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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
```

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```
-----
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
```

new XElement("p", "This work may be freely copied and distributed worldwide.")  
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This is a port of the SciMark2a Java Benchmark to C# by  
Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

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public domain is compatible with GPL.

<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="\$(InstallerTasksAssemblyPath)" />

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">

<PropertyGroup>

<TpnFile=\$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>

</PropertyGroup>

<!--

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside  
its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file

in the dotnet home directory.

-->

```
<ItemGroup>  
  <TpnRepo Include="dotnet/runtime" />  
  <TpnRepo Include="dotnet/aspnetcore" />  
  <TpnRepo Include="dotnet/installer" />  
  <TpnRepo Include="dotnet/roslyn-analyzers" />  
  <TpnRepo Include="dotnet/templating" />  
  <TpnRepo Include="dotnet/winforms" />  
  <TpnRepo Include="dotnet/wpf" />  
  <TpnRepo Include="dotnet/linker" />
```

<!--

Additional repos that  
should be included but don't have any third-party-notices files:

```
dotnet/efcore  
dotnet/emsdk  
dotnet/extensions  
dotnet/icu  
dotnet/sdk  
dotnet/windowsdesktop
```

-->

```
<TpnRepo Condition="'%(TpnRepo.Branch)' == '' Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />  
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />  
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />  
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />  
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />  
</ItemGroup>
```

```
<RegenerateThirdPartyNotices  
  TpnFile="$(TpnFile)"  
  PotentialTpnPaths="@ (PotentialTpnPath)"  
  TpnRepos="@ (TpnRepo)" />
```

```
<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />  
</Target>
```

</Project>

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<https://github.com/madler/zlib>  
[https://zlib.net/zlib\\_license.html](https://zlib.net/zlib_license.html)

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.12, March 27th, 2022

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By Sean Eron Anderson  
seander@cs.stanford.edu

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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<https://github.com/santoshshahoo/nbench> (mirror of the same code)

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# 1.4 microsoft.windows.compatibility 7.0.1

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# 1.5 tss.msr 2.1.1

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# 1.6 system-serviceprocess-servicecontroller

## 7.0.0

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License notice for A Benchmark Test for Systems Implementation Languages

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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
  </ItemGroup>
</Project>
```

```
<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>
```

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```
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
  new XElement("p", "This work may be freely copied and distributed worldwide.")
```

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<https://github.com/dosvidos/SciMark>

```
<license>
```

This is a port of the SciMark2a Java Benchmark to C# by Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

This software is likely to burn your processor, bitflip your memory chips annihilate your screen and corrupt all your disks, so you it at your own risk.

```
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```

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```
<Project Sdk="Microsoft.Build.NoTargets">
```

```
<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="$(InstallerTasksAssemblyPath)" />
```

```
<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">
```

```
<PropertyGroup>
```

```
<TpnFile>$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>
```

```
</PropertyGroup>
```

```
<!--
```

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file in the dotnet home directory.

```
-->
```

```
<ItemGroup>
```

```
<TpnRepo Include="dotnet/runtime" />
```

```
<TpnRepo Include="dotnet/aspnetcore" />
```

```
<TpnRepo Include="dotnet/installer" />
```

```
<TpnRepo Include="dotnet/roslyn-analyzers" />
```

```
<TpnRepo Include="dotnet/templating" />
```

```
<TpnRepo Include="dotnet/winforms" />
```

```
<TpnRepo Include="dotnet/wpf" />
```

```
<TpnRepo Include="dotnet/linker" />
```

```
<!--
```

Additional repos that should be included but don't have any third-party-notices files:

dotnet/efcore

dotnet/emsdk

dotnet/extensions

dotnet/icu

dotnet/sdk

dotnet/windowsdesktop

```
-->
```

```
<TpnRepo Condition="'%(TpnRepo.Branch)' == ''" Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
```



```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
</ItemGroup>

<RegenerateThirdPartyNotices
  TpnFile="$(TpnFile)"
  PotentialTpnPaths="@ (PotentialTpnPath)"
  TpnRepos="@ (TpnRepo)" />

<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>

</Project>
```

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<https://github.com/madler/zlib>  
[https://zlib.net/zlib\\_license.html](https://zlib.net/zlib_license.html)

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.12, March 27th, 2022

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<http://www.mono-project.com/docs/about-mono/>

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Bit Twiddling Hacks

By Sean Eron Anderson  
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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# 1.7 system-diagnostics-eventlog 7.0.0

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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

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Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
```

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```
-----
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
```

new XElement("p", "XML version by Jon Bosak, 1996-1997."),  
new XElement("p", "This work may be freely copied and distributed worldwide.")  
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Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

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<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="\$(InstallerTasksAssemblyPath)" />

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">

<PropertyGroup>

<TpnFile>\$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>

</PropertyGroup>

<!--

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside

its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file in the dotnet home directory.

-->

```
<ItemGroup>
  <TpnRepo Include="dotnet/runtime" />
  <TpnRepo Include="dotnet/aspnetcore" />
  <TpnRepo Include="dotnet/installer" />
  <TpnRepo Include="dotnet/roslyn-analyzers" />
  <TpnRepo Include="dotnet/templating" />
  <TpnRepo Include="dotnet/winforms" />
  <TpnRepo Include="dotnet/wpf" />
  <TpnRepo Include="dotnet/linker" />
```

<!--

Additional repos that should be included but don't have any third-party-notices files:

```
dotnet/efcore
dotnet/emsdk
dotnet/extensions
dotnet/icu
dotnet/sdk
dotnet/windowsdesktop
```

-->

```
<TpnRepo Condition="'%(TpnRepo.Branch)' == "" Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
```

</ItemGroup>

```
<RegenerateThirdPartyNotices
  TpnFile="$(TpnFile)"
  PotentialTpnPaths="@ (PotentialTpnPath)"
  TpnRepos="@ (TpnRepo)" />
```

```
<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>
```

</Project>

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.12, March 27th, 2022

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<https://github.com/santoshshahoo/nbench> (mirror of the same code)

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redo.png (modified version of edit-redo.png)  
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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## 1.9 nlog-advanced-net-logging 4.5.8

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## 1.10 system-numeric-vectors 4.5.0

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

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# 1.14 microsoft.windows.sdk.net.ref

## 10.0.22621.28

### 1.14.1 Available under license :

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/opt/cola/permits/1845778165\_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-  
zip/lib/net6.0/Microsoft.Windows.SDK.NET.dll: binary file matches

/opt/cola/permits/1845778165\_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-  
zip/lib/net6.0/WinRT.Runtime.dll: binary file matches

/opt/cola/permits/1845778165\_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-  
zip/winmd/Windows.Foundation.UniversalApiContract.winmd: binary file matches

/opt/cola/permits/1845778165\_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-  
zip/winmd/Windows.Services.Maps.LocalSearchContract.winmd: binary file matches

Found in path(s):

\* /bin/grep

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Found in path(s):

\* /opt/cola/permits/1845778165\_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-  
zip/Microsoft.Windows.SDK.NET.Ref.nuspec

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

<param name="attestation">A plain-english statement declaring that the publisher has permission to use the  
feature.</param>

<summary>Indicates that the user has permission to use the feature, and that the feature is still in the "limited  
access" state.</summary>

<member name="T:Windows.ApplicationModel.UserActivities.UserActivityAttribution">

<member name="M:Windows.ApplicationModel.UserActivities.UserActivityAttribution.#ctor">

<summary>Create a **UserActivityAttribution** object.</summary>

<member

name="M:Windows.ApplicationModel.UserActivities.UserActivityAttribution.#ctor(Windows.Foundation.Uri)">

<summary>Create a **UserActivityAttribution** object with the specified icon image URI.</summary>

<param name="iconUri">The Uniform Resource Identifier (URI) of the icon image to use with this  
**UserActivityAttribution**.</param>

<member name="P:Windows.ApplicationModel.UserActivities.UserActivityAttribution.AddImageQuery">

<member

name="P:Windows.ApplicationModel.UserActivities.UserActivityAttribution.AlternateText">

<member name="P:Windows.ApplicationModel.UserActivities.UserActivityAttribution.IconUri">

<member name="P:Windows.ApplicationModel.UserActivities.UserActivityVisualElements.Attribution">

<member

name="P:Windows.ApplicationModel.UserActivities.UserActivityVisualElements.AttributionDisplayText">

<member name="P:Windows.Networking.Connectivity.AttributedNetworkUsage.AttributionId">

```
<member name="P:Windows.Networking.Connectivity.AttributedNetworkUsage.AttributionName">
<member name="P:Windows.Networking.Connectivity.AttributedNetworkUsage.AttributionThumbnail">
<returns>**true** if permission is granted. Otherwise, **false**.</returns>
<member name="P:Windows.Services.Maps.MapService.DataAttributions">
<member name="P:Windows.Services.Maps.LocalSearch.LocalLocation.DataAttribution">
```

Found in path(s):

```
* /opt/cola/permits/1845778165_1699990928.5434532/0/microsoft-windows-sdk-net-ref-10-0-22621-31-
zip/lib/net6.0/Microsoft.Windows.SDK.NET.xml
```

## 1.15 system-codedom 7.0.0

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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
```

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```
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
  new XElement("p", "This work may be freely copied and distributed worldwide.")
```

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Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

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public domain is compatible with GPL.

<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="\$(InstallerTasksAssemblyPath)" />

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">

<PropertyGroup>

<TpnFile>\$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>

</PropertyGroup>

<!--

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside  
its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file  
in the dotnet home directory.

-->

<ItemGroup>

```
<TpnRepo Include="dotnet/runtime" />
<TpnRepo Include="dotnet/aspnetcore" />
<TpnRepo Include="dotnet/installer" />
<TpnRepo Include="dotnet/roslyn-analyzers" />
<TpnRepo Include="dotnet/templating" />
<TpnRepo Include="dotnet/winforms" />
<TpnRepo Include="dotnet/wpf" />
<TpnRepo Include="dotnet/linker" />
```

```
<!--
```

Additional repos that  
should be included but don't have any third-party-notices files:

```
dotnet/efcore
dotnet/emsdk
dotnet/extensions
dotnet/icu
dotnet/sdk
dotnet/windowsdesktop
```

```
-->
```

```
<TpnRepo Condition="'%(TpnRepo.Branch)' == '' Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
</ItemGroup>
```

```
<RegenerateThirdPartyNotices
  TpnFile="$(TpnFile)"
  PotentialTpnPaths="@ (PotentialTpnPath)"
  TpnRepos="@ (TpnRepo)" />
```

```
<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>
```

```
</Project>
```

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<https://github.com/madler/zlib>  
[https://zlib.net/zlib\\_license.html](https://zlib.net/zlib_license.html)

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.12, March 27th, 2022

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jloup@gzip.org      madler@alumni.caltech.edu

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seander@cs.stanford.edu

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
```

```
<Compile Include="..\ServerContracts/Server.CoClasses.cs" />
<Compile Include="..\ServerContracts/Server.Contracts.cs" />
<Compile Include="..\ServerContracts/ServerGuids.cs" />
</ItemGroup>
<ItemGroup>
  <CMakeProjectReference Include="..\NativeServer/CMakeLists.txt" />
  <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>
```

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new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
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<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="\$(InstallerTasksAssemblyPath)" />

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">

<PropertyGroup>

<TpnFile>\$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>

</PropertyGroup>

<!--

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside  
its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file  
in the dotnet home directory.

-->

<ItemGroup>

<TpnRepo Include="dotnet/runtime" />

<TpnRepo Include="dotnet/aspnetcore" />

<TpnRepo Include="dotnet/installer" />

<TpnRepo Include="dotnet/roslyn-analyzers" />

<TpnRepo Include="dotnet/templating" />

<TpnRepo Include="dotnet/winforms" />

<TpnRepo Include="dotnet/wpf" />

<TpnRepo Include="dotnet/linker" />

<!--

Additional repos that  
should be included but don't have any third-party-notices files:

dotnet/efcore

dotnet/emsdk

dotnet/extensions

dotnet/icu

dotnet/sdk

dotnet/windowsdesktop



-->

```
<TpnRepo Condition="% (TpnRepo.Branch)' == '' Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
```

```
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
```

```
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
```

```
</ItemGroup>
```

```
<RegenerateThirdPartyNotices
```

```
  TpnFile="$(TpnFile)"
```

```
  PotentialTpnPaths="@ (PotentialTpnPath)"
```

```
  TpnRepos="@ (TpnRepo)" />
```

```
<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
```

```
</Target>
```

```
</Project>
```

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<https://github.com/madler/zlib>

[https://zlib.net/zlib\\_license.html](https://zlib.net/zlib_license.html)

/\* zlib.h -- interface of the 'zlib' general purpose compression library

version 1.2.12, March 27th, 2022

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## 1.17 lumberjackconsole 1.0.2

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new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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```
<Project Sdk="Microsoft.NET.Sdk">
```

```
<PropertyGroup>
```

```
<OutputType>Exe</OutputType>
```

```
<ApplicationManifest>App.manifest</ApplicationManifest>
```

```
</PropertyGroup>
```

```
<ItemGroup>
```

```
<Compile Include="Program.cs" />
```

```
<Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
```

```
<Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
```

```
<Compile Include="..\..\ServerContracts/ServerGuids.cs" />
```

```
</ItemGroup>
```

```
<ItemGroup>
```

```
<ProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
```

```
<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
```

```
</ItemGroup>
```

```
</Project>
```

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

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

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# 1.21 microsoft-identitymodel-logging 6.29.0

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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The punycode implementation is based on the sample code in RFC 3492

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in 2018 by David Blackman and Sebastiano Vigna (vigna@acm.org)

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Martin Richards  
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new XElement("fm",
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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Use: <https://github.com/mono/mono/blob/23e6f6f4b58d72800f4e27fa29a6b58806ff475f/mono/mini/bench.cs#L65>

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<https://github.com/santoshshahoo/nbench> (mirror of the same code)

/\*

\*\* BYTEmark (tm)

\*\* BYTE Magazine's Native Mode benchmarks

\*\* Rick Grehan, BYTE Magazine

\*\*

\*\* Create:

\*\* Revision: 3/95

\*\*

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Title: Dealing with commas in a CSV file

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Use:

<https://github.com/dotnet/coreclr/blob/a9074bce5e3814db67dbec1c56f477202164d162/tests/src/sizeondisk/sodbench/SoDBench.cs#L738>

```
<Project Sdk="Microsoft.NET.Sdk">
```

```
<PropertyGroup>
```

```
<OutputType>Exe</OutputType>
```

```
<ApplicationManifest>App.manifest</ApplicationManifest>
```

```
</PropertyGroup>
```

```
<ItemGroup>
```

```
<Compile Include="Program.cs" />
```

```
<Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
```

```
<Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
```

```
<Compile Include="..\..\ServerContracts/ServerGuids.cs" />
```

```
</ItemGroup>
```

```
<ItemGroup>
```

```
<ProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
```

```
<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
```

```
</ItemGroup>
```

```
</Project>
```

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### 3.0.0

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## 1.25 azure-activedirectory-identitymodel-extensions-for-dotnet 6.29.0

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## 1.27 system-formats-asn 7.0.0

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Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
</ItemGroup>
```

```
<CMakeProjectReference Include="../../NativeServer/CMakeLists.txt" />
<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>
```

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```
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
  new XElement("p", "This work may be freely copied and distributed worldwide."))
```

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```
<Project Sdk="Microsoft.Build.NoTargets">
```

```
<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="$(InstallerTasksAssemblyPath)" />
```

```
<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">
```

```
<PropertyGroup>
```

```
<TpnFile>$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>
```

```
</PropertyGroup>
```

```
<!--
```

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file in the dotnet home directory.

```
-->
```

```
<ItemGroup>
```

```
<TpnRepo Include="dotnet/runtime" />
```

```
<TpnRepo Include="dotnet/aspnetcore" />
```

```
<TpnRepo Include="dotnet/installer" />
```

```
<TpnRepo Include="dotnet/roslyn-analyzers" />
```

```
<TpnRepo Include="dotnet/templating" />
```

```
<TpnRepo Include="dotnet/winforms" />
```

```
<TpnRepo Include="dotnet/wpf" />
```

```
<TpnRepo Include="dotnet/linker" />
```

```
<!--
```

Additional repos that should be included but don't have any third-party-notices files:

dotnet/efcore

dotnet/emsdk

dotnet/extensions

dotnet/icu

dotnet/sdk

dotnet/windowsdesktop

```
-->
```

```
<TpnRepo Condition="'%(TpnRepo.Branch)' == '' Branch="main" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
```

```
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
</ItemGroup>

<RegenerateThirdPartyNotices
  TpnFile="$(TpnFile)"
  PotentialTpnPaths="@ (PotentialTpnPath)"
  TpnRepos="@ (TpnRepo)" />

<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>
```

</Project>

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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Bit Twiddling Hacks

By Sean Eron Anderson  
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## 1.28 mstest-testadapter 3.0.4

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media-playback-pause.png  
media-playback-start.png  
process-stop.png  
redo.png (modified version of edit-redo.png)  
system-search.png  
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Bit Twiddling Hacks

By Sean Eron Anderson

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<http://www.w3.org/TR/2004/REC-DOM-Level-3-Core-20040407/java-binding.html>

The specification  
of DOM Level 3's various parts is at:  
<http://www.w3.org/TR/2004/REC-DOM-Level-3-Core-20040407/>  
<http://www.w3.org/TR/2004/REC-DOM-Level-3-LS-20040407/>  
<http://www.w3.org/TR/2004/NOTE-DOM-Level-3-XPath-20040226/>

The specification of DOM Level 2's various parts is at:  
<http://www.w3.org/TR/2000/REC-DOM-Level-2-Events-20001113/>  
<http://www.w3.org/TR/2000/REC-DOM-Level-2-Style-20001113/>  
<http://www.w3.org/TR/2000/REC-DOM-Level-2-Traversal-Range-20001113/>

<http://www.w3.org/TR/2000/REC-DOM-Level-2-Views-20001113/>

The specification of DOM Level 1's various parts is at:

<http://www.w3.org/TR/1998/REC-DOM-Level-1-19981001/level-one-html.html>

Links to all available W3C DOM Java Bindings can be found at:

<http://www.w3.org/DOM/DOMTR>

The actual classes of The Simple API for CSS (SAC) came from:

<http://www.w3.org/Style/CSS/SAC/>

<http://www.w3.org/2002/06/sacjava-1.3.zip>

The actual DOM Java Language Binding classes for SMIL came from:

<http://dev.w3.org/cvsweb/java/classes/org/w3c/dom/smil/>

(both `ElementTimeControl.java` and `TimeEvent.java` were taken at revision 1.1)

The actual DOM Java Language Binding classes for SVG 1.1 came from:

<http://www.w3.org/TR/SVG11/java.html>

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

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Bit Twiddling Hacks

By Sean Eron Anderson  
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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
  </ItemGroup>
</Project>
```

```
<Compile Include="..\..\ServerContracts/ServerGuids.cs" />
</ItemGroup>
<ItemGroup>
  <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
  <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>
```

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```
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
  new XElement("p", "This work may be freely copied and distributed worldwide.")
```

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This is a port of the SciMark2a Java Benchmark to C# by  
Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

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<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="\$(InstallerTasksAssemblyPath)" />

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">

<PropertyGroup>

<TpnFile>\$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>

</PropertyGroup>

<!--

Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file in the dotnet home directory.

-->

<ItemGroup>

<TpnRepo Include="dotnet/runtime" />

<TpnRepo Include="dotnet/aspnetcore" />

<TpnRepo Include="dotnet/installer" />

<TpnRepo Include="dotnet/roslyn-analyzers" />

<TpnRepo Include="dotnet/templating" />

<TpnRepo Include="dotnet/winforms" />

<TpnRepo Include="dotnet/wpf" />

<TpnRepo Include="dotnet/linker" />

<!--

Additional repos that should be included but don't have any third-party-notices files:

dotnet/efcore

dotnet/emsdk

dotnet/extensions

dotnet/icu

dotnet/sdk

dotnet/windowsdesktop

-->



```
<TpnRepo Condition="% (TpnRepo.Branch)' == '' Branch="main" />

<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
</ItemGroup>

<RegenerateThirdPartyNotices
  TpnFile="$(TpnFile)"
  PotentialTpnPaths="@ (PotentialTpnPath)"
  TpnRepos="@ (TpnRepo)" />

<Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>

</Project>
```

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<https://github.com/madler/zlib>

[https://zlib.net/zlib\\_license.html](https://zlib.net/zlib_license.html)

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.12, March 27th, 2022

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By Sean Eron Anderson  
seander@cs.stanford.edu

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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## 1.42 alamofire 4.9.1

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# 1.44 tdoauth 1.6.2

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## 1.45

# microsoft.toolkit.uwp.notifications.javascript

## 5.1.1

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# 1.46 reactive-extensions-query-library 3.0.0

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# 1.47 microsoft-csharp 4.7.0

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

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## 1.48 system-threading-tasks-extensions 4.5.1

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

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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<https://github.com/madler/zlib>  
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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<http://www.cl.cam.ac.uk/~mr10/Bench/README>

Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards  
23 February 2007

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```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
```

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```
-----
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),
  new XElement("p", "This work may be freely copied and distributed worldwide.")
)
<Project Sdk="Microsoft.Build.NoTargets">

<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="$(InstallerTasksAssemblyPath)" />
```

```

<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">
  <PropertyGroup>
    <TpnFile>$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>
  </PropertyGroup>

  <!--
    Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside
    its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file
    in the dotnet home directory.
  -->
  <ItemGroup>
    <TpnRepo Include="dotnet/runtime" />
    <TpnRepo Include="dotnet/aspnetcore" />
    <TpnRepo Include="dotnet/installer" />
    <TpnRepo Include="dotnet/roslyn-analyzers" />
    <TpnRepo Include="dotnet/templating" />
    <TpnRepo Include="dotnet/winforms" />
    <TpnRepo Include="dotnet/wpf" />

    <!--
      Additional repos that should be included but don't have any
third-party-notices files:
      dotnet/efcore
      dotnet/emsdk
      dotnet/extensions
      dotnet/icu
      dotnet/sdk
      dotnet/windowsdesktop
      dotnet/linker
    -->

    <TpnRepo Condition="'%(TpnRepo.Branch)' == "" Branch="main" />

    <PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />
    <PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />
    <PotentialTpnPath Include="THIRD-PARTY-NOTICES" />
    <PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />
    <PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />
  </ItemGroup>

  <RegenerateThirdPartyNotices
    TpnFile="$(TpnFile)"
    PotentialTpnPaths="@ (PotentialTpnPath)"
    TpnRepos="@ (TpnRepo)" />

  <Message Text="$(MSBuildProjectName) -> $(TpnFile)" Importance="High" />
</Target>

```

</Project>

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This is a port of the SciMark2a Java Benchmark to C# by  
Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see <http://math.nist.gov/scimark2>

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<https://github.com/madler/zlib>  
[http://zlib.net/zlib\\_license.html](http://zlib.net/zlib_license.html)

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

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

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Martin Richards  
23 February 2007

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  </PropertyGroup>
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    <Compile Include="..\..\ServerContracts/Server.CoClasses.cs" />
    <Compile Include="..\..\ServerContracts/Server.Contracts.cs" />
    <Compile Include="..\..\ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <CMakeProjectReference Include="..\..\NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
```

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new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),  
new XElement("fm",  
  new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992."),  
  new XElement("p", "SGML markup by Jon Bosak, 1992-1994."),  
  new XElement("p", "XML version by Jon Bosak, 1996-1997."),  
  new XElement("p", "This work may be freely copied and distributed worldwide.")  
<Project Sdk="Microsoft.Build.NoTargets">  
  
<UsingTask TaskName="RegenerateThirdPartyNotices" AssemblyFile="$(InstallerTasksAssemblyPath)" />  
  
<Target Name="RegenerateThirdPartyNotices" AfterTargets="Build">  
  <PropertyGroup>  
    <TpnFile>$(InstallerProjectRoot)pkg\THIRD-PARTY-NOTICES.TXT</TpnFile>  
  </PropertyGroup>  
  
  <!--  
    Repo configuration. Upstreams, but also more: the TPN in dotnet/runtime serves many repos outside  
    its graph, because dotnet/runtime produces the installer that ends up placing the single TPN file  
    in the dotnet home directory.  
  -->  
  <ItemGroup>  
    <TpnRepo Include="dotnet/runtime" />  
    <TpnRepo Include="dotnet/aspnetcore" />  
    <TpnRepo Include="dotnet/installer" />  
    <TpnRepo Include="dotnet/roslyn-analyzers" />  
    <TpnRepo Include="dotnet/templating" />  
    <TpnRepo Include="dotnet/winforms" />  
    <TpnRepo Include="dotnet/wpf" />  
  
  <!--  
    Additional repos that should be included but don't have any  
third-party-notices files:  
    dotnet/efcore  
    dotnet/emsdk  
    dotnet/extensions  
    dotnet/icu  
    dotnet/sdk  
    dotnet/windowsdesktop  
    dotnet/linker
```

-->

<TpnRepo Condition="% (TpnRepo.Branch)' == '' Branch="main" />

<PotentialTpnPath Include="THIRD-PARTY-NOTICES.TXT" />

<PotentialTpnPath Include="THIRD-PARTY-NOTICES.txt" />

<PotentialTpnPath Include="THIRD-PARTY-NOTICES" />

<PotentialTpnPath Include="THIRDPARTYNOTICES.TXT" />

<PotentialTpnPath Include="THIRDPARTYNOTICES.txt" />

</ItemGroup>

<RegenerateThirdPartyNotices

TpnFile="\$(TpnFile)"

PotentialTpnPaths="@ (PotentialTpnPath)"

TpnRepos="@ (TpnRepo)" />

<Message Text="\$(MSBuildProjectName) -> \$(TpnFile)" Importance="High" />

</Target>

</Project>

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Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

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<https://github.com/madler/zlib>  
[http://zlib.net/zlib\\_license.html](http://zlib.net/zlib_license.html)

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

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By Sean Eron Anderson  
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Written

in 2018 by David Blackman and Sebastiano Vigna (vigna@acm.org)

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<https://github.com/santoshshahoo/nbench> (mirror of the same code)

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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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