IGN_HDRS (CPPIGNHDRS):
?C: This symbol is defined if CPP_FILE_COM ignores *.h files.
?C:.
?C:CPP_CAN_STDIN (CPPCANSTDIN):
?C: This
symbol is defined if CPP_FILE_COM can read standard input
?C: directly.
?C:.
?H:#define CPP_FILE_COM "$cppfilecom"
?H:#define CPP_STDIN_FLAGS "$cppstdinflags"
?H:#$d_cppignhdrs CPP_IGN_HDRS /* does CPP ignore .h files? */
?H:#$d_cppcanstdin CPP_CAN_STDIN /* can CPP read stdin directly? */
?H:.
?T:cont
?F:!testcpp.c !testcpp.h !testcpp.out
?LINT:set d_cppcanstdin d_cppignhdrs
?LINT:usefile testcpp.c testcpp.out
: see how we invoke the C preprocessor
$cat <<EOM

```

\$package needs to be able to preprocess its input files in a mode which preserves comments, which is often not the default behaviour. It should run the C preprocessor you will use when compiling your own source code, which should be ISO/ANSI C compliant if you want \$package to handle the latest standard C. I will try to guess, but I might guess wrongly because it is not necessarily the same preprocessor used to build \$package.

```

EOM
$cat <<'EOT' >testcpp.c
#define ABC abc
#define XYZ xyz
ABC.XYZ
/* comment */
EOT
:
if $test "X$cppfilecom"
!= "X" && \
$cppfilecom testcpp.c </dev/null >testcpp.out 2>/dev/null && \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "You used to use $cppfilecom so we'll use that again."
elif echo 'Maybe "'$cc' -E -C" will work...' && \
$cc -E -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1

```

```

then
  echo "It works!"
  cppfilecom="$cc -E -C"
  elif echo 'Nope...maybe ""$cc"" -P -C" will work...' && \
  $cc -P -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out >/dev/null 2>&1
then
  echo "Yup, that does."
  cppfilecom="$cc -P -C"
  elif echo 'No such luck, maybe ""$cpp"" -C" will work...' && \
  $cpp -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out
  >/dev/null 2>&1
then
  echo "Yup, it does."
  cppfilecom="$cpp -C"
else
  cppfilecom=""
  $cat <<'EOM'
I can't find a C preprocessor that will preserve comments. Please name one.
EOM
fi
:
dflt="$cppfilecom"
cont=true
while $test "$cont" ; do
  echo " "
  rp="How should $package run your preprocessor preserving comments?"
  . ./myread
  cppfilecom="$ans"
  $cppfilecom testcpp.c >testcpp.out 2>&1
  if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out >/dev/null 2>&1
  then
    echo "OK, that will do."
    cont=""
  else
    echo "Sorry, I can't get that to work."
  fi
done

@if CPP_IGN_HDRS || d_cppignhdrs
: Now see if it ignores header files.
cp testcpp.c testcpp.h
$cppfilecom testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \

```

```

$contains comment testcpp.out >/dev/null 2>&1
then
echo "Terrific; it processes .h files passed on the command line too."
val="$undef"
else
echo "It ignores .h files on the command line; pity."
val="$define"
fi
set
d_cppignhdrs
eval $setvar

@end
@if CPP_STDIN_FLAGS || CPP_CAN_STDIN || cppstdinflags || d_cppcanstdin
: Now see how to send stdin to it.
echo " "
cp testcpp.c testcpp.h
$cppfilecom <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Great; and it will read stdin if passed no arguments."
val="$define"
cppstdinflags="
else
$cppfilecom - <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Great; and it can read stdin by passing it '-!'"
val="$define"
cppstdinflags='-!
else
$cat <<FOO
Unfortunately, I can't find an easy way to get that preprocessor to read from
standard input. Do you know any flags I can pass it to get it to do so?
If that preprocessor can't read directly form standard input, answer 'none'.

FOO
val='dunno'
while $test "$val" = "dunno"; do
rp='Flags to get preprocessor
to read stdin?'
dflt='none'
. ./myread
if $test $ans = 'none'; then
echo "Oh well, if $package wants it done, it will do it for itself."
val="$undef"

```

```

else
$cpfilecom $ans <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Good; that works fine."
val="$define"
cppstdinflags="$ans"
else
echo "Sorry, I couldn't get that to work."
fi
fi
done
fi
fi
set d_cppcanstdin
eval $setvar

@end
: cleanup cpp test files anyway
$rm -f testcpp.*

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/cppfilecom.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setgrent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_setgrent.U,v \$

?RCS:

?MAKE:d\_setgrent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setgrent:

?S: This variable conditionally defines the HAS\_SETGRENT symbol, which

?S: indicates to the C program that the setgrent() routine is available

?S: for initializing sequential access to the group database.

?S:.

?C:HAS\_SETGRENT:

?C: This symbol, if defined, indicates that the setgrent routine is

?C: available for initializing sequential access of the group database.

?C:.

?H:#\$d\_setgrent HAS\_SETGRENT /\*\*/

?H:  
?LINT:set d\_setgrent  
: see if setgrent exists  
set setgrent d\_setgrent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_setgrent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2005 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_clearenv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_clearenv:

?S: This variable conditionally defines the HAS\_CLEARENV symbol, which

?S: indicates to the C program that the clearenv () routine is available.

?S:.

?C:HAS\_CLEARENV:

?C: This symbol, if defined, indicates that the clearenv () routine is

?C: available for use.

?C:.

?H:#\$d\_clearenv HAS\_CLEARENV /\*\*/

?H:.

?LINT:set d\_clearenv

: see if clearenv exists

set clearenv d\_clearenv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_clearenv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_popen.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root



?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_popen.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:47 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_popen: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_popen:  
?S: This variable conditionally defines HAS\_POPEN if popen() is  
?S: available to open a pipe from a process.  
?S:.  
?C:HAS\_POPEN (POPEN):  
?C: This symbol, if defined, indicates that the popen routine is  
?C: available to open a pipe from a process.  
?C:.  
?H:#\$d\_popen HAS\_POPEN /\*\*/  
?H:.  
?LINT:set  
d\_popen  
: see if popen exists  
set popen d\_popen  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_popen.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_uwait.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_uwait.U,v \$  
?RCS: Revision 3.0.1.1 1994/01/24 14:10:49 ram  
?RCS: patch16: added knowledge about wait3()  
?RCS: patch16: revised 'union wait' look-up algorithm  
?RCS: patch16: fixed make dependency line accordingly  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:

```

?MAKE:d_uwait d_uwait3: cat contains cppstdin cppminus +cppflags rm \
Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_uwait:
?S: This symbol
conditionally defines UNION_WAIT which indicates to the C
?S: program that argument for the wait() system call should be declared as
?S: 'union wait status' instead of 'int status'.
?S:.
?S:d_uwait3:
?S: This symbol conditionally defines UNION_WAIT3 which indicates to the C
?S: program that the first argument for the wait3() system call should be
?S: declared as 'union wait status' instead of 'int status'.
?S:.
?C:UNION_WAIT:
?C: This symbol if defined indicates to the C program that the argument
?C: for the wait() system call should be declared as 'union wait status'
?C: instead of 'int status'. You probably need to include <sys/wait.h>
?C: in the former case (see I_SYSWAIT).
?C:.
?C:UNION_WAIT3:
?C: This symbol if defined indicates to the C program that the first argument
?C: for the wait3() system call should be declared as 'union wait status'
?C: instead of 'int status'. You probably need to include <sys/wait.h>
?C: in the former case (see I_SYSWAIT). It seems safe to assume that
the
?C: same rule applies to the second parameter of wait4().
?C:.
?H:#$d_uwait UNION_WAIT /**/
?H:#$d_uwait3 UNION_WAIT3 /**/
?H:.
?T:val2 flags f also
?LINT:set d_uwait d_uwait3
: see if union wait is available
echo " "
?X:
?X: Unfortunately, we can't just grep <sys/wait.h> for "union wait" because
?X: some weird systems (did I hear HP-UX?) define union wait only when _BSD
?X: is defined. The same thing happens on OSF/1, who is pushing weirdness to
?X: its limits by requiring wait() to use (int *) but wait3() to use
?X: (union wait *), unless _BSD is defined and -lbsd is used, in which case
?X: wait() also expects (union wait *). Aaargh!--RAM
?X:
set X $cppflags
shift
flags="
also="
for f in $*; do

```

```

case "$f" in
*NO_PROTO*) ;;
*) flags="$flags $f";;
esac
done
$cat `./findhdr sys/wait.h` /dev/null | \
$cppstdin $flags $cppminus >wait.out 2>/dev/null
if $contains 'union.*wait.*{' wait.out >/dev/null 2>&1 ; then
echo "Looks like your <sys/wait.h> knows about 'union wait'..."
>&4
val="$define"
@if UNION_WAIT
also='also '
if $contains 'extern.*wait[ ]*([ ]*int' wait.out >/dev/null 2>&1
then
echo "But wait() seems to expect an 'int' pointer (POSIX way)." >&4
val="$undef"
also=""
elif $contains 'extern.*wait[ ]*([ ]*union' wait.out >/dev/null 2>&1
then
echo "And indeed wait() expects an 'union wait' pointer (BSD way)." >&4
else
echo "So we'll use that for wait()." >&4
fi
@end
@if UNION_WAIT3 || d_uwait3
val2="$define"
@end
@if UNION_WAIT3
if $contains 'extern.*wait3[ ]*([ ]*int' wait.out >/dev/null 2>&1
then
echo "However wait3() seems to expect an 'int' pointer, weird." >&4
val2="$undef"
elif $contains 'extern.*wait3[ ]*([ ]*union' wait.out >/dev/null 2>&1
then
echo "And wait3() ${also} expects an 'union wait' pointer, fine." >&4
else
echo "As expected, wait3() ${also} uses an 'union wait' pointer." >&4
fi
@end
else
echo "No trace of 'union wait' in <sys/wait.h>..." >&4
val="$undef"
@if UNION_WAIT && UNION_WAIT3
echo
"Both wait() and wait3() will use a plain 'int' pointer then." >&4
@elsif UNION_WAIT
echo "Your wait() should be happy with a plain 'int' pointer." >&4

```

```

@elsif UNION_WAIT3
echo "Your wait3() should be happy with a plain 'int' pointer." >&4
@end
fi
set d_uwait
eval $setvar
@if UNION_WAIT3 || d_uwait3
val="$val2"; set d_uwait3
eval $setvar
@end
$rm -f wait.out

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_uwait.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Options.U,v \$

?RCS: Revision 3.0.1.7 1997/02/28 15:08:15 ram

?RCS: patch61: optdef.sh now starts with a "startsh"

?RCS: patch61: moved some code from Head.U

?RCS:

?RCS: Revision 3.0.1.6 1995/09/25 09:14:46 ram

?RCS: patch59: protected option parsing code against 'echo -\*' option failure

?RCS:

?RCS: Revision 3.0.1.5 1995/05/12 12:04:52 ram

?RCS: patch54: added -K option for experts

?RCS:

?RCS: Revision 3.0.1.4 1995/01/30 14:27:52 ram

?RCS: patch49: this unit now exports file optdef.sh,  
not a variable

?RCS:

?RCS: Revision 3.0.1.3 1995/01/11 15:19:00 ram

?RCS: patch45: new -O option allowing -D and -U to override config.sh settings

?RCS: patch45: file optdef.sh is no longer removed after sourcing

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 15:58:06 ram

?RCS: patch36: ensure option definition file is removed before appending

?RCS: patch36: protect variable definitions with spaces in them

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 06:55:44 ram

?RCS: patch30: now uses new me symbol to tag error messages

?RCS: patch30: new -D and -U options to define/undef symbols (JHI)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:14 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Command line parsing. It is really important that the variables used here

?X: be not listed in the MAKE line, or they will be saved in config.sh and

?X: loading this file to fetch default answers would clobber the values set

?X: herein.

?X:

?MAKE:Options: startsh

?MAKE: -pick wipe \$@ %<

?V:reuseval

alldone error realsilent silent extractsh fastread \  
 override knowitall: config\_sh

?T:arg argn symbol config\_arg0 config\_args config\_argc xxx yyy zzz uuu

?T:args\_exp args\_sep arg\_exp

?F:!Configure

?F:/optdef.sh ./cmdline.opt ./posthint.sh ./cmdl.opt

: Save command line options in file UU/cmdline.opt for later use in  
 : generating config.sh.

?X: This temporary file will be read by Oldsym.U. I used a temporary

?X: file to preserve all sorts of potential command line quotes and

?X: also because we don't know in advance how many variables we'll

?X: need, so I can't actually declare them on the MAKE line.

?X: The config\_args variable won't be quite correct if Configure is

?X: fed something like ./Configure -Dcc="gcc -B/usr/ccs/bin/"

?X: since the quotes are gone by the time we see them. You'd have to

?X: reconstruct the command line from the config\_arg? lines, but since

?X: I don't imagine anyone actually having to do that, I'm not going

?X: to worry too much.

cat > cmdline.opt

<<EOSH

: Configure command line arguments.

config\_arg0='\$0'

config\_args='\$\*'

config\_argc=\$#

EOSH

argn=1

args\_exp=""

args\_sep=""

for arg in "\$@"; do

cat >>cmdline.opt <<EOSH

```

config_arg$argn='$arg'
EOSH
?X: Extreme backslashitis: replace each ' by """"
cat <<EOC | sed -e "s/'/""""/g" > cmdl.opt
$arg
EOC
arg_exp=`cat cmdl.opt`
args_exp="$args_exp$args_sep$args_exp"
argn=`expr $argn + 1`
args_sep=' '
done
?X: args_exp is good for restarting self: eval "set X $args_exp"; shift; $0 "$@"
?X: used by hints/os2.sh in Perl, for instance
rm -f cmdl.opt

```

```

: produce awk script to parse command line options
cat >options.awk <<'EOF'
BEGIN {
optstr = "A:dD:eEf:hKOrsSU:V"; # getopt-style specification

```

```

len = length(optstr);
for (i = 1; i <= len; i++) {
c = substr(optstr, i, 1);
?X: some older awk's do not have the C ?: construct
if (i < len) a = substr(optstr, i + 1, 1); else a = "";
if (a == ":") {
arg[c] = 1;
i++;
}
opt[c] = 1;
}
}
{
expect = 0;
str = $0;
if (substr(str,
1, 1) != "-") {
printf("%s\n", str);
next;
}
len = length($0);
for (i = 2; i <= len; i++) {
c = substr(str, i, 1);
if (!opt[c]) {
printf("-%s\n", substr(str, i));
next;
}
printf("-%s\n", c);
}
}

```

```

if (arg[c] {
  if (i < len)
    printf("%s\n", substr(str, i + 1));
  else
    expect = 1;
  next;
}
}
}
END {
  if (expect)
    print "?";
}
EOF

```

: process the command line options

```

?X: Use "$@" to keep arguments with spaces in them from being split apart.
?X: For the same reason, awk will output quoted arguments and the final eval
?X: removes them and sets a proper $* array. An 'X' is prepended to each
?X: argument before being fed to echo to guard against 'echo -x', where -x
?X: would be understood as an echo option! It is removed before feeding awk.
set X `for arg in "$@"; do echo "X$arg"; done |
sed -e s/X// | awk -f options.awk`
eval "set $*"
shift
rm -f options.awk

```

: set up default values

```

fastread=""
reuseval=false
config_sh=""
alldone=""
error=""
silent=""
extractsh=""
override=""
knowitall=""
rm
-f optdef.sh posthint.sh
cat >optdef.sh <<EOS
$startsh
EOS

```

?X:

```

?X: Given that we now have the possibility to execute Configure remotely
?X: thanks to the new src.U support, we have to face the possibility
?X: of having to ask where the source lie, which means we need the Myread.U
?X: stuff and possibly other things that might echo something on the

```

?X: screen...  
?X:  
?X: That's not pretty, and might be confusing in 99% of the time. So...  
?X: We introduce a new realsilent variable which is set when -s is given,  
?X: and we force silent=true if -S is supplied. The Extractall.U unit  
?X: will then undo the >&4 redirection based on the value of the  
?X: realsilent variable... -- RAM, 18/93/96  
?X:

```
: option parsing
while test $# -gt 0; do
case "$1" in
-d) shift; fastread=yes;;
-e) shift; alldone=cont;;
-f)
  shift
  cd ..
  if test -r "$1"; then
    config_sh="$1"
  else
    echo "$me: cannot read config file $1." >&2
    error=true
  fi
  cd UU
  shift;;
-h)
  shift; error=true;;
-r) shift; reuseval=true;;
-s) shift; silent=true; realsilent=true;;
-E) shift; alldone=exit;;
-K) shift; knowitall=true;;
-O) shift; override=true;;
-S) shift; silent=true; extractsh=true;;
-D)
  shift
  case "$1" in
  *)
    echo "$me: use '-U symbol=', not '-D symbol='." >&2
    echo "$me: ignoring -D $1" >&2
    ;;
  *) echo "$1" | \
    sed -e "s/'/'\"/g" -e "s/=(.*)/=\\1/'" >> optdef.sh;;
  *) echo "$1='define'" >> optdef.sh;;
  esac
  shift
  ;;
-U)
  shift
```



```

case "$1" in
*=) echo "$1" >> optdef.sh;;
*=*)
echo "$me: use '-D symbol=val', not '-U symbol=val.'" >&2
echo "$me: ignoring -U $1" >&2
;;
*) echo "$1='undef'" >> optdef.sh;;
esac
shift
;;
-A)
shift
xxx=""
yyy="$1"
zzz=""
uuu=undef
case "$yyy" in
*=*) zzz=`echo "$yyy"|sed 's!=.*!!'^
case "$zzz" in
*:* ) zzz="" ;;
*) xxx=append
zzz="" ``echo
"$yyy"|sed 's!^[^=]*=!!'^
yyy=`echo "$yyy"|sed 's!=.*!!'^ ;;
esac
;;
esac
case "$xxx" in
") case "$yyy" in
*:* ) xxx=`echo "$yyy"|sed 's!:..*!!'^
yyy=`echo "$yyy"|sed 's!^[^:]*:!!'^
zzz=`echo "$yyy"|sed 's!^[^=]*=!!'^
yyy=`echo "$yyy"|sed 's!=.*!!'^ ;;
*) xxx=`echo "$yyy"|sed 's!:..*!!'^
yyy=`echo "$yyy"|sed 's!^[^:]*:!!'^ ;;
esac
;;
esac
case "$xxx" in
append)
echo "$yyy=${\${$yyy}$zzz}\" >> posthint.sh ;;
clear)
echo "$yyy="" >> posthint.sh ;;
define)
case "$zzz" in
") zzz=define ;;
esac
echo "$yyy='$zzz'" >> posthint.sh ;;

```

```

eval)
echo "eval \"\$yyy=\$zzz\\"" >> posthint.sh ;;
prepend)
echo "\$yyy=\"\$zzz\${\$yyy}\\"" >> posthint.sh ;;
undef)
case "\$zzz" in
")
zzz="\$uuu" ;;
esac
echo "\$yyy=\$zzz" >> posthint.sh ;;
*) echo "\$me: unknown -A command '\$xxx', ignoring -A \$1" >&2 ;;
esac
shift
;;
-V) echo "\$me generated by metaconfig <VERSION> PL<PATCHLEVEL>." >&2
exit 0;;
--) break;;
-*) echo "\$me: unknown option \$1" >&2; shift; error=true;;
*) break;;
esac
done

```

```

case "\$error" in
true)

```

```

cat >&2 <<EOM

```

```

Usage: \$me [-dehrsEKOSV] [-f config.sh] [-D symbol] [-D symbol=value]
          [-U symbol] [-U symbol=] [-A command:symbol...]

```

```
-d : use defaults for all answers.
```

```
-e : go on without questioning past the production of config.sh.
```

```
-f : specify an alternate default configuration file.
```

```
-h : print this help message and exit (with an error status).
```

```
-r : reuse C symbols value if possible (skips costly nm extraction).
```

```
-s : silent mode, only echoes questions and essential information.
```

```
-D : define symbol to have some value:
```

```
    -D symbol      symbol gets the value 'define'
```

```
    -D symbol=value
```

```
    symbol gets the value 'value'
```

```
-E : stop at the end of questions, after having produced config.sh.
```

```
-K : do not use unless you know what you are doing.
```

```
-O : let -D and -U override definitions from loaded configuration file.
```

```
-S : perform variable substitutions on all .SH files (can mix with -f)
```

```
-U : undefine symbol:
```

```
    -U symbol      symbol gets the value 'undef'
```

```
    -U symbol=     symbol gets completely empty
```

```
-A : manipulate symbol after the platform specific hints have been applied:
```

```
    -A symbol=value append "value to symbol
```

```
    -A append:symbol=value append value to symbol
```

```
    -A define:symbol=value define symbol to have value
```

```

-A clear:symbol define symbol to be "
-A define:symbol define symbol to be 'define'
-A eval:symbol=value define symbol to be eval of value
-A prepend:symbol=value prepend value to symbol
-A undef:symbol define symbol to be 'undef'
-A undef:symbol= define symbol to be "
-V : print version number and exit (with
a zero status).
EOM
exit 1
;;
esac

?X:
?X: Unless they specified either -S or both -d and -e/E, make sure we're
?X: running interactively, i.e. attached to a terminal. Moved from Head.U to
?X: be able to handle batch configurations...
?X:
?X: We have to hardwire the Configure name and cannot use $me, since if they
?X: said 'sh <Configure', then $me is 'sh'...
?X:
: Sanity checks
case "$fastread$alldone" in
yescont|yesexit) ;;
*)
case "$extractsh" in
true) ;;
*)
if test ! -t 0; then
echo "Say 'sh Configure', not 'sh <Configure'"
exit 1
fi
;;
esac
;;
esac

```

```

?X: In silent mode, the standard output is closed. Questions are asked by
?X: outputting on file descriptor #4, which is the original stdout descriptor.
?X: This filters out all the "junk", since all the needed information is written
?X: on #4. Note that ksh will not let us redirect output if the file descriptor
?X: has not be defined yet, unlike sh, hence the following line...--RAM.
exec 4>&1
case "$silent" in
true)
exec 1>/dev/null;;
esac

```

: run the defines and the undefines, if any, but leave the file out there...

touch optdef.sh

./optdef.sh

: create the posthint manipulation script and leave the file out there...

?X: this file will be perused by Oldconfig.U

touch posthint.sh

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Options.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Obsol\_sh.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Obsol\_sh.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:11 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This file is prepended to .MT/Obsol\_sh if that file is not empty. That file

?X: contains the necessary mappings of new symbols to obsolete ones.

?X:

?MAKE:Obsol\_sh:

?MAKE: -pick prepend \$@ ./Obsol\_sh

?LINT:nocomment

#

# The following symbols are obsolete. They are mapped to the new

# symbols only to ease the transition process. The

sources should be

# updated so as to use the new symbols only, since supporting of those

# obsolete symbols may end without notice.

#

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Obsol\_sh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_bcmp.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_bcmp.U,v \$  
?RCS: Revision 3.0.1.2 1993/10/16 13:47:52 ram  
?RCS: patch12: added magic support for bcmp()  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:00:44 ram  
?RCS: patch10: now only defines HAS\_BCMP, no macro remap on memcmp (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:42 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_bcmp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_bcmp:  
?S: This variable conditionally defines the HAS\_BCMP symbol  
if  
?S: the bcmp() routine is available to compare strings.  
?S:.  
?C:HAS\_BCMP:  
?C: This symbol is defined if the bcmp() routine is available to  
?C: compare blocks of memory.  
?C:.  
?H:#\$d\_bcmp HAS\_BCMP /\*\*/  
?H:.  
?M:bcmp: HAS\_BCMP  
?M:#ifndef HAS\_BCMP  
?M:#ifndef bcmp  
?M:#define bcmp(s,d,l) memcmp((s),(d),(l))  
?M:#endif  
?M:#endif  
?M:.  
?LINT:set d\_bcmp  
: see if bcmp exists  
set bcmp d\_bcmp  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_bcmp.U

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_syssselct.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_syssselct.U,v $
?RCS: Revision 3.0.1.1 1993/08/25 14:01:33 ram
?RCS: patch6: added default for i_syssselct
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:35 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: Look wether <sys/select.h> exists
?X:
?MAKE:i_syssselct: Inhdr
?MAKE: -pick add $@ %<
?S:i_syssselct:
?S: This variable conditionally defines I_SYS_SELECT, which indicates
?S: to the C program that it should include <sys/select.h> in
order to
?S: get the definition of struct timeval.
?S:.
?C:I_SYS_SELECT (I_SYSSSELECT):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/select.h> in order to get definition of struct timeval.
?C:.
?H:#$i_syssselct I_SYS_SELECT /**/
?H:.
?D:i_syssselct="
?LINT:set i_syssselct
: see if sys/select.h has to be included
set sys/select.h i_syssselct
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1-rc1/dist/U/i_syssselct.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Prefixit.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Prefixit.U,v \$  
?RCS: Revision 3.0.1.1 1995/01/30 14:29:22 ram  
?RCS: patch49: created  
?RCS:  
?X:  
?X: Used as: "set dflt var dir; eval \$prefixit" to set \$dflt to be  
?X: \$prefix/dir by default, or the previous \$var depending on certain  
?X: conditions:  
?X: - If the \$oldprefix variable is empty, then \$prefix holds the same  
?X: value as on previous runs. Therefore, reuse \$var if set, otherwise  
?X: set \$dflt to \$prefix/dir.  
?X: - If \$oldprefix is not  
empty, then set \$dflt to \$prefix/dir if \$var  
?X: is empty (first run). Otherwise, if \$var is \$oldprefix/dir, then  
?X: change it to \$prefix/dir. If none of the above, reuse the old \$var.  
?X:  
?X: When dir is omitted, the dflt variable is set to \$var if prefix did not  
?X: change, to an empty value otherwise. If dir=none, then a single space  
?X: in var is kept as-is, even if the prefix changes.  
?X:  
?MAKE:Prefixit: prefix oldprefix  
?MAKE: -pick add \$@ %<  
?LINT:define prefixit  
?S:prefixit:  
?S: This shell variable is used internally by Configure to reset  
?S: the leading installation prefix correctly when it is changed.  
?S: set dflt var [dir]  
?S: eval \$prefixit  
?S: That will set \$dflt to \$var or \$prefix/dir depending on the  
?S: value of \$var and \$oldprefix.  
?S:.  
?V:prefixit  
?T:tp  
: set the prefixit variable, to compute a suitable default value  
prefixit='case "\$3" in  
""|none)  
case "\$oldprefix" in  
"") eval "\$1=\"\\${\$2}\"";;  
\*)  
case "\$3" in  
"") eval "\$1="";;

```

none)
eval "tp=\\"$2\"";
case
"$tp" in
  ""|" |none) eval "$1=\\"$2\"";;
  *) eval "$1=";;
esac;;
esac;;
esac;;
*)
eval "tp=\\"$oldprefix-\\"$2-\\""; eval "tp=\\"$tp\"";
case "$tp" in
  --/*--|\~*--) eval "$1=\\"$prefix/$3\"";;
/*-$oldprefix/*|\~*-$oldprefix/*)
  eval "$1=\`echo \\"$2 | sed \\"s,^\\"$oldprefix,\\"$prefix,\\"`\\"";;
  *) eval "$1=\\"$2\"";;
esac;;
esac'

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Prefixit.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?X:

?X: This unit allows the duplication of the source tree to the current

?X: directory via symbolic links. This must be requested explicitly

?X: by them issuing a -Dmksymlinks on the command line.

?X:

?MAKE:Mksymlinks: Mkdirp lns issymlink src rsrc pkgsrc

?MAKE: -pick add \$@ %<

?F:!UU

?T: dir filename tmppwd filelist

?LINT:extern mksymlinks

@if {test -f ../MANIFEST}

: Duplicate the tree with symbolic links if -Dmksymlinks was supplied



```

case "$mksymlinks"
in
$define|true|[yY]*)
echo " "
case "$src" in
"|.|) echo "Cannot create symlinks in the original directory." >&4
exit 1
;;
*) case "$lns:$issymlink" in
*"ln"*" -s:"*"test -"?)
echo "Creating the symbolic links..." >&4
echo "(First creating the subdirectories...)" >&4
cd ..
awk '{print $1}' $src/MANIFEST | grep / | sed 's:[^/]*$::' | \
sort -u | while true
do
read dir
test -z "$dir" && break
./UU/mkdirp $dir 2>/dev/null
if test -d $dir; then
: ok
else
echo "Failed to create '$dir'. Aborting." >&4
exit 1
fi
done
echo "(Now creating the symlinks...)" >&4
awk '{print $1}' $src/MANIFEST | while true; do
read filename
test -z "$filename" && break
if test -f $filename; then
if $issymlink $filename; then
rm -f $filename
fi
fi
if test -f $filename; then
echo "$filename already exists, not symlinking."
else
?X: Note that the following works because "$pkgsrc" is absolute
ln
-s $pkgsrc/$filename $filename
fi
done
?X: Check that everything was correctly copied
echo "(Checking current directory...)" >&4
cd UU
awk '$1 !~ /PACK[A-Z]+/ {print $1}' "$rsrc/MANIFEST" | \
(split -l 50 2>/dev/null || split -50)

```

```

rm -f missing
tmppwd=`pwd`
for filelist in x??: do
  (cd ..; ls `cat "$tmppwd/$filelist" ` \
  >/dev/null 2>>"$tmppwd/missing")
done
if test -s missing; then
  echo "Failed duplication of source tree. Aborting." >&4
  exit 1
fi
;;
*) echo "(I cannot figure out how to do symbolic links, ignoring!)" >&4
;;
esac
;;
esac
;;
esac
;;
esac

```

@end

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Mksymlinks.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:versiononly: cat Myread Setvar Devel

?MAKE: -pick add \$@ %<

?LINT:set versiononly

?Y:TOP

?S:versiononly:

?S: If set, this symbol indicates that only the version-specific

?S: components of a perl installation should be installed.

?S: This may be useful for making a test installation of a new

?S: version without disturbing the existing installation.

?S: Setting versiononly is equivalent to setting installperl's -v option.

?S: In particular, the non-versioned scripts and programs such as

?S: a2p, c2ph, h2xs, pod2\*, and perldoc

```

are not installed
?S: (see INSTALL for a more complete list). Nor are the man
?S: pages installed.
?S: Usually, this is undef.
?S:.
?LINT:extern inc_version_list
?LINT:change inc_version_list
?LINT:extern inc_version_list_init
?LINT:change inc_version_list_init
?LINT:extern version
: determine whether to use a version number suffix for installed binaries
echo " "
$cat <<EOM
Do you want to use a version number suffix for installed binaries? This
will install 'perl$version' instead of 'perl', and likewise for other
binaries like 'perldoc' and 'cpan'. This allows many versions of perl
to be installed side-by-side. Unless you are a developer, you probably
do not want to do this.
EOM
case "$versiononly" in
"$define"|[Yy]*|true) dflt='y' ;;
*) dflt='n';
esac
rp="Do you want to use a version number suffix for installed binaries?"
./myread
case "$ans" in
[yY]*) val="$define";
*) val="$undef" ;;
esac
set versiononly
eval $setvar

case "$versiononly" in
"$define") inc_version_list="
        inc_version_list_init=0
        ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/versiononly.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_sbrkproto: Hasproto i\_unistd  
?MAKE: -pick add \$@ %<  
?S:d\_sbrkproto:  
?S: This variable conditionally defines the HAS\_SBRK\_PROTO symbol,  
?S: which indicates to the C program that the system provides  
?S: a prototype for the sbrk() function. Otherwise, it is  
?S: up to the program to supply one.  
?S:.  
?C:HAS\_SBRK\_PROTO:  
?C: This symbol, if defined, indicates that the system provides  
?C: a prototype for the sbrk() function. Otherwise, it is up  
?C: to the program to supply one. Good guesses are  
?C: extern void\* sbrk(int);  
?C: extern  
void\* sbrk(size\_t);  
?C:.  
?H:#\$d\_sbrkproto HAS\_SBRK\_PROTO /\*\*/  
?H:.  
?LINT:set d\_sbrkproto  
: see if prototype for sbrk is available  
echo " "  
set d\_sbrkproto sbrk \$i\_unistd unistd.h  
eval \$hasproto

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_sbrkproto.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmctl.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_shmctl.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:18 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:

?MAKE:d\_shmctl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_shmctl:  
?S: This variable conditionally defines the HAS\_SHMCTL symbol, which  
?S: indicates to the C program that the shmctl() routine is available.  
?S:.  
?C:HAS\_SHMCTL:  
?C: This symbol, if defined, indicates that the shmctl() routine is  
?C: available to perform shared memory control operations.  
?C:.  
?H:#\$d\_shmctl  
HAS\_SHMCTL /\*\*/  
?H:.  
?LINT:set d\_shmctl  
: see if shmctl exists  
set shmctl d\_shmctl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_shmctl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: randfunc.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:09:39 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This is the new unit that should be used when random  
?X: functions are to be used. It thus makes randbits.U obsolete.  
?X:  
?MAKE:randfunc mrand seedfunc nrandbits: cat +cc rm test Myread Csym  
?MAKE: -pick add \$@ %<  
?S:randfunc:  
?S: Indicates the name of the random number function to use.  
?S: Values include drand48, random, and rand. In C programs,  
?S: the 'nrand' macro is defined

to generate uniformly distributed  
?S: random numbers over the range [0., 1.] (see mrand and nrand).  
?S:.  
?S:mrand:  
?S: Indicates the macro to be used to generate normalized  
?S: random numbers. Uses randfunc, often divided by  
?S: (double) ((1 << nrandbits) -1) in order to normalize the result.  
?S: In C programs, the macro 'nrand' is mapped on mrand.  
?S:.  
?S:seedfunc:  
?S: Indicates the random number generating seed function.  
?S: Values include srand48, srandom, and srand.  
?S:.  
?S:nrandbits:  
?S: Indicates how many bits are produced by the function used to  
?S: generate normalized random numbers.  
?S:.  
?C:nrand:  
?C: This macro is to be used to generate uniformly distributed  
?C: random numbers over the range [0., 1.].  
?C:.  
?C:seednrand:  
?C: This symbol defines the macro to be used in seeding the  
?C: random number generator (see nrand).  
?C:.  
?H:#define nrand() \$mrand /\*\*/  
?H:#define seednrand(x) \$seedfunc(x) /\*\*/  
?H:.  
?T:cont val  
?LINT:nothere \$nrandbits)  
: How can we generate normalized  
random numbers ?  
echo " "  
case "\$randfunc" in  
")  
if set drand48 val -f; eval \$csym; \$val; then  
dflt="drand48"  
echo "Good, found drand48()." >&4  
elif set random val -f; eval \$csym; \$val; then  
dflt="random"  
echo "OK, found random()." >&4  
else  
dflt="rand"  
echo "Yick, looks like I have to use rand()." >&4  
fi  
echo " "  
;;  
\*)

```

dflt="$randfunc"
;;
esac
cont=true
while $stest "$cont"; do
rp="Use which function to generate random numbers?"
./myread
?X: Invalidates nrandbits if the answer is not the default so
?X: that the value stored in config.sh will not be used when
?X: we change our random function.
if $stest "$ans" = "$dflt"; then
: null
else
nrandbits="
fi
randfunc="$ans"
if set $ans val -f; eval $csym; $val; then
cont="
else
dflt=n
rp="Function $ans does not exists. Use that name anyway?"
./myread
dflt=rand
case "$ans" in
[yY]*) cont=";;
esac
fi
case "$cont" in
")
case "$randfunc" in
drand48)
mrand="drand48()"
seedfunc="srand48"
;;
rand*)
case
"$nrandbits" in
")
echo "Checking to see how many bits your $randfunc() function produces..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
int main()
{
register int i;
register unsigned long tmp;
register unsigned long max = 0L;
extern long random();

```

```

for (i = 1000; i; i--) {
    tmp = (unsigned long)$randfunc();
    if (tmp > max) max = tmp;
}
for (i = 0; max; i++)
    max /= 2;
printf("%d\n",i);
}
EOCP
if $cc -o try try.c >/dev/null 2>&1 ; then
    dflt=`try`
else
    dflt='?'
echo "(I can't seem to compile the test program...)"
fi
;;
*)
    dflt="$nrandbits"
    ;;
esac
rp="How many bits does your $randfunc() function produce?"
./myread
nrandbits="$ans"
$rm -f try.c try
mrand="($randfunc() / (double) ((1 << $nrandbits) - 1))"
seedfunc="srand"
;;
?X: The following is provided just in case...
*)
    dflt="31"
    rp="How many bits does your $randfunc() function produce?"
    ./myread
    nrandbits="$ans"
    seedfunc="s$randfunc"
    mrand="($randfunc()
/ (double) ((1 << $nrandbits) - 1))"
    if set $seedfunc val -f; eval $csym; $val; then
        echo "(Using $seedfunc() to seed random generator)"
    else
        echo "(Warning: no $seedfunc() to seed random generator)"
        seedfunc=rand
    fi
    ;;
esac
;;
esac
done

```



Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/randfunc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_setproctitle: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setproctitle:

?S: This variable conditionally defines the HAS\_SETPROCTITLE symbol,

?S: which indicates to the C program that the setproctitle() routine

?S: is available.

?S:.

?C:HAS\_SETPROCTITLE:

?C: This symbol, if defined, indicates that the setproctitle routine is

?C: available to set process title.

?C:.

?H:#\$d\_setproctitle HAS\_SETPROCTITLE /\*\*/

?H:.

?LINT:set d\_setproctitle

: see if setproctitle exists

set setproctitle d\_setproctitle

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_setproctitle.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_shadow.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_shadow: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_shadow:

?S: This variable conditionally defines the I\_SHADOW symbol, and indicates

?S: whether a C program should include <shadow.h>.

?S:.

```
?C:I_SHADOW:
?C: This symbol, if defined, indicates that <shadow.h> exists and
?C: should be included.
?C:.
?H:#$i_shadow I_SHADOW /**/
?H:.
?LINT:set i_shadow
: see if this is a shadow.h system
set shadow.h i_shadow
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i_shadow.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_mkdir.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_mkdir.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:37 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_mkdir: Inlibc
?MAKE: -pick add $@ %<
?S:d_mkdir:
?S: This variable conditionally defines the HAS_MKDIR symbol, which
?S: indicates to the C program that the mkdir() routine is available
?S: to create directories..
?S:.
?C:HAS_MKDIR (MKDIR):
?C: This symbol, if defined, indicates that the mkdir routine is available
?C: to create directories.
    Otherwise you should fork off a new process to
?C: exec /bin/mkdir.
?C:.
?H:#$d_mkdir HAS_MKDIR /**/
?H:.
?LINT:set d_mkdir
: see if mkdir exists
set mkdir d_mkdir
```

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_mkdir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getlogin\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getlogin\_r getlogin\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_unistd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getlogin\_r:

?S: This variable conditionally defines the HAS\_GETLOGIN\_R symbol,

?S: which indicates to the C program that the getlogin\_r()

?S: routine is available.

?S:.

?S:getlogin\_r\_proto:

?S: This variable encodes the prototype of getlogin\_r.

?S: It is zero if d\_getlogin\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getlogin\_r

?S: is defined.

?S:.

?C:HAS\_GETLOGIN\_R:

?C: This symbol, if defined, indicates that the getlogin\_r routine

?C: is available

to getlogin re-entrantly.

?C:.

?C:GETLOGIN\_R\_PROTO:

?C: This symbol encodes the prototype of getlogin\_r.

?C: It is zero if d\_getlogin\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getlogin\_r

?C: is defined.

?C:.

?H:#\$d\_getlogin\_r HAS\_GETLOGIN\_R /\*\*/

?H:#define GETLOGIN\_R\_PROTO \$getlogin\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getlogin\_r\_proto

: see if getlogin\_r exists

set getlogin\_r d\_getlogin\_r

eval \$inlibc

case "\$d\_getlogin\_r" in

```

"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_unistd unistd.h"
case "$d_getlogin_r_proto:$usethreads" in
":define") d_getlogin_r_proto=define
set d_getlogin_r_proto getlogin_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getlogin_r_proto" in
define)
case "$getlogin_r_proto" in
"|0) try='int getlogin_r(char*, size_t);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=I_BW ;;
esac
case "$getlogin_r_proto" in
"|0) try='int getlogin_r(char*, int);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=I_BI
;;
esac
case "$getlogin_r_proto" in
"|0) try='char* getlogin_r(char*, size_t);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=B_BW ;;
esac
case "$getlogin_r_proto" in
"|0) try='char* getlogin_r(char*, int);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=B_BI ;;
esac
case "$getlogin_r_proto" in
"|0) d_getlogin_r=undef
getlogin_r_proto=0
echo "Disabling getlogin_r, cannot determine prototype." >&4 ;;
* ) case "$getlogin_r_proto" in
REENTRANT_PROTO*) ;;
*) getlogin_r_proto="REENTRANT_PROTO_$getlogin_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getlogin_r has no prototype, not using it." >&4 ;;
esac
d_getlogin_r=undef
getlogin_r_proto=0
;;
esac
;;
*) getlogin_r_proto=0
;;

```

esac

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_getlogin\_r.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: selecttype.U,v 3.0.1.3 1997/02/28 16:20:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: selecttype.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 16:20:09 ram
?RCS: patch61: always include <sys/select.h> when available for test
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:14:06 ram
?RCS: patch56: removed harmful spaces in assignment
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:06:31 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:selecttype: Protochk Oldconfig Myread cat
\
d_fd_set d_select d_socket i_systime i_sysselect extern_C
?MAKE: -pick add $@ %<
?S:selecttype:
?S: This variable holds the type used for the 2nd, 3rd, and 4th
?S: arguments to select. Usually, this is 'fd_set *', if HAS_FD_SET
?S: is defined, and 'int *' otherwise. This is only useful if you
?S: have select(), naturally.
?S:.
?C:Select_fd_set_t:
?C: This symbol holds the type used for the 2nd, 3rd, and 4th
?C: arguments to select. Usually, this is 'fd_set *', if HAS_FD_SET
?C: is defined, and 'int *' otherwise. This is only useful if you
?C: have select(), of course.
?C:.
?H:#define Select_fd_set_t $selecttype /**/
?H:.
?T:xxx nfd tmo try hdrs val
```

: check for type of arguments to select.

```
case "$selecttype" in
```

```
) case "$d_select" in
```

```
$define)
```

```
echo " "
```

```
$cat <<EOM
```

Checking to see what type of arguments are accepted by select().

EOM

```
hdrs="$define sys/types.h
```

```
$i_sysptime sys/time.h
```

```
$i_sysselect sys/select.h
```

```
$d_socket sys/socket.h"
```

: The first arg can be int, unsigned,

or size\_t

: The last arg may or may not be 'const'

```
val="
```

: void pointer has been seen but using that

: breaks the selectminbits test

```
for xxx in 'fd_set *' 'int *'; do
```

```
for nfd in 'int' 'size_t' 'unsigned long' 'unsigned' ; do
```

```
for tmo in 'struct timeval *' 'const struct timeval *'; do
```

```
case "$val" in
```

```
) try="$extern_C select _(($nfd, $xxx, $xxx, $xxx, $tmo));"
```

```
if ./protochk "$try" $hdrs; then
```

```
echo "Your system accepts $xxx."
```

```
val="$xxx"
```

```
fi
```

```
::
```

```
esac
```

```
done
```

```
done
```

```
done
```

?X: In the unlikely event that none of those worked, prompt the user.

```
case "$val" in
```

```
) rp='What is the type for the 2nd, 3rd, and 4th arguments to select?'
```

```
case "$d_fd_set" in
```

```
$define) dflt="fd_set *" ;;
```

```
*) dflt="int *" ;;
```

```
esac
```

```
./myread
```

```
val=$ans
```

```
::
```

```
esac
```

```
selecttype="$val"
```

```
::
```

\*) : no select, so pick a harmless default

```
selecttype='int *'
```

```
::
```

```
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/protos/selecttype.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_stdstdio.U,v 3.0.1.3 1997/02/28 15:46:32 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Tye McQueen <tye@metronet.com>
?RCS:
?RCS: $Log: d_stdstdio.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:46:32 ram
?RCS: patch61: merged with perl5's unit
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:06:54 ram
?RCS: patch56: typo fix on ?C: line for FILE_bufsiz
?RCS: patch56: fixed unbalanced parenthesis (ADO)
?RCS: patch56: check whether FILE_cnt and FILE_ptr can be assigned to (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1995/05/12 12:12:11 ram
?RCS:
patch54: complete rewrite by Tye McQueen to fit modern systems
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:31 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_stdstdio d_stdibase stdio_ptr stdio_cnt \
d_stdio_ptr_lval_sets_cnt d_stdio_ptr_lval_nochange_cnt stdio_base \
stdio_bufsiz d_stdio_cnt_lval d_stdio_ptr_lval stdio_filbuf: cat \
Compile contains rm_try d_gnulibc gnulibc_version i_stdlib \
Setvar Findhdr Oldconfig run to
?MAKE: -pick weed $@ %<
?S:d_stdstdio:
?S: This variable conditionally defines USE_STDIO_PTR if this system
?S: has a FILE structure declaring usable _ptr and _cnt fields (or
?S: equivalent) in stdio.h.
?S:.
```

?S:stdio\_ptr:

?S: This variable defines how, given a FILE pointer, fp, to access the

?S: \_ptr field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_ptr(fp).

?S:.

?S:d\_stdio\_ptr\_lval:

?S: This variable conditionally defines STDIO\_PTR\_LVALUE if the

?S: FILE\_ptr macro can be used as an lvalue.

?S:.

?S:stdio\_cnt:

?S: This

variable defines how, given a FILE pointer, fp, to access the

?S: \_cnt field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_cnt(fp).

?S:.

?S:d\_stdio\_cnt\_lval:

?S: This variable conditionally defines STDIO\_CNT\_LVALUE if the

?S: FILE\_cnt macro can be used as an lvalue.

?S:.

?S:d\_stdio\_ptr\_lval\_sets\_cnt:

?S: This symbol is defined if using the FILE\_ptr macro as an lvalue

?S: to increase the pointer by n has the side effect of decreasing the

?S: value of File\_cnt(fp) by n.

?S:.

?S:d\_stdio\_ptr\_lval\_nochange\_cnt:

?S: This symbol is defined if using the FILE\_ptr macro as an lvalue

?S: to increase the pointer by n leaves File\_cnt(fp) unchanged.

?S:.

?S:stdio\_filbuf:

?S: This variable defines how, given a FILE pointer, fp, to tell

?S: stdio to refill its internal buffers (?). This will

?S: be used to define the macro FILE\_filbuf(fp).

?S:.

?S:d\_stdiobase:

?S: This variable conditionally defines USE\_STDIO\_BASE if this system

?S: has

a FILE structure declaring a usable \_base field (or equivalent)

?S: in stdio.h.

?S:.

?S:stdio\_base:

?S: This variable defines how, given a FILE pointer, fp, to access the

?S: \_base field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_base(fp).

?S:.

?S:stdio\_bufsiz:

?S: This variable defines how, given a FILE pointer, fp, to determine

?S: the number of bytes store in the I/O buffer pointer to by the

?S: \_base field (or equivalent) of stdio.h's FILE structure. This will



?S: be used to define the macro FILE\_bufsiz(fp).

?S:.

?C:USE\_STDIO\_PTR ~ d\_stdstdio (USE\_STD\_STDIO STDSTDIO):

?C: This symbol is defined if the \_ptr and \_cnt fields (or similar)

?C: of the stdio FILE structure can be used to access the stdio buffer

?C: for a file handle. If this is defined, then the FILE\_ptr(fp)

?C: and FILE\_cnt(fp) macros will also be defined and should be used

?C: to access these fields.

?C:.

?C:FILE\_ptr:

?C: This macro is used to access the \_ptr

field (or equivalent) of the

?C: FILE structure pointed to by its argument. This macro will always be

?C: defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_PTR\_LVALUE:

?C: This symbol is defined if the FILE\_ptr macro can be used as an

?C: lvalue.

?C:.

?C:FILE\_cnt:

?C: This macro is used to access the \_cnt field (or equivalent) of the

?C: FILE structure pointed to by its argument. This macro will always be

?C: defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_CNT\_LVALUE:

?C: This symbol is defined if the FILE\_cnt macro can be used as an

?C: lvalue.

?C:.

?C:STDIO\_PTR\_LVAL\_SETS\_CNT:

?C: This symbol is defined if using the FILE\_ptr macro as an lvalue

?C: to increase the pointer by n has the side effect of decreasing the

?C: value of File\_cnt(fp) by n.

?C:.

?C:STDIO\_PTR\_LVAL\_NOCHANGE\_CNT:

?C: This symbol is defined if using the FILE\_ptr macro as an lvalue

?C: to increase the pointer by n leaves File\_cnt(fp) unchanged.

?C:.

?C:FILE\_filbuf:

?C: This macro is used to access the internal stdio

\_filbuf function

?C: (or equivalent), if STDIO\_CNT\_LVALUE and STDIO\_PTR\_LVALUE

?C: are defined. It is typically either \_filbuf or \_\_filbuf.

?C: This macro will only be defined if both STDIO\_CNT\_LVALUE and

?C: STDIO\_PTR\_LVALUE are defined.

?C:.

?H:?d\_stdstdio:#\$d\_stdstdio USE\_STDIO\_PTR /\*\*/

?H:?d\_stdstdio:#ifdef USE\_STDIO\_PTR

?H:#define FILE\_ptr(fp) \$stdio\_ptr

```

?H:#$d_stdio_ptr_lval STDIO_PTR_LVALUE /**/
?H:#define FILE_cnt(fp) $stdio_cnt
?H:#$d_stdio_cnt_lval STDIO_CNT_LVALUE /**/
?H:#$d_stdio_ptr_lval_sets_cnt STDIO_PTR_LVAL_SETS_CNT /**/
?H:#$d_stdio_ptr_lval_nochange_cnt STDIO_PTR_LVAL_NOCHANGE_CNT /**/
?H:?FILE_filbuf:#if defined(STDIO_PTR_LVALUE) && defined(STDIO_CNT_LVALUE)
?H:?FILE_filbuf:#define FILE_filbuf(fp) $stdio_filbuf /**/
?H:?FILE_filbuf:#endif
?H:?d_stdstdio:#endif
?H:.
?W:d_stdstdio:FILE_ptr FILE_cnt FILE_filbuf
?C:USE_STDIO_BASE ~ d_stdibase:
?C: This symbol is defined if the _base field (or similar) of the
?C: stdio FILE structure can be used to access the
stdio buffer for
?C: a file handle. If this is defined, then the FILE_base(fp) macro
?C: will also be defined and should be used to access this field.
?C: Also, the FILE_bufsiz(fp) macro will be defined and should be used
?C: to determine the number of bytes in the buffer. USE_STDIO_BASE
?C: will never be defined unless USE_STDIO_PTR is.
?C:.
?C:FILE_base:
?C: This macro is used to access the _base field (or equivalent) of the
?C: FILE structure pointed to by its argument. This macro will always be
?C: defined if USE_STDIO_BASE is defined.
?C:.
?C:FILE_bufsiz:
?C: This macro is used to determine the number of bytes in the I/O
?C: buffer pointed to by _base field (or equivalent) of the FILE
?C: structure pointed to its argument. This macro will always be defined
?C: if USE_STDIO_BASE is defined.
?C:.
?H:?d_stdibase:#$d_stdibase USE_STDIO_BASE /**/
?H:?d_stdibase:#ifdef USE_STDIO_BASE
?H:#define FILE_base(fp) $stdio_base
?H:#define FILE_bufsiz(fp) $stdio_bufsiz
?H:?d_stdibase:#endif
?H:.
?W:d_stdibase:FILE_base
FILE_bufsiz
?T:ptr_lval cnt_lval filbuf xxx
?F:!try
?LINT:set d_stdstdio d_stdibase
: see if _ptr and _cnt from stdio act std
echo " "

if $contains '_lbfsize' `./findhdr stdio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from BSD.)"

```

```

case "$stdio_ptr" in
") stdio_ptr='((fp)->_p)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_r)'
cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_ub._base ? (fp)->_ub._base : (fp)->_bf._base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_ub._base ? (fp)->_ub._size : (fp)->_bf._size)';;
esac
elif $contains '_IO_fpos_t' `./findhdr stdio.h` `./findhdr libio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from Linux.)"
case "$stdio_ptr" in
") stdio_ptr='((fp)->_IO_read_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt"
in
") stdio_cnt='((fp)->_IO_read_end - (fp)->_IO_read_ptr)'
cnt_lval=$undef
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_IO_read_base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_IO_read_end - (fp)->_IO_read_base)';;
esac
else
case "$stdio_ptr" in
") stdio_ptr='((fp)->_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_cnt)'

```

```

cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_cnt + (fp)->_ptr - (fp)->_base)';;
esac
fi

: test whether _ptr and _cnt really work
echo "Checking how std your stdio is..." >&4
$cat >try.c <<EOP
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
int main() {
FILE *fp = fopen("try.c", "r");
char c = getc(fp);
if
(
18 <= FILE_cnt(fp) &&
strncmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
)
exit(0);
exit(1);
}
EOP
val="$undef"
set try
if eval $compile && $to try.c; then
if $run ./try; then
echo "Your stdio acts pretty std."
val="$define"
else
echo "Your stdio isn't very std."
fi
else
echo "Your stdio doesn't appear very std."
fi
$rm_try

```

```

# glibc 2.2.90 and above apparently change stdio streams so Perl's
# direct buffer manipulation no longer works. The Configure tests
# should be changed to correctly detect this, but until then,
# the following check should at least let perl compile and run.
# (This quick fix should be updated before 5.8.1.)
# To be defensive, reject all unknown versions, and all versions > 2.2.9.
# A. Dougherty, June 3, 2002.
case "$d_gnulibc" in
$define)
case "$gnulibc_version" in
2.[01]*) ;;
2.2) ;;
2.2.[0-9]) ;;
*) echo "But I will not snoop inside glibc $gnulibc_version stdio buffers."
val="$undef"
;;
esac
;;
esac
set d_stdstdio
eval
$setvar

@if STDIO_PTR_LVALUE || d_stdio_ptr_lval
: Can _ptr be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$ptr_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_ptr_lval
eval $setvar
@end

@if STDIO_CNT_LVALUE || d_stdio_cnt_lval
: Can _cnt be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$cnt_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_cnt_lval
eval $setvar
@end

@if FILE_filbuf
: How to access the stdio _filbuf or __filbuf function.
: If this fails, check how the getc macro in stdio.h works.

```

```

case "${d_stdio_ptr_lval}${d_stdio_cnt_lval}" in
${define}${define})
: Try $hint value, if any, then _filbuf, __filbuf, _fill, then punt.
: _fill is for os/2.
xxx='notok'
for filbuf in $stdio_filbuf '_filbuf(fp)' '__filbuf(fp)' '_fill(fp)'; do
$cat >try.c <<EOP
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#define
FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#define FILE_filbuf(fp) $filbuf
int main() {
FILE *fp = fopen("try.c", "r");
int c;
c = getc(fp);
c = FILE_filbuf(fp); /* Just looking for linker errors.*/
exit(0);
}
EOP
set try
if eval $compile && $to try.c && $run ./try; then
echo "Your stdio appears to use $filbuf"
stdio_filbuf="$filbuf"
xxx='ok'
break
else
echo "Hmm. $filbuf doesn't seem to work."
fi
$rm_try
done
case "$xxx" in
notok) echo "I can't figure out how to access _filbuf"
echo "I'll just have to work around it."
d_stdio_ptr_lval="$undef"
d_stdio_cnt_lval="$undef"
;;
esac
;;
esac
@end

@if STDIO_PTR_LVALUE
: test whether setting _ptr sets _cnt as a side effect

```

```

d_stdio_ptr_lval_sets_cnt="$undef"
d_stdio_ptr_lval_nochange_cnt="$undef"
case "$d_stdio_ptr_lval$d_stdstdio" in
$define$define)
    echo "Checking to see what happens if we set the stdio ptr..." >&4
$cat >try.c <<EOP
#include <stdio.h>
/* Can
we scream? */
/* Eat dust sed :-) */
/* In the buffer space, no one can hear you scream. */
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#include <sys/types.h>
int main() {
    FILE *fp = fopen("try.c", "r");
    int c;
    char *ptr;
    size_t cnt;
    if (!fp) {
        puts("Fail even to read");
        exit(1);
    }
    c = getc(fp); /* Read away the first # */
    if (c == EOF) {
        puts("Fail even to read");
        exit(1);
    }
    if (!(
        18 <= FILE_cnt(fp) &&
        strncmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
    )) {
        puts("Fail even to read");
        exit (1);
    }
    ptr = (char*) FILE_ptr(fp);
    cnt = (size_t)FILE_cnt(fp);

    FILE_ptr(fp) += 42;

    if ((char*)FILE_ptr(fp) != (ptr + 42)) {
        printf("Fail ptr check %p != %p", FILE_ptr(fp), (ptr + 42));
        exit (1);
    }
}

```

```

if (FILE_cnt(fp) <= 20) {
    printf ("Fail (<20 chars to test)");
    exit (1);
}
if (strncmp(FILE_ptr(fp), "Eat dust sed :-) *\n", 20) != 0) {
    puts("Fail compare");
    exit
(1);
}
if (cnt == FILE_cnt(fp)) {
    puts("Pass_unchanged");
    exit (0);
}
if (FILE_cnt(fp) == (cnt - 42)) {
    puts("Pass_changed");
    exit (0);
}
printf("Fail count was %d now %d\n", cnt, FILE_cnt(fp));
return 1;

}
EOP
set try
if eval $compile && $to try.c; then
case ` $run ./try ` in
Pass_changed)
    echo "Increasing ptr in your stdio decreases cnt by the same amount. Good." >&4
    d_stdio_ptr_lval_sets_cnt="$define" ;;
Pass_unchanged)
    echo "Increasing ptr in your stdio leaves cnt unchanged. Good." >&4
    d_stdio_ptr_lval_nochange_cnt="$define" ;;
Fail*)
    echo "Increasing ptr in your stdio didn't do exactly what I expected. We'll not be doing that then." >&4 ;;
*)
    echo "It appears attempting to set ptr in your stdio is a bad plan." >&4 ;;
esac
else
    echo "It seems we can't set ptr in your stdio. Nevermind." >&4
fi
$rm_try
;;
esac
@end

@if d_stdibase || USE_STDIO_BASE || FILE_base || FILE_bufsiz
: see if _base is also standard
val="$undef"
case

```



```

"$d_stdstdio" in
$define)
$cat >try.c <<EOP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#define FILE_base(fp) $stdio_base
#define FILE_bufsiz(fp) $stdio_bufsiz
int main() {
FILE *fp = fopen("try.c", "r");
char c = getc(fp);
if (
19 <= FILE_bufsiz(fp) &&
strncmp(FILE_base(fp), "#include <stdio.h>\n", 19) == 0
)
exit(0);
exit(1);
}
EOP
set try
if eval $compile && $to try.c; then
if $run ./try; then
echo "And its _base field acts std."
val="$define"
else
echo "But its _base field isn't std."
fi
else
echo "However, it seems to be lacking the _base field."
fi
$rm_try
;;
esac
set d_stdibase
eval $setvar

@end

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d_stdstdio.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_select.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_select.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:02 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_select: Inlibc
?MAKE: -pick add $@ %<
?S:d_select:
?S: This variable conditionally defines HAS_SELECT if select() is
?S: available to select active file descriptors. A <sys/time.h>
?S: inclusion may be necessary for the timeout field.
?S:.
?C:HAS_SELECT:
?C: This symbol, if defined, indicates that the select routine is
?C: available
?C: to select active file descriptors. If the timeout field
?C: is used, <sys/time.h> may need to be included.
?C:.
?H:#$d_select HAS_SELECT /**/
?H:.
?LINT:set d_select
: see if select exists
set select d_select
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/d_select.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: libc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libc.U,v $
?RCS: Revision 3.0.1.10 1997/02/28 15:56:48 ram

```

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: added support for HPUX-10 nm output

?RCS:

?RCS: Revision 3.0.1.9 1995/07/25 14:11:56 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.8 1995/05/12 12:20:47 ram

?RCS: patch54: made sure only most recent version of shared lib is picked

?RCS: patch54: final "nm -p" check now uses xscan and xrun like everybody

?RCS: patch54: can now grok Linux nm output with lead \_\_IO (ADO)

?RCS: patch54: added support for Linux ELF output, using 'W' for alias (ADO)

?RCS:

?RCS: Revision 3.0.1.7 1994/10/29 16:23:40 ram

?RCS: patch36: now looks for shared libraries before anything else (ADO)

?RCS: patch36: added new nm output format (ADO)

?RCS:

?RCS: Revision 3.0.1.6 1994/08/29 16:28:10 ram

?RCS: patch32: added I-type symbols for nm output parsing on Linux

?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 07:03:24 ram

?RCS: patch30: checks are now presented by succession of if/elif

?RCS: patch30: uniformized checks for shared objects with new so symbol

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 15:06:33 ram

?RCS: patch23: added shared library knowledge (ADO and WED)

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:12:17 ram

?RCS: patch16: can now export nm\_extract as an internal-use only variable

?RCS:

?RCS: Revision 3.0.1.2 1993/09/13 16:09:03 ram

?RCS: patch10: added special handling for Apollo systems (WAD)

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:40:03 ram

?RCS: patch7: added entry for /usr/shlib/libc.so (OSF/1 machines)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libc +nm\_extract: echo n c rm test grep Getfile Myread Oldconfig Loc \ sed libs incpath libpth ar runnm nm nm\_opt nm\_so\_opt contains xlibpth \ so \_a \_o osname trnl tr sort uniq sysroot

?MAKE: -pick add \$@ %<

?S:libc:

?S: This variable contains the location of the C library.

?S:.

?S:nm\_extract:

?S: This variable holds the name of the extraction command used to process  
?S: the output of nm and yield the list of defined symbols. It is used  
?S: internally by Configure.  
?S:.  
?T:thislib try libnames xxx xscan xrun thisname com tans file  
?F:!libnames !libc.tmp !tmp.imp  
?LINT:extern PASE  
?LINT:extern libnames  
?LINT:change nm\_opt  
?INIT:libnames=""  
: Figure out where the libc is located  
case "\$runnm" in  
true)  
?X: indentation is wrong on purpose--RAM  
:  
get list of predefined functions in a handy place  
echo " "  
case "\$libc" in  
") libc=unknown  
case "\$libs" in  
\*-lc\_s\*) libc=`./loc libc\_s\$\_a \$libc \$libpth`  
esac  
;;  
esac  
case "\$libs" in  
") ;;  
\*) for thislib in \$libs; do  
case "\$thislib" in  
-lc|-lc\_s)  
: Handle C library specially below.  
;;  
-l\*)  
thislib=`echo \$thislib | \$sed -e 's/^-l//`  
if try=`./loc lib\$thislib.\$so.\*' X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc lib\$thislib.\$so X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc lib\$thislib\$\_a X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc \$thislib\$\_a X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc lib\$thislib X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc \$thislib X \$libpth`; \$test -f "\$try"; then  
:  
elif try=`./loc \$thislib\$\_a X \$libpth`; \$test -f "\$try"; then  
:  
else

```

    try="
fi
libnames="$libnames $try"
;;
*) libnames="$libnames $thislib" ;;
esac
done
;;
esac
?X:
?X: Some systems (e.g. DG/UX) use
"environmental" links, which make the test
?X: -f fail. Ditto for symbolic links. So in order to reliably check the
?X: existence of a file, we use test -r. It will still fail with DG/UX links
?X: though, but at least it will detect symbolic links. At some strategic
?X: points, we make use of (test -h), using a sub-shell in case builtin test
?X: does not implement the -h check for symbolic links. This makes it
?X: possible to preset libc in a hint file for instance and have it show up
?X: as-is in the question.
?X:
xxx=normal
case "$libc" in
unknown)
?X:
?X: The sed below transforms .so.9 .so.12 into something like .so.0009 .so.0012,
?X: then sorts on it to allow keeping .so.12 instead of .so.9 as the latest
?X: up-to-date library. The initial filename (before sed munging, saved in hold
?X: space via 'h') is appended via 'G' before sorting, then the leading munged
?X: part is removed after sorting. Nice efficient work from Tye McQueen.
?X: The initial blurfl is here to prevent the trailing
pipe from producing an
?X: empty string, causing Configure to output all its set variables!
?X:
set /lib/libc.$so
for xxx in $libpth; do
    $test -r $1 || set $xxx/libc.$so
: The messy sed command sorts on library version numbers.
    $test -r $1 || \
    set `echo blurfl; echo $xxx/libc.$so.[0-9]* | \
    tr ' ' $trnl | egrep -v \.[A-Za-z]*$' | $sed -e '
    h
    s/[0-9][0-9]*/0000&/g
    s/0*\([0-9][0-9][0-9][0-9][0-9]\)\1/g
    G
    s/\n/' | \
    $sort | $sed -e 's/^\.* //'^
eval set \$$#
done

```

```

$test -r $1 || set $sysroot/usr/ccs/lib/libc.$so
$test -r $1 || set $sysroot/lib/libsys_s$_a
;;
*)
?X: ensure the test below for the (shared) C library will fail
set blurfl
;;
esac
if $test -r "$1"; then
  echo "Your (shared) C library seems to be in $1."
  libc="$1"
elif $test -r /lib/libc && $test -r /lib/clib; then
?X:
?X: Apollo has its C library in /lib/clib AND /lib/libc
?X: not to mention its math library in /lib/syslib...
?X:
  echo "Your C library seems to be in both /lib/clib
  and /lib/libc."
  xxx=apollo
  libc='/lib/clib /lib/libc'
  if $test -r /lib/syslib; then
    echo "(Your math library is in /lib/syslib.)"
?X: Put syslib in libc -- not quite right, but won't hurt
    libc="$libc /lib/syslib"
  fi
  elif $test -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
    echo "Your C library seems to be in $libc, as you said before."
?X: For mips, and...
  elif $test -r $incpath/usr/lib/libc$_a; then
    libc=$incpath/usr/lib/libc$_a;
    echo "Your C library seems to be in $libc. That's fine."
  elif $test -r /lib/libc$_a; then
    libc=/lib/libc$_a;
    echo "Your C library seems to be in $libc. You're normal."
  else
    if tans=`./loc libc$_a blurfl/dyick $libpth`; $test -r "$stans"; then
      :
    elif tans=`./loc libc blurfl/dyick $libpth`; $test -r "$stans"; then
      libnames="$libnames "`./loc clib blurfl/dyick $libpth`
    elif tans=`./loc clib blurfl/dyick $libpth`; $test -r "$stans"; then
      :
    elif tans=`./loc Slibc$_a blurfl/dyick $xlibpth`; $test -r "$stans"; then
      :
    elif tans=`./loc
Mlibc$_a blurfl/dyick $xlibpth`; $test -r "$stans"; then
      :
    else
      tans=`./loc Llibc$_a blurfl/dyick $xlibpth`

```

```

fi
if $test -r "$stans"; then
  echo "Your C library seems to be in $stans, of all places."
  libc=$stans
else
  libc='blurfl'
fi
fi
if $test $xxx = apollo -o -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
  dflt="$libc"
cat <<EOM

```

If the guess above is wrong (which it might be if you're using a strange compiler, or your machine supports multiple models), you can override it here.

```

EOM
else
  dflt=""
  echo $libc | $tr ' ' $trnl | $sort | $uniq > libpath
cat >&4 <<EOM

```

I can't seem to find your C library. I've looked in the following places:

```

EOM
$sed 's/^/ /' libpath
cat <<EOM

```

None of these seems to contain your C library. I need to get its name...

```

EOM
fi
fn=f
rp='Where is your C library?'
./getfile
libc="$ans"

echo " "
echo $libc $libnames | $tr ' ' $trnl | $sort | $uniq > libnames
set X `cat libnames`
shift
xxx=files
case $# in 1) xxx=file; esac
echo
"Extracting names from the following $xxx for later perusal:" >&4
echo " "
$sed 's/^/ /' libnames >&4
echo " "
$echo $n "This may take a while...$c" >&4

```

?X:

?X: Linux may need the special Dynamic option to nm for shared libraries.

?X: In general, this is stored in the nm\_so\_opt variable.

?X: Unfortunately, that option may be fatal on non-shared libraries.

?X:

```
for file in $*; do
  case $file in
    *$so*) $nm $nm_so_opt $nm_opt $file 2>/dev/null;;
    *) $nm $nm_opt $file 2>/dev/null;;
  esac
done >libc.tmp
```

```
$echo $n ".c"
```

?X:

?X: To accelerate processing, we look at the correct 'sed' command

?X: by using a small subset of libc.tmp, i.e. fprintf function.

?X: When we know which sed command to use, do the name extraction

?X:

```
$grep fprintf libc.tmp > libc.ptf
```

?X:

?X: In order to enhance readability and save some space, we define

?X: some variables that will be "eval"ed.

?X:

```
xscan='eval "<libc.ptf $com >libc.list"; $echo $n ".c" >&4'
```

```
xrun='eval "<libc.tmp $com >libc.list"; echo "done." >&4'
```

?X:

BSD-like output, I and W types added for Linux

?X: Some versions of Linux include a leading \_\_IO in the symbol name.

?X: HP-UX 10 reportedly has trailing spaces, though I'm surprised it has

?X: BSD-like output. (AD).

?X: GNU extension: i is "indirect function"

```
xxx=[ADTSIW]
```

```
if com="$sed -n -e 's/__IO//' -e 's/^. * $xxx */p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

?X: SYSV-like output

```
elif com="$sed -n -e 's/___*//' -e 's/^\([a-zA-Z_0-9$]*\).*xtern.*\1/p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e '/UNDEF/d' -e '/FUNC..GL/s/^. *|___*//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/^. * D ___*//p' -e 's/^. * D //p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```



```

eval $xrun
elif com="$sed -n -e 's/^_/' -e 's/^([a-zA-Z_0-9]*).*xtern.*text.*\1/p'";\
eval $xscan;\
$contains '^fprintf$'
libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|FUNC |GLOB .*|/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$grep '|' | $sed -n -e '/|COMMON/d' -e '/|DATA/d' \
-e '/file/d' -e 's/^([ ]*).*\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|FUNC |GLOB .*|/p' -e 's/^.*|FUNC |WEAK .*|/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: mips nm output (sysV)
elif com="$sed -n -e 's/^_/' -e '/|Undef/d' -e '/|Proc/s/ .*|/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^.*|Proc .*|Text *| */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e '/Def. Text/s/.* \([ ]*\)\$/\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: OS/2
nm output
elif com="$sed -n -e 's/^[-0-9a-f ]*_\([.]*\)=. *\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/.*\.text n\ \ \ \./p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: AIX nm output
elif com="$sed -n -e 's/^_.*|/ -e 's/[ ]*D[ ]*[0-9]*.*|/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
else

```

```

$nm -p $* 2>/dev/null >libc.tmp
$grep fprintf libc.tmp > libc.ptf
if com="$sed -n -e 's/^. * [ADTSIW] *[_.]*/p' -e 's/^. * [ADTSIW] //p'';\
eval $xscan; $contains '^fprintf$' libc.list >/dev/null 2>&1
then
nm_opt='-p'
eval $xrun
else
echo " "
echo "$nm didn't seem to work right. Trying $ar instead..." >&4
com="
if $ar t $libc > libc.tmp && \
$contains '^fprintf$' libc.tmp >/dev/null 2>&1
then
for thisname in $libnames $libc; do
$ar t $thisname >>libc.tmp
done
$sed -e "s/\$_o\$//" < libc.tmp > libc.list
echo
"Ok." >&4
elif test "X$osname" = "Xos2" && $ar tv $libc > libc.tmp; then
?X: Repeat libc to extract forwarders to DLL entries too
for thisname in $libnames $libc; do
$ar tv $thisname >>libc.tmp
?X: Revision 50 of EMX has bug in ar: it will not extract forwarders
?X: to DLL entries. Use emximp which will extract exactly them.
emximp -o tmp.imp $thisname \
2>/dev/null && \
$sed -e 's/^\([_a-zA-Z0-9]*\) .*$/1/p' \
< tmp.imp >>libc.tmp
$rm -f tmp.imp
done
$sed -e "s/\$_o\$/" -e 's/^\|+/' < libc.tmp > libc.list
echo "Ok." >&4
else
echo "$ar didn't seem to work right." >&4
echo "Maybe this is a Cray...trying bld instead..." >&4
if bld t $libc | \
$sed -e 's/.*\|/' -e "s/\$_o:.*\|/" > libc.list &&
$test -s libc.list
then
for thisname in $libnames; do
bld t $libnames | \
$sed -e 's/.*\|/' -e "s/\$_o:.*\|/" >>libc.list
$ar t $thisname >>libc.tmp
done
echo "Ok." >&4
else

```

```

echo
"That didn't work either. Giving up." >&4
exit 1
fi
fi
fi
fi
nm_extract="$com"
case "$PASE" in
define)
echo " "
echo "Since you are compiling for PASE, extracting more symbols from libc.a ..." >&4
dump -Tv /lib/libc.a | awk '$7 == "/unix" {print $5 " " $8}' | grep "^SV" | awk '{print $2}' >> libc.list
;;
*) if $test -f /lib/syscalls.exp; then
echo " "
echo "Also extracting names from /lib/syscalls.exp for good ole AIX..." >&4
$sed -n 's/^\([^ ]*\)[ ]*syscall[0-9]*[ ]*$/\1/p' \
/lib/syscalls.exp >>libc.list
fi
;;
esac
;;
esac
$rm -f libnames libpath

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/modified/libc.U

```

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```

?RCS: $Id: d_mkfifo.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_mkfifo.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:14:17 ram
?RCS: patch36: created by ADO
?RCS:
?RCS:

```

?MAKE:d\_mkfifo: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mkfifo:  
?S: This variable conditionally defines the HAS\_MKFIFO symbol, which  
?S: indicates to the C program that the mkfifo() routine is available.  
?S:.  
?C:HAS\_MKFIFO :  
?C: This symbol, if defined, indicates that the mkfifo  
routine is  
?C: available to create FIFOs. Otherwise, mknod should be able to  
?C: do it for you. However, if mkfifo is there, mknod might require  
?C: super-user privileges which mkfifo will not.  
?C:.  
?H:#\$d\_mkfifo HAS\_MKFIFO /\*\*/  
?H:.  
?LINT:set d\_mkfifo  
: see if mkfifo exists  
set mkfifo d\_mkfifo  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/d\_mkfifo.U

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?RCS:

?MAKE:d\_log2: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_log2:

?S: This variable conditionally defines the HAS\_LOG2 symbol, which

?S: indicates to the C program that the log2() routine is available

?S: to compute log base two.

?S:.

?C:HAS\_LOG2:

?C: This symbol, if defined, indicates that the log2 routine is

?C: available to do the log2 function.

?C:.

?H:#\$d\_log2 HAS\_LOG2 /\*\*/  
?H:.

?LINT:set d\_log2

: see if log2 exists

set log2 d\_log2

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/d\_log2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS:

?RCS: \$Log: sitelib.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:21:35 ram

?RCS: patch61: created

?RCS:

?MAKE:sitelib sitelibexp installsitelib: afs cat Getfile \

Oldconfig Prefixit test privlib package sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:sitelib:

?S: This variable contains the eventual value of the SITELIB symbol,

?S: which is the name of the private library for this package. It may

?S: have a ~ on the front. It is up to the makefile to eventually create

?S: this

directory while performing installation (with ~ substitution).

?S:.

?S:sitelibexp:

?S: This variable is the ~name expanded version of sitelib, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?S:installsitelib:

?S: This variable is really the same as sitelibexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?C:SITELIB:

?C: This symbol contains the name of the private library for this package.

?C: The library is private in the sense that it needn't be in anyone's

?C: execution path, but it should be accessible by the world. The program

?C: should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: Individual sites may place their own extensions and modules in

?C: this directory.

?C:.

?C:SITELIB\_EXP:

?C: This symbol contains the ~name expanded version of SITELIB, to be used

?C: in programs that are not prepared to deal with ~ expansion  
at run-time.

?C:.

```
?H:#define SITELIB "$sitelib" /**/
```

```
?H:#define SITELIB_EXP "$sitelibexp" /**/
```

?H:.

?T:prog

: determine where site specific libraries go.

```
set sitelib sitelib
```

```
eval $prefixit
```

```
case "$sitelib" in
```

```
)
```

?X: remove any trailing -3.0 or other version identification

```
prog=`echo $package | $sed 's/-*[0-9.]*$//`
```

```
dflt="$privlib/site_ $prog" ;;
```

```
*) dflt="$sitelib" ;;
```

```
esac
```

```
$cat <<EOM
```

The installation process will also create a directory for site-specific extensions and modules. Some users find it convenient to place all local files in this directory rather than in the main distribution directory.

EOM

```
fn=d~+
```

```
rp='Pathname for the site-specific library files?'
```

```
./getfile
```

```
if $test "X$sitelibexp" != "X$sansexp"; then
```

```
installsitelib="
```

```
fi
```

```
sitelib="$ans"
```

```
sitelibexp="$sansexp"
```

```
if $afs; then
```

```
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installsitelib" in
```

```
) dflt=`echo $sitelibexp | sed 's#~/afs/#/afs/#`;;
```

```
*) dflt="$installsitelib";;
```

```
esac
```

```
fn=de~
```

```
rp='Where will private files be installed?'
./getfile
installsitelib="$sans"
else
installsitelib="$sitelibexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/sitelib.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS:

?RCS: \$Log: d\_gethent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethent:

?S: This variable conditionally defines HAS\_GETHOSTENT if gethostent() is

?S: available to dup file descriptors.

?S:.

?C:HAS\_GETHOSTENT (GETHOSTENT):

?C: This symbol, if defined, indicates that the gethostent routine is

?C: available to lookup host names in some data base or other.

?C:.

?H:#\$d\_gethent HAS\_GETHOSTENT /\*\*/

?H:.

?LINT:set

d\_gethent

: see if gethostent exists

set gethostent d\_gethent

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_gethent.U
```

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?RCS:

?MAKE:d\_lgamma\_r: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lgamma\_r:

?S: This variable conditionally defines the HAS\_LGAMMA\_R symbol, which

?S: indicates to the C program that the lgamma\_r() routine is available

?S: for the log gamma function, without using the global signgam variable.

?S:.

?C:HAS\_LGAMMA\_R:

?C: This symbol, if defined, indicates that the lgamma\_r routine is

?C: available to do the log gamma function without using the global

?C: signgam variable.

?C:.

?H:#\$d\_lgamma\_r HAS\_LGAMMA\_R /\*\*/

?H:.

?LINT:set d\_lgamma\_r

: see if lgamma\_r exists

set lgamma\_r d\_lgamma\_r

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_lgamma\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: kernel.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS:

?RCS: \$Log: kernel.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:54 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:kernel: Getfile test

?MAKE: -pick add \$@ %<

?S:kernel:

?S: This variable becomes the (fully rooted) path name of the kernel.

?S:.



```

: find the name of the kernel.
echo " "
case "$kernel" in
")
if $test -r /unix; then
dflt=/unix
elif $test -r /vmunix; then
dflt=/vmunix
elif $test -r /xenix; then
dflt=/xenix
elif $test -r /mach; then
dflt=/mach
elif
$test -r /dgux; then
dflt=/dgux
elif $test -r /hp-ux; then
dflt=/hp-ux
elif $test -r /syst; then
dflt=/syst
elif $test -r /arix; then
dflt=/arix
elif $test -r /irix; then
dflt=/arix
else
dflt='unknown'
set X /*x
shift
case $# in
1)
if $test -r "$1"; then
dflt="$1"
fi
;;
esac
fi
;;
*)
dflt="$kernel"
;;
esac
fn=f
rp='What is the name of your kernel?'
./getfile
kernel="$ans"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/kernel.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_statblks.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:29 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_statblks: contains Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_statblks:
?S: This variable conditionally defines USE_STAT_BLOCKS if this system
?S: has a stat structure declaring st_blksize and st_blocks.
?S:.
?C:USE_STAT_BLOCKS (STATBLOCKS):
?C: This symbol is defined if this system has a stat structure declaring
?C: st_blksize and st_blocks.
?C:.
?H:#$d_statblks USE_STAT_BLOCKS
/**/
?H:.
?T:xxx
?LINT:set d_statblks
: see if stat knows about block sizes
echo " "
xxx=`./findhdr sys/stat.h`
if $contains 'st_blocks;' "$xxx" >/dev/null 2>&1 ; then
if $contains 'st_blksize;' "$xxx" >/dev/null 2>&1 ; then
echo "Your stat() knows about block sizes." >&4
val="$define"
else
echo "Your stat() doesn't know about block sizes." >&4
val="$undef"
fi
else
echo "Your stat() doesn't know about block sizes." >&4
val="$undef"
fi
set d_statblks
eval $setvar
```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_statblks.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setuid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS:

?RCS: \$Log: d\_setuid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:15 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setuid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setuid:

?S: This variable conditionally defines the HAS\_SETUID symbol, which

?S: indicates to the C program that the setuid() routine is available

?S: to change the real uid of the current program.

?S:.

?C:HAS\_SETUID (SETUID):

?C: This symbol, if defined, indicates that the setuid  
routine is available

?C: to change the real uid of the current program.

?C:.

?H:#\$d\_setuid HAS\_SETUID /\*\*/

?H:.

?LINT:set d\_setuid

: see if setuid exists

set setuid d\_setuid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_setuid.U

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?RCS:

?MAKE:d\_readv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_readv:

?S: This variable conditionally defines the HAS\_READV symbol, which

?S: indicates to the C program that the readv() routine is available.

?S:.

?C:HAS\_READV:

?C: This symbol, if defined, indicates that the readv routine is

?C: available to do gather reads. You will also need <sys/uio.h>

?C: and there I\_SYSUIO.

?C:.

?H:#\$d\_readv HAS\_READV /\*\*/

?H:.

?LINT:set d\_readv

: see if readv exists

set readv d\_readv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_readv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fpclassl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fpclassl:

?S: This variable conditionally defines the HAS\_FPCLASSL symbol, which

?S: indicates to the C program that the fpclassl() routine is available.

?S:.

?C:HAS\_FPCLASSL:

?C: This symbol, if defined, indicates that the fpclassl routine is

?C: available to classify long doubles. Available for example in IRIX.

?C: The returned values are defined in <ieeefp.h> and are:

?C:

?C: FP\_SNAN signaling NaN

?C: FP\_QNAN quiet NaN

?C: FP\_NINF negative infinity

?C: FP\_PINF positive infinity

?C: FP\_NDENORM negative denormalized non-zero

?C: FP\_PDENORM positive denormalized non-zero

?C: FP\_NZERO negative zero

?C: FP\_PZERO positive zero

?C: FP\_NNORM negative

normalized non-zero

?C: FP\_PNORM positive normalized non-zero

?C:.

?H:#\$d\_fpclassl HAS\_FPCLASSL /\*\*/

?H:.

?LINT:set d\_fpclassl

: see if fpclassl exists

set fpclassl d\_fpclassl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_fpclassl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: prototype.U,v \$

?RCS: Revision 3.0.1.3 1994/05/06 15:11:49 ram

?RCS: patch23: ensure cc flags used when looking for prototype support

?RCS:

?RCS: Revision 3.0.1.2 1994/01/24 14:15:36 ram

?RCS: patch16: prototype handling macros now appear only when needed

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:03:12 ram

?RCS: patch6: defines were referring to non-existent VOID symbol

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:36 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:prototype:

Myread Oldconfig cat +cc +cflags rm Setvar

?MAKE: -pick add \$@ %<

?S:prototype:

?S: This variable holds the eventual value of CAN\_PROTOTYPE, which

?S: indicates the C compiler can handle function prototypes.

?S:.

?C: CAN\_PROTOTYPE ~ %<:

?C: If defined, this macro indicates that the C compiler can handle

?C: function prototypes.

?C:.

?C: DOTS:

?C: This macro is used to specify the ... in function prototypes which

?C: have arbitrary additional arguments.

?C:.

?C: NXT\_ARG:

?C: This macro is used to separate arguments in the declared argument list.

?C:.

?C: P\_FUNC:

?C: This macro is used to declare "private" (static) functions.

?C: It takes three arguments: the function type and name, a parenthesized

?C: traditional (comma separated) argument list, and the declared argument

?C: list (in which arguments are separated with NXT\_ARG, and additional

?C: arbitrary arguments are specified with DOTS). For example:

?C:

?C: P\_FUNC(int foo, (bar, baz), int bar NXT\_ARG char \*baz[])

?C:.

?C: P\_FUNC\_VOID:

?C: This

macro is used to declare "private" (static) functions that have

?C: no arguments. The macro takes one argument: the function type and name.

?C: For example:

?C:

?C: P\_FUNC\_VOID(int subr)

?C:.

?C: V\_FUNC:

?C: This macro is used to declare "public" (non-static) functions.

?C: It takes three arguments: the function type and name, a parenthesized

?C: traditional (comma separated) argument list, and the declared argument

?C: list (in which arguments are separated with NXT\_ARG, and additional

?C: arbitrary arguments are specified with DOTS). For example:

?C:

?C: V\_FUNC(int main, (argc, argv), int argc NXT\_ARG char \*argv[])

?C:.

?C: V\_FUNC\_VOID:

?C: This macro is used to declare "public" (non-static) functions that have

?C: no arguments. The macro takes one argument: the function type and name.

?C: For example:

?C:

?C: V\_FUNC\_VOID(int fork)

?C:.

?C: \_(P):

?C: This macro is used to declare function parameters for folks who want

?C: to make declarations with prototypes using a different style than

?C: the above macros. Use double parentheses. For example:

?C:

```
?C: int main _((int argc, char *argv[]));
```

?C:.

```
?H:?%<:#$prototype CAN_PROTOTYPE /**/
```

```
?H:?%<:#ifdef CAN_PROTOTYPE
```

```
?H:?NXT_ARG:#define NXT_ARG ,
```

```
?H:?DOTS:#define DOTS , ...
```

```
?H:?V_FUNC:#define V_FUNC(name, arglist, args)name(args)
```

```
?H:?P_FUNC:#define P_FUNC(name, arglist, args)static name(args)
```

```
?H:?V_FUNC_VOID:#define V_FUNC_VOID(name)name(void)
```

```
?H:?P_FUNC_VOID:#define P_FUNC_VOID(name)static name(void)
```

```
?H:?_:#define _(args) args
```

```
?H:?%<:#else
```

```
?H:?NXT_ARG:#define NXT_ARG ;
```

```
?H:?DOTS:#define DOTS
```

```
?H:?V_FUNC:#define V_FUNC(name, arglist, args)name arglist args;
```

```
?H:?P_FUNC:#define P_FUNC(name, arglist, args)static name arglist args;
```

```
?H:?V_FUNC_VOID:#define V_FUNC_VOID(name)name()
```

```
?H:?P_FUNC_VOID:#define P_FUNC_VOID(name)static name()
```

```
?H:?_:#define _(args) ()
```

```
?H:?%<:#endif
```

?H:.

```
?W:%<:NXT_ARG DOTS V_FUNC P_FUNC V_FUNC_VOID P_FUNC_VOID _
```

```
?LINT:set prototype
```

: Cruising for prototypes

```
echo " "
```

```
echo "Checking out
```

```
function prototypes..." >&4
```

```
$cat >prototype.c <<'EOCP'
```

```
int main(int argc, char *argv[]) {
```

```
exit(0);}
```

```
EOCP
```

```
if $cc $ccflags -c prototype.c >prototype.out 2>&1 ; then
```

```
echo "Your C compiler appears to support function prototypes."
```

```
val="$define"
```

```
else
```

```
echo "Your C compiler doesn't seem to understand function prototypes."
```

```
val="$undef"
```

```
fi
```

```
set prototype
```

```
eval $setvar
```

```
$rm -f prototype*
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
```

5.32.1~rc1/dist/U/prototype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_libutil.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_libutil: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_libutil:

?S: This variable conditionally defines the I\_LIBUTIL symbol, and indicates

?S: whether a C program should include <libutil.h>.

?S:.

?C:I\_LIBUTIL:

?C: This symbol, if defined, indicates that <libutil.h> exists and

?C: should be included.

?C:.

?H:#\$i\_libutil I\_LIBUTIL /\*\*/

?H:.

?LINT:set i\_libutil

: see if this is a libutil.h system

set libutil.h i\_libutil

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/perl/i\_libutil.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_internet.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_internet.U,v \$

?RCS: Revision 3.0.1.1 1993/09/13 16:02:04 ram

?RCS: patch10: most mailers support Internet addresses nowadays (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:24 ram

?RCS: Baseline for dist 3.0 netwide release.



```

?RCS:
?MAKE:d_internet: Myread Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_internet:
?S: This variable conditionally defines the INTERNET symbol, which
?S: indicates to the C program that there is a mailer available
    which
?S: supports internet-style addresses (user@site.domain).
?S:.
?C:INTERNET:
?C: This symbol, if defined, indicates that there is a mailer available
?C: which supports internet-style addresses (user@site.domain).
?C:.
?H:#$d_internet INTERNET /**/
?H:.
?LINT:set d_internet
: check for internet mailer
dflt=y
case "$d_internet" in
"$undef") dflt=n;;
esac
cat <<EOM

```

Most mailers can deliver mail to addresses of the INTERNET persuasion, such as user@host.edu. Some older mailers, however, require the complete path to the destination to be specified in the address.

```

EOM
rp="Does your mailer understand INTERNET addresses?"
. ./myread
case "$ans" in
y*) val="$define";;
*) val="$undef";;
esac
set d_internet
eval $setvar

```

Found in path(s):  
\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_internet.U  
No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_bfd.U,v $
?RCS:
?RCS: Copyright (c) 2014 H.Merijn Brand
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.

```

?RCS:  
?MAKE:i\_bfd: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_bfd:  
?S: This variable conditionally defines the I\_BFD symbol, and  
?S: indicates whether a C program can include <bfd.h>.  
?S:.  
?C:I\_BFD:  
?C: This symbol, if defined, indicates that <bfd.h> exists and  
?C: can be included.  
?C:.  
?H:#\$i\_bfd I\_BFD /\*\*/  
?H:.  
?LINT:set i\_bfd  
: see if this is a bfd.h system  
set bfd.h i\_bfd  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/i\_bfd.U

No license file was found, but licenses were detected in source scan.

/\*

\* \$Id: setsid.C,v 3.0.1.1 1994/01/24 13:58:47 ram Exp ram \$

\*

\* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

\*

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\* as specified in the README file that comes with the distribution.

\* You may reuse parts of this distribution only within the terms of

\* that same Artistic Licence; a copy of which may be found at the root

\* of the source tree for dist 4.0.

\*

\* \$Log: setsid.C,v \$

\* Revision 3.0.1.1 1994/01/24 13:58:47 ram

\* patch16: created

\*

\*/

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/lib/C/fake/setsid.C

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: socksize.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?MAKE:socksizetype: \  
Protochk Oldconfig Myread cat d\_socket d\_socklen\_t sizetype \  
usesocks i\_socks i\_systypes extern\_C  
?MAKE: -pick add \$@ %<

?S:socksizetype:  
?S: This variable holds the type used for the size argument  
?S: for various socket calls like accept. Usual values include  
?S: socklen\_t, size\_t, and int.

?S:.  
?C:Sock\_size\_t:  
?C: This symbol holds the type used for the size argument of  
?C: various socket calls (just the base type, not the pointer-to).

?C:.  
?H:#define Sock\_size\_t \$socksizetype /\*\*/  
?H:.

?T:xxx yyy try  
@if Sock\_size\_t  
: check for type of the size argument to socket calls  
case "\$d\_socket" in  
"\$define")  
\$cat <<EOM

Checking to see what type is the last argument  
of accept().

```
EOM
yyy="
case "$d_socklen_t" in
"$define") yyy="$yyy socklen_t"
esac
yyy="$yyy $sizetype int long unsigned"
for xxx in $yyy; do
case "$socksizetype" in
") try="$extern_C int accept(int, struct sockaddr *, $xxx *);"
case "$usesocks" in
"$define")
if ./protochk "$try" $i_systypes sys/types.h $d_socket sys/socket.h literal '#define INCLUDE_PROTOTYPES'
$i_socks socks.h.; then
echo "Your system accepts '$xxx *' for the last argument of accept()."
socksizetype="$xxx"
fi
;;
*) if ./protochk "$try" $i_systypes sys/types.h $d_socket sys/socket.h; then
echo "Your system accepts '$xxx *' for the last argument of accept()."
socksizetype="$xxx"
```

```

fi
;;
esac
;;
esac
done
: In case none of those worked, prompt the user.
case "$socksizetype" in
") rp='What is the type for socket address structure sizes?'
dflt='int'
. ./myread
socksizetype=$ans
;;
esac
;;
*) : no sockets, so pick relatively harmless default
socksizetype='int'
;;
esac
@end

```

Found

in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/protos/socksizetype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001, Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_sigprocmask: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sigprocmask:

?S: This variable conditionally defines HAS\_SIGPROCMASK

?S: if sigprocmask() is available to examine or change the signal mask

?S: of the calling process.

?S:.

?C:HAS\_SIGPROCMASK:

?C: This symbol, if defined, indicates that the sigprocmask

?C: system call is available to examine or change the signal mask

?C: of the calling process.

?C:  
?H:#\$d\_sigprocmask HAS\_SIGPROCMAK /\*\*/  
?H:  
?LINT:set d\_sigprocmask  
: see if sigprocmask exists  
set sigprocmask d\_sigprocmask  
eval  
\$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_sigprocmask.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Config\_sh.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 14:57:53 ram  
?RCS: patch61: added support for src.U  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/11 14:53:31 ram  
?RCS: patch45: moved path stripping from d\_portable.U to end of Configure  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 15:50:37 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:48 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit ends up producing the config.sh  
script, which contains all the  
?X: definitions figured out by Configure. The add.Config\_sh command knows  
?X: which variables need to be remembered. It also adds the EOT (ends the  
?X: here document redirection with variable substitution).  
?X:  
?MAKE:Config\_sh: cf\_time cf\_by test spitshell startsh myuname Myread \  
End Obsol\_sh Loc +d\_portable package src cat sed  
?MAKE: -pick add.Config\_sh \$@ %<  
?MAKE: -pick add \$@ ./Obsol\_sh

```

?MAKE: -pick close.Config_sh $@ %<
?F:!config.over !config.arch
?T:file sfile xsed
?LINT:unclosed EOT
: back to where it started
if test -d ../UU; then
  cd ..
fi

: configuration may be unconditionally patched via a 'config.arch' file
if $test -f config.arch; then
  echo "I see a config.arch file, loading it." >&4
  . ./config.arch
fi

: configuration may be patched via a 'config.over' file
if $test -f config.over; then
  echo " "
  dflt=y
  rp='I see a config.over file. Do you wish to load it?'
  . UU/myread
  case "$ans" in
  n*) echo "OK, I'll ignore it.;;"
  *) . ./config.over
  echo
  "Configuration override changes have been loaded."
  ;;
  esac
fi

@if d_portable
: in case they want portability, strip down executable paths
?X:
?X: Strip down paths in located executables. For each file, e.g. vi, there
?X: is a $vi variable whose value is for instance '/usr/bin/vi'. By resetting
?X: $vi to 'vi', we rely on the PATH variable to locate the executable...
?X: In order to allow vi='/usr/bin/nvi' which will strip down to vi='nvi',
?X: we can't just say 'eval $file="\$file"', we have to recourse to sed.
?X: We don't use basename since it is less portable than sed.
?X:
case "$d_portable" in
"$define")
  echo " "
  echo "Stripping down executable paths..." >&4
  xsed=$sed
  for file in $loclist $trylist; do
    eval sfile="\${$file}"
    sfile=`echo $sfile | $xsed -e 's,.*^(.*)\,1,'

```

```

eval $file="$sfile"
done
;;
esac

@end
: create config.sh file
echo " "
echo "Creating config.sh..." >&4
$spitshell <<EOT >config.sh
$startsh
#
# This file was produced by running the
# Configure script. It holds all the
# definitions figured out by Configure. Should you modify one of these values,
# do not forget to propagate your changes by running "Configure -der". You may
# instead choose to run each of the .SH files by yourself, or "Configure -S".
#

# Package name    : $package
# Source directory : $src
# Configuration time: $cf_time
# Configured by   : $cf_by
# Target system   : $myuname

EOT
?X: Command line options are saved by the Options.U unit in the
?X: temporary file UU/cmdline.opt
$test -f UU/cmdline.opt && $cat UU/cmdline.opt >> config.sh
$spitshell <<EOT >>config.sh

Found in path(s):
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/Config_sh.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: man3dir.U,v $

```

```

?RCS: Revision 3.0.1.1 1997/02/28 16:10:34 ram
?RCS: patch61: created
?RCS:
?X:
?X: This was originally specific to perl5. Since perl5 has man pages that
?X: go in both man1/ and man3/ directories, we need both man1dir
?X: and man3dir. This unit is basically dist's mansrc.U with
?X: man3 used instead of man everywhere.
?X: I then added various tests because perl5 has *lots* of man3
?X: pages with long file names. -- ADO
?X:
?MAKE:man3dir
man3direxp man3ext installman3dir: afs cat nroff Loc Oldconfig \
sed man1dir package package Getfile prefix Prefixit Prefixup \
d_flexfnam privlib Myread
?MAKE: -pick add $@ %<
?Y:TOP
?S:man3dir:
?S: This variable contains the name of the directory in which manual
?S: source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S:.
?S:man3direxp:
?S: This variable is the same as the man3dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?S:installman3dir:
?S: This variable is really the same as man3direxp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: man3direxp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?S:man3ext:
?S: This variable contains the extension that the manual
page should
?S: have: one of 'n', 'l', or '3'. The Makefile must supply the '!'.
?S: See man3dir.
?S:.
: determine where library module manual pages go
set man3dir man3dir none
eval $prefixit
$cat <<EOM

$package has manual pages for many of the library modules.
EOM

case "$nroff" in

```



```
nroff)
```

```
$cat <<'EOM'
```

However, you don't have nroff, so they're probably useless to you.

```
EOM
```

```
case "$man3dir" in
```

```
) man3dir="none";;
```

```
esac;;
```

```
esac
```

```
case "$d_flexfnam" in
```

```
undef)
```

```
$cat <<'EOM'
```

However, your system can't handle the long file names like File::Basename.3.

```
EOM
```

```
case "$man3dir" in
```

```
) man3dir="none";;
```

```
esac;;
```

```
esac
```

```
echo "If you don't want the manual sources installed, answer 'none'."
```

```
?X: We dont use /usr/local/man/man3 because some man programs will
```

```
?X: only show the /usr/local/man/man3 contents, and not the system ones,
```

```
?X: thus man less will show the perl module less.pm, but not the system
```

```
?X: less command. We might also conflict with TCL man pages.
```

```
?X: However, something like /opt/perl/man/man3
```

```
is fine.
```

```
case "$man3dir" in
```

```
) case "$prefix" in
```

```
*$package*) dflt=`echo $man1dir |
```

```
$sed -e 's/man1/man3/g' -e 's/man\./1/man\./3/g'` ;;
```

```
*) dflt="$privlib/man/man3" ;;
```

```
esac
```

```
;;
```

```
' ) dflt=none;;
```

```
*) dflt="$man3dir" ;;
```

```
esac
```

```
echo " "
```

```
fn=dn+~
```

```
rp="Where do the $package library man pages (source) go?"
```

```
./getfile
```

```
if test "X$man3direxp" != "X$ansexp"; then
```

```
installman3dir="
```

```
fi
```

```
man3dir="$ans"
```

```
man3direxp="$ansexp"
```

```
case "$man3dir" in
```

```

") man3dir=' '
installman3dir=";;
esac
if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installman3dir" in
") dflt=`echo $man3direxp | sed 's#^/afs/#/afs/.#` ;;
*) dflt="$installman3dir" ;;
esac
fn=de~
rp='Where will man pages be installed?'
./getfile
installman3dir="$ans"
else
installman3dir="$man3direxp"
fi

```

: What suffix  
to use on installed man pages

```

case "$man3dir" in
' ')
man3ext='0'
;;
*)
rp="What suffix should be used for the $package library man pages?"
case "$man3ext" in
") case "$man3dir" in
*3) dflt=3 ;;
*3p) dflt=3p ;;
*3pm) dflt=3pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L3) dflt=L3;;
*) dflt=3;;
esac
;;
*) dflt="$man3ext";;

```

```
esac
. ./myread
man3ext="$sans"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/man3dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readdir\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_readdir\_r readdir\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_dirent extern\_C

?MAKE: -pick add \$@ %<

?S:d\_readdir\_r:

?S: This variable conditionally defines the HAS\_READDIR\_R symbol,

?S: which indicates to the C program that the readdir\_r()

?S: routine is available.

?S:.

?S:readdir\_r\_proto:

?S: This variable encodes the prototype of readdir\_r.

?S: It is zero if d\_readdir\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir\_r

?S: is defined.

?S:.

?C:HAS\_READDIR\_R:

?C: This symbol, if defined, indicates that the readdir\_r routine

?C: is available to readdir re-entrantly.

?C:.

?C:READDIR\_R\_PROTO:

?C: This

symbol encodes the prototype of readdir\_r.

?C: It is zero if d\_readdir\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir\_r

?C: is defined.

?C:.

?H:#\$d\_readdir\_r HAS\_READDIR\_R /\*\*/

?H:#define READDIR\_R\_PROTO \$readdir\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_readdir\_r\_proto

```

: see if readdir_r exists
set readdir_r d_readdir_r
eval $inlibc
case "$d_readdir_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_dirent dirent.h"
case "$d_readdir_r_proto:$usethreads" in
":define") d_readdir_r_proto=define
set d_readdir_r_proto readdir_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_readdir_r_proto" in
define)
case "$readdir_r_proto" in
"|0) try='int readdir_r(DIR*, struct dirent*, struct dirent**);'
./prochck "$extern_C $try" $hdrs && readdir_r_proto=I_TSR ;;
esac
case "$readdir_r_proto" in
"|0) try='int readdir_r(DIR*, struct dirent*);'
./prochck "$extern_C $try" $hdrs && readdir_r_proto=I_TS
;;
esac
case "$readdir_r_proto" in
"|0) d_readdir_r=undef
readdir_r_proto=0
echo "Disabling readdir_r, cannot determine prototype." >&4 ;;
* ) case "$readdir_r_proto" in
REENTRANT_PROTO*) ;;
*) readdir_r_proto="REENTRANT_PROTO_${readdir_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "readdir_r has no prototype, not using it." >&4 ;;
esac
d_readdir_r=undef
readdir_r_proto=0
;;
esac
;;
*) readdir_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-

5.32.1~rc1/U/threads/d\_readdir\_r.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_stddef.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_stddef.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_stddef: Inhdr
?MAKE:-pick add $@ %<
?S:i_stddef:
?S: This variable conditionally defines the I_STDDEF symbol, which
?S: indicates to the C program that <stddef.h> exists and should
?S: be included.
?S:.
?C:I_STDDEF:
?C: This symbol, if defined, indicates that <stddef.h> exists and should
?C: be included.
?C:.
?H:#$i_stddef I_STDDEF /**/
?H:.
?LINT:set
i_stddef
: see if stddef is available
set stddef.h i_stddef
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_stddef.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
```

```

?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: so.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:30:04 ram
?RCS: patch36: now tells user how he can suppress shared lib lookup (ADO)
?RCS: patch36: removed echo at the top, since it's now in the here-doc (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:07:02 ram
?RCS: patch30: created
?RCS:
?X:
?X: This unit computes the shared-object / shared-lib extension
?X:
?MAKE:so: test libpth Loc Myread Oldconfig cat
?MAKE: -pick add $@ %<
?S:so:
?S: This variable holds the extension used to identify
shared libraries
?S: (also known as shared objects) on the system. Usually set to 'so'.
?S:.
?T: xxx
: compute shared library extension
case "$so" in
")
if xxx=`./loc libc.sl X $libpth`; $test -f "$xxx"; then
dflt='sl'
else
dflt='so'
fi
;;
*) dflt="$so";;
esac
$cat <<EOM

```

On some systems, shared libraries may be available. Answer 'none' if you want to suppress searching of shared libraries for the remainder of this configuration.

```

EOM
rp='What is the file extension used for shared libraries?'
./myread
so="$ans"

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/so.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: make.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: make.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 16:09:40 ram
?RCS: patch61: created
?RCS:
?MAKE:make_set_make : Loc rm sed make
?MAKE: -pick add $@ %<
?S:make_set_make:
?S: Some versions of 'make' set the variable MAKE. Others do not.
?S: This variable contains the string to be included in Makefile.SH
?S: so that MAKE is set if needed, and not if not needed.
?S: Possible values are:
?S:
?S: make_set_make='#' #
If your make program handles this for you,
?S:
?S: make_set_make="MAKE=$make" # if it doesn't.
?S:
?S: This uses a comment character so that we can distinguish a
?S: 'set' value (from a previous config.sh or Configure -D option)
?S: from an uncomputed value.
?S:..
?LINT: extern MAKE
?LINT: change MAKE
?X: This test is based on one from an autoconf-generated configure
?X: script. Autoconf stole a lot from Configure, but now it's our
?X: turn to do so... ;-) -- RAM, 21/02/97
: check whether make sets MAKE
echo " "
echo "Checking if your $make program sets \$(MAKE)..." >&4
case "$make_set_make" in
")
?X: Use sed so we don't have a line beginning with @echo. Metaconfig
?X: will think that's a command like @if or @end.
$sed 's/^X //' > testmake.mak << 'EOF'
Xall:
```

```

X @echo 'maketemp="$(MAKE)'"
EOF
?X: GNU make sometimes prints "make[1]: Entering...", which would confuse us
case "$make -f testmake.mak 2>/dev/null" in
*maketemp=*) make_set_make='#' ;;
*) make_set_make="MAKE=$make" ;;
esac
$rm
-f testmake.mak
;;
esac
case "$make_set_make" in
#) echo "Yup, it does.";;
*) echo "Nope, it doesn't.";;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/make.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: libpth.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libpth.U,v $
?RCS: Revision 3.0.1.6 1997/02/28 16:08:49 ram
?RCS: patch61: new loclibpth variable
?RCS:
?RCS: Revision 3.0.1.5 1995/01/11 15:31:30 ram
?RCS: patch45: call ./mips instead of just mips (WED)
?RCS:
?RCS: Revision 3.0.1.4 1994/08/29 16:29:15 ram
?RCS: patch32: added /lib/pa1.1 for HP-UX specially tuned PA-RISC libs (ADO)
?RCS: patch32: fixed information message, making it clearer (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/06/20 07:03:54
ram
?RCS: patch30: added /usr/shlib to glibpth for shared-only libraries
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:26:57 ram
?RCS: patch27: fixed a typo (libpth -> glibpth)

```



?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:07:53 ram  
?RCS: patch23: now asks for library directories to be searched (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:02 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit initializes the path for C library lookup.  
?X:  
?MAKE:libpth glibpth xlibpth plibpth loclibpth incpth: \  
usrinc incpath test cat Myread Oldconfig sysroot osname \  
ccname echo cppstdin awk grep sed rm usecrosscompile  
?MAKE: -pick add \$@ %<  
?S:libpth:  
?S: This variable holds the general path (space-separated) used to find  
?S: libraries. It is intended to be used by other units.  
?S:.  
?S:glibpth:  
?S: This variable holds the general path (space-separated) used to  
?S: find libraries. It may contain directories that do not exist on  
?S: this platform, libpth is the cleaned-up  
version.  
?S:.  
?S:xlibpth:  
?S: This variable holds extra path (space-separated) used to find  
?S: libraries on this platform, for example CPU-specific libraries  
?S: (on multi-CPU platforms) may be listed here.  
?S:.  
?S:loclibpth:  
?S: This variable holds the paths (space-separated) used to find local  
?S: libraries. It is prepended to libpth, and is intended to be easily  
?S: set from the command line.  
?S:.  
?S:plibpth:  
?S: Holds the private path used by Configure to find out the libraries.  
?S: Its value is prepend to libpth. This variable takes care of special  
?S: machines, like the mips. Usually, it should be empty.  
?S:.  
?S:incpth:  
?S: This variable must precede the normal include path to get the  
?S: right one, as in "\$incpath/usr/include" or "\$incpath/usr/lib".  
?S: Value can be "" or "/bsd43" on mips.  
?S:.  
?T: xxx dlist i j croak  
?LINT:extern incpth  
?LINT:change usrinc  
?INIT:: change the next line if compiling for Xenix/286 on Xenix/386



```

libpth="$echo $libpth|sed 's/^ //' "
for xxx in $libpth $loclibpth $plibpth $glibpth; do
if $test -d $xxx; then
  case " $libpth " in
    * " $xxx " *) ;;
    *) libpth="$libpth $xxx";;
  esac
fi

done
fi
$rm -f try.c
case "$usrinc" in
") for i in $incpth; do
if $test -f $i/errno.h -a -f $i/stdio.h -a -f $i/time.h; then
  usrinc="$i"
  break
fi
done
;;
esac

case "$usecrosscompile" in
$define|true|[yY]*)
  case "$incpth" in
") echo "Incpth not defined." >&4; croak=y ;;
*) echo "Using incpth '$incpth'." >&4 ;;
  esac
  case "$libpth" in
") echo "Libpth not defined." >&4; croak=y ;;
*) echo "Using libpth '$libpth'." >&4 ;;
  esac
  case "$usrinc" in
") echo "Usrinc not defined." >&4; croak=y ;;
*) echo "Using usrinc $usrinc." >&4 ;;
  esac
  case "$croak" in
y)
if test "X$sysroot" = X; then
  echo "Cannot continue, aborting." >&4; exit 1
else
  echo "Cross-compiling using sysroot $sysroot, failing to guess inc/lib paths is not fatal" >&4
fi
;;
esac
;;
esac
;;

```

```
esac
```

```
: Default value for incpth is just usrinc
```

```
case "$incpth" in
") incpth="$usrinc";;
esac
```

```
: Set private lib path
```

```
case
"$plibpth" in
") if ./mips; then
?X: on mips, we DO NOT want /lib, and we want $incpath/usr/lib
plibpth="$incpath/usr/lib $sysroot/usr/local/lib $sysroot/usr/ccs/lib"
fi;;
esac
case "$libpth" in
') dlist="";;
") dlist="$loclibpth $plibpth $glibpth";;
*) dlist="$libpth";;
esac
```

```
: Now check and see which directories actually exist, avoiding duplicates
```

```
for xxx in $dlist
do
if $test -d $xxx; then
case " $libpth " in
*" $xxx "*) ;;
*) libpth="$libpth $xxx";;
esac
fi
done
$cat <<'EOM'
```

Some systems have incompatible or broken versions of libraries. Among the directories listed in the question below, please remove any you know not to be holding relevant libraries, and add any that are needed. Say "none" for none.

```
EOM
```

```
if test "X$sysroot" != X; then
```

```
$cat <<EOM
```

You have set sysroot to \$sysroot, please supply the directories excluding sysroot

```
EOM
```

```
fi
```

```
case "$libpth" in
```

```

") dflt='none';;
*)
?X: strip leading space
set X $libpth
shift
dflt=${1+"$@"}
;;
esac
rp="Directories
to use for library searches?"
./myread
case "$ans" in
none) libpth=' ';;
*) libpth="$ans";;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/libpth.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endgrent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_endgrent.U,v \$

?RCS:

?MAKE:d\_endgrent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_endgrent:

?S: This variable conditionally defines the HAS\_ENDGRENT symbol, which

?S: indicates to the C program that the endgrent() routine is available

?S: for sequential access of the group database.

?S:.

?C:HAS\_ENDGRENT:

?C: This symbol, if defined, indicates that the getgrent routine is

?C: available for finalizing sequential access of the group database.

?C:.

?H:#\$d\_endgrent HAS\_ENDGRENT /\*\*/

?H:.

?LINT:set d\_endgrent

: see if endgrent exists

set endgrent d\_endgrent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_endgrent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_varhdr.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:54:42 ram

?RCS: patch61: varargs script now starts with leading "startsh"

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:21:02 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.1 1994/05/13 15:26:05 ram

?RCS: patch27: this unit now supersedes old i\_stdarg.U and i\_varargs.U

?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:49 ram

?RCS: Baseline for

dist 3.0 netwide release.

?RCS:

?MAKE:i\_stdarg i\_varargs i\_varhdr: cat +cc +ccflags rm test Setvar \  
Findhdr Warn startsh \_o

?MAKE: -pick add \$@ %<

?S:i\_stdarg:

?S: This variable conditionally defines the I\_STDARG symbol, which

?S: indicates to the C program that <stdarg.h> exists and should

?S: be included.

?S:.

?S:i\_varargs:

?S: This variable conditionally defines I\_VARARGS, which indicates

?S: to the C program that it should include <varargs.h>.

?S:.

?S:i\_varhdr:

?S: Contains the name of the header to be included to get va\_dcl definition.

?S: Typically one of varargs.h or stdarg.h.

?S:.

?C:I\_STDARG:

?C: This symbol, if defined, indicates that <stdarg.h> exists and should

```

?C: be included.
?C:.
?C:I_VARARGS:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <varargs.h>.
?C:.
?H:#$i_stdarg I_STDARG /**/
?H:#$i_varargs I_VARARGS /**/
?H:.
?W:%<:va_dcl
?F:!varargs
?T:valstd
?LINT:set i_stdarg i_varargs
?X:
?X: Don't use setvar because the varargs test
    below might override these.
?X: Actually, the messages here are just informative. We don't wish to set
?X: i_varargs or i_stdarg to their final value before knowing which of the
?X: two we'll include.
?X:
: see if stdarg is available
echo " "
if $test `./findhdr stdarg.h`; then
    echo "<stdarg.h> found." >&4
    valstd="$define"
else
    echo "<stdarg.h> NOT found." >&4
    valstd="$undef"
fi

: see if varargs is available
echo " "
if $test `./findhdr varargs.h`; then
    echo "<varargs.h> found." >&4
else
    echo "<varargs.h> NOT found, but that's ok (I hope)." >&4
fi

?X:
?X: if you have stdarg.h, you need to support prototypes to actually use it;
?X: but if stdarg.h exists and the compiler doesn't support prototypes (for some
?X: bizarre reason), we'll fall back to varargs.h anyway so it's not so bad.
?X:
: set up the varargs testing programs
$cat > varargs.c <<EOP
#ifdef I_STDARG
#include <stdarg.h>
#endif

```

```

#ifndef I_VARARGS
#include <varargs.h>
#endif

#ifndef I_STDARG
int f(char *p, ...)
#else
int
f(va_alist)
va_dcl
#endif
{
va_list ap;
#ifndef I_STDARG
char *p;
#endif
#ifdef I_STDARG
va_start(ap,p);
#else
va_start(ap);
p = va_arg(ap, char *);
#endif
va_end(ap);
}
EOP
$cat > varargs <<EOP
$startsh
if $cc -c $ccflags -D\${1} varargs.c >/dev/null 2>&1; then
echo "true"
else
echo "false"
fi
$rm -f varargs$_o
EOP
chmod +x varargs

: now check which varargs header should be included
echo " "
i_varhdr="
case "$valstd" in
"$define")
if `./varargs I_STDARG`; then
val='stdarg.h'
elif `./varargs I_VARARGS`; then
val='varargs.h'
fi
;;
*)

```



```

if `./varargs I_VARARGS`; then
  val='varargs.h'
fi
;;
esac
case "$val" in
")
./warn "I could not find the definition for va_dcl... You have problems..."
val="$undef"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
*)
set i_varhdr
eval $setvar
case "$i_varhdr" in
stdarg.h)
val="$define"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
varargs.h)
val="$undef"; set i_stdarg;
eval $setvar
val="$define"; set i_varargs; eval $setvar
;;
esac
echo "We'll include <$i_varhdr> to get va_dcl definition." >&4;;
esac
$rm -f varargs*

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_varhdr.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Signal.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:01 ram

?RCS: patch61: created

?RCS:

?X:

?X: This unit produces three files:

?X:

?X: 1- A signal.c file, which, when compiled and run, produces an output like:

?X:

?X: HUP 1

?X: INT 2

?X: QUIT 3

?X: etc...

?X:

?X: 2- A signal.awk script to parse the output of signal.c, fill  
 ?X: in gaps (up to NSIG) and move duplicates to the end.

?X:

?X: 3- A signal\_cmd script to compile signal.c and run it  
 ?X: through sort -n -k 2 | uniq | awk -f signal.awk.

?X:

(we try also sort -n +1 since some old hosts don't grok sort -k)

?X: (This is called signal\_cmd to avoid OS/2 confusion with  
 ?X: signal.cmd vs. signal.

?X: The signal\_cmd script also falls back on checking signals one at a  
 ?X: time in case the signal.c program fails. On at least one version of  
 ?X: Linux 2.1.x, the header file #define'd SIGRTMAX to a symbol that  
 ?X: is not defined by the compiler/linker. :-(. Further, on that same  
 ?X: version of Linux, the user had a defective C-shell that gave an  
 ?X: incorrect list for kill -l, so the fall-back didn't work.

?X:

?X: This unit is then used by sig\_name.U.

?X:

?MAKE:Signal: test tr rm awk cat grep startsh eunicefix sed sort uniq \  
 Findhdr cppstdin +cppflags cppminus Compile trnl run

?MAKE: -pick add \$@ %<

?X:all files declared as "public" since they're used from other units

?F:signal.c signal\_cmd signal.lst signal signal.awk

?T: xx xxx xxxfiles

?LINT:use rm run

: Trace out the files included by signal.h, then look for SIGxxx  
 names.

?X: Remove SIGARRAYSIZE used by HPUX.

?X: Remove SIGSTKSIZE used by Linux.

?X: Remove SIGSTKSZ used by Posix.

?X: Remove SIGTYP void lines used by OS2.

?X: Some cpps, like os390, dont give the file name anywhere  
 if [ "\$\$fieldn" = X ]; then

: Just make some guesses. We check them later.

xxx='/usr/include/signal.h /usr/include/sys/signal.h'

else

xxx=`echo '#include <signal.h>' |

\$cppstdin \$cppminus \$cppflags 2>/dev/null |

```

$grep '^[ ]*#.*include' |
$awk '{print \\$$fieldn}' | $sed 's!'!'g' | \
  $sed 's!\\\\\\\\\\\\\\\\!/'!'g' | $sort | $uniq`
fi
?X: Check this list of files to be sure we have parsed the cpp output ok.
?X: This will also avoid potentially non-existent files, such
?X: as ../foo/bar.h
xxxfiles=""
?X: Add /dev/null in case the $xxx list is empty.
for xx in $xxx /dev/null ; do
  $test -f "$xx" && xxxfiles="$xxxfiles $xx"
done
?X: If we have found no files, at least try signal.h
case "$xxxfiles" in
") xxxfiles=`./findhdr signal.h` ;;
esac
xxx=`awk '
$1 ~ /^#define$/ &&
  $2 ~ /^SIG[A-Z0-9]*$/ && $2 !~ /SIGARRAYSIZE/ && $2 !~ /SIGSTKSIZE/ && $2 !~ /SIGSTKSZ/ && $3 !~
/void/ {
  print substr($2, 4, 20)
}
$1 == "#" && $2 ~ /^define$/ && $3 ~ /^SIG[A-Z0-9]*$/ && $3 !~ /SIGARRAYSIZE/ && $4 !~ /void/ {
  print substr($3, 4, 20)
}' $xxxfiles`
: Append some common names just in case the awk scan failed.
xxx="$xxx ABRT ALRM BUS CANCEL CHLD CLD CONT DIL EMT FPE"
xxx="$xxx FREEZE HUP ILL INT IO IOT KILL LOST LWP PHONE"
xxx="$xxx PIPE POLL PROF PWR QUIT RTMAX RTMIN SEGV STKFLT STOP"
xxx="$xxx SYS TERM THAW TRAP TSTP TTIN TTOU URG USR1 USR2"
xxx="$xxx USR3 USR4 VTALRM WAITING WINCH WIND WINDOW XCPU XFSZ"

: generate a few handy files for later
$cat > signal.c <<'EOCP'
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
int main() {

/* Strange style to avoid deeply-nested #if/#else/#endif */
#ifdef NSIG
# ifdef _NSIG
#  define NSIG (_NSIG)
# endif
#endif

#ifdef NSIG
# ifdef SIGMAX

```

```

# define NSIG (SIGMAX+1)
# endif
#endif

#ifndef NSIG
# ifdef SIG_MAX
#
#   define NSIG (SIG_MAX+1)
# endif
#endif

#ifndef NSIG
# ifdef MAXSIG
#   define NSIG (MAXSIG+1)
# endif
#endif

#ifndef NSIG
# ifdef MAX_SIG
#   define NSIG (MAX_SIG+1)
# endif
#endif

#ifndef NSIG
# ifdef SIGARRAYSIZE
#   define NSIG (SIGARRAYSIZE+1) /* Not sure of the +1 */
# endif
#endif

#ifndef NSIG
# ifdef _sys_nsig
#   define NSIG (_sys_nsig) /* Solaris 2.5 */
# endif
#endif

/* Default to some arbitrary number that's big enough to get most
of the common signals.
*/
#ifndef NSIG
#   define NSIG 50
#endif

printf("NSIG %d\n", NSIG);

#ifndef JUST_NSIG

EOCP

```

```

echo $xxx | $tr ' ' $trnl | $sort | $uniq | $awk '
{
printf "#ifdef SIG"; printf $1; printf "\n"
printf "printf(\""; printf $1; printf " %%d\\n\",SIG";
printf $1; printf ");\n"
printf "#endif\n"
}
END {
printf "#endif /* JUST_NSIG */\n";
printf "exit(0);\n}\n";
}
' >>signal.c
$cat >signal.awk <<'EOP'
BEGIN { ndups = 0 }
$1 ~ /^NSIG$/ { nsig = $2 }
($1 !~ /^NSIG$/) && (NF == 2) {
    if ($2 >
maxsig) { maxsig = $2 }
    if (sig_name[$2]) {
dup_name[ndups] = $1
dup_num[ndups] = $2
ndups++
    }
    else {
sig_name[$2] = $1
sig_num[$2] = $2
    }
}
END {
    if (nsig == 0) {
        nsig = maxsig + 1
    }
    printf("NSIG %d\n", nsig);
    for (n = 1; n < nsig; n++) {
if (sig_name[n]) {
        printf("%s %d\n", sig_name[n], sig_num[n])
    }
    else {
        printf("NUM%d %d\n", n, n)
    }
    }
    for (n = 0; n < ndups; n++) {
printf("%s %d\n", dup_name[n], dup_num[n])
    }
}
EOP
$cat >signal_cmd <<EOS
$startsh

```

```

if $test -s signal.lst; then
    echo "Using your existing signal.lst file"
    exit 0
fi
xxx="$xxx"
EOS
?X: Avoid variable interpolation problems, especially with
?X: xxx, which contains newlines.
$cat >>signal_cmd <<'EOS'

set signal
if eval $compile_ok; then
    $run ./signal$_exe | ($sort -n -k 2 2>/dev/null || $sort -n +1) |\
    $uniq | $awk -f signal.awk >signal.lst
else
    echo "(I can't seem be able to compile the whole test program)" >&4
    echo "(I'll try it in little
pieces.)" >&4
    set signal -DJUST_NSIG
    if eval $compile_ok; then
        $run ./signal$_exe > signal.nsg
        $cat signal.nsg
    else
        echo "I can't seem to figure out how many signals you have." >&4
        echo "Guessing 50." >&4
        echo 'NSIG 50' > signal.nsg
    fi
: Now look at all the signal names, one at a time.
for xx in `echo $xxx | $tr ' ' $trnl | $sort | $uniq`; do
    $cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
int main() {
printf("$xx %d\n", SIG${xx});
return 0;
}
EOCP
    set signal
    if eval $compile; then
        echo "SIG${xx} found."
        $run ./signal$_exe >> signal.ls1
    else
        echo "SIG${xx} NOT found."
    fi
done
if $test -s signal.ls1; then
    $cat signal.nsg signal.ls1 |

```

```

    $sort -n | $uniq | $awk -f signal.awk >signal.lst
fi

fi
if $test -s signal.lst; then
:
else
echo "(AAK! I can't compile the test programs -- Guessing)" >&4
echo 'kill -l' >signal
set X `csh -f <signal`
$rm -f signal
shift
case $# in
0) set HUP INT QUIT ILL TRAP ABRT
EMT FPE KILL BUS SEGV SYS PIPE ALRM TERM;;
esac
echo $@ | $tr ' ' $trnl | \
    $awk '{ printf "%s %d\n", $1, ++s; }
    END { printf "NSIG %d\n", ++s }' >signal.lst
fi
$rm -f signal.c signal$_exe signal$_o signal.nsg signal.ls1
EOS
chmod a+x signal_cmd
$eunicefix signal_cmd

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-
5.32.1~rc1/dist/U/Signal.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_ustat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ustat:

?S: This variable conditionally defines HAS\_USTAT if ustat() is

?S: available to query file system statistics by dev\_t.

?S:.

?C:HAS\_USTAT:

?C: This symbol, if defined, indicates that the ustat system call is

?C: available to query file system statistics by dev\_t.

?C:.

?H:#\$d\_ustat HAS\_USTAT /\*\*/

?H:.

?LINT:set d\_ustat

: see if ustat exists

set ustat d\_ustat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_ustat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: stdchar.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:stdchar: contains Findhdr cppstdin cppminus rm

?MAKE: -pick add \$@ %<

?S:stdchar:

?S: This variable conditionally defines STDCHAR to be the type of char

?S: used in stdio.h. It has the values "unsigned char" or "char".

?S:.

?C:STDCHAR:

?C: This symbol is defined to be the type of char used in stdio.h.

?C: It has the values "unsigned char" or "char".

?C:.

?H:#define STDCHAR \$stdchar /\*\*/

?H:.

?F:!stdioh

:

see what type of char stdio uses.

echo " "

?X: untangle the #include nest

echo '#include <stdio.h>' | \$cppstdin \$cppminus > stdioh

if \$contains 'unsigned.\*char.\*\_ptr;' stdioh >/dev/null 2>&1 ; then

echo "Your stdio uses unsigned chars." >&4



```
stdchar="unsigned char"
else
echo "Your stdio uses signed chars." >&4
stdchar="char"
fi
$rm -f stdioh
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/stdchar.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_j0 d\_j0l: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_j0:

?S: This variable conditionally defines the HAS\_J0 symbol, which

?S: indicates to the C program that the j0() routine is available.

?S:.

?S:d\_j0l:

?S: This variable conditionally defines the HAS\_J0L symbol, which

?S: indicates to the C program that the j0l() routine is available.

?S:.

?C:HAS\_J0:

?C: This symbol, if defined, indicates to the C program that the

?C: j0() function is available for Bessel functions of the first

?C: kind of the order zero, for doubles.

?C:.

?C:HAS\_J0L:

?C: This symbol, if defined, indicates to the C program that the

?C: j0l() function is available for Bessel functions of the first

?C: kind of the order zero, for long doubles.

?C:.

?H:#\$d\_j0 HAS\_J0 /\*\*/

?H:#\$d\_j0l HAS\_J0L /\*\*/

?H:.

?LINT:set

d\_j0

?LINT:set d\_j0l

: see if j0 exists

set j0 d\_j0

eval \$inlibc

: see if j0l exists

set j0l d\_j0l

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_j0.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memalign.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memalign.U,v \$

?RCS:

?MAKE:d\_memalign: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memalign:

?S: This variable conditionally defines the HAS\_MEMALIGN symbol, which

?S: indicates to the C program that the memalign() routine is available.

?S:.

?C:HAS\_MEMALIGN :

?C: This symbol, if defined, indicates that the memalign routine is

?C: available to allocate aligned memory.

?C:.

?H:#\$d\_memalign HAS\_MEMALIGN /\*\*/

?H:.

?LINT:set d\_memalign

: see if memalign exists

set

memalign d\_memalign

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_memalign.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?RCS: \$Log: d\_getpent.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:06:09 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_getpent: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_getpent:  
 ?S: This variable conditionally defines HAS\_GETPROTOENT if getprotoent() is  
 ?S: available to look up protocols in some data base or another.  
 ?S:.  
 ?C:HAS\_GETPROTOENT:  
 ?C: This symbol, if defined, indicates that the getprotoent() routine is  
 ?C: available to look up protocols in some data base  
 or another.  
 ?C:.  
 ?H:#\$d\_getpent HAS\_GETPROTOENT /\*\*/  
 ?H:.  
 ?LINT:set d\_getpent  
 : see if getprotoent exists  
 set getprotoent d\_getpent  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getpent.U

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?RCS: You may redistribute only under the terms of the Artistic Licence,

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_keypad.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/nlist\_pfx.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_setlocale.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/Magic\_h.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_bsdjmp.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_nolnbuf.U

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/mkdep.U

\*

```
/opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_dbl_dig.U
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_charsprf.U
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_PORTAR.U
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_dbl_dig.U
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_brokstat.U
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d_pidcheck.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysun.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysun.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:42 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit looks wether <sys/un.h> is available or not
?X:
?MAKE:i_sysun: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysun:
?S: This variable conditionally defines I_SYS_UN, which indicates
?S: to the C program that it should include <sys/un.h> to get UNIX
?S: domain socket definitions.
?S:.
?C:I_SYS_UN:
?C: This symbol, if defined, indicates
?C: to the C program that it should
?C: include <sys/un.h> to get UNIX domain socket definitions.
?C:.
?H:#$i_sysun I_SYS_UN /**/
?H:.
?LINT:set i_sysun
: see if this is a sys/un.h system
set sys/un.h i_sysun
```

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i\_sysun.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: dlsrc.U,v\$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: dlsrc.U,v \$

?RCS:

?X: hpux support thanks to Jeff Okamoto <okamoto@hpcc101.corp.hp.com>

?X:

?X: To create a shared library, you must compile ALL source files in the

?X: library with +z (or possibly +Z if the library is whopping huge),

?X: then link the library with -b. Example:

?X: cc -c +z module\_a.c

?X: cc -c +z module\_b.c

?X: ld -b module\_a.o module\_b.o -o module.sl

?X:

?MAKE:usedl ld dlsrc cccdlflags lddlflags ccdlflags bin\_ELF ld\_can\_script: \

rm\_try Getfile Myread test osname sed d\_dlopen Findhdr Setvar \

src run cc ccflags ldflags optimize ls gccversion cat rsrc i\_stdlib \

i\_unistd osvers sysroot

?MAKE: -pick add \$@ %<

?Y:BOTTOM

?S:usedl:

?S: This variable

indicates if the system supports dynamic

?S: loading of some sort. See also dlsrc and dlobj.

?S:.

?S:ld:

?S: This variable indicates the program to be used to link

?S: libraries for dynamic loading. On some systems, it is 'ld'.

?S: On ELF systems, it should be \$cc. Mostly, we'll try to respect

?S: the hint file setting.

?S:.

?S:dlsrc:

?S: This variable contains the name of the dynamic loading file that

?S: will be used with the package.

?S:.

?S:cccdlflags:

?S: This variable contains any special flags that might need to be

?S: passed with 'cc -c' to compile modules to be used to create a shared  
?S: library that will be used for dynamic loading. For hpux, this  
?S: should be +z. It is up to the makefile to use it.  
?S:.  
?S:lddflags:  
?S: This variable contains any special flags that might need to be  
?S: passed to \$ld to create a shared library suitable for dynamic  
?S: loading. It is up to the makefile to use it. For hpux, it  
?S: should be '-b'. For sunos 4.1, it is empty.  
?S:.  
?S:ccdlflags:  
?S: This  
variable contains any special flags that might need to be  
?S: passed to cc to link with a shared library for dynamic loading.  
?S: It is up to the makefile to use it. For sunos 4.1, it should  
?S: be empty.  
?S:.  
?S:bin\_ELF:  
?S: This variable saves the result from configure if generated binaries  
?S: are in ELF format. Only set to defined when the test has actually  
?S: been performed, and the result was positive.  
?S:.  
?S:ld\_can\_script:  
?S: This variable shows if the loader accepts scripts in the form of  
?S: -Wl,--version-script=ld.script. This is currently only supported  
?S: for GNU ld on ELF in dynamic loading builds.  
?S:.  
?C:USE\_DYNAMIC\_LOADING ~ %<:  
?C: This symbol, if defined, indicates that dynamic loading of  
?C: some sort is available.  
?C:.  
?H:%<:#\$usedl USE\_DYNAMIC\_LOADING /\*\*/  
?H:.  
?W:%<:dlopen  
?T:dldir thisflag tdir  
?F:!a.out  
:determine which dynamic loading, if any, to compile in  
echo " "  
dldir="ext/DynaLoader"  
case "\$usedl" in  
\$define|y|true)  
dflt='y'  
usedl="\$define"  
;;  
\$undef|n|false)  
dflt='n'  
usedl="\$undef"  
;;

```

*)
dflt='n'
case "$d_dlopen" in
    $define) dflt='y' ;;
esac
: Does a dl_XXX.XS file exist for this operating system
$test -f $rsrc/$dldir/dl_${osname}.xs && dflt='y'
;;
esac
rp="Do you wish to use dynamic loading?"
./myread
usedl="$ans"
bin_ELF="$undef"
case "$ans" in
    y*) usedl="$define"
case "$dlsrc" in
    ") if $test -f $rsrc/$dldir/dl_${osname}.xs ; then
        dflt="$dldir/dl_${osname}.xs"
    elif $test "$d_dlopen" = "$define" ; then
        dflt="$dldir/dl_dlopen.xs"
    else
        dflt=""
    fi
    ;;
    *) dflt="$dldir/$dlsrc"
    ;;
esac
echo "The following dynamic loading files are available:"
: Can not go over to $dldir because getfile has path hard-coded in.
tdir=`pwd`; cd "$rsrc"; $ls -C $dldir/dl*.xs; cd "$tdir"
rp="Source file to use for dynamic loading"
fn="fne"
gfpth="$src"
./getfile
usedl="$define"
: emulate basename
dlsrc=`echo $ans | $sed -e 's%.*^([^\]*)$%\1%`

$cat
<< EOM

```

Some systems may require passing special flags to `$cc -c` to compile modules that will be used to create a shared library. To use no flags, say "none".

```

EOM
case "$cccdlflags" in
    ") case "$gccversion" in

```

```

") case "$osname" in
hpux) dflt='+z' ;;
irix*) dflt='-KPIC' ;;
svr4*|esix*|solaris|nonstopux) dflt='-KPIC' ;;
sunos) dflt='-pic' ;;
*) dflt='none' ;;
    esac
;;
*) case "$osname" in
darwin) dflt='none' ;;
*linux*|svr4*|esix*|solaris|nonstopux) dflt='-fPIC' ;;
*) dflt='-fpic' ;;
    esac ;;
esac ;;
' ') dflt='none' ;;
*) dflt="$cccdlflags" ;;
esac

case "$dflt" in
    none) dflt="" ;;
esac

# If -Dsysroot was specified, now's the time to add it
# to cccdlflags
if test "X$sysroot" != X; then
    case "$gccversion" in
    ") ;;
    *) case "$dflt" in
        *sysroot*) ;;
        'undef'*)
            dflt="$dflt --sysroot=$sysroot" ;;
        esac
        ;;
    esac
fi

case "$dflt" in
    ") dflt='none';;
esac

rp="Any
special flags to pass to $cc -c to compile shared library modules?"
./myread
case "$ans" in
?X: Use ' ' so that a subsequent Configure run preserves the old state.
    none) cccdlflags=' ' ;;
    *) cccdlflags="$ans" ;;
esac

```



```
cat << EOM
```

Some systems use ld to create libraries that can be dynamically loaded, while other systems (such as those using ELF) use \$cc.

```
EOM
```

```
: Determine if this is ELF
```

```
$cat >try.c <<EOM
```

```
/* Test for whether ELF binaries are produced */
```

```
#include <fcntl.h>
```

```
#$i_stdlib I_STDLIB
```

```
#ifdef I_STDLIB
```

```
#include <stdlib.h>
```

```
#endif
```

```
#$i_unistd I_UNISTD
```

```
#ifdef I_UNISTD
```

```
#include <unistd.h>
```

```
#endif
```

```
int main() {
```

```
    char b[4];
```

```
    int i = open("a.out",O_RDONLY);
```

```
    if(i == -1)
```

```
exit(1); /* fail */
```

```
    if(read(i,b,4)==4 && b[0]==127 && b[1]=='E' && b[2]=='L' && b[3]=='F')
```

```
exit(0); /* succeed (yes, it is ELF) */
```

```
    exit(1); /* fail */
```

```
}
```

```
EOM
```

```
if $cc $ccflags $ldflags -o a.out try.c >/dev/null 2>&1 && $run ./a.out; then
```

```
    bin_ELF="$define"
```

```
fi
```

```
$rm_try
```

```
case "$ld" in
```

```
    *) if $test $bin_ELF = "$define"; then
```

```
        cat <<EOM
```

You appear to have ELF support. I'll use \$cc to build dynamic libraries.

```
EOM
```

```
        dflt="$cc"
```

```
    else
```

```
        echo "I'll use ld to build dynamic libraries."
```

```
        dflt='ld'
```

```
    fi
```

```
;;
```

```
*) dflt="$ld"
```

```

;;
esac

rp="What command should be used to create dynamic libraries?"
./myread
ld="$ans"

cat << EOM

```

Some systems may require passing special flags to `$ld` to create a library that can be dynamically loaded. If your `ld` flags include `-L/other/path` options to locate libraries outside your loader's normal search path, you may need to specify those `-L` options here as well. To use no flags, say "none".

```

EOM
case "$lddflags" in
  *) case "$osname" in
      haiku) dflt='-shared' ;;
      hpux) dflt='-b';
    case "$gccversion" in
      *) dflt="$dflt +vnocompatwarnings" ;;
    esac
  ;;
  *linux*|irix*|gnu*) dflt="-shared $optimize" ;;
  solaris) # See [perl #66604].
    # On Solaris 11, gcc -m64
on amd64
  # appears not to understand -G. gcc versions at
  # least as old as 3.4.3 support -shared, so just
  # use that with Solaris 11 and later, but keep
  # the old behavior for older Solaris versions.
  case "$gccversion" in
    *) dflt='-G' ;;
  *) case "$osvers" in
      2.?|2.10) dflt='-G' ;;
    *) dflt='-shared' ;;
  esac
  ;;
  sunos) dflt='-assert nodefinitions' ;;
  svr4*|esix*|nonstopux) dflt="-G $ldflags" ;;
  *) dflt='none' ;;
esac
;;
*) dflt="$lddflags" ;;
esac

```

```

: Only do this for gcc, since, for example, qcc has no concept
: of --sysroot.
if $test "X$sysroot" != X; then
    case "$gccversion" in
    *) ;;
    *) dflt="$dflt --sysroot=$sysroot" ;;
    esac
fi

```

: Try to guess additional flags to pick up local libraries.

: Be careful not to append to a plain 'none'

```

case "$dflt" in
    none) dflt="" ;;
esac
for thisflag in $ldflags; do
    case "$thisflag" in
    -L*|-R*|-Wl,-R*)

        case " $dflt " in
        *" $thisflag "*) ;;
        *) dflt="$dflt $thisflag" ;;
        esac
        ;;
    esac
done

```

```

case "$dflt" in
    '| ') dflt='none' ;;
esac

```

```

case "$ldflags" in
    *-fstack-protector-strong*)
    case "$dflt" in
        *-fstack-protector-strong*) ;; # Don't add it again
        *) dflt="$dflt -fstack-protector-strong" ;;
    esac
    ;;
    *-fstack-protector*)
    case "$dflt" in
        *-fstack-protector*) ;; # Don't add it again
        *) dflt="$dflt -fstack-protector" ;;
    esac
    ;;
esac

```

rp="Any special flags to pass to \$ld to create a dynamically loaded library?"

. ./myread

```

case "$ans" in
?X: Use ' ' so that a subsequent Configure run preserves the old state.
  none) lddflags=' ' ;;
  *) lddflags="$ans" ;;
esac

```

```

cat <<EOM

```

Some systems may require passing special flags to \$cc to indicate that the resulting executable will use dynamic linking. To use no flags, say "none".

EOM

```

case "$ccdlflags" in
  ") case "$osname" in
    *linux*|hpux|gnu*)
dflt='-Wl,-E' ;;
    sunos)      dflt='none' ;;
    *)          dflt='none' ;;
esac ;;
  ') dflt='none' ;;
  *) dflt="$ccdlflags" ;;
esac
rp="Any special flags to pass to $cc to use dynamic linking?"
. ./myread
case "$ans" in
?X: Use ' ' so that a subsequent Configure run preserves the old state.
  none) ccdlflags=' ' ;;
  *) ccdlflags="$ans" ;;
esac
;;
?X: End of usedl=y section

```

```

  *) usedl="$undef"
ld='ld'
dlsrc='dl_none.xs'
lddlflags="
ccdlflags="
;;
esac

```

```

ld_can_script="$undef"
case "$bin_ELF$usedl" in
  $define$define)
# Abuse try.h and a.out names for neat cleanup
$cat >try.c <<EOM
void foo() {}
void bar() {}

```

```

EOM
$cat >try.h <<EOM
LIBTEST_42 {
global:
foo;
local: *;
};
EOM
if $cc $cccdlflags $ccdlflags $ccflags \
    $ldflags $lddlflags -o a.out try.c \
    -Wl,--version-script=try.h >/dev/null 2>&1 \
    && $stest -s a.out ; then
    echo "ld supports scripting" >&4
    ld_can_script="$define"
else

    echo "ld does not support scripting" >&4
fi
$rm_try
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/dlsrc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: modetype.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:25:07 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:modetype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:modetype:

?S: This variable defines modetype to be something like mode\_t,

?S: int, unsigned short, or whatever type is used to declare file

?S: modes for system calls.

?S:.

?C:Mode\_t:

?C: This symbol holds the type used to declare file modes

?C: for systems calls.

It is usually mode\_t, but may be

?C: int or unsigned short. It may be necessary to include <sys/types.h>

?C: to get any typedef'ed information.

?C:.

?H:#define Mode\_t \$modetype /\* file mode parameter for system calls \*/

?H:.

: see what type is used for mode\_t

set mode\_t modetype int stdio.h sys/types.h

eval \$typedef

dflt="\$modetype"

echo " "

rp="What type is used for file modes?"

./myread

modetype="\$ans"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/modetype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Oldsym.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Oldsym.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:06:58 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit follows the creation of the config.sh file. It adds some

?X: special symbols: defines from patchlevel.h file if any and PERL\_CONFIG\_SH,

?X: which is set to true. Then, we try to keep all the new symbols that

?X: may come from a hint

file or a previous config.sh file.

?X:

?MAKE:Oldsym: Config\_sh cat test hint src sed sort uniq perl\_patchlevel

?MAKE: -pick add \$@ %<

?T:PERL\_CONFIG\_SH PERL\_PATCHLEVEL sym tmp

?F:!UU

: add special variables

\$test -f \$src/patchlevel.h && \

awk '/^#define[ ]+PERL\_/ {printf "%s=%s\n", \$2, \$3}' \$src/patchlevel.h >>config.sh

echo "PERL\_PATCHLEVEL='\$perl\_patchlevel'" >>config.sh

echo "PERL\_CONFIG\_SH=true" >>config.sh

: propagate old symbols

if \$test -f UU/config.sh; then

?X: Make sure each symbol is unique in oldconfig.sh

<UU/config.sh \$sort | \$uniq >UU/oldconfig.sh

?X:

?X: All the symbols that appear twice come only from config.sh (hence the

?X: two config.sh in the command line). These symbols will be removed by

?X: the uniq -u command. The oldsyms file thus contains all the symbols

?X: that did not appear in the produced config.sh (Larry Wall).

?X:

?X: Do not touch the -u flag of uniq. This means you too, Jarkko.

?X:

\$sed -n 's/^\([a-zA-Z\_0-9]\*\)=.\*/\1/p' \

config.sh config.sh UU/oldconfig.sh

\

\$sort | \$uniq -u >UU/oldsyms

set X ` \$cat UU/oldsyms`

shift

case \$# in

0) ;;

\*)

\$cat <<EOM

Hmm...You had some extra variables I don't know about...I'll try to keep 'em...

EOM

echo ": Variables propagated from previous config.sh file." >>config.sh

for sym in ` \$cat UU/oldsyms`; do

echo " Propagating \$hint variable ""\$sym..."

eval `tmp=""\${sym}""`

echo "\$tmp" | \

sed -e "s/'\"/\"'/g" -e "s/^\\$sym=/'" -e "s/\$/'" >>config.sh

done

::

esac

fi

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/Oldsym.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwnam\_r getpwnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwnam\_r:

?S: This variable conditionally defines the HAS\_GETPWNAM\_R symbol,

?S: which indicates to the C program that the getpwnam\_r()

?S: routine is available.

?S:.

?S:getpwnam\_r\_proto:

?S: This variable encodes the prototype of getpwnam\_r.

?S: It is zero if d\_getpwnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwnam\_r

?S: is defined.

?S:.

?C:HAS\_GETPWNAM\_R:

?C: This symbol, if defined, indicates that the getpwnam\_r routine

?C: is available to

getpwnam re-entrantly.

?C:.

?C:GETPWNAM\_R\_PROTO:

?C: This symbol encodes the prototype of getpwnam\_r.

?C: It is zero if d\_getpwnam\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwnam\_r

?C: is defined.

?C:.

?H:#\$d\_getpwnam\_r HAS\_GETPWNAM\_R /\*\*/

?H:#define GETPWNAM\_R\_PROTO \$getpwnam\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getpwnam\_r\_proto

: see if getpwnam\_r exists

set getpwnam\_r d\_getpwnam\_r

eval \$inlibc

case "\$d\_getpwnam\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_pwd pwd.h"

case "\$d\_getpwnam\_r\_proto:\$usethreads" in



```

":define") d_getpwnam_r_proto=define
set d_getpwnam_r_proto getpwnam_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getpwnam_r_proto" in
define)
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*, char*, size_t, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBWR ;;
esac
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*,
char*, int, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBIR ;;
esac
case "$getpwnam_r_proto" in
"|0) try='struct passwd* getpwnam_r(const char*, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=S_CSBI ;;
esac
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBI ;;
esac
case "$getpwnam_r_proto" in
"|0) d_getpwnam_r=undef
getpwnam_r_proto=0
echo "Disabling getpwnam_r, cannot determine prototype." >&4 ;;
*) case "$getpwnam_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwnam_r_proto="REENTRANT_PROTO_$getpwnam_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "getpwnam_r has no prototype, not using it." >&4 ;;
esac
d_getpwnam_r=undef
getpwnam_r_proto=0
;;
esac
;;
*) getpwnam_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d\_getpwnam\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sethostent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_sethostent\_r sethostent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_sethostent\_r:

?S: This variable conditionally defines the HAS\_SETHOSTENT\_R symbol,

?S: which indicates to the C program that the sethostent\_r()

?S: routine is available.

?S:.

?S:sethostent\_r\_proto:

?S: This variable encodes the prototype of sethostent\_r.

?S: It is zero if d\_sethostent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_sethostent\_r

?S: is defined.

?S:.

?C:HAS\_SETHOSTENT\_R:

?C: This symbol, if defined, indicates that the sethostent\_r routine

?C: is

available to sethostent re-entrantly.

?C:.

?C:SETHOSTENT\_R\_PROTO:

?C: This symbol encodes the prototype of sethostent\_r.

?C: It is zero if d\_sethostent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_sethostent\_r

?C: is defined.

?C:.

?H:#\$d\_sethostent\_r HAS\_SETHOSTENT\_R /\*\*/

?H:#define SETHOSTENT\_R\_PROTO \$sethostent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_sethostent\_r\_proto

: see if sethostent\_r exists

set sethostent\_r d\_sethostent\_r

eval \$inlibc

case "\$d\_sethostent\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"

case "\$d\_sethostent\_r\_proto:\$usethreads" in

```

":define") d_sethostent_r_proto=define
set d_sethostent_r_proto sethostent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_sethostent_r_proto" in
define)
case "$sethostent_r_proto" in
"|0) try='int sethostent_r(int, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && sethostent_r_proto=I_ID ;;
esac
case "$sethostent_r_proto" in
"|0) try='void
sethostent_r(int, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && sethostent_r_proto=V_ID ;;
esac
case "$sethostent_r_proto" in
"|0) d_sethostent_r=undef
sethostent_r_proto=0
echo "Disabling sethostent_r, cannot determine prototype." >&4 ;;
* ) case "$sethostent_r_proto" in
REENTRANT_PROTO*) ;;
*) sethostent_r_proto="REENTRANT_PROTO_${sethostent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "sethostent_r has no prototype, not using it." >&4 ;;
esac
d_sethostent_r=undef
sethostent_r_proto=0
;;
esac
;;
*) sethostent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/threads/d_sethostent_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strtod.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 15:46:36 ram  
?RCS: patch61: created  
?RCS:  
?RCS:  
?MAKE:d\_strtod: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtod:  
?S: This variable conditionally defines the HAS\_STRTOD symbol, which  
?S: indicates to the C program that the strtod() routine is available  
?S: to provide better numeric string conversion than atof().  
?S:.  
?C:HAS\_STRTOD (STRTOD):  
?C: This symbol, if defined,  
indicates that the strtod routine is  
?C: available to provide better numeric string conversion than atof().  
?C:.  
?H:#\$d\_strtod HAS\_STRTOD /\*\*/  
?H:.  
?LINT:set d\_strtod  
: see if strtod exists  
set strtod d\_strtod  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strtod.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: End.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:04:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit serves as the goal which forces make to choose all the units that

?X: ask questions. The \$W on the ?MAKE: line is the list of all symbols wanted.

?X: To force any unit to be included, copy this unit to your private U directory

?X: and add the name of the unit desired to the ?MAKE: dependency line.

?X:

?MAKE:End: \$W

?MAKE: -pick add \$@ %<

?LINT:use \$W

: end of configuration

questions

echo " "

echo "End of configuration questions."

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/End.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:run to from targetarch targetdir targetmkdir targethost targetport \

usecrosscompile hostperl hostgenerate hostosname targetenv: \

src test rm echo sed mkdir cp chmod make touch

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usecrosscompile:

?S: This variable conditionally defines the USE\_CROSS\_COMPILE symbol,

?S: and indicates that Perl has been cross-compiled.

?S:.

?S:run:

?S: This variable contains the command used by Configure

?S: to copy and execute a cross-compiled executable in the

?S: target host. Useful and available only during Perl build.

?S: Empty string " if not cross-compiling.

?S:.

?S:from:

?S: This variable contains the command used by Configure

?S: to copy files from the target host. Useful

and available

?S: only during Perl build.

?S: The string '.' if not cross-compiling.  
?S:.  
?S:to:  
?S: This variable contains the command used by Configure  
?S: to copy to from the target host. Useful and available  
?S: only during Perl build.  
?S: The string '.' if not cross-compiling.  
?S:.  
?S:targetarch:  
?S: If cross-compiling, this variable contains the target architecture.  
?S: If not, this will be empty.  
?S:.  
?S:targetdir:  
?S: This variable contains a path that will be created on the target  
?S: host using targetmkdir, and then used to copy the cross-compiled  
?S: executables to. Defaults to '/tmp' if not set.  
?S:.  
?S:targetmkdir:  
?S: This variable contains the command used by Configure to create a  
?S: new directory on the target host.  
?S:.  
?S:targethost:  
?S: This variable contains the name of a separate host machine that  
?S: can be used to run compiled test programs and perl tests on.  
?S: Set to empty string if not in use.  
?S:.  
?S:targetport:  
?S: This variable contains the number  
?S: of a network port to be used to  
?S: connect to the host in targethost, if unset defaults to 22 for ssh.  
?S:.  
?S:hostperl:  
?S: This variable contains the path to a miniperl binary that can be  
?S: run on the host OS when cross-compiling. Useful and available only  
?S: during Perl build.  
?S: Empty string "" if not cross-compiling.  
?S:.  
?S:hostgenerate:  
?S: This variable contains the path to a generate\_uudmap binary that  
?S: can be run on the host OS when cross-compiling. Useful and  
?S: available only during Perl build.  
?S: Empty string "" if not cross-compiling.  
?S:.  
?S:hostosname:  
?S: This variable contains the original value of '\$^O' for hostperl  
?S: when cross-compiling. This is useful to pick the proper tools  
?S: when running build code in the host.  
?S: Empty string "" if not cross-compiling.

?S:.

?S:targetenv:

?S: If cross-compiling, this variable can be used to modify the  
 ?S: environment on the target system.

?S: However, how and where it's used, and even if it's used at all, is  
 ?S: entirely  
 dependent on both the transport mechanism (targetrun) and  
 ?S: what the target system is. Unless the relevant documentation says  
 ?S: otherwise, it is generally not useful.

?S:.

?C:USE\_CROSS\_COMPILE:

?C: This symbol, if defined, indicates that Perl is being cross-compiled.

?C:.

?C:PERL\_TARGETARCH:

?C: This symbol, if defined, indicates the target architecture  
 ?C: Perl has been cross-compiled to. Undefined if not a cross-compile.

?C:.

```
?H:?%<:#ifndef USE_CROSS_COMPILE
?H:?%<:#$usecrosscompile USE_CROSS_COMPILE /**/
?H:?%<:#define PERL_TARGETARCH "$targetarch" /**/
?H:?%<:#endif
```

?H:.

?D:targetenv="

?D:targethost="

?D:targetmkdir="

?T:croak pwd exe f q cwd file xxx env

?LINT:extern usecrosscompile

?LINT:extern cc

?LINT:extern usrinc

?LINT:change ar

?LINT:change nm

?LINT:change ranlib

?LINT:change src

?LINT:extern targetenv

?LINT:extern targetport

?LINT:extern targetdir

?LINT:extern targetuser

?LINT:change targetuser

?LINT:extern targetrun

?LINT:extern targetfrom

?LINT:extern  
 targetto

?LINT:change targetrun

?LINT:change targetfrom

?LINT:change targetto

?LINT:extern incpth

?LINT:extern libpth

?LINT:extern locincpth

```

?LINT:extern loclibpth
?LINT:change locincpth
?LINT:change loclibpth
?LINT:extern hostperl
?LINT:extern hostgenerate
?LINT:extern before_host
?LINT:change before_host
?LINT:extern hostosname
?LINT:extern multiarch
: Check for Cross-Compilation
?X: targethost and targetenv mainly set to allow ?S: documentation
?X: otherwise it could have been declared extern
if $test "X$targethost" = "X"; then
    targethost=""
fi
if $test "X$targetenv" = "X"; then
    targetenv=""
fi
case "$usecrosscompile" in
$define|true|[yY]*)
    $echo "Cross-compiling..."
    croak=""
    case "$cc" in
*_gcc*|*-g+*) # A cross-compiling gcc, probably.
        # arm-linux-androideabi-gcc -> arm-linux-androideabi
        # x86_64-w64-mingw32-gcc.exe -> x86_64-w64-mingw32
        targetarch=`$echo $cc|$sed 's/-g[c\+][c\+].*$/^`
        ar=`$echo $cc|$sed 's/-g[c\+][c\+]/-ar/^`
        # leave out ld,
        choosing it is more complex
        nm=`$echo $cc|$sed 's/-g[c\+][c\+]/-nm/^`
        ranlib=`$echo $cc|$sed 's/-g[c\+][c\+]/-ranlib/^`
        # We are in a weird spot. Just before us, some values
        # were 'saved', to be restored after the hints are
        # run. This means that the changes we made to ar,
        # nm and ranlib will get reverted.
        # To avoid that, we hijack the saving mechanism and
        # have it save our new values.
        for file in ar nm ranlib; do
            eval xxx=\$$file
            eval $file=$xxx$_exe
            eval _$file=$xxx
        done
        ;;
    esac
    case "$targetarch" in
    *) echo "Targetarch not defined." >&4; croak=y ;;
    *) echo "Using targetarch $targetarch." >&4 ;;

```



```

esac
case "$targethost" in
") echo "Targethost not defined." >&4; croak=n ;;
*) echo "Using targethost $targethost." >&4
esac
locincpth=' '
loclibpth=' '
case "$croak" in
y) echo "Cannot continue, aborting." >&4; exit 1 ;;
esac
: compile a host miniperl and generate_uudmap, unless we got passed them
if
$test "X$hostperl" = X; then
    echo "Building host miniperl and generate_uudmap binaries" >&4
    before_host=`pwd`
    cd ..
    cd $src
    src=`pwd`
    rm -rf $src/host
    mkdir $src/host
    cd $src/host
    $src/Configure -des -Dusedevel -Dmksymlinks
    $make miniperl
    case "$hostgenerate" in
    ") $make generate_uudmap
        hostgenerate=$src/host/generate_uudmap
        ;;
    "$undef") hostgenerate="
        ;;
    esac
    hostperl=$src/host/miniperl
    cd $before_host
fi
hostosname=`$hostperl -le 'print $^O`
;;
*)
    usecrosscompile="$undef"
    ;;
esac

: Define -Dtargethost=somecomputer to run compiled tests on another machine
case "$targethost" in
") echo "Checking for cross-compile" >&4
    case "$usecrosscompile$multiarch" in
        *$define*) echo "Skipping the try tests in the rest of Configure as no targethost was defined when cross-
compiling" >&4
            if [ -f Makefile ]; then
                echo

```

```

" "
    echo "Now you must ensure config.sh, config.h and the generated headers exist and run a $make."
else
    echo "Configure done."
fi
exit 0
;;
*) echo "No targethost for running compiler tests against defined, running locally" >&4
run="
to=:
from=:
;;
esac
;;
*) echo "Using targethost $targethost." >&4
case "$src" in
/*) run=$src/Cross/run
targetmkdir=$src/Cross/mkdir
to=$src/Cross/to
from=$src/Cross/from
;;
*) pwd=`$test -f ../Configure & cd ..; pwd`
run=$pwd/Cross/run
targetmkdir=$pwd/Cross/mkdir
to=$pwd/Cross/to
from=$pwd/Cross/from
;;
esac
case "$targetrun" in
") targetrun=ssh ;;
esac
case "$targetto" in
") targetto=scp ;;
esac
case "$targetfrom" in
") targetfrom=scp ;;
esac
run=$run-$targetrun
to=$to-$targetto
from=$from-$targetfrom
case "$targetdir" in
") targetdir=/tmp
echo "Guessing targetdir $targetdir."
>&4
;;
esac
case "$targetuser" in
") targetuser=root

```



```

*/Cross/mkdir)
  cat >$targetmkdir <<EOF
#!/bin/sh
$targetrun -p $targetport -l $targetuser $targethost "mkdir -p \${@"
EOF
  $chmod a+rx $targetmkdir
  ;;
*) echo "Unknown targetmkdir '$targetmkdir'" >&4
  exit 1
  ;;
esac
case
"$targetto" in
scp|rcp)
  cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\$f" in
/*)
  $targetmkdir \dirname \$f\
  $targetto -P $targetport -r $q \$f $targetuser@$targethost:\$f      2>/dev/null || exit 1
  ;;
*)
  $targetmkdir $targetdir/\dirname \$f\
  $targetto -P $targetport -r $q \$f $targetuser@$targethost:$targetdir/\$f 2>/dev/null || exit 1
  ;;
esac
done
exit 0
EOF
  ;;
cp) cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\$f" in
/*)
  $mkdir -p $targetdir/\dirname \$f\
  $cp \$f $targetdir/\$f || exit 1
  ;;
*)
  $targetmkdir $targetdir/\dirname \$f\
  $cp \$f $targetdir/\$f || exit 1
  ;;
esac
done
exit 0

```

```

EOF
;;
*) echo "Unknown targetto '$targetto'" >&4
  exit 1
;;
esac
case "$targetfrom" in
scp|rcp)
  cat >$from <<EOF
#!/bin/sh
for f in @$@
do
  $rm -f $f
  $targetfrom -P $targetport $q $targetuser@$targethost:$targetdir/$f . || exit 1
done
exit 0
EOF
;;
cp) cat >$from <<EOF
#!/bin/sh
for
  f in @$@
do
  $rm -f $f
  cp $targetdir/$f . || exit 1
done
exit 0
EOF
;;
*) echo "Unknown targetfrom '$targetfrom'" >&4
  exit 1
;;
esac
if $test ! -f $run; then
  echo "Target 'run' script '$run' not found." >&4
else
  $chmod a+rx $run
fi
if $test ! -f $to; then
  echo "Target 'to' script '$to' not found." >&4
else
  $chmod a+rx $to
fi
if $test ! -f $from; then
  echo "Target 'from' script '$from' not found." >&4
else
  $chmod a+rx $from
fi

```

```

if $test ! -f $run -o ! -f $to -o ! -f $from; then
    exit 1
fi
cat >&4 <<EOF
Using '$run' for remote execution,
and '$from' and '$to'
for remote file transfer.
EOF
;;
*) run="
to=:
from=:
usecrosscompile="$undef"
targetarch="
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/Cross.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: libflex.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libflex.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:57:48 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0.1.2 1994/05/06 15:07:02 ram
?RCS: patch23: now uses full library path instead of -l notation
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:13:25 ram
?RCS: patch16: un-obsolete this unit to allow smooth lex/flex compilations
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:59 ram
?RCS: Baseline for dist 3.0 worldwide
release.
?RCS:
?MAKE:libflex: Loc lex libpth _a
?MAKE: -pick add $@ %<

```

```

?S:libflex:
?S: This variable contains the argument to pass to the loader in order
?S: to get the flex/lex library routines. If there is no flex or flex
?S: library, it is null.
?S:.
?T:xxx
: see if we should include -lfl
echo " "
case "$lex" in
*flex)
xxx=`./loc libl$_a x $libpth`
case "$xxx" in
x)
echo "No flex library found." >&4
libflex="
;;
*)
echo "flex library found in $xxx." >&4
libflex="$xxx"
;;
esac
;;
*lex)
xxx=`./loc libl$_a x $libpth`
case "$xxx" in
x)
echo "No lex library found." >&4
libflex="
;;
*)
echo "lex library found in $xxx." >&4
libflex="$xxx"
;;
esac
;;
*)
echo "You don't seem to have lex or flex, so I won't look for libraries." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/libflex.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: etc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: etc.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:07 ram  
?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:etc etcexp: Getfile Loc Oldconfig

?MAKE: -pick add \$@ %<

?S:etc:  
?S: This variable holds the name of the directory in which the user wants  
?S: to put "administrative" executable images for the package in question.  
?S: It is most often a local directory such as /usr/local/etc. Programs  
?S: relying on this variable must be prepared to deal with

~name

?S: substitutions.

?S:.

?S:etcexp:

?S: This is the same as the etc variable, but is filename expanded at

?S: configuration time, for convenient use in makefiles.

?S:.

: determine where administrative executables go

case "\$etc" in

")

dflt=`./loc ./local/etc /usr/local/etc /local/etc /usr/etc /etc`

::

\*)

dflt="\$etc"

::

esac

fn=d~

rp='Where should the administrative executables go?'

./getfile

etc="\$ans"

etcexp="\$ansexp"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/dist/U/etc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dlerror.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi



?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_dlerror.U,v \$  
?RCS: Revision 3.0.1.2 1995/07/25 13:52:49 ram  
?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:11:23 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_dlerror: Inlibc runnm  
?MAKE: -pick add \$@ %<  
?S:d\_dlerror:  
?S: This variable conditionally defines the HAS\_DLERROR symbol, which  
?S: indicates  
to the C program that the dlerror() routine is available.  
?S:.  
?C:HAS\_DLERROR :  
?C: This symbol, if defined, indicates that the dlerror routine is  
?C: available to return a string describing the last error that  
?C: occurred from a call to dlopen(), dlclose() or dlsym().  
?C:.  
?H:#\$d\_dlerror HAS\_DLERROR /\*\*/  
?H:.  
?T: xxx\_runnm  
?LINT:set d\_dlerror  
?X: We don't permanently change runnm, but we do temporarily.  
?LINT: change runnm  
: see if dlerror exists  
?X: On NetBSD and FreeBSD, dlerror might be available, but it is in  
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not  
?X: use the nm extraction, but use a real compile and link test instead.  
xxx\_runnm="\$runnm"  
runnm=false  
set dlerror d\_dlerror  
eval \$inlibc  
runnm="\$xxx\_runnm"

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_dlerror.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llrintl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llrintl:

?S: This variable conditionally defines the HAS\_LLRLINTL symbol, which

?S: indicates to the C program that the llrintl() routine is available

?S: to return the long long value closest to a long double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LLRLINTL:

?C: This symbol, if defined, indicates that the llrintl routine is

?C: available to return the long long value closest to a long double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_llrintl HAS\_LLRLINTL /\*\*/

?H:.

?LINT:set d\_llrintl

: see if llrintl exists

set llrintl d\_llrintl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_llrintl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: locdist.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: locdist.U,v \$

?RCS: Revision 3.0.1.1 1994/05/06 15:09:20 ram

?RCS: patch23: added support for multi-state regions (WED)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:06 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:locdist orgdist citydist statedist multistatedist centrydist contdist: \

test newslibexp cat Myread Oldconfig

?MAKE: -pick add \$@ %<

?S:locdist:

?S: This variable contains the eventual value of the LOCDIST symbol,

?S: which

is the local organization's distribution name for news.

?S:.

?S:orgdist:

?S: This variable contains the eventual value of the ORGDIST symbol,

?S: which is the organization's distribution name for news.

?S:.

?S:citydist:

?S: This variable contains the eventual value of the CITYDIST symbol,

?S: which is the city's distribution name for news.

?S:.

?S:statedist:

?S: This variable contains the eventual value of the STATEDIST symbol,

?S: which is the state's or province's distribution name for news.

?S:.

?S:multistatedist:

?S: This variable contains the eventual value of the MULTISTATEDIST symbol,

?S: which is the news distribution code for multi-state region.

?S:.

?S:centrydist:

?S: This variable contains the eventual value of the CNTRYDIST symbol,

?S: which is the country's distribution name for news.

?S:.

?S:contdist:

?S: This variable contains the eventual value of the CONTDIST symbol,

?S: which is the continent's distribution name for news.

?S:.

?C:LOCDIST:

?C: This symbol contains the  
distribution name for the news system that

?C: restricts article distribution to the local organization.

?C:.

?C:ORGDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to the organization.

?C:.

?C:CITYDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to the city.

?C:.

?C:STATEDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to the state or province.

?C:.

?C:MULTISTATEDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to a multi-state region.

?C:.

?C:CNTRYDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to the country.

?C:.

?C:CONTDIST:

?C: This symbol contains the distribution name for the news system that

?C: restricts article distribution to the continent.

?C:.

?H:#define LOCDIST

```
"$locdist" /**/
```

?H:#define ORGDIST "\$orgdist" /\*\*/

?H:#define CITYDIST "\$citydist" /\*\*/

?H:#define MULTISTATEDIST "\$multistatedist" /\*\*/

?H:#define STATEDIST "\$statedist" /\*\*/

?H:#define CNTRYDIST "\$cntrydist" /\*\*/

?H:#define CONTDIST "\$contdist" /\*\*/

?H:.

: get the local distributions

```
$cat <<'EOH'
```

Distribution groups are the things you use on the Distribution line to limit where an article will go to. You are likely to be a member of several distribution groups, such as organization, city, state, province, country, continent, etc. For example, Los Angeles has the distribution code "la", New Jersey has the code "nj", and Europe has the code "eunet".

The categories you will be asked are:

local organization (Could be just one machine or a cluster or an office)

organization att, dec, kgb, ...

city la, ny, mosc, ...

state/province ca, nj, bc, ...

multi-state region pnw, ne, ...

country usa, can, rok, whatever

continent na (North America), asia, etc.

EOH

```
if $test
```

```
-f $newslibexp/distributions; then
```

```
case "$silent" in
```

```
true) ;;
```

```
*) dflt='Hit return to continue'
```

```
rp="
```

```
./myread
```

```

;;
esac
echo "Here is your distributions file:" >&4
echo " " >&4
$cat >&4 $newslibexp/distributions
echo " " >&4
fi
echo "Use 'none' for any distributions you don't have."
echo " "
case "$locdist" in
") dflt="none";;
*) dflt="$locdist";;
esac
rp="What is the distribution code for your local organization?"
./myread
locdist="$ans"
case "$orgdist" in
") dflt="none";;
*) dflt="$orgdist";;
esac
rp="What is the distribution code for your organization?"
./myread
orgdist="$ans"
case "$citydist" in
") dflt="none";;
*) dflt="$citydist";;
esac
rp="What is the distribution code for your city?"
./myread
citydist="$ans"
case "$statedist" in
") dflt="none";;
*) dflt="$statedist";;
esac
rp="What is the distribution code for your state/province?"
./myread
statedist="$ans"
case "$multistatedist" in
") dflt="none";;
*) dflt="$multistatedist";;
esac
rp="What is the
distribution code for your multi-state region?"
./myread
multistatedist="$ans"
case "$cntrydist" in
") dflt="none";;
*) dflt="$cntrydist";;

```

```

esac
rp="What is the distribution code for your country?"
./myread
cndydist="$ans"
case "$contdist" in
") dflt="none";;
*) dflt="$contdist";;
esac
rp="What is the distribution code for your continent?"
./myread
contdist="$ans"
$cat <<'EOM'

```

If you have any other distribution groups you will need to edit Pnews and newsetup to add them.

EOM

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/locdist.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endnent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_endnent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_endnent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_endnent:

?S: This variable conditionally defines HAS\_ENDNETENT if endnent() is

?S: available to close whatever was being used for network queries.

?S:.

?C:HAS\_ENDNETENT:

?C: This symbol, if defined, indicates that the endnent() routine is

?C: available to close whatever was being used for network

queries.

?C:.

?H:#\$d\_endnent HAS\_ENDNETENT /\*\*/

?H:  
?LINT:set d\_endnent  
: see if endnentent exists  
set endnentent d\_endnent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_endnent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getitimer: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getitimer:

?S: This variable conditionally defines the HAS\_GETITIMER symbol, which

?S: indicates to the C program that the getitimer() routine is available.

?S:.

?C:HAS\_GETITIMER:

?C: This symbol, if defined, indicates that the getitimer routine is

?C: available to return interval timers.

?C:.

?H:#\$d\_getitimer HAS\_GETITIMER /\*\*/

?H:.

?LINT:set d\_getitimer

: see if getitimer exists

set getitimer d\_getitimer

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_getitimer.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dosuid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Tye McQueen <tye@metronet.com> added safe setuid script checks.

?RCS:

?RCS: \$Log: d\_dosuid.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:33:03 ram

?RCS: patch61: moved unit to TOP via a ?Y: layout directive

?RCS: patch61: tell them /dev/fd is not about floppy disks

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:12:08 ram

?RCS: patch36: added checks for secure setuid scripts (Tye McQueen)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:55 ram

?RCS: Baseline for  
dist 3.0 netwide release.

?RCS:

?MAKE:d\_dosuid d\_suidsafe: cat contains ls rm test Myread Setvar \  
Oldconfig Guess package hint patchlevel

?MAKE: -pick add \$@ %<

?S:d\_suidsafe:

?S: This variable conditionally defines SETUID\_SCRIPTS\_ARE\_SECURE\_NOW

?S: if setuid scripts can be secure. This test looks in /dev/fd/.

?S:.

?S:d\_dosuid:

?S: This variable conditionally defines the symbol DOSUID, which

?S: tells the C program that it should insert setuid emulation code

?S: on hosts which have setuid #! scripts disabled.

?S:.

?C:SETUID\_SCRIPTS\_ARE\_SECURE\_NOW:

?C: This symbol, if defined, indicates that the bug that prevents

?C: setuid scripts from being secure is not present in this kernel.

?C:.

?C:DOSUID:

?C: This symbol, if defined, indicates that the C program should

?C: check the script that it is executing for setuid/setgid bits, and

?C: attempt to emulate setuid/setgid on systems that have disabled

?C: setuid #! scripts because the kernel can't do it securely.

?C: It is up to the package

?C: designer to make sure that this emulation

?C: is done securely. Among other things, it should do an fstat on

?C: the script it just opened to make sure it really is a setuid/setgid

?C: script, it should make sure the arguments passed correspond exactly

?C: to the argument on the #! line, and it should not trust any

?C: subprocesses to which it must pass the filename rather than the

?C: file descriptor of the script to be executed.

?C:.

?H:#\$d\_suidsafe SETUID\_SCRIPTS\_ARE\_SECURE\_NOW /\*\*/  
?H:#\$d\_dosuid DOSUID /\*\*/



```
?H:
?Y:TOP
?F:!reflect
?LINT: set d_suidsaf
: see if setuid scripts can be secure
$cat <<EOM
```

Some kernels have a bug that prevents setuid #! scripts from being secure. Some sites have disabled setuid #! scripts because of this.

First let's decide if your kernel supports secure setuid #! scripts. (If setuid #! scripts would be secure but have been disabled anyway, don't say that they are secure if asked.)

EOM

```
val="$undef"
if $test -d /dev/fd; then
echo "#!$ls" >reflect
chmod
+x,u+s reflect
./reflect >flect 2>&1
if $contains "/dev/fd" flect >/dev/null; then
echo "Congratulations, your kernel has secure setuid scripts!" >&4
val="$define"
else
$cat <<EOM
```

If you are not sure if they are secure, I can check but I'll need a username and password different from the one you are using right now. If you don't have such a username or don't want me to test, simply enter 'none'.

EOM

```
rp='Other username to test security of setuid scripts with?'
dflt='none'
./myread
case "$ans" in
n|none)
case "$d_suidsaf" in
") echo "I'll assume setuid scripts are *not* secure." >&4
dflt=n;;
"$undef")
echo "Well, the $hint value is *not* secure." >&4
dflt=n;;
*) echo "Well, the $hint value *is* secure." >&4
dflt=y;;
esac
;;
```

```

*)
$rm -f reflect flect
echo "#!$ls" >reflect
chmod +x,u+s reflect
echo >flect
chmod a+w flect
echo "'su" will (probably) prompt you for "'$ans's password."
su $ans -c './reflect
>flect'
if $contains "/dev/fd" flect >/dev/null; then
echo "Okay, it looks like setuid scripts are secure." >&4
dflt=y
else
echo "I don't think setuid scripts are secure." >&4
dflt=n
fi
;;
esac
rp='Does your kernel have *secure* setuid scripts?'
./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
fi
else
echo "I don't think setuid scripts are secure (no /dev/fd directory)." >&4
echo "(That's for file descriptors, not floppy disks.)"
val="$undef"
fi
set d_suidsafesafe
eval $setvar

```

```
$rm -f reflect flect
```

```

: now see if they want to do setuid emulation
if $test $patchlevel -lt 11; then
echo " "
val="$undef"
case "$d_suidsafesafe" in
"$define")
val="$undef"
echo "No need to emulate SUID scripts since they are secure here." >&4
;;
*)

```

```
$cat <<EOM
```

Some systems have disabled setuid scripts, especially systems where setuid scripts cannot be secure. On systems where setuid scripts have

been disabled, the setuid/setgid bits on scripts are currently useless. It is possible for \$package to detect those bits and emulate setuid/setgid in a secure fashion. This emulation will only work if setuid scripts have been disabled in your kernel.

EOM

```
case "$d_dosuid" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
rp="Do you want to do setuid/setgid emulation?"
. ./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
;;
esac
set d_dosuid
eval $setvar
else
  case "$d_dosuid" in
"$define")
cat >&4 <<EOH
```

SUID emulation has been removed for 5.12  
Please re-run Configure without -Dd\_dosuid

EOH

```
exit 1;
;;
esac
d_dosuid=undef
fi
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d_dosuid.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_usleep.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: d\_usleep.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:07:53 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_usleep: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_usleep:  
 ?S: This variable conditionally defines HAS\_USLEEP if usleep() is  
 ?S: available to do high granularity sleeps.  
 ?S:.  
 ?C:HAS\_USLEEP (USLEEP):  
 ?C: This symbol, if defined, indicates that the usleep routine is  
 ?C: available to let the process sleep on a sub-second accuracy.  
 ?C:.  
 ?H:#\$d\_usleep  
 HAS\_USLEEP /\*\*/  
 ?H:.  
 ?LINT:set d\_usleep  
 : see if usleep exists  
 set usleep d\_usleep  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_usleep.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_difftime.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
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 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
 ?RCS:  
 ?RCS: \$Log: d\_difftime.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/08/29 16:07:31 ram  
 ?RCS: patch32: created by ADO  
 ?RCS:  
 ?MAKE:d\_difftime: Inlibc  
 ?MAKE: -pick add \$@ %<

?S:d\_difftime:

?S: This variable conditionally defines the HAS\_DIFFTIME symbol, which

?S: indicates to the C program that the difftime() routine is available.

?S:.

?C:HAS\_DIFFTIME :

?C: This symbol, if defined, indicates that

the difftime routine is

?C: available.

?C:.

?H:#\$d\_difftime HAS\_DIFFTIME /\*\*/

?H:.

?LINT:set d\_difftime

: see if difftime exists

set difftime d\_difftime

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_difftime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: cf\_email.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:05:06 ram

?RCS: patch16: created

?RCS:

?RCS:

?MAKE:cf\_email: cat cf\_by test myhostname mydomain Oldconfig Myread

?MAKE: -pick add \$@ %<

?S:cf\_email:

?S: Electronic mail address of the person who ran Configure. This can be

?S: used by units that require the user's e-mail, like MailList.U.

?S:.

?T:cont maildomain

?LINT:extern MAILDOMAIN

: determine the e-mail address of the user who is running us

\$cat <<EOM

I need to get your e-mail address

in Internet format if possible, i.e.  
something like user@host.domain. Please answer accurately since I have  
no easy means to double check it. The default value provided below  
is most probably close to reality but may not be valid from outside  
your organization...

EOM

```
cont=x
while test "$cont"; do
case "$MAILDOMAIN" in
")
if $test -s /etc/mailname; then
maildomain=`$cat /etc/mailname`
else
maildomain="$myhostname$mydomain"
fi
;;
*) maildomain="$MAILDOMAIN";;
esac
case "$cf_email" in
") dflt="$cf_by@$maildomain";;
*) dflt="$cf_email";;
esac
rp='What is your e-mail address?'
./myread
cf_email="$ans"
case "$cf_email" in
*@*.**) cont="";;
*)
rp='Address does not look like an Internet one. Use it anyway?'
case "$fastread" in
yes) dflt=y ;;
*) dflt=n ;;
esac
./myread
case "$ans" in
y*) cont="";;
*) echo " " ;;
esac
;;
esac
done
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/cf_email.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_setitimer: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setitimer:  
?S: This variable conditionally defines the HAS\_SETITIMER symbol, which  
?S: indicates to the C program that the setitimer() routine is available.  
?S:.  
?C:HAS\_SETITIMER:  
?C: This symbol, if defined, indicates that the setitimer routine is  
?C: available to set interval timers.  
?C:.  
?H:#\$d\_setitimer HAS\_SETITIMER /\*\*/  
?H:.  
?LINT:set d\_setitimer  
: see if setitimer exists  
set setitimer d\_setitimer  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1-rc1/U/perl/d\_setitimer.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpagsz.U,v 3.0.1.1 1994/10/29 16:13:10 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_getpagsz.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:13:10 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:14 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_getpagsz: Compile Oldconfig Myread Inlibc Findhdr  
?MAKE: -pick add \$@ %<

?S:d\_getpagsz:  
?S: This variable conditionally defines HAS\_GETPAGESIZE if getpagesize()  
?S: is available to get the system page size.  
?S:.  
?C:HAS\_GETPAGESIZE  
(GETPAGESIZE):  
?C: This symbol, if defined, indicates that the getpagesize system call  
?C: is available to get system page size, which is the granularity of  
?C: many memory management calls.  
?C:.  
?H:#\$d\_getpagsz HAS\_GETPAGESIZE /\*\*/  
?H:.  
?LINT:set d\_getpagsz  
: see if getpagesize exists  
set getpagesize d\_getpagsz  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/d\_getpagsz.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:usemorebits: Setvar  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:usemorebits:  
?S: This variable conditionally defines the USE\_MORE\_BITS symbol,  
?S: and indicates that explicit 64-bit interfaces and long doubles  
?S: should be used when available.  
?S:.  
?C:USE\_MORE\_BITS:  
?C: This symbol, if defined, indicates that 64-bit interfaces and  
?C: long doubles should be used when available.  
?C:.  
?H:?%<:#ifndef USE\_MORE\_BITS  
?H:?%<:#\$usemorebits USE\_MORE\_BITS /\*\*/  
?H:?%<:#endif  
?H:.  
?LINT:extern use64bitint  
?LINT:change use64bitint  
?LINT:extern uselongdouble



```
?LINT:change uselongdouble
: Check if morebits is requested
case "$usemorebits" in
"$define"|true|[yY]*)
use64bitint="$define"
uselongdouble="$define"
usemorebits="$define"
;;
*) usemorebits="$undef"
;;
esac
```

Found

in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/usemorebits.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getsent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_getsent.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_getsent: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_getsent:
```

```
?S: This variable conditionally defines HAS_GETSERVENT if getservernt() is
```

```
?S: available to look up network services in some data base or another.
```

```
?S:.
```

```
?C:HAS_GETSERVENT:
```

```
?C: This symbol, if defined, indicates that the getservernt() routine is
```

```
?C: available to look up network services in some
```

```
data base or another.
```

```
?C:.
```

```
?H:#$d_getsent HAS_GETSERVENT /**/
```

```
?H:.
```

```
?LINT:set d_getsent
```

```
: see if getservernt exists
```

```
set getservernt d_getsent
```

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/d\_getsent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: registers.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: registers.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:19:41 ram

?RCS: patch61: removed empty ?LINT lines

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:28:33 ram

?RCS: patch36: call ./Cpplib explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:41 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:registers reg1 reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11 \  
reg12 reg13 reg14 reg15 reg16: awk rm Cpplib

Myread Oldconfig

?MAKE: -pick add \$@ %<

?S:registers:

?S: This variable contains the number of register declarations paid

?S: attention to by the C compiler.

?S:.

?S:reg1:

?S: This variable, along with reg2, reg3, etc. contains the eventual

?S: value for the symbols register1, register2, register3, etc. It has

?S: either the value "register" or is null.

?S:.

?C:register1:

?C: This symbol, along with register2, register3, etc. is either the word

?C: "register" or null, depending on whether the C compiler pays attention

?C: to this many register declarations. The intent is that you don't have

?C: to order your register declarations in the order of importance, so you

?C: can freely declare register variables in sub-blocks of code and as

?C: function parameters. Do not use register<n> more than once per routine.

?C:.

```

?LINT:describe reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11
?LINT:describe reg12 reg13 reg14 reg15 reg16
?LINT:known register2 register3 register4 register5 register6
register7
?LINT:known register8 register9 register10 register11 register12 register13
?LINT:known register14 register15 register16
?H:#define register1 $reg1 /**/
?H:#define register2 $reg2 /**/
?H:#define register3 $reg3 /**/
?H:#define register4 $reg4 /**/
?H:#define register5 $reg5 /**/
?H:#define register6 $reg6 /**/
?H:#define register7 $reg7 /**/
?H:#define register8 $reg8 /**/
?H:#define register9 $reg9 /**/
?H:#define register10 $reg10 /**/
?H:#define register11 $reg11 /**/
?H:#define register12 $reg12 /**/
?H:#define register13 $reg13 /**/
?H:#define register14 $reg14 /**/
?H:#define register15 $reg15 /**/
?H:#define register16 $reg16 /**/
?H:.
?F:!.foo
: see how many register declarations we want to use
case "$registers" in
")
if ./Cppsym vax; then
dflt=6
elif ./Cppsym sun mc68000 mips; then
dflt=10
elif ./Cppsym pyr; then
dflt=14
elif ./Cppsym ns32000 ns16000; then
dflt=5
elif ./Cppsym $smallmach; then
dflt=3
else
: if you have any other numbers
for me, please send them in
dflt=6
fi;;
*) dflt=$registers ;;
esac
?LINT:set reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11
?LINT:set reg12 reg13 reg14 reg15 reg16
cat <<EOM

```

Different C compilers on different machines pay attention to different numbers of register declarations. About how many register declarations in each routine does your C compiler pay attention to? (OK to guess)

EOM

```
rp="Maximum register declarations?"
./myread
registers=$ans
reg1="
$awk "BEGIN { for (i=1; i<=16; i++) printf \"reg%d=\\n\\\", i} \" \
</dev/null >.foo
./foo
$awk "BEGIN { for (i=1; i<=$registers; i++) printf \"reg%d=register\\n\\\", i} \" \
</dev/null >.foo
./foo
$rm -f .foo
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/registers.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strncmp.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strncmp.U,v \$

?RCS: Revision 3.0.1.2 1994/05/06 14:54:34 ram

?RCS: patch23: fixed a typo (WED)

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:04:39 ram

?RCS: patch10: created (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_strncmp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strncmp:

?S: This variable conditionally defines the HAS\_STRCASECMP symbol, which

?S: indicates to the C program

that the strcasecmp() routine is available

?S: for case-insensitive string compares.

?S:.

?C:HAS\_STRCASECMP:

?C: This symbol, if defined, indicates that the strcasecmp() routine is

?C: available for case-insensitive string compares.

?C:.

?H:#\$d\_strerror HAS\_STRCASECMP /\*\*/

?H:.

?LINT:set d\_strerror

: see if strcasecmp exists

set strcasecmp d\_strerror

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/d\_strerror.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2019 Karl Williamson

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_towlower: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_towlower:

?S: This variable conditionally defines the HAS\_TOWLOWER symbol, which

?S: indicates to the C program that the tolower() routine is available.

?S:.

?C:HAS\_TOWLOWER:

?C: This symbol, if defined, indicates that the tolower () routine is

?C: available to do case conversion.

?C:.

?H:#\$d\_towlower HAS\_TOWLOWER /\*\*/

?H:.

?LINT:set d\_towlower

: see if tolower exists

set tolower d\_towlower

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_towlower.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: myhostname.U,v 3.0.1.3 1997/02/28 16:15:55 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: myhostname.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:15:55 ram

?RCS: patch61: improved hostname lookup by using ypmatch when NIS is used

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:25:43 ram

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS: patch36: now uses new Tr unit to convert to/from lowercase

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:06:20 ram

?RCS: patch30: now a little more clever for domain name guessing

?RCS:

?RCS:

Revision 3.0 1993/08/18 12:09:18 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:myhostname phostname mydomain: contains sed test Myread Oldconfig \  
Guess Loc awk echo sort uniq +usrinc rm hostcat Tr

?MAKE: -pick add \$@ %<

?S:myhostname (hostname):

?S: This variable contains the eventual value of the MYHOSTNAME symbol,  
?S: which is the name of the host the program is going to run on.

?S: The domain is not kept with hostname, but must be gotten from mydomain.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:mydomain:

?S: This variable contains the eventual value of the MYDOMAIN symbol,  
?S: which is the domain of the host the program is going to run on.

?S: The domain must be appended to myhostname to form a complete host name.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:phostname:

?S: This variable contains the eventual value of the PHOSTNAME symbol,  
?S: which is a command that can be fed to popen()  
to get the host name.

?S: The program should probably not presume that the domain is or isn't  
?S: there already.

?S:.

?C:MYHOSTNAME (HOSTNAME):

?C: This symbol contains name of the host the program is going to run on.

?C: The domain is not kept with hostname, but must be gotten from MYDOMAIN.

?C: The dot comes with MYDOMAIN, and need not be supplied by the program.

?C: If gethostname() or uname() exist, MYHOSTNAME may be ignored. If MYDOMAIN

?C: is not used, MYHOSTNAME will hold the name derived from PHOSTNAME.

?C:.

?C:MYDOMAIN:

?C: This symbol contains the domain of the host the program is going to

?C: run on. The domain must be appended to HOSTNAME to form a complete

?C: host name. The dot comes with MYDOMAIN, and need not be supplied by

?C: the program. If the host name is derived from PHOSTNAME, the domain

?C: may or may not already be there, and the program should check.

?C:.

```
?H:#define MYHOSTNAME "$myhostname" /**/
?H:#define MYDOMAIN "$mydomain" /**/
?H:
?LINT:extern osname
?T:cont
i tans tmp_re
: now get the host name
echo " "
echo "Figuring out host name..." >&4
case "$myhostname" in
") cont=true
echo 'Maybe "hostname" will work...'
if tans=`sh -c hostname 2>&1` ; then
myhostname=$tans
phostname=hostname
cont="
fi
;;
*) cont="";;
esac
if $test "$cont"; then
if ./xenix; then
echo 'Oh, dear. Maybe "/etc/systemid" is the key...'
if tans=`cat /etc/systemid 2>&1` ; then
myhostname=$tans
phostname='cat /etc/systemid'
echo "Whadyaknow. Xenix always was a bit strange..."
cont="
fi
elif $test -r /etc/systemid; then
echo "(What is a non-Xenix system doing with /etc/systemid?)"
fi
fi
if $test "$cont"; then
echo 'No, maybe "uname -l" will work...'
```

```

if tans=`sh -c 'uname -l 2>&1` ; then
  myhostname=$tans
  phostname='uname -l'
else
  echo 'Strange. Maybe "uname -n" will work...'
  if tans=`sh -c 'uname -n 2>&1` ; then
    myhostname=$tans
    phostname='uname -n'
  else
    echo 'Oh well, maybe I can mine it out of whoami.h...'
    if
      tans=`sh -c '$contains' sysname $usrinc/whoami.h 2>&1` ; then
        myhostname=`echo "$tans" | $sed 's/^(.*)$/1/'`
        phostname="sed -n -e ""'/sysname/s/^(.*)$/1/{' -e p -e q -e '}' <$usrinc/whoami.h"
      else
        case "$myhostname" in
          ") echo "Does this machine have an identity crisis or something?"
            phostname="";
          *)
            echo "Well, you said $myhostname before..."
            phostname='echo $myhostname';
        esac
      fi
    fi
  fi
  case "$myhostname" in
    ") myhostname=noname ;;
  esac
  : you do not want to know about this
  set $myhostname
  myhostname=$1

  : verify guess
  if $test "$myhostname" ; then
    dflt=y
    rp='Your host name appears to be "$myhostname". Right?'
    . ./myread
    case "$ans" in
      y*) ;;
      *) myhostname="";
    esac
  fi

  : bad guess or no guess
  while $test "X$myhostname" = X ; do
    dflt="
    rp="Please type the (one word) name of your host:"

```



```
. /myread
myhostname="$ans"
done
```

```
: translate upper to lower if necessary
case "$myhostname" in
*[A-Z]*)
echo
"(Normalizing case in your host name)"
myhostname=`echo $myhostname | ./tr '[A-Z]' '[a-z]'`
;;
esac
```

?X: Do not ask for domain name if this is not used later on. In that

?X: case, the hostname may keep its domain name, but it doesn't matter.

@if MYDOMAIN || mydomain

```
case "$myhostname" in
*.*)
dflt=`expr "X$myhostname" : "X[^.]*\(\..*\)"`
myhostname=`expr "X$myhostname" : "X\([^.*]\)\. "`
echo "(Trimming domain name from host name--host name is now $myhostname)"
;;
*) case "$mydomain" in
")
```

?X:

?X: There is currently no way to say we do not want hostcat if mydomain is not

?X: used. One way to achieve that would be to put that code in a mydomain.U

?X: unit. However, we want to stick the sanity checks right after the domain

?X: name computation, or if none is done, right after the hostname computation.

?X:

```
{
```

?X: If we use NIS, try ypmatch.

```
test "X$hostcat" = "Xypcat hosts" &&
ypmatch "$myhostname" hosts 2>/dev/null \
$sed -e 's/[ ]*#.*//; s/$/ /' > hosts
&& \
$test -s hosts
} || {
```

?X: Extract only the relevant hosts, reducing file size,

?X: remove comments, insert trailing space for later use.

?X: Test to be sure we \*have\* a hostcat command. os390 doesn't.

```
test "X$hostcat" != "X" &&
$hostcat | $sed -n -e "s/[ ]*#.*//; s\$/ /
/[ ]$myhostname[ . ]/p" > hosts
}
```

```
tmp_re="[ .]"
```

```
if $test -f hosts; then
```

```
$test x`$awk "/[0-9].*[ ]$myhostname$tmp_re/ { sum++ }
```

```

        END { print sum }" hosts` = x1 || tmp_re="[ ]"
dflt=`$awk "/[0-9].*[ ]$myhostname$tmp_re/ {for(i=2; i<=NF;i++) print \\$i}" \
hosts | $sort | $uniq | \
$sed -n -e "s/$myhostname\\.([a-zA-Z0-9_])\1/p"
case ` $echo X$dflt` in
X*\ *) echo "(Several hosts in the database matched hostname)"
dflt=.
;;
X.) echo "(You do not have fully-qualified names in the hosts database)"
;;
esac
else
echo "(I cannot locate a hosts database anywhere)"
dflt=.
fi
case "$dflt" in
.)
tans=`./loc resolv.conf X /etc /usr/etc`
if
$test -f "$tans"; then
echo "(Attempting domain name extraction from $tans)"
?X: Look for either a search or a domain directive.
dflt=`$sed -n -e 's// /g' \
-e 's/^search *([^\ ]*).*\1/p' $tans \
-e 1q 2>/dev/null`
case "$dflt" in
.) dflt=`$sed -n -e 's// /g' \
-e 's/^domain *([^\ ]*).*\1/p' $tans \
-e 1q 2>/dev/null`
;;
esac
fi
;;
esac
case "$dflt" in
.) echo "(No help from resolv.conf either -- attempting clever guess)"
dflt=`sh -c domainname 2>/dev/null`
case "$dflt" in
") dflt='.';
.nis.*|.yp.*|.main.*) dflt=`echo $dflt | $sed -e 's/^\.[^.]*/'`;
esac
;;
esac
case "$dflt$osname" in
.os390) echo "(Attempting domain name extraction from //SYS1.TCPPARMS(TCPDATA))"
dflt=`awk '/^DOMAINORIGIN/ {print $2}' '//SYS1.TCPPARMS(TCPDATA)' 2>/dev/null`
;;
esac

```

```

case "$dfld" in
.) echo "(Lost all hope -- silly guess then)"
  dfld='.nonet'
  ;;
esac
$rm -f hosts
;;
*)
dfld="$mydomain";;
esac;;
esac
echo " "
rp="What is your domain name?"
./myread
tans="$ans"
case "$ans" in
") ;;
.*) ;;
*) tans=".${ans}";;
esac
mydomain="$tans"

: translate upper to lower if necessary
case "$mydomain" in
*[A-Z]*)
echo "(Normalizing case in your domain name)"
mydomain=`echo $mydomain | ./tr '[A-Z]' '[a-z]'`
;;
esac

@end
: a little sanity check here
case "$phostname" in
") ;;
*)
case ` $phostname | ./tr '[A-Z]' '[a-z]'` in
$myhostname$mydomain|$myhostname) ;;
*)
case "$phostname" in
sed*)
echo "(That doesn't agree with your whoami.h file, by the way.)"
;;
*)
echo "(That doesn't agree with your $phostname command, by the way.)"
;;
esac
;;
esac

```

```
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/modified/myhostname.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

?MAKE:d\_hasmntopt: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_hasmntopt:

?S: This variable conditionally defines the HAS\_HASMNTOPT symbol, which

?S: indicates to the C program that the hasmntopt() routine is available

?S: to query the mount options of file systems.

?S:.

?C:HAS\_HASMNTOPT:

?C: This symbol, if defined, indicates that the hasmntopt routine is

?C: available to query the mount options of file systems.

?C:.

?H:#\$d\_hasmntopt HAS\_HASMNTOPT /\*\*/

?H:.

?LINT:set d\_hasmntopt

: see if hasmntopt exists

set hasmntopt d\_hasmntopt

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d_hasmntopt.U
```

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?RCS:

?MAKE:d\_round: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_round:

?S: This variable conditionally defines the HAS\_ROUND symbol, which

?S: indicates to the C program that the round() routine is available.

?S:.

?C:HAS\_ROUND:

?C: This symbol, if defined, indicates that the round routine is

?C: available to round to nearest integer, away from zero.

?C:.

?H:#\$d\_round HAS\_ROUND /\*\*/

?H:.

?LINT:set d\_round

: see if round exists

set round d\_round

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/1788054869\_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/perl/d\_round.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: errnolist.U,v 3.0.1.2 1997/02/28 15:48:01 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: errnolist.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:48:01 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: likewise for .o replaced by \$\_o

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:10:54 ram

?RCS: patch16: created

?RCS:

?MAKE:errnolist errnolist\_SH errnolist\_a errnolist\_c errnolist\_o: cat \

Compile +d\_sysernlst\_a\_o

?MAKE: -pick add \$@ %<

?S:errnolist:

?S: This variable holds the base name of a file containing the

?S: definition

of the sys\_errnolist array, if the C library

?S: doesn't provide it already. Otherwise, its value is empty.

?S: The following lines should be included in your Makefile.SH:

?S:

?S: case "\$errnolist" in

?S: ") ;;

?S: \*)

?S: \$spitshell >>Makefile <<!GROK!THIS!

?S: \$errnolist\_c: \$errnolist\_SH \$errnolist\_a

```

?S: sh ./$errnolist_SH
?S:
?S: !GROK!THIS!
?S: ;;
?S: esac
?S:
?S: You may define the 'errnolist' variable in your Myinit.U if you
?S: wish to override its default value "errnolist".
?S:.
?S:errnolist_SH:
?S: This is the name of a file which will generate errnolisc.
?S:.
?S:errnolist_a:
?S: This is the name of the awk script called by errnolist_SH.
?S:.
?S:errnolist_c:
?S: This is the name of a generated C file which provides the
?S: definition of the sys_errnolist array.
?S:.
?S:errnolist_o:
?S: This is the name of the object file which provides the
?S: definition of the sys_errnolist array, if the C library
?S: doesn't provide it already. Otherwise, its value is
empty.
?S:.
?INIT:errnolist=errnolist
: check for sys_errnolist
@if d_sysernlst || HAS_SYS_ERRNOLIST
case "$d_sysernlst" in
"$define")
    errnolist="
    errnolist_SH="
    errnolist_a="
    errnolist_c="
    errnolist_o="
    ;;
*)
    echo " "
    echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
    errnolist_SH=$errnolist.SH
    errnolist_a=$errnolist$_a
    errnolist_c=$errnolist.c
    errnolist_o=$errnolist$_o
    ;;
esac
@else
echo " "
$cat <<EOM

```

Checking to see if your C library provides us with sys\_errnolist[]...

EOM

```
$cat >errnolist.c <<'EOCP'
```

```
extern char *sys_errnolist[];
```

```
int main() {
```

```
    char *p0 = sys_errnolist[0];
```

```
    char *p1 = sys_errnolist[1];
```

```
    return (p0 == p1); /* Make sure they're not optimized away */
```

```
}
```

EOCP

```
set errnolist
```

```
if eval $compile; then
```

```
    echo "It does."
```

```
    errnolist=""
```

```
    errnolist_SH=""
```

```
    errnolist_a=""
```

```
    errnolist_c=""
```

```
    errnolist_o=""
```

```
else
```

```
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
```

```
    errnolist_SH=$errnolist.SH
```

```
    errnolist_a=$errnolist$_a
```

```
    errnolist_c=$errnolist.c
```

```
    errnolist_o=$errnolist$_o
```

```
fi
```

```
@end
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/U/compline/errnolist.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_pwd.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:10:57 ram

?RCS: patch56: use setvar so hint file values can override our guesses (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:03:27 ram

?RCS: patch23: had forgotten cppminus in cppstd in test (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:25 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks whether there is a pwd system or not

?X:

?MAKE:i\_pwd d\_pwquota d\_pwage d\_pwchange d\_pwclass d\_pwexpire d\_pwcomment:  
 \  
 contains rm cppstd in cppflags cppminus Inhdr Findhdr Setvar

?MAKE: -pick add \$@ %<

?S:i\_pwd:

?S: This variable conditionally defines I\_PWD, which indicates  
 ?S: to the C program that it should include <pwd.h>.

?S:.

?S:d\_pwquota:

?S: This variable conditionally defines PWQUOTA, which indicates  
 ?S: that struct passwd contains pw\_quota.

?S:.

?S:d\_pwage:

?S: This variable conditionally defines PWAGE, which indicates  
 ?S: that struct passwd contains pw\_age.

?S:.

?S:d\_pwchange:

?S: This variable conditionally defines PWCHANGE, which indicates  
 ?S: that struct passwd contains pw\_change.

?S:.

?S:d\_pwclass:

?S: This variable conditionally defines PWCLASS, which indicates  
 ?S: that struct passwd contains pw\_class.

?S:.

?S:d\_pwexpire:

?S: This variable conditionally defines PWEXPIRE, which indicates  
 ?S: that struct passwd contains pw\_expire.

?S:.

?S:d\_pwcomment:

?S: This variable conditionally defines PWCOMMENT, which indicates  
 ?S: that struct passwd contains pw\_comment.

?S:.

?C:I\_PWD:

?C: This symbol,  
 if defined, indicates to the C program that it should  
 ?C: include <pwd.h>.

?C:.

?C:PWQUOTA:

?C: This symbol, if defined, indicates to the C program that struct passwd  
 ?C: contains pw\_quota.



```

?C:.
?C:PWAGE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_age.
?C:.
?C:PWCHANGE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_change.
?C:.
?C:PWCLASS:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_class.
?C:.
?C:PWEXPIRE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_expire.
?C:.
?C:PWCOMMENT:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_comment.
?C:.
?H:#$i_pwd I_PWD /**/
?H:#$d_pwquota PWQUOTA /**/
?H:#$d_pwage PWAGE /**/
?H:#$d_pwchange PWCHANGE /**/
?H:#$d_pwclass PWCLASS /**/
?H:#$d_pwexpire PWEXPIRE /**/
?H:#$d_pwcomment PWCOMMENT /**/
?H:.
?LINT: set i_pwd d_pwquota
d_pwage d_pwchange d_pwclass d_pwexpire d_pwcomment
?T:xxx
: see if this is a pwd.h system
set pwd.h i_pwd
eval $inhdr

case "$i_pwd" in
$define)
xxx=`./findhdr pwd.h`
$cppstdin $cppflags $cppminus < $xxx >$$.h

if $contains 'pw_quota' $$.h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwquota
eval $setvar

```

```
if $contains 'pw_age' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwage
eval $setvar
```

```
if $contains 'pw_change' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwchange
eval $setvar
```

```
if $contains 'pw_class' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwclass
eval $setvar
```

```
if $contains 'pw_expire' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwexpire
eval $setvar
```

```
if $contains 'pw_comment' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwcomment
eval $setvar
```

```
$rm -f $$h
;;
*)
val="$undef";
set
d_pwquota; eval $setvar
set d_pwage; eval $setvar
```

```
set d_pwchange; eval $setvar
set d_pwclass; eval $setvar
set d_pwexpire; eval $setvar
set d_pwcomment; eval $setvar
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/1788054869_1694044661.2614672/0/perl-5-32-1-orig-regen-configure-1-tar-gz/metaconfig-5.32.1~rc1/dist/U/i_pwd.U
```

# 1.568 login 4.8.1-1

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# 1.571 gcc-10-base 10.2.1-6

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Julian Seward, jseward@bzip.org  
bzip2/libbzip2 version 1.0.6 of 6 September 2010

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DRuntime: Runtime Library for the D Programming Language

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d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

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Version 2, June 1991

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[This is the first released version of the library GPL. It is  
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#### Preamble

=====

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Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

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Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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Julian Seward, [jseward@bzip.org](mailto:jseward@bzip.org)  
bzip2/libbzip2 version 1.0.6 of 6 September 2010

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DRuntime: Runtime Library for the D Programming Language

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Version 2, June 1991

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## 1.574 libcom-err 1.46.2-2

### 1.574.1 Available under license :

This package was added to the e2fsprogs debian source package by Theodore Ts'o <tytso@mit.edu> on Sat Mar 15 15:33:37 EST 2003

It is part of the main e2fsprogs distribution, which can be found at:

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Sources were obtained from <http://sourceforge.net/projects/e2fsprogs>

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#

# This is a Makefile stub which handles the creation of BSD shared  
# libraries.

#

# In order to use this stub, the following makefile variables must be defined.

#

# BSDLIB\_VERSION = 1.0

# BSDLIB\_IMAGE = libce

# BSDLIB\_MYDIR = et

# BSDLIB\_INSTALL\_DIR = \$(SHLIBDIR)

#

all:: image

real-subdirs:: Makefile

@echo " MKDIR pic"

@mkdir -p pic

BSD\_LIB = \$(BSDLIB\_IMAGE).so.\$(BSDLIB\_VERSION)

BSDLIB\_PIC\_FLAG = -fpic

image: \$(BSD\_LIB)

\$(BSD\_LIB): \$(OBJS)

(cd pic; ld -Bshareable -o \$(BSD\_LIB) \$(LDFLAGS\_SHLIB) \$(OBJS))

\$(MV) pic/\$(BSD\_LIB) .

\$(RM) -f ../\$(BSD\_LIB)

(cd ..; \$(LN) \$(LINK\_BUILD\_FLAGS) \

```
`echo $(my_dir) | sed -e 's;lib/;;'/${BSD_LIB} ${BSD_LIB})
```

```
install-shlibs install:: $(BSD_LIB)
```

```
@echo " INSTALL_PROGRAM ${BSDLIB_INSTALL_DIR}/${BSD_LIB}"
```

```
@${INSTALL_PROGRAM} ${BSD_LIB} \
```

```
$(DESTDIR)${BSDLIB_INSTALL_DIR}/${BSD_LIB}
```

```
@-${LDCONFIG}
```

```
install-strip: install
```

```
install-shlibs-strip:: install-shlibs
```

```
uninstall-shlibs uninstall::
```

```
$(RM) -f $(DESTDIR)${BSDLIB_INSTALL_DIR}/${BSD_LIB}
```

```
clean::
```

```
$(RM)
```

```
-rf pic
```

```
$(RM) -f ${BSD_LIB}
```

```
$(RM) -f ../${BSD_LIB}
```

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This is the Debian GNU/Linux prepackaged version of the translation files of the EXT2 file system utilities. The EXT2 utilities were



written by Theodore Ts'o <tytso@mit.edu> and Remy Card  
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Index: tdbsa/tdb.c

-----  
--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/

/\*

- Unix SMB/CIFS implementation.  
+ trivial database library - standalone version

- trivial database library - private includes

-

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Gadi Oxman, August 1995

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```

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```
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```

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Theodore Ts'o

23-June-2007

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Version 2, June 1991

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part of  
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It is part of the main e2fsprogs distribution, which can be found at:

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[applies only to hppa\*-\*-pro\* targets]

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DRuntime: Runtime Library for the D Programming Language

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Version 2, June 1991

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If distribution of object code is made by offering access to copy

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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- b. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

- c. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
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```
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```

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