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| Microsoft |
| All-In-One Code Framework |
| CodeFx |
|  |
| **MSDN Forum Support Team** |
| **3/1/2009** |

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| "All-In-One Code Framework" code-name "CodeFx" delineates the framework and skeleton of most Microsoft development techniques using typical examples in different programming languages. |

**TABLE OF CONTENTS**

[Introduction 4](#_Toc243666949)

[Sample Catalog 5](#_Toc243666950)

[Samples for COM 5](#_Toc243666951)

[Samples for Windows 7 6](#_Toc243666952)

[Samples for App Compat 7](#_Toc243666953)

[Samples for ASP.NET 7](#_Toc243666954)

[Samples for Silverlight 8](#_Toc243666955)

[Samples for Data Access 10](#_Toc243666956)

[Samples for Office 12](#_Toc243666957)

[Samples for Language 13](#_Toc243666958)

[Samples for Library 14](#_Toc243666959)

[Samples for IPC and RPC 16](#_Toc243666960)

[Samples for Windows 17](#_Toc243666961)

[Samples for WinForm 17](#_Toc243666962)

[Samples for WPF 18](#_Toc243666963)

[Samples for XML 19](#_Toc243666964)

[Samples for File System 19](#_Toc243666965)

[Samples for Security 20](#_Toc243666966)

[Samples for Visual Studio 21](#_Toc243666967)

[Samples for Windows Shell 22](#_Toc243666968)

[Samples for Hook 23](#_Toc243666969)

[Samples for Console 24](#_Toc243666970)

[Samples for Network 24](#_Toc243666971)

[Samples for Diagnostics 24](#_Toc243666972)

[Features 26](#_Toc243666973)

[All-In-One 26](#_Toc243666974)

[Skeleton 26](#_Toc243666975)

[Source of Examples 26](#_Toc243666976)

[Uniform 26](#_Toc243666977)

[Mutually Dependent 27](#_Toc243666978)

[Feedback 28](#_Toc243666979)

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# Introduction

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| Dear Friends. Have you ever needed a quick understanding of a technique, e.g. ActiveX or VSX, but been daunted by the few or too many samples and documents that are available on the Internet? Have you ever downloaded or created a good sample, e.g. a named pipe sample for IPC, but forgotten where the sample was placed after a few days? Have you ever wanted a simple test environment, e.g. a COM object or a DLL, but become tired of frequently creating such projects and naming them as "ClassLibrary1", "ClassLibrary2", "ClassLibraryABC"?  If your answer is YES to any one of these questions, this **All-In-One Code Framework** will be of assistance to you. |

Microsoft [**All-In-One Code Framework**](http://cfx.codeplex.com) code-name **CodeFx** delineates the framework and skeleton of Microsoft development techniques through typical sample codes in three popular programming languages (Visual C#, VB.NET, Visual C++). Each sample is elaborately selected, composed, and documented to demonstrate one frequently-asked, tested or used coding scenario based on our support experience in MSDN [newsgroups](http://msdn.microsoft.com/en-us/subscriptions/aa974230.aspx) and [forums](http://social.msdn.microsoft.com/Forums/en-US/categories). If you are a software developer, you can fill the skeleton with blood, muscle and soul. If you are a software tester or a support engineer like us, you may extend the sample codes a little to fit your specific test scenario or refer your customer to this project if the customer's question coincides with what we collected.  
  
Today is October 18th, 2009. CodeFx has more than **230** code examples that cover **22** Microsoft development technologies like Windows 7 and Silverlight 3. The collection grows at a rate of **six samples per week**. You can find the up-to-date list of CodeFx samples in [**All-In-One Code Framework Sample Catalog**](http://cfx.codeplex.com/wikipage?title=All-In-One%20Code%20Framework%20Sample%20Catalog&referringTitle=Home).

[](http://cfx.codeplex.com/Project/ProjectRss.aspx?ProjectRSSFeed=codeplex%3a%2f%2fsourcecontrol%2fcfx)[CodeFx KB](http://support.microsoft.com/search/default.aspx?query=codefx)[CodeFx Blog](http://blogs.msdn.com/codefx)[](http://digg.com/microsoft/All_In_One_Code_Framework)[](http://twitter.com/msft_codefx)

# Sample Catalog

## Samples for COM



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSDllCOMServer | An in-process COM Server in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBDllCOMServer | An in-process COM Server in VB.NET | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLDllCOMServer | An in-process ATL COM Server | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSExeCOMServer | An out-of-process COM Server in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLExeCOMServer | An out-of-process ATL COM Server | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSCOMService | An out-of-process COM Service in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLCOMService | An out-of-process ATL COM Service | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSServicedComponent | A serviced component written in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBServicedComponent | A serviced component written in VB.NET | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| MFCActiveX | A MFC ActiveX Control | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| MFCSafeActiveX | A MFC ActiveX Control Safe for Scripting and Initialization | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLActiveX | An ATL ActiveX Control | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSActiveX | A C# ActiveX Control | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBActiveX | A VB.NET ActiveX Control | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLCOMClient | Use COM servers in an ATL application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppCOMClient | Use COM servers in a C++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSCOMClient | Host ActiveX controls use COM servers in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBCOMClient | Host ActiveX controls and use COM servers in VB.NET | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| MFCCOMClient | Host ActiveX controls and use COM servers in MFC | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| HTMLEmbedActiveX | Host ActiveX controls in HTML | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for Windows 7



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSWin7TriggerStartService | Win7 Trigger Start Service (C#) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBWin7TriggerStartService | Win7 Trigger Start Service (VB.NET) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppWin7TriggerStartService | Win7 Trigger Start Service (C++) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSWin7ShellLibrary | Operate on Win7 Shell Library (C#) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBWin7ShellLibrary | Operate on Win7 Shell Library (VB.NET) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppWin7ShellLibrary | Operate on Win7 Shell Library (C++) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSWin7TaskbarAppID | Win7 Application ID in taskbar (C#) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBWin7TaskbarAppID | Win7 Application ID in taskbar (VB.NET) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CppWin7TaskbarAppID | Win7 Application ID in taskbar (C++) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSWin7TaskbarOverlayIcons | Win7 Overlay Icons in taskbar (C#) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBWin7TaskbarOverlayIcons | Win7 Overlay Icons in taskbar (VB.NET) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CppWin7TaskbarOverlayIcons | Win7 Overlay Icons in taskbar (C++) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSWin7TaskbarProgressbar | Win7 Progressbar in taskbar (C#) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBWin7TaskbarProgressbar | Win7 Progressbar in taskbar (VB.NET) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CppWin7TaskbarProgressBar | Win7 Progressbar in taskbar (C++) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSWin7TaskbarThumbnail | Win7 Thumbnail in taskbar (C#) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBWin7TaskbarThumbnail | Win7 Thumbnail in taskbar (VB.NET) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSWin7TaskbarJumpList | Win7 Jumplist in taskbar (C#) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBWin7TaskbarJumpList | Win7 Jumplist in taskbar (VB.NET) | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSWin7Direct2D | Win7 new 2-D graphics API (C#) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| VBWin7Direct2D | Win7 new 2-D graphics API (VB.NET) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| CppWin7Direct2D | Win7 new 2-D graphics API (C++) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |

## Samples for App Compat



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppCheckOSVersion | Check OS Version in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSCheckOSVersion | Check OS Version in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for ASP.NET



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| VBASPNETFileUpload | File upload in ASP.NET (VB.NET) | [BravoYang](http://www.codeplex.com/site/users/view/BravoYang) |
| VBASPNETLocalization | Globalization and localization in ASP.NET (VB.NET) | [BravoYang](http://www.codeplex.com/site/users/view/BravoYang) |
| CSASPNETCascadingDropDownList | Cascading Drop Down List in ASP.NET | [ThomasSun](http://www.codeplex.com/site/users/view/ThomasSun) |
| CSASPNETPageValidation | ASP.NET Validator Controls (C#) | [LiZongQing](http://www.codeplex.com/site/users/view/LiZongQing) |
| CSASPNETAjaxExtender | ASP.NET AJAX Extender (C#) | [VinceXu](http://www.codeplex.com/site/users/view/VinceXu) |
| CSASPNETMVCFileDownload | ASP.NET MVC File Download sample | [stcheng](http://www.codeplex.com/site/users/view/stcheng) |
| CSASPNETOutputCache | Output cache in ASP.NET (C#) | [ThomasSun](http://www.codeplex.com/site/users/view/ThomasSun) |
| CSASPNETMenu | Menu in ASP.NET (C#) | [LiZongQing](http://www.codeplex.com/site/users/view/LiZongQing) |
| VBASPNETMasterPage | ASP.NET Master Page (VB.NET) | [BravoYang](http://www.codeplex.com/site/users/view/BravoYang) |
| CSASPNETDataPager | ASP.NET DataPager control (C#) | [Kjian](http://www.codeplex.com/site/users/view/Kjian) |
| CSASPNETGridView | ASP.NET GridView control (C#) | [Kjian](http://www.codeplex.com/site/users/view/Kjian) |

## Samples for Silverlight



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSSL3PlaneProjection | Plane projection in SL3 (C#) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBSL3PlaneProjection | Plane projection in SL3 (VB.NET) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3FullScreen | Full screen in SL3 (C#) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBSL3FullScreen | Full screen in SL3 (VB.NET) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3Input | Mouse and keyboard inputs in SL3 | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| VBSL3Input | Mouse and keyboard inputs in SL3 | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| CSSL3PixelShader | Pixel shader in SL3 (C#) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBSL3PixelShader | Pixel shader in SL3 (VB.NET) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3Text | Work with text in SL3 (C#) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| VBSL3Text | Work with text in SL3 (VB.NET) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| XAMLSL3Text | Work with text in SL3 (XAML) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| XAMLSL3StyleControlTemplate | Style and control template in SL3 | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| XAMLSL3SplashScreen | Splash screen in SL3 (XAML) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3DeepZoom | Deep zoom in SL3 (C#) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| VBSL3DeepZoom | Deep zoom in SL3 (VB.NET) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| CSSL3CustomControl | Custom control in SL3 (C#) | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| VBSL3CustomControl | Custom control in SL3 (VB.NET) | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| CSSL3Animation | Animation in SL3 (C#) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBSL3Animation | Animation in SL3 (VB.NET) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3WriteableBitmap | Writeable bitmap in SL3 (C#) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| CSSL3LocalMessage | Communication between local Silverlight-based applications (C#) | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| VBSL3LocalMessage | Communication between local Silverlight-based applications (VB.NET) | [Moggle](http://www.codeplex.com/site/users/view/Moggle) |
| CSSL3MediaElement | Silverlight3 MediaElement (C#) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBSL3MediaElement | Silverlight3 MediaElement (VB.NET) | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSSL3OOB | Out-of-browser Silverlight3 application (C#) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |
| VBSL3OOB | Out-of-browser Silverlight3 application (VB.NET) | [shanaolanxing](http://www.codeplex.com/site/users/view/shanaolanxing) |

## Samples for Data Access



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSUseADO | Use ADO in a C# application | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CppUseADO | Use ADO in a C++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSUseADONET | Use ADO.NET in a C# application | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CppUseADONET | Use ADO.NET in a C++ application | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSADONETDataService | ADO.NET Data Service in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBADONETDataService | ADO.NET Data Service in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSADONETDataServiceClient | Use ADO.NET Data Service in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBADONETDataServiceClient | Use ADO.NET Data Service in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSADONETDataServiceSL3Client | Use ADO.NET Data Service in Silverlight | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| VBADONETDataServiceSL3Client | Use ADO.NET Data Service in Silverlight | [allenc](http://www.codeplex.com/site/users/view/allenc) |
| CSLinqToObject | Use LINQ to Objects in C# | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| VBLinqToObject | Use LINQ to Objects in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSLinqToSQL | Use LINQ to SQL in C# | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| VBLinqToSQL | Use LINQ to SQL in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSLinqToEntities | Use LINQ to Entities in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBLinqToEntities | Use LINQ to Entities in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSLinqToDataSets | Use LINQ to DataSets in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBLinqToDataSets | Use LINQ to DataSets in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSLinqExtension | Extend LINQ in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| SQLServer2005DB | A SQL Server 2005 Database project | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |

## Samples for Office



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSOutlookUIDesigner | Customize Outlook UI using VSTO Designers (C#) | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| VBOutlookRibbonDesigner | Customize Outlook UI using VSTO Designers (VB.NET) | TimLi |
| CSOutlookRibbonXml | Customize Outlook UI using Ribbon XML (C#) | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| VBOutlookRibbonXml | Customize Outlook UI using Ribbon XML (VB.NET) | TimLi |
| CSVstoExcelWorkbook | Customize Excel workbook using VSTO | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| CSVstoVBAInterop | VSTO Interop with Excel VBA macros | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| CSVstoGetWrapperObject | Get VSTO Wrapper Object | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| CSExcelAutomationAddIn | Excel Automation Add-in in C# | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| VBExcelAutomationAddIn | Excel Automation Add-in in VB.NET | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| CSVstoServerDocument | Use VSTO ServerDocument class | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| CSOfficeSharedAddIn | Office Shared AddIn in C# | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| CppOfficeManagedCOMAddInShim | Shim of Office Managed COM AddIn | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| CSAutomateWord | Automate Word in a C# application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBAutomateWord | Automate Word in a VB.NET application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppAutomateWord | Automate Word in a VC++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSAutomateExcel | Automate Excel in a C# application | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| VBAutomateExcel | Automate Excel in a VB.NET application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppAutomateExcel | Automate Excel in a VC++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSAutomateOutlook | Automate Outlook in a C# application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBAutomateOutlook | Automate Outlook in a VB.NET application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppAutomateOutlook | Automate Outlook in a VC++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSAutomatePowerPoint | Automate PowerPoint in a C# application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBAutomatePowerPoint | Automate PowerPoint in a VB.NET application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppAutomatePowerPoint | Automate PowerPoint in a VC++ application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for Language



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSBasics | Basics of C# |  |
| CSCodeDOM | CodeDOM in C# | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| VBCodeDOM | CodeDOM in VB.NET | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| VBBasics | Basics of VB.NET |  |
| CppBasics | Basics of VC++ |  |
| CppCLIBasics | Basics of VC++/CLI |  |

## Samples for Library



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppDllExport | A C++ dynamic library export symbols | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppImplicitlyLinkDll | C++ implicitly links a DLL | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppDelayloadDll | C++ delay-loads a DLL | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppLoadLibrary | C++ dynamically loads a DLL | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSLoadLibrary | C# dynamically loads a native DLL | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSPInvokeDll | C# P/Invokes a native DLL | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSClassLibrary | A C# Class Library | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppHostCLR | C++ hosts CLR and loads a .NET assembly | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSReflection | C# dynamically loads and uses the types of an assembly | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSEmitAssembly | C# emits an assembly with types in runtime | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBClassLibrary | A VB.NET Class Library | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBReflection | VB.NET dynamically loads and uses the types of an assembly | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppStaticLibrary | A C++ Static Library | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppStaticallyLinkLib | C++ statically links a static library | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppCLIWrapLib | C++/CLI wrapper of native C++ lib | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for IPC and RPC



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppNamedPipeServer | A named-pipe server written in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppNamedPipeClient | A named-pipe client written in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSNamedPipeServer | A named-pipe server written in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang), [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSNamedPipeClient | A named-pipe client written in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang), [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CppMailslotServer | A mailslot server written in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppMailslotClient | A mailslot client written in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSMailslotServer | A mailslot server written in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSMailslotClient | A mailslot client written in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CppFileMappingServer | Create shared memory in C++ | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |
| CppFileMappingClient | Access shared memory in C++ | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |
| CSFileMappingServer | Create shared memory in C# | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |
| CSFileMappingClient | Access shared memory in C# | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |
| CSRemotingServer | A .NET Remoting server written in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSRemotingClient | A .NET Remoting client written in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBRemotingServer | A .NET Remoting server written in VB | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBRemotingClient | A .NET Remoting client written in VB | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSReceiveWM\_COPYDATA | Receive WM\_COPYDATA in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSSendWM\_COPYDATA | Send WM\_COPYDATA in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CppReceiveWM\_COPYDATA | Receive WM\_COPYDATA in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppSendWM\_COPYDATA | Send WM\_COPYDATA in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSSocketServer | A socket server written in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSSocketClient | A socket client written in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| MFCClipboard | Use clipboard in MFC | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |

## Samples for Windows



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppWindowsDialog | Windows Dialog Box in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppWindowsUserControls | Use user-controls in C++ Windows application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppWindowsCommonControls | Use common-controls in C++ Windows application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppWindowsSubclassing | Subclass Windows in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for WinForm



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSWinFormDataBinding | WinForm Data-binding in C# | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormControls | WinForm Control Customization in C# | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormObjPersistence | Object Persistence in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormDragAndDrop | Drag and Drop operations in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormGraphics | Use GDI+ to do Graphics in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormTimeConsumingOpr | Time-consuming Operations in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormPrinting | Printing in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormPassValueBetweenForms | Pass Value between WinForms | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormLocalization | Localize WinForm application | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormDataGridView | DataGridView in WinForm | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormDesigner | WinForm Designers in C# | [ZhiXin](http://www.codeplex.com/site/users/view/ZhiXin) |
| CSWinFormSplashScreen | WinForm Splash Screen | [Bruce](http://www.codeplex.com/site/users/view/Bruce) |
| CSWinFormBindingNestedProperties | WinForms binding nested properties | Linda |

## Samples for WPF



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSWPFThreading | Threading in WPF | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |

## Samples for XML



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSLinqToXml | Use LINQ to XML in C# | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| VBLinqToXml | Use LINQ to XML in VB.NET | [LingzhiSun](http://www.codeplex.com/site/users/view/LingzhiSun) |
| CSXmlSerialization | XML Serialization (C#) | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| VBXmlSerialization | XML Serialization (VB.NET) | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| CSXmlGeneral | General operations of XML files (C#) | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |
| VBXmlGeneral | General operations of XML files (VB.NET) | [Colbert](http://www.codeplex.com/site/users/view/Colbert) |

## Samples for File System



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppSynchronousIO | Synchronous I/O in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppAsynchronousIO | Asynchronous I/O in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppSparseFile | Sparse file operations in C++ | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSSparseFile | Sparse file operations in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBSparseFile | Sparse file operations in VB.NET | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppFileHandle | Operations about file handle | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSListFilesInDirectory | List files in directory using C# | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |
| VBListFilesInDirectory | List files in directory using VB.NET | [midnightfrank](http://www.codeplex.com/site/users/view/midnightfrank) |

## Samples for Security



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSEncryption | Use encryption in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSDigitalSignature | Use digital signature in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSUac | UAC Elevation in C# | [Fisnik](http://www.codeplex.com/site/users/view/Fisnik) |
| VBUac | UAC Elevation in VB.NET | [Fisnik](http://www.codeplex.com/site/users/view/Fisnik) |
| CppUac | UAC Elevation in VC++ | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CSCustomAuthorization | Implement custom authorization in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CSControlFirewall | Control Windows Firewall in C# | [Fisnik](http://www.codeplex.com/site/users/view/Fisnik) |
| CSImpersonateUser | Impersonation in C# | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| VBImpersonateUser | Impersonation in VB.NET | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |
| CppImpersonateUser | Impersonation in C++ | [Riquel](http://www.codeplex.com/site/users/view/Riquel) |

## Samples for Visual Studio



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSTFSWorkItemObjectModel | Use TFS WorkItem Object Model in C# | [billwg](http://www.codeplex.com/site/users/view/billwg) |
| CSVSPackage | VS Package in C# | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CSVSPackageState | VS Package: State Persisting | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |
| CSVSToolWindow | VSPackage with a tool window | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CSTFSDataWarehouseAdapter | TFS Data Warehouse Adapter | [billwg](http://www.codeplex.com/site/users/view/billwg) |

## Samples for Windows Shell



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| ATLShellExtDragAndDropHandler | Shell Drag and Drop Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtInfotipHandler | Shell Infotip Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtPropSheetHandler | Shell Property Sheet Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtContextMenuHandler | Shell Context Menu Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtIconHandler | Shell Icon Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtIconOverlayHandler | Shell Icon Overlay Extension Handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| ATLShellExtColumnHandler | Shell extension column handler | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CSShellKnownFolders | Shell Knownfolder API (C#) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBShellKnownFolders | Shell Knownfolder API (VB.NET) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppShellKnownFolders | Shell Knownfolder API (C++) | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for Hook



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSWindowsHook | Windows Hook in a C# application | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CppWindowsHook | Windows Hook in a C++ application | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |
| CppHookDll | Hook Dll injected into other processes | [RongchunZhang](http://www.codeplex.com/site/users/view/RongchunZhang) |

## Samples for Console



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppRedirectConsole | C++ app redirects console IO | [hongyes](http://www.codeplex.com/site/users/view/hongyes) |

## Samples for Network



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CSSMTPSendEmail | Send email using SMTP in C# | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| VBSMTPSendEmail | Send email using SMTP in VB.NET | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

## Samples for Diagnostics



|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Owner** |
| CppStackOverflow | Stack overflow in a Win32 application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppStackCorruption | Stack corruption in a Win32 application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppHeapCorruption | Heap corruption in a Win32 application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |
| CppResourceLeaks | Resource leaks in a Win32 application | [Jialiang](http://www.codeplex.com/site/users/view/Jialiang) |

# Features

## All-In-One

All examples for all Microsoft development techniques are in one Visual Studio solution. All source codes, documents, and reference materials can be viewed or tested in one instance of Visual Studio.

## Skeleton

The project delineates the skeleton of the technologies. Its samples do not demonstrate any specific businesses such as the design of [a traffic game in Silverlight](http://blogs.msdn.com/tess/archive/2009/03/04/silverlight-2-0-walkthrough-creating-a-traffic-jam-game.aspx) or [fireworks in ATL](http://msdn.microsoft.com/en-us/library/x5bh51cs.aspx), as they may distract your attention from the core of the technologies. You can easily extend the skeleton to meet your own requirements.

## Source of Examples

The examples are refined out of our supports for developers in the [newsgroups](http://msdn.microsoft.com/en-us/subscriptions/aa974230.aspx) and the [forums](http://social.msdn.microsoft.com/Forums/en-US/categories). You can think of the project as a collection of most frequently requested test scenarios in contrast with FAQs.

## Uniform

* All examples follow a uniform naming convention. The convention applies to the name of the projects, variables, methods, types, etc.
* All examples have a uniform style of coding, commenting and documentation. For instance, each code example has a ReadMe.txt file that documents the example. The content of ReadMe.txt follows this structure: Use (the purpose of the example), Project Relation (the relation between the current example and the rest), Build (how to build the example), Creation (the detailed steps to create such an example) and References (the reference materials).
* All examples of the same technique manage to provide a uniform output or export. For instance, ATLDllCOMServer, ATLExeCOMServer, ATLCOMService, CSDllCOMServer, CSCOMService, VBDllCOMServer, MFCActiveX, MFCSafeActiveX, ATLActiveX, CSActiveX, VBActiveX are COM components in different forms. However, they export a uniform set of methods, properties and events.

## Mutually Dependent

The code examples are mutually dependent or related, and many are efficiently reused by other examples to demonstrate the techniques. For instance, CppDllExport is a sample C++ DLL that exports the symbols of data, functions and classes. CppImplicitlyLinkDll depends on CppDllExport to demonstrate the implicit link of a DLL; CppDelayloadDll delay-loads the DLL; CppLoadLibrary dynamically loads the DLL; CSPInvokeDll uses CppDllExport to show the use of .NET Platform Invocation Service.

The above five features are highlighted because most sample code sites like [www.codeproject.com](http://www.codeproject.com) and [MSDN](http://msdn.microsoft.com/en-us/default.aspx) lack them. Besides, the code examples in All-In-One Code Framework are **typical**, **extensible**, **structured**, **complete**, **well-documented** and **easy to understand**.

# Feedback

We look forward to hearing your feedback. Please post your suggestions and ideas in [Discussions](http://cfx.codeplex.com/Thread/List.aspx) or [contact us](https://www.codeplex.com/site/users/contact/Jialiang?OriginalUrl=http://www.codeplex.com/site/users/view/Jialiang) directly. Your comments on this project are appreciated.

Thank you!