



System.Runtime.InteropServices by Microsoft

System.Runtime.InteropServices 1.4G [GitHub last commit](#) [GitHub Repo stars](#)

Details

Info

! INFO

Name: **System.Runtime.InteropServices**

Author: Microsoft

NuGet: <https://www.nuget.org/packages/System.Runtime.InteropServices/>

You can find more details at <https://learn.microsoft.com/en-us/dotnet/standard/native-interop/pinvoke-source-generation>

Source : <https://www.nuget.org/packages/System.Runtime.InteropServices/>

About

i NOTE

Generate PInvoke calls

How to use

Example (source csproj, source files)

CSharp Project

Program.cs

DemoMsgBox.cs

globals.cs

This is the CSharp Project that references **System.Runtime.InteropServices**

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

  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <TargetFramework>net7.0</TargetFramework>
    <ImplicitUsings>enable</ImplicitUsings>
    <Nullable>enable</Nullable>
  </PropertyGroup>
  <PropertyGroup>
    <EmitCompilerGeneratedFiles>true</EmitCompilerGeneratedFiles>

    <CompilerGeneratedFilesOutputPath>$(BaseIntermediateOutputPath)\GeneratedX</CompilerGeneratedFilesOutputPath>
    <AllowUnsafeBlocks>true</AllowUnsafeBlocks>
  </PropertyGroup>
</Project>
```

This is the use of **System.Runtime.InteropServices** in *Program.cs*

```
WriteLine(MessageBoxW(IntPtr.Zero, "asd", "asd", 1));
//RSCG
WriteLine(MessageBoxW_LI(IntPtr.Zero, "asd", "asd", 1));
```

This is the use of **System.Runtime.InteropServices** in *DemoMsgBox.cs*

```

partial class DemoImport
{
    [DllImport("user32.dll", EntryPoint = "MessageBoxW", CharSet =
CharSet.Unicode, SetLastError = true)]

    internal static extern int MessageBoxW(IntPtr hWnd, string lpText,
string lpCaption, uint uType);

    [LibraryImport("user32.dll", EntryPoint = "MessageBoxW",
SetLastError = true,
StringMarshalling = StringMarshalling.Utf16)]

    internal static partial int MessageBoxW_LI(IntPtr hWnd, string
lpText, string lpCaption, uint uType);
}

```

This is the use of **System.Runtime.InteropServices** in *globals.cs*

```

global using static System.Console;
global using static DemoImport;
global using System.Runtime.InteropServices;

```

Generated Files

Those are taken from \$(BaseIntermediateOutputPath)\GeneratedX

LibraryImports.g.cs

```

// <auto-generated/>
unsafe partial class DemoImport
{
    [System.CodeDom.Compiler.GeneratedCodeAttribute("Microsoft.Interop.LibraryImportGenerator",
"7.0.8.17405")]
    [System.Runtime.CompilerServices.SkipLocalsInitAttribute]
    internal static partial int MessageBoxW_LI(nint hWnd, string lpText, string lpCaption,
    {
        int __lastError;
        int __retVal;
        // Pin - Pin data in preparation for calling the P/Invoke.
        fixed (void* __lpText_native =
&global::System.Runtime.InteropServices.Marshalling.Utf16StringMarshaller.GetPinnableReference(lpText),
        fixed (void* __lpCaption_native =
&global::System.Runtime.InteropServices.Marshalling.Utf16StringMarshaller.GetPinnableReference(lpCaption))
        {
            System.Runtime.InteropServices.Marshal.SetLastSystemError(0);
            __retVal = __PInvoke(hWnd, (ushort*)__lpText_native, (ushort*)__lpCaption_native, __lastError);
            __lastError = System.Runtime.InteropServices.Marshal.GetLastSystemError();
        }

        System.Runtime.InteropServices.Marshal.SetLastPInvokeError(__lastError);
        return __retVal;
        // Local P/Invoke
        [System.Runtime.InteropServices.DllImportAttribute("user32.dll", EntryPoint = "MessageBoxW", SetLastError =
ExactSpelling = true)]
        static extern unsafe int __PInvoke(nint hWnd, ushort* lpText, ushort* lpCaption, int dwFlags);
    }
}

```

Usefull

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TIP

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https://ignatandrei.github.io/RSCG_Examples/v2/docs/System.Runtime.InteropServices