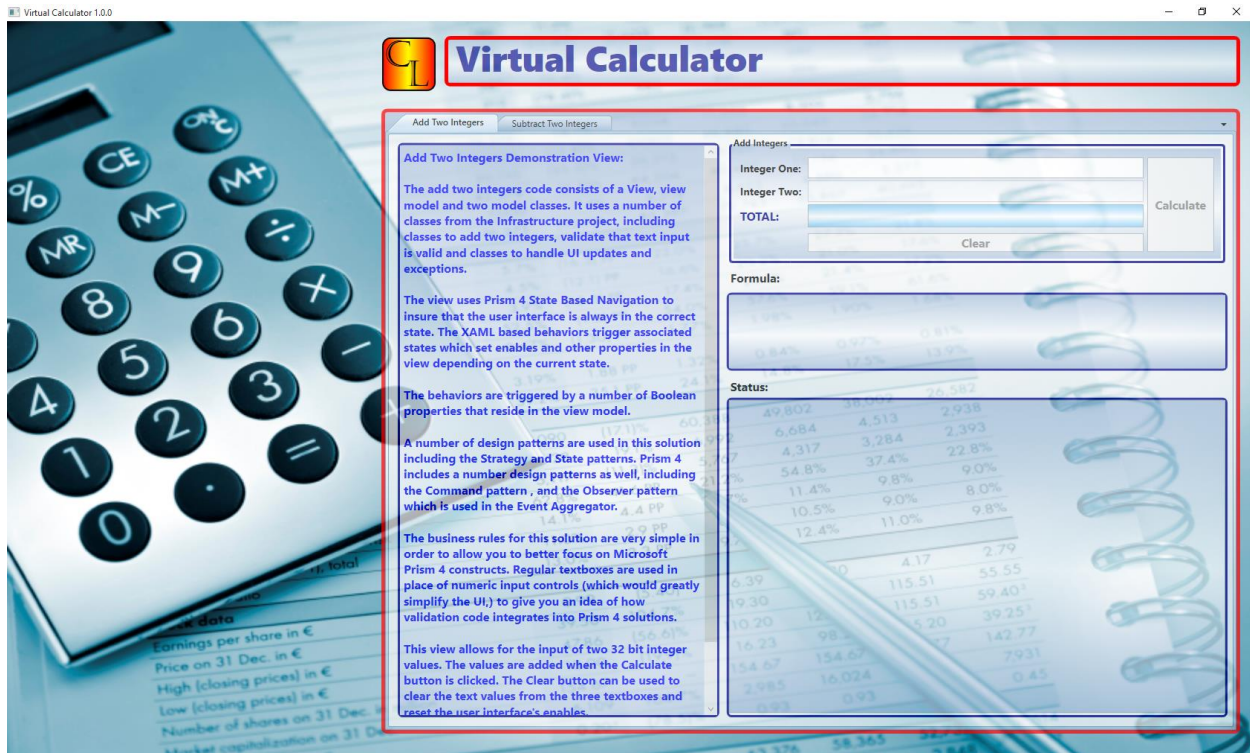# Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

READ ME FIRST!

The Virtual Calculator demo solution.

➢ **Document explanation:**
- o Please read this document before working with the demo solutions. It will explain where to find resources and how to address version issues with the demo applications.
- o This document is designed to help you resolve version issues with the Syncfusion WPF suite and, if necessary, the Unity Dependency Injection Container (DIC). Both of these libraries are used in the Prism 4 demo applications.
- o It is also designed to show you how to resolve issues with the .NET framework version that is used with the demo solutions.
- o As Syncfusion adds new versions to its control suite, you may find that you experience build issues when trying to resolve dependencies between older and newer versions of the control suite. This document is designed to walk you through the necessary steps to resolve these issues.
- o It also provides installation and setup instructions for Visual Studio 2013 Express and Visual Studio Community Edition. Both of these software packages are free from Microsoft. Just select the version that you want to work with and follow the instructions.
- o If you have a higher edition of Visual Studio, (Professional, Ultimate etc.) you may also use them to work with the demo solutions.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

- o **WARNING:** Earlier versions of Visual Studio (before 2010) will also work with the demos but will require additional setup that this document does not address.

- ➢ **The test environment used to validate the demo application setup:**
  - o I used VMware Workstation 12 Pro to create a virtual Microsoft Windows 10 Home operating system.
  - o I added Visual Studio 2013 Express and Visual Studio 2015 Community Edition to the virtual machine.
  - o VM snapshots were used to allow me to roll back the installations when necessary.
  - o I then downloaded the current version of Syncfusion WPF.
  - o I also downloaded the Prism 4 demo applications.
  - o I use NUnit for unit testing in the demo applications, and I downloaded the latest version of this testing framework to validate the unit tests.
  - o After installing the Syncfusion suite, I configured the demo applications so that they worked with the new version of Syncfusion WPF.
  - o See the instruction section for detailed step by step directions.

- ➢ **List of the demo applications:**
  - o Hello World!
  - o Virtual Calculator

- ➢ **Software that can be used with the demo applications:**
  - o Operating Systems:
    - ➢ Microsoft Windows 7 (Any Edition)
    - ➢ Microsoft Windows 8 (Any Edition)
    - ➢ Microsoft Windows 8.1 (Any Edition)
    - ➢ Microsoft Windows 10 (Any Edition)

  - o Visual Studio Versions:
    - ➢ Visual Studio 2008 (Any Edition. May need additional Setup.)
    - ➢ Visual Studio 2010 (Any Edition)
    - ➢ Visual Studio 2013 (Any Edition)
    - ➢ Visual Studio 2015 (Any Edition)

  - o Syncfusion software:
    - ➢ The Syncfusion WPF Control Suite (Latest Version)
      - Can use either a licensed or evaluation (30 day) version.

  - o Microsoft Prism Version:
    - ➢ Microsoft Prism 4.2

  - o Dependency Injection Container:
    - ➢ Microsoft Unity

  - o Testing Framework:
    - ➢ Nunit Framework

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

**NOTE:** If you already have Visual Studio, Syncfusion, and Nunit loaded, you can skip the next 4 sections.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

➢ **Visual Studio 2013 Express demo instructions:**
  - **A. Download Visual Studio 2013 Express:**
    1. Open Microsoft Edge or your browser of choice.
    2. Navigate to the Visual Studio 2013 Express for Windows download Website: http://www.microsoft.com/en-US/download/details.aspx?id=44914
    3. The website is shown:
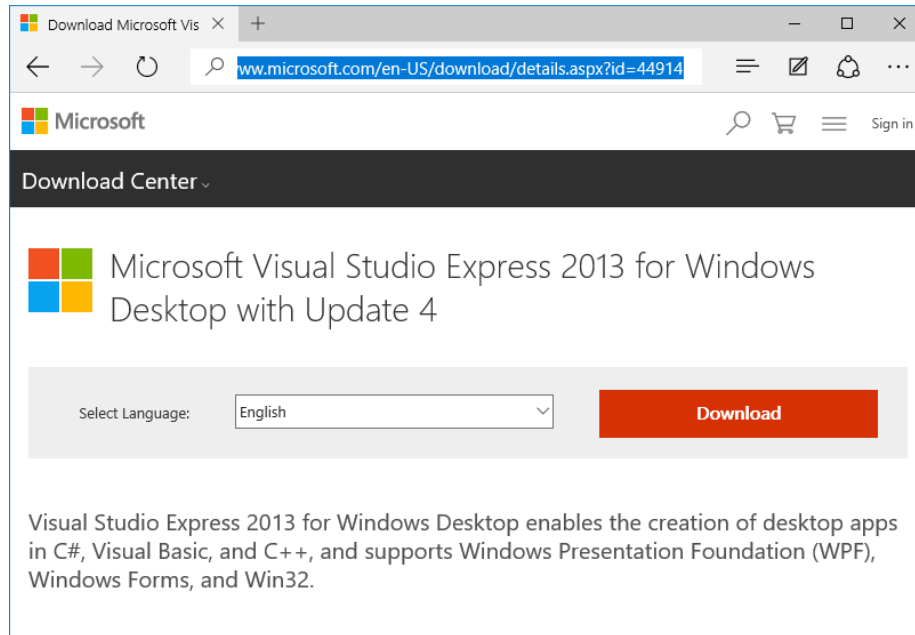
The Visual Studio 2013 Express for Windows Desktop Update 4 Web Page.

    4. Click the download button.
    5. The "Choose the download that you want" web page is shown.
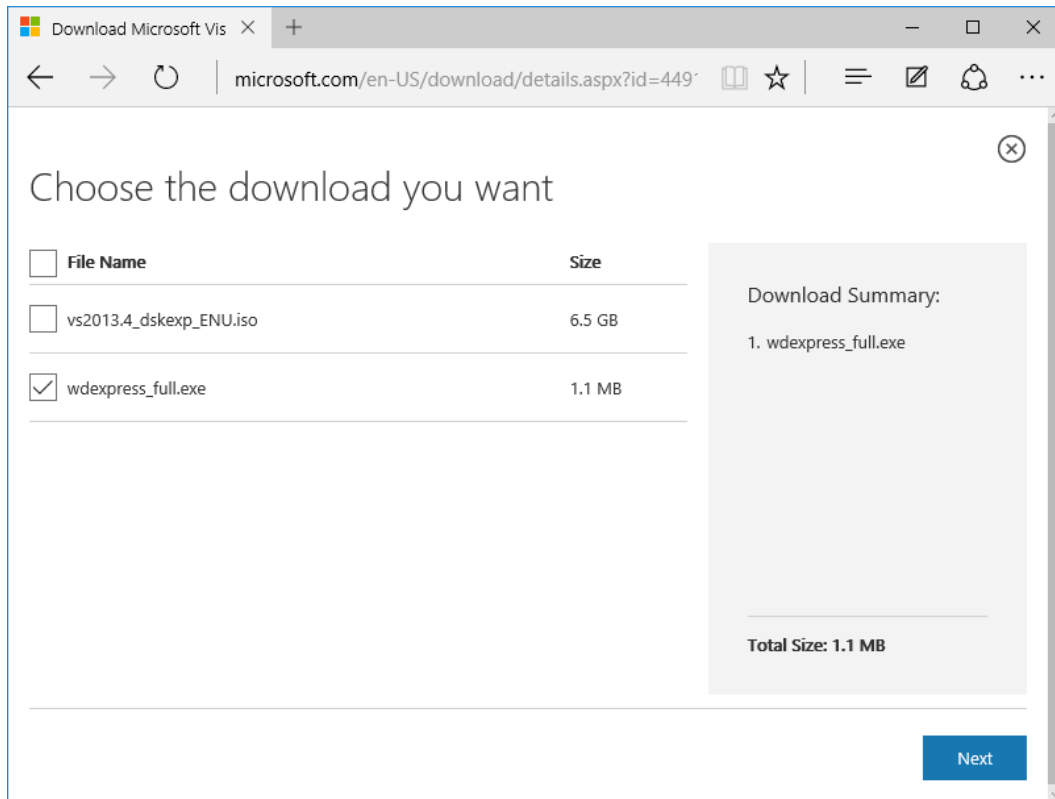
The Visual Studio 2013 Express "Choose the download that you want" web page.

6. Select either the iso or exe download checkbox. (You also have the option of selecting both).
7. Click the Next button at the bottom right of the web page.
8. The "Thank you for downloading" web page is shown.
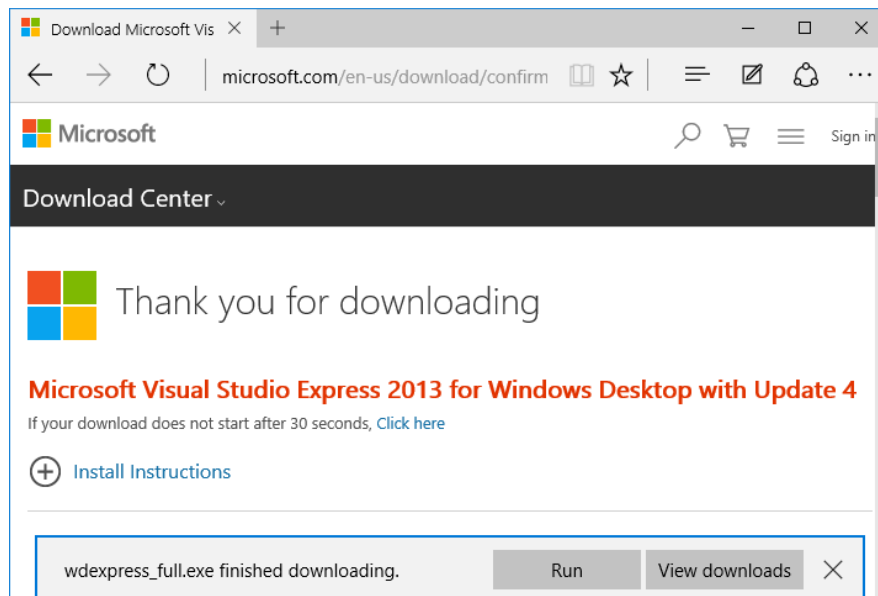
The "Thank you for downloading" web page.

9. When the popup at the bottom of the window displays "finished downloading," close the web page.

B. Install Visual Studio 2013 Express:
1. Open the File Explorer.
2. Click the Downloads folder to the left of the dialog.
3. The Downloads Window is shown.
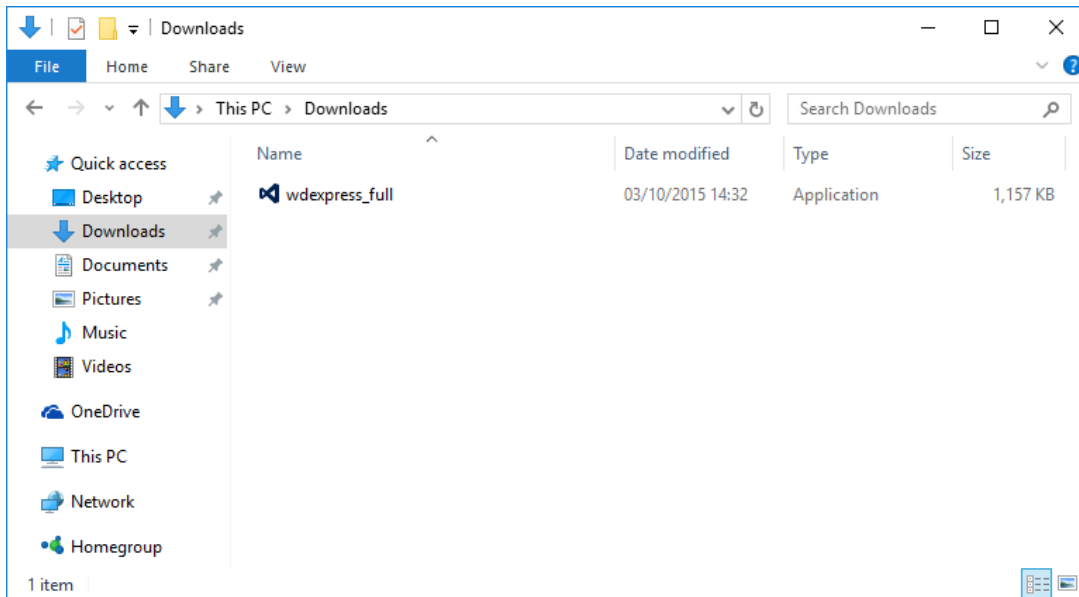
The Downloads Window.

4. Double click the wdexpress_full file.
5. The "Open File - Security Warning" dialog may be shown.

The "Open File - Security Warning" dialog.

6. If the dialog is shown, click the Run button.
7. The Visual Studio "Setup Blocked" Window may be shown. If it is, close the window by clicking the Cancel button at the bottom of the page and restart the computer. When the computer reboots, go back to Step 1 and skip this step.

The Visual Studio Setup Blocked Window.

8. The Visual Studio 2013 Express for Windows Desktop Setup dialog is shown.

The Visual Studio 2013 Express for Windows Desktop Setup dialog.

9. Check the "I agree to the License Terms and Privacy Policy" checkbox.
10. The INSTALL button is shown at the bottom of the dialog.

The Visual Studio 2013 Express for Windows Desktop with INSTALL button

11. Click the INSTALL button.
12. The User Account Control dialog may be shown.
13. If it is shown, click the Yes button.
14. The software starts to install.

WARNING: This process may take a long time.
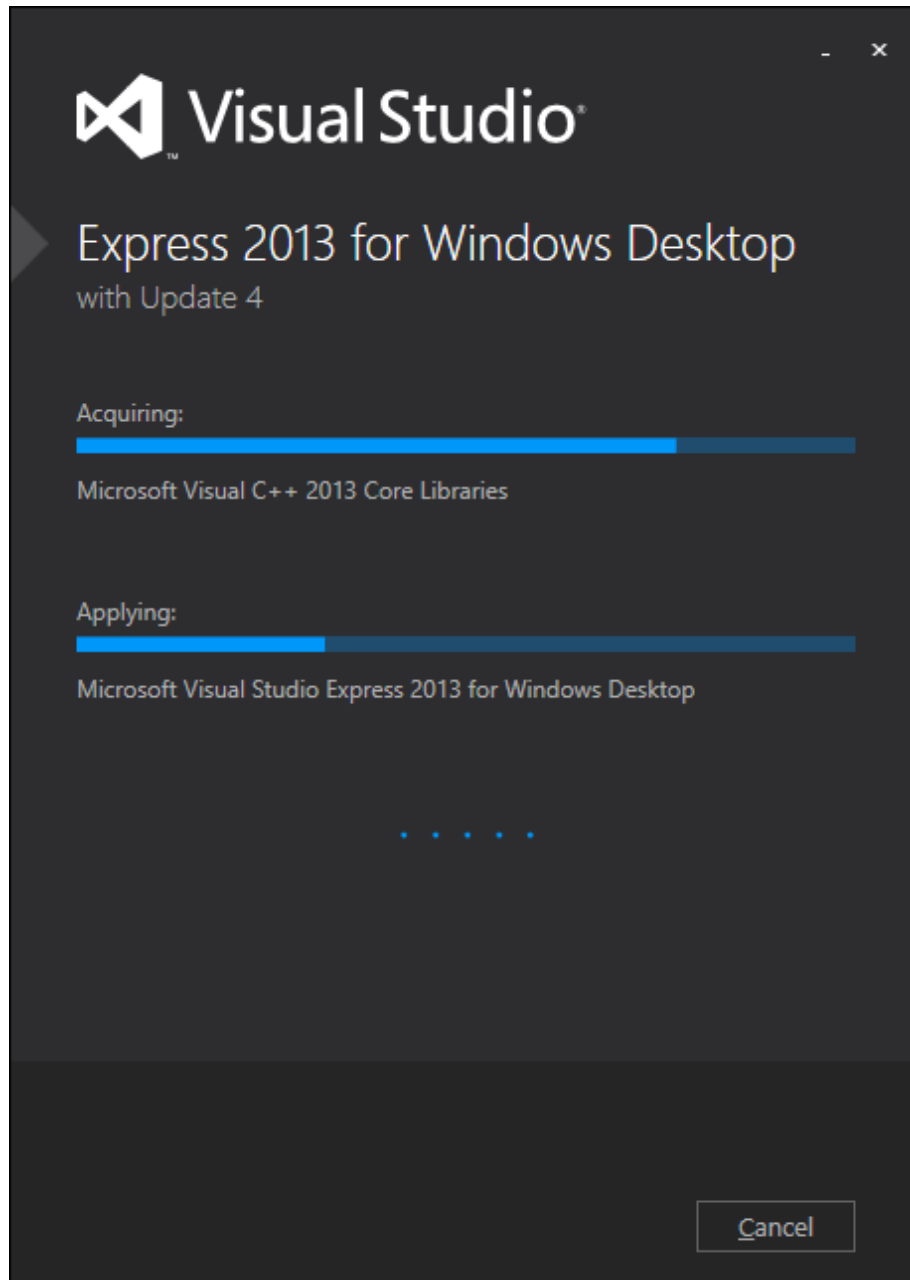
The Visual Studio 2013 Desktop Edition Installation Window.

15. After Visual Studio is installed, the LAUNCH button is displayed at the bottom of the Setup Completed! dialog.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book
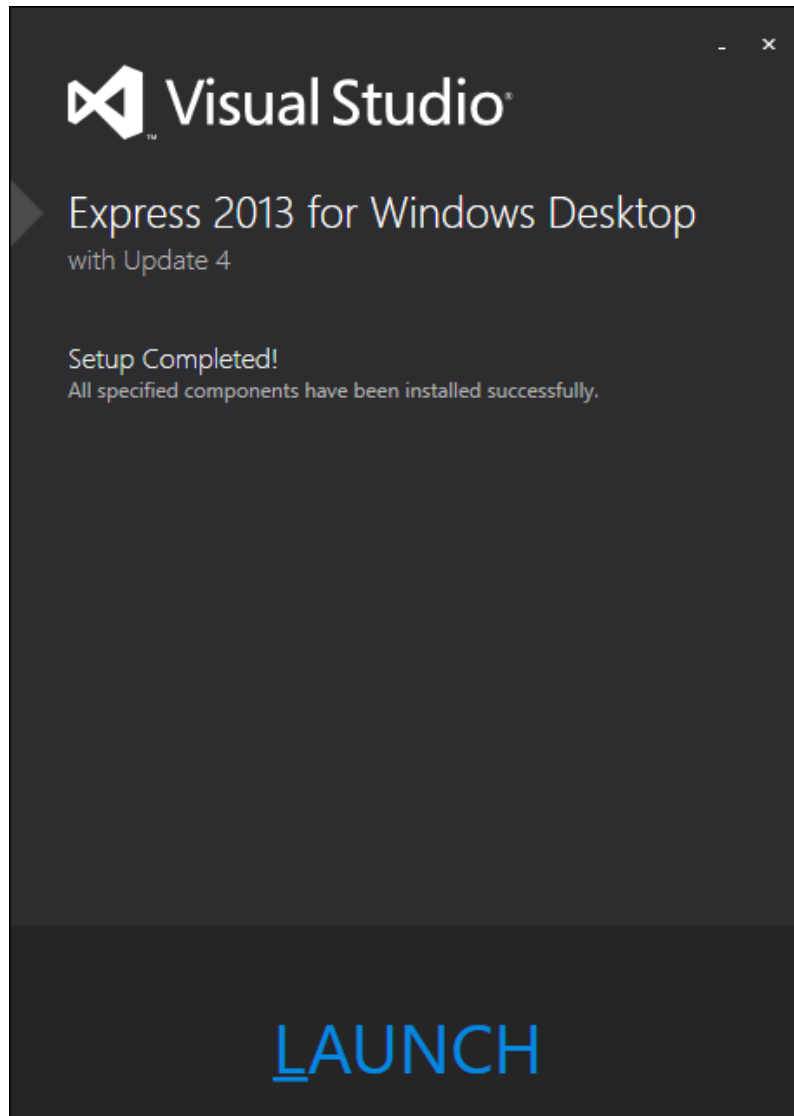
By: Eric Stitt

The Visual Studio Setup Completed! dialog with LAUNCH button.

16. Click the LAUNCH button.
17. The Visual Studio Welcome dialog is shown.
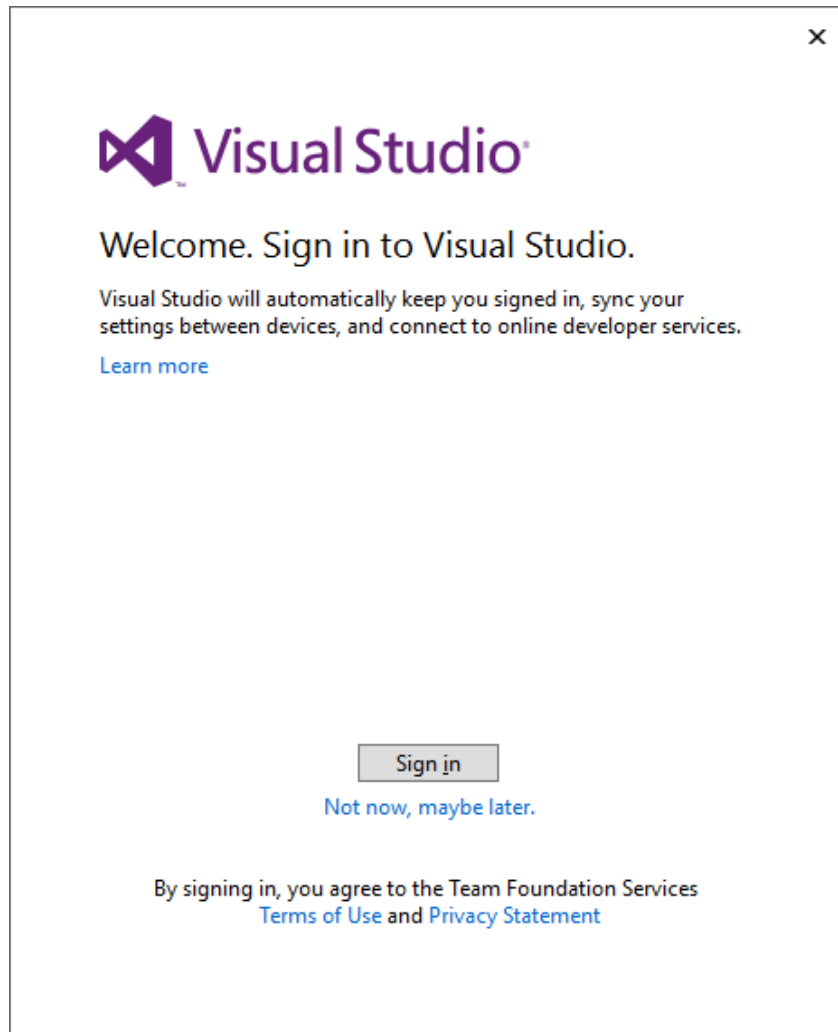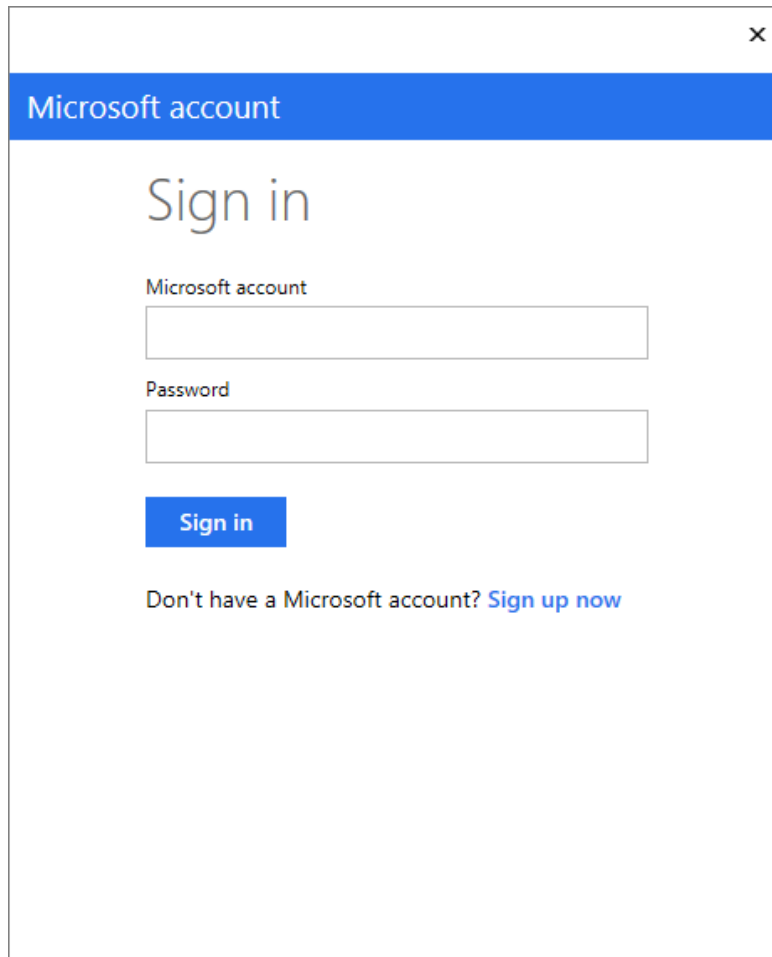
The Visual Studio Welcome dialog.

18. Click the Sign In button.
19. The Sign In dialog is shown.

The Sign In dialog.

NOTE: if you don't already have an account, click the Sign up now link at the bottom of the Window and follow the instructions.

20. Enter your Microsoft Account (e-mailaddress@website.com) and Password.
21. Click the Sign in button.
22. The preparing for first use dialog is shown.
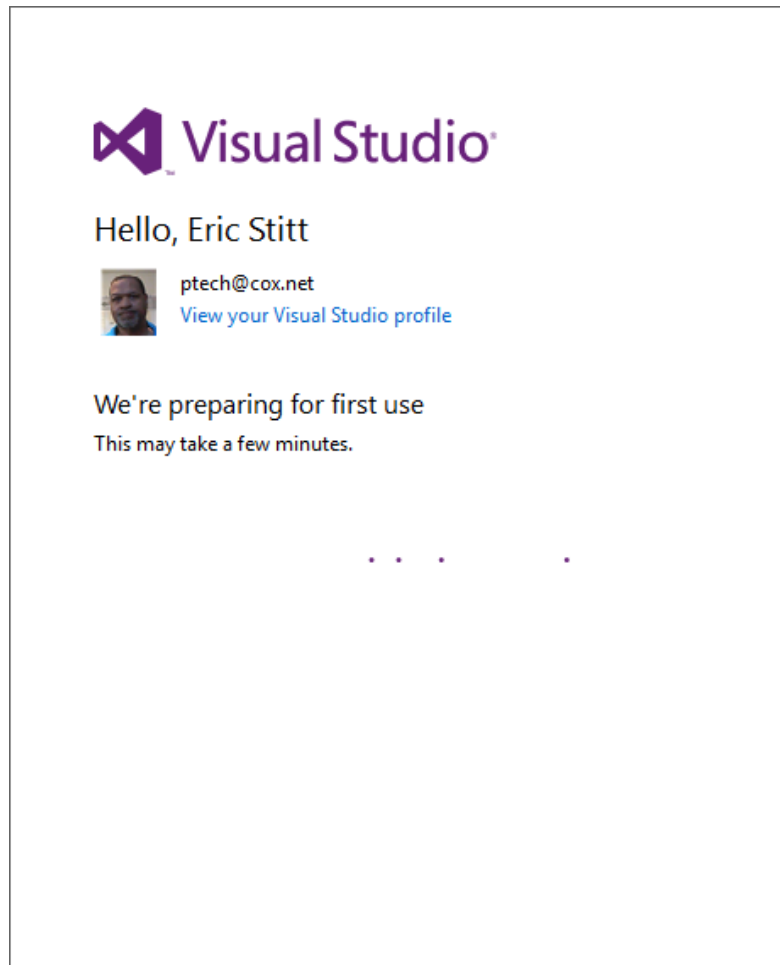
The preparing for first use dialog.

23. After the preparing for first use dialog closes, the Visual Studio IDE is shown.
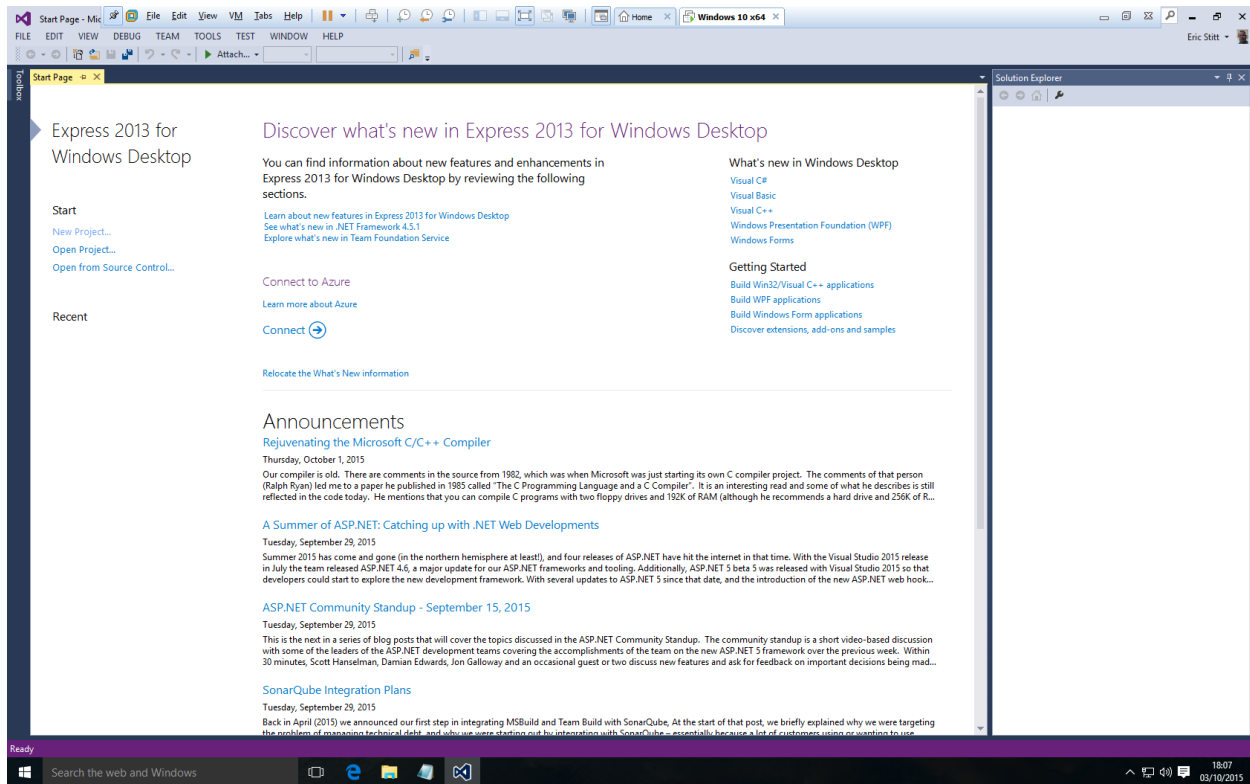
The Visual Studio IDE.

24. At this time you can close the Visual Studio Window.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

➢ **Visual Studio 2015 Community Edition demo instructions:**
   A. Download Visual Studio 2015 Community Edition:
   1. Open Microsoft Edge or your browser of choice.
   2. Navigate to the Visual Studio 2015 Community Edition download Website:
      http://www.microsoft.com/en-us/download/details.aspx?id=48146
   3. The website is shown:
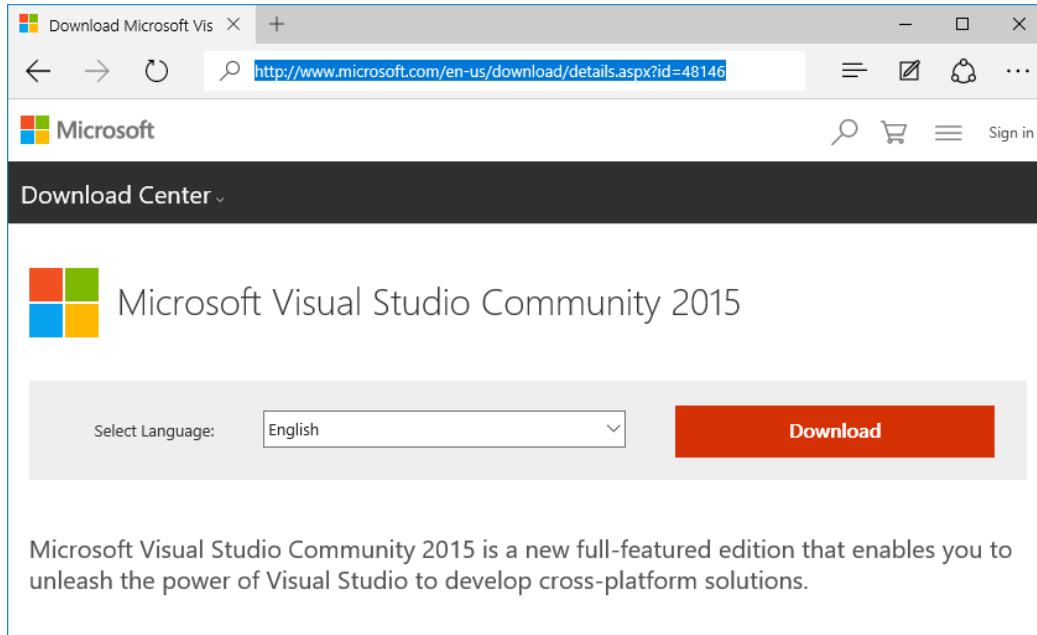
The Visual Studio 2015 Community Edition download Website.

   4. Click the Download button.
   5. The "Choose the download you want" web page is shown.
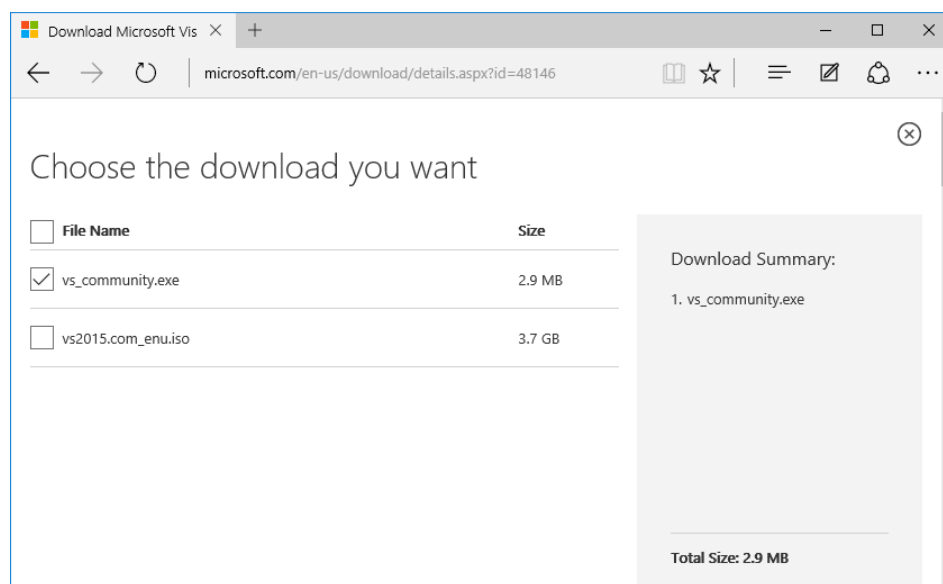
The "Choose the download you want" web page.

6. Select either the iso or exe download checkbox. (You also have the option of selecting both).
7. Click the Next button at the bottom of the page.
8. The "Thank you for downloading" web page is shown
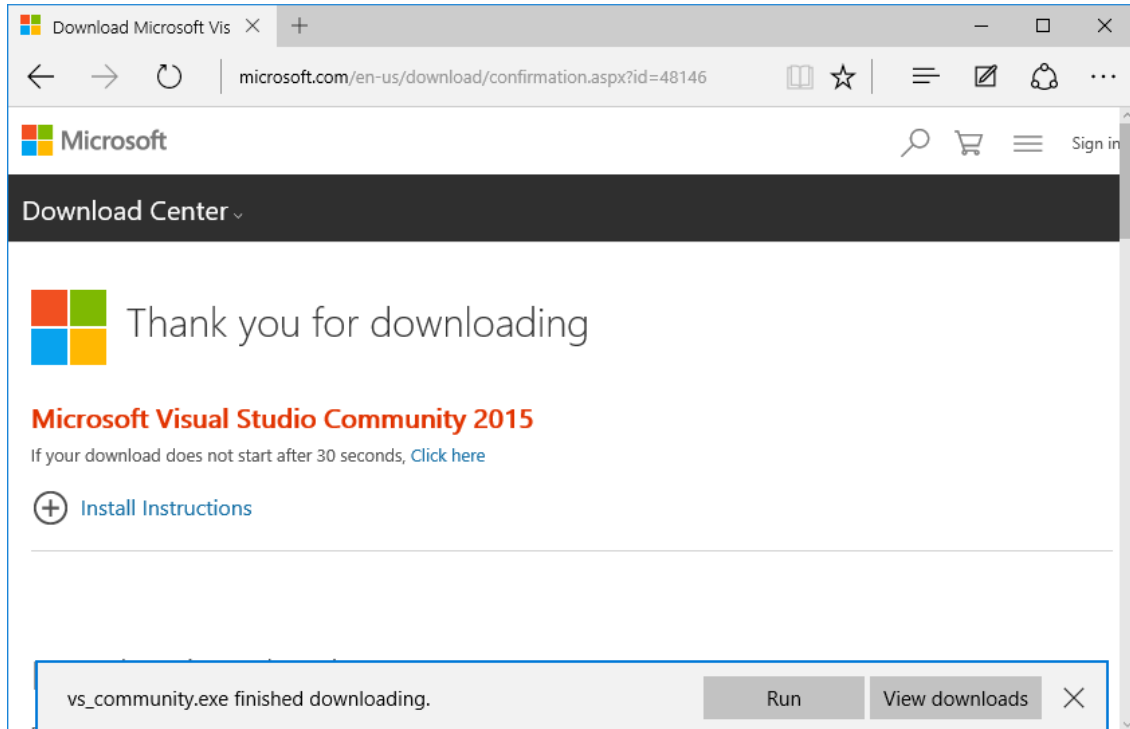
The "Thank you for downloading" web page.

9. When the popup at the bottom of the window displays "finished downloading." close the web page.

B. Install Visual Studio 2013 Community Edition:
1. Open the File Explorer.
2. Click the Downloads folder to the left of the dialog.
3. The Downloads Window is shown.
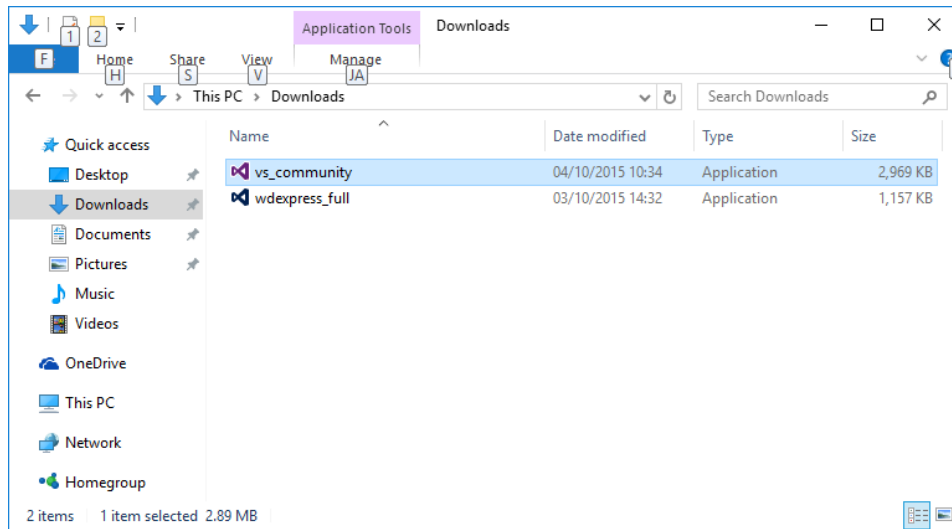
The Downloads Window.

4. Double click the vs_community file in the downloads folder.
5. The "Open File - Security Warning" dialog may be shown.
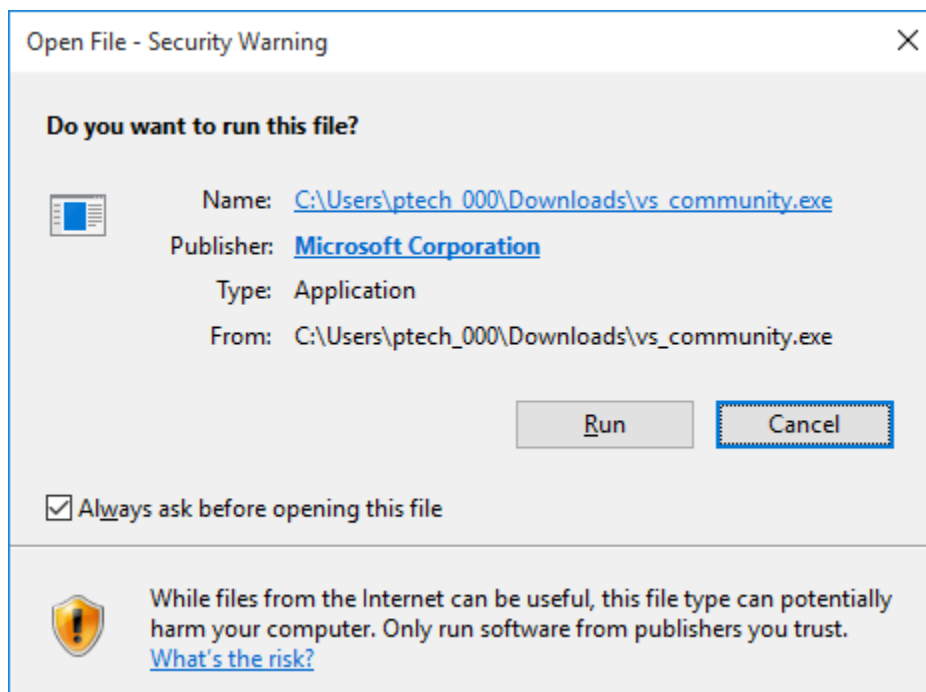
The "Open File - Security Warning" dialog.

6. If the dialog is shown, click the Run button.
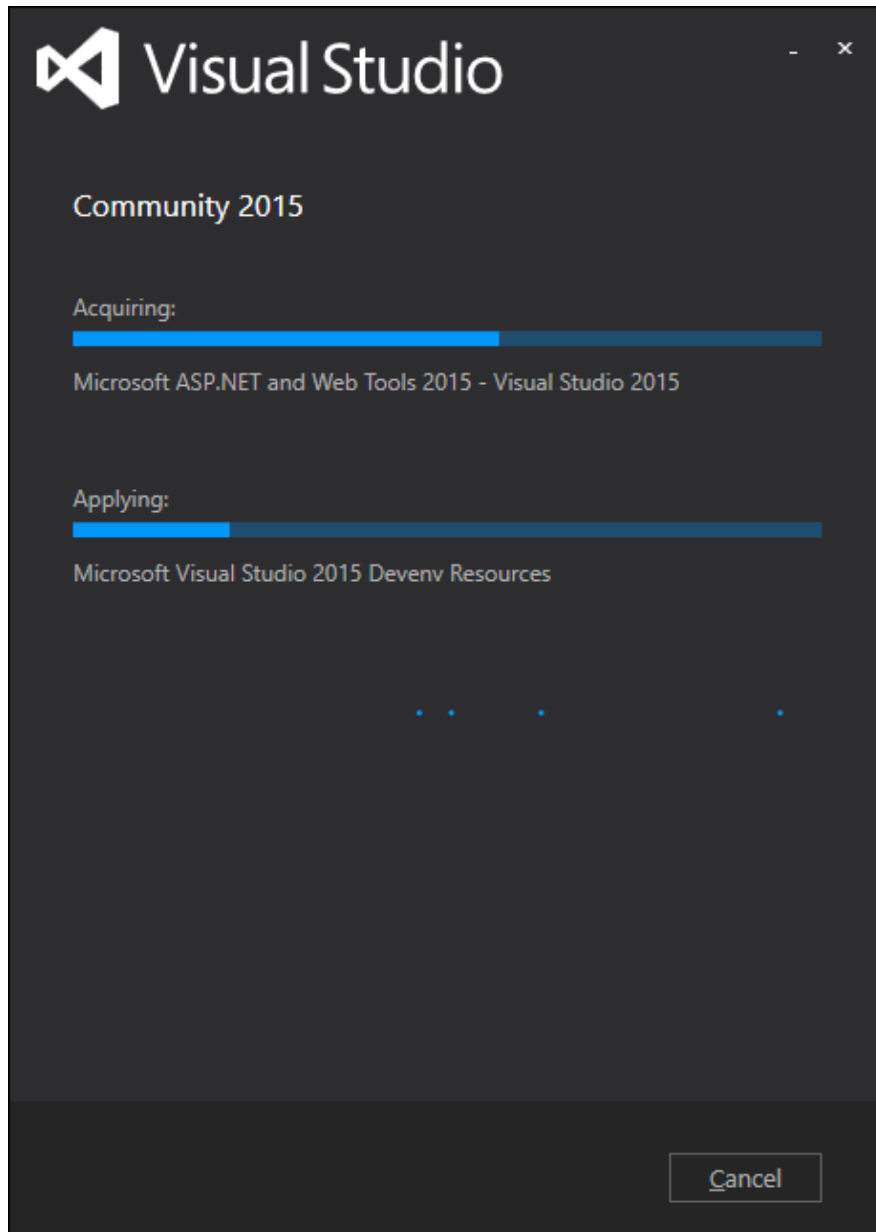7. The Visual Studio 2015 Community Edition Setup dialog is shown.
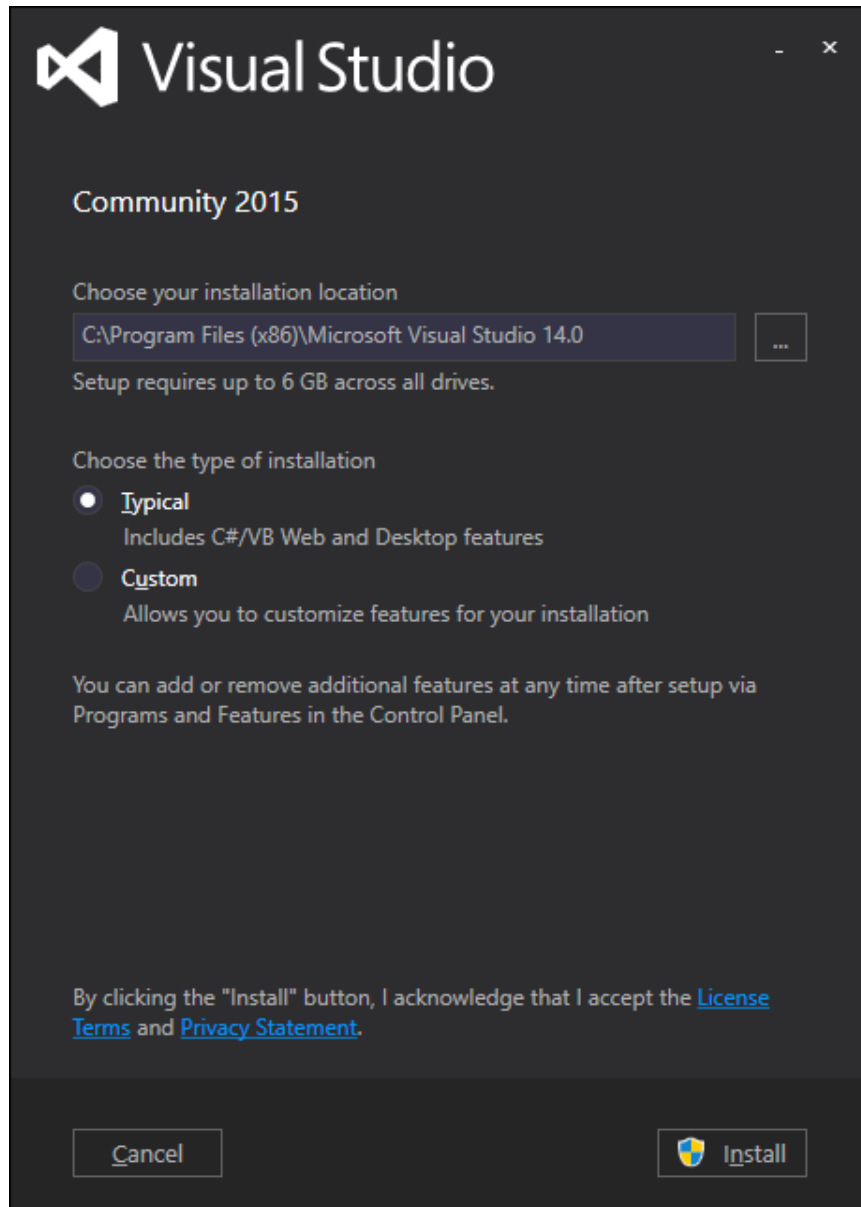
The Visual Studio 2015 Community Edition Setup dialog.

8. Select the Typical radio button. (You may also select the Custom radio button).
9. Click the Install button on the bottom right.
10. The User Account Control dialog may be shown.
11. If it is, click the Yes button.
12. The software starts to install.

WARNING: This process may take a long time.

By: Eric Stitt

The Visual Studio 2015 Community Edition Installation Window.

13. After Visual Studio is installed, the LAUNCH button is displayed at the bottom of the Setup Completed! dialog.
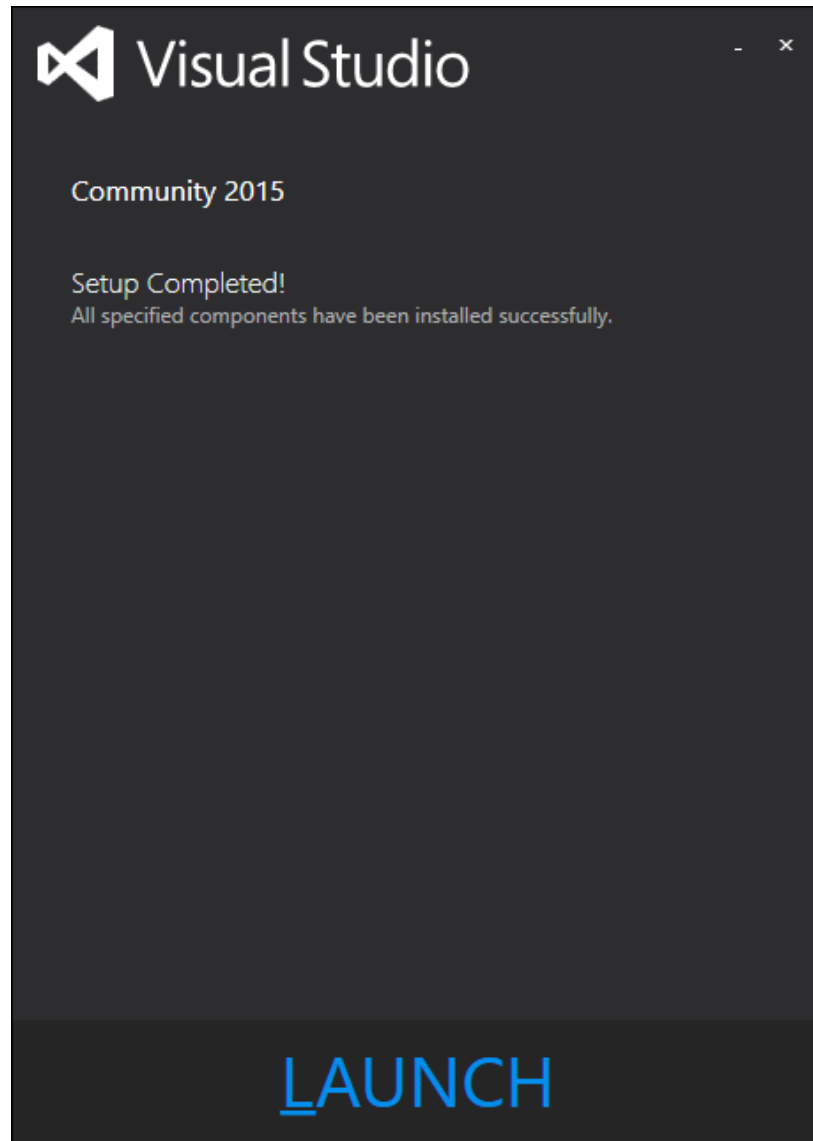
The Visual Studio 2015 Community Edition Setup Completed dialog with LAUNCH button.

14. Click the LAUNCH button.
15. The Visual Studio Welcome dialog is shown
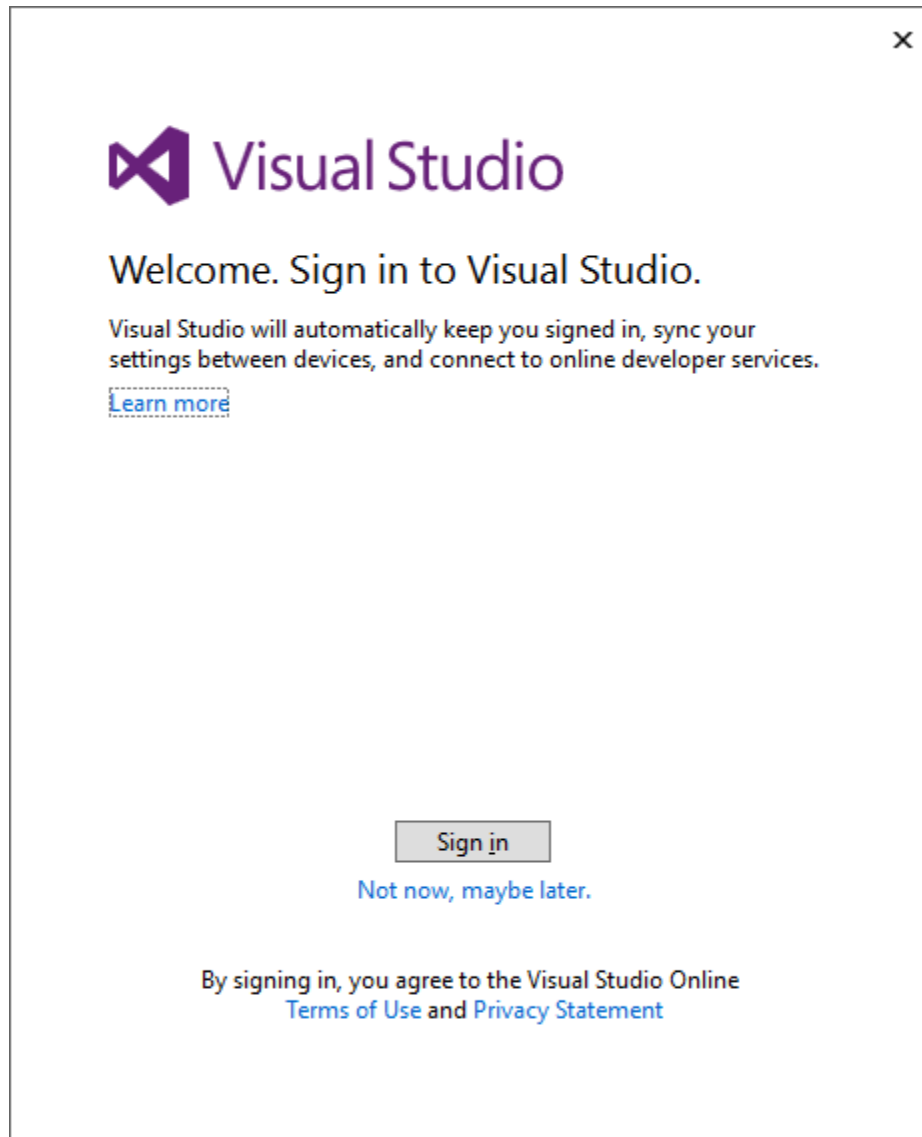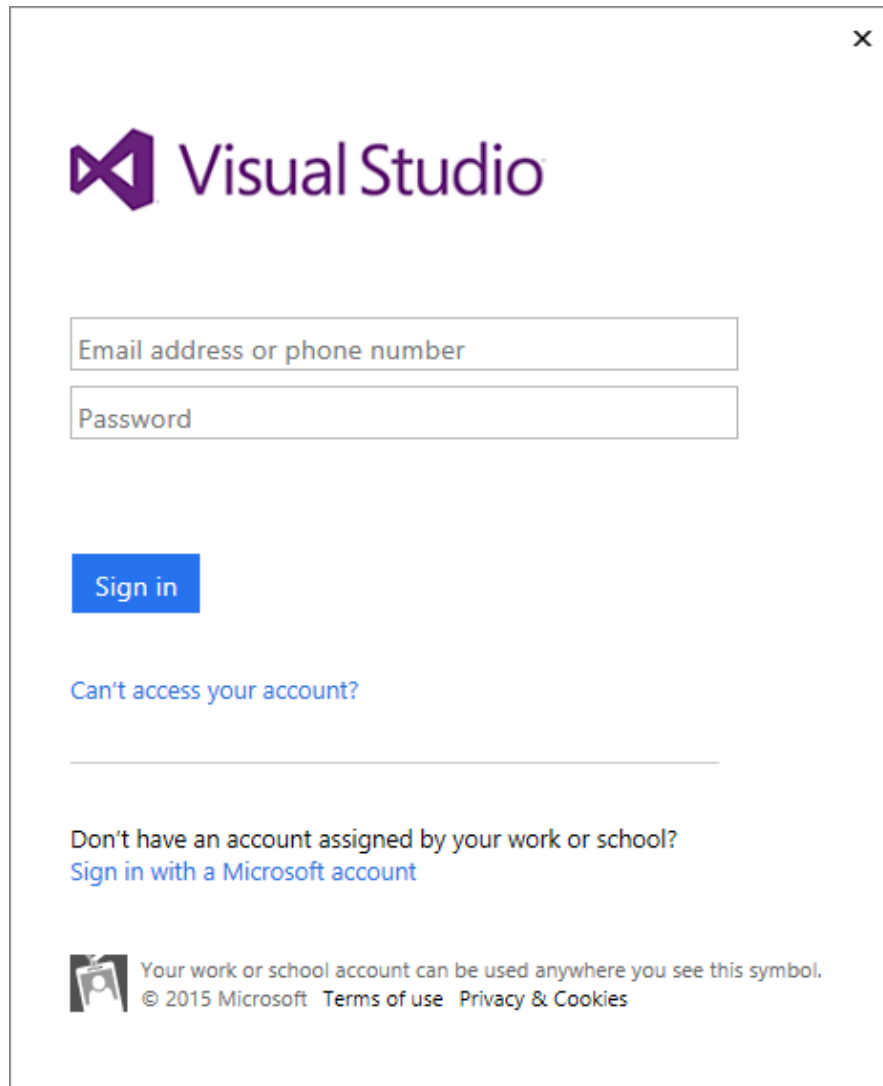
The Visual Studio Welcome dialog.

16. Click the Sign In button.
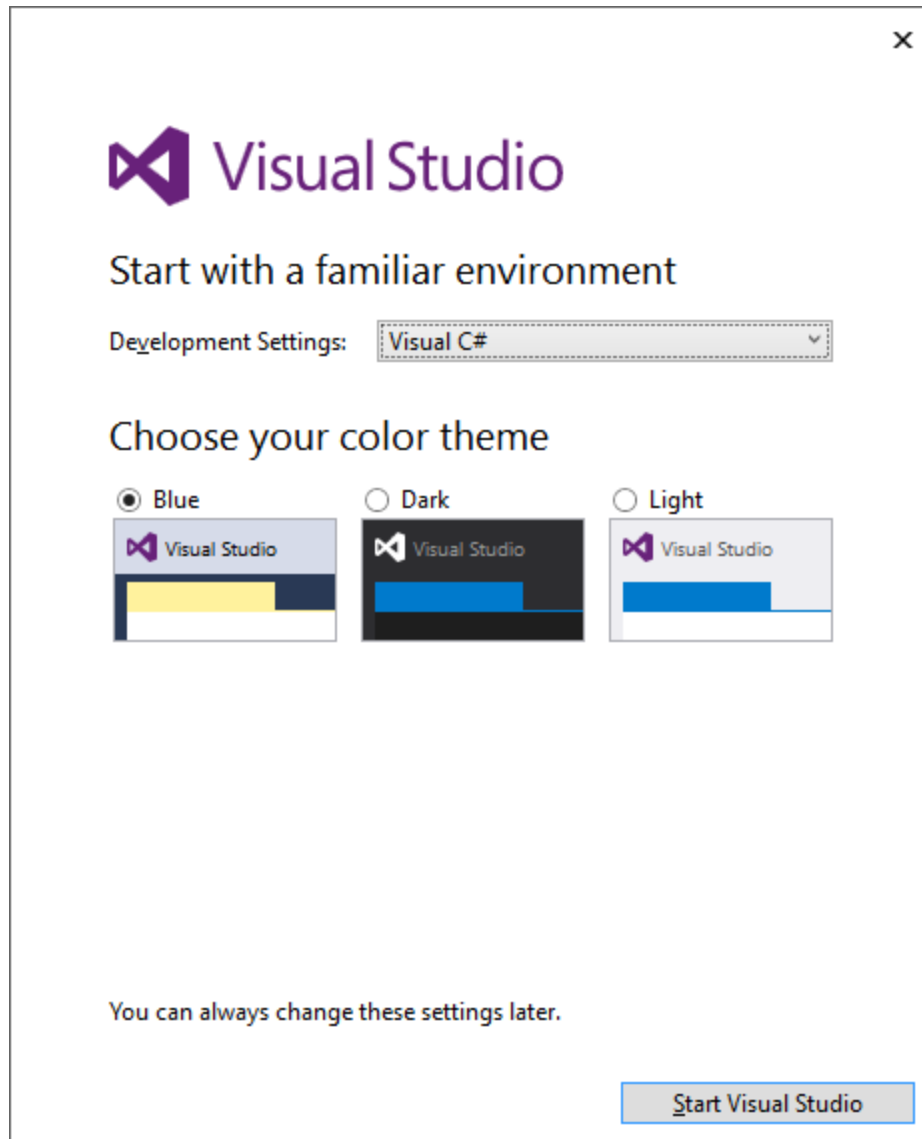17. The Sign In dialog is shown.

The Sign In dialog.

NOTE: If you don't already have an account, click the "Sign in with a Microsoft account" link.

18. Enter your Microsoft Account (e-mailaddress@website.com) and Password.
19. Click the Sign in button.
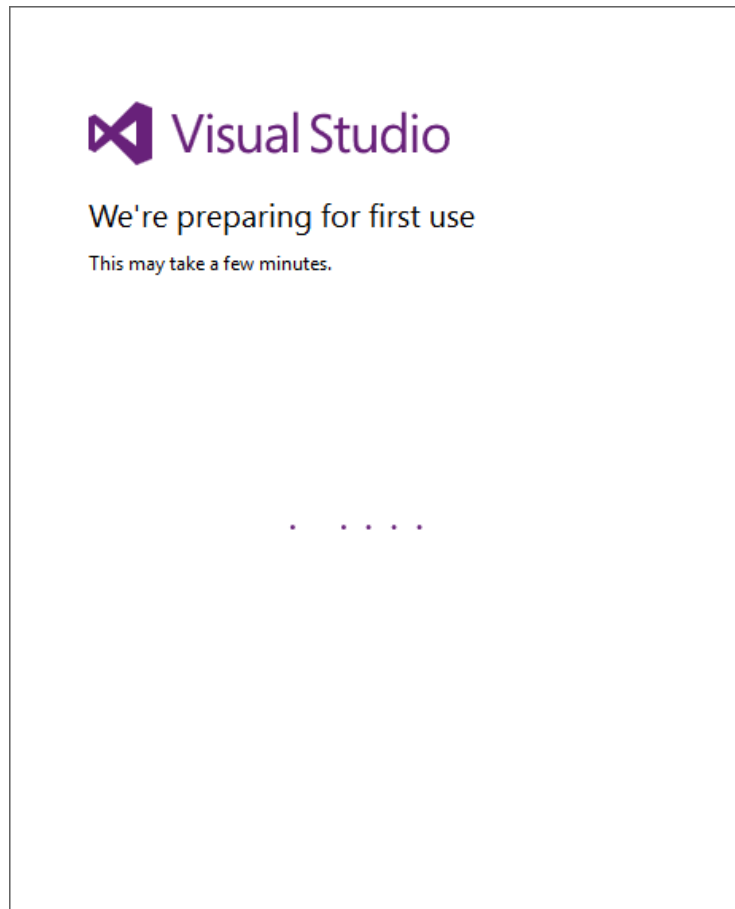20. The "Start with a familiar environment" dialog is shown.

The "Start with a familiar environment" dialog.

21. Select a Development Settings item that you work with most. (I used C#)
22. Select a Color Theme.
23. Click the Start Visual Studio Button at the bottom right of the dialog.
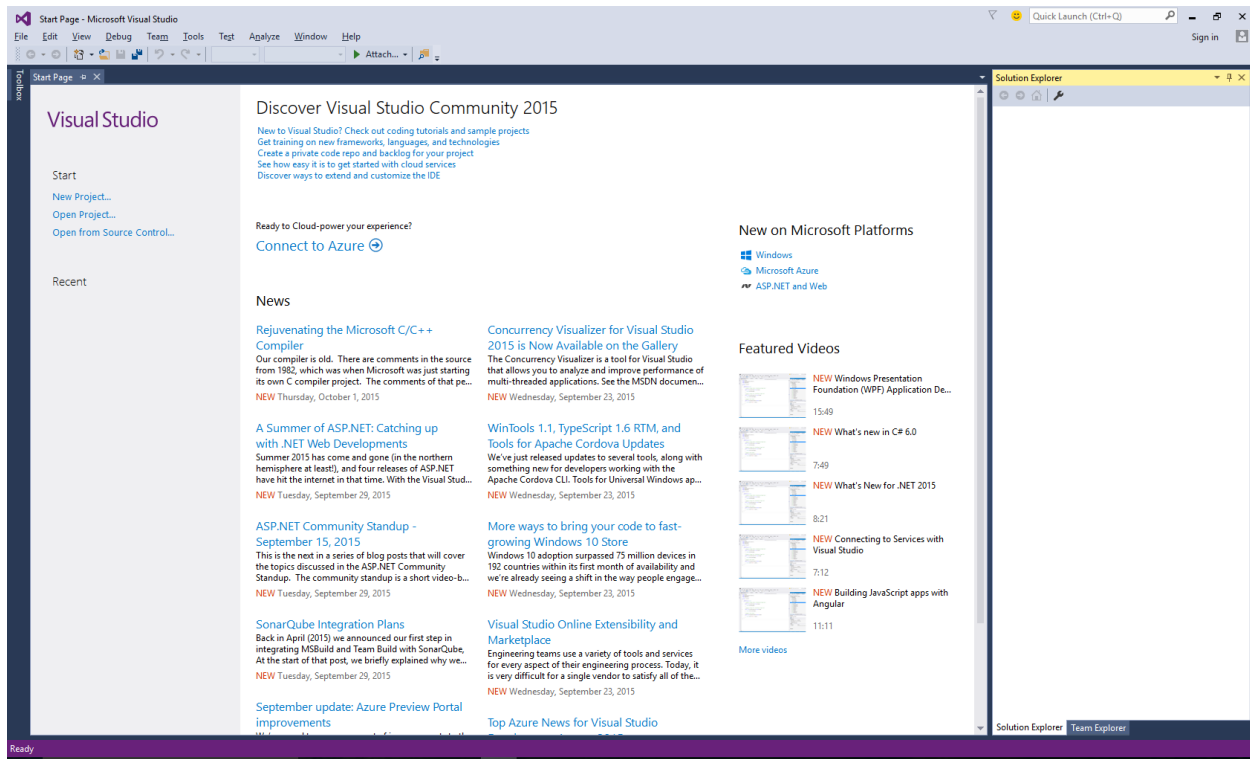24. The "We're preparing for first use" dialog is shown.

The "We're preparing for first use" dialog.

25. After the "We're preparing for first use" dialog closes, the Visual Studio IDE is shown.

The Visual Studio IDE Window.

26. At this time you can close the Visual Studio Window.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

➢ **Install and Setup the Syncfusion Control Suite:**

    A. Download Syncfusion WPF:

1. Open Microsoft Edge or your browser of choice.
2. Navigate to the Syncfusion WPF download Website:
   http://www.syncfusion.com/downloads/wpf
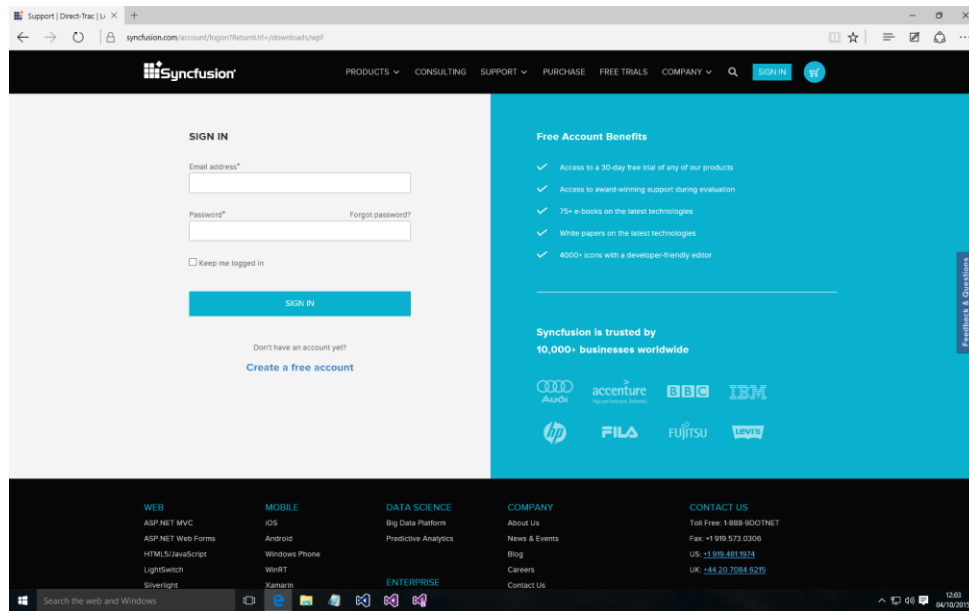3. The Syncfusion Essential Studio WPF web page is shown:
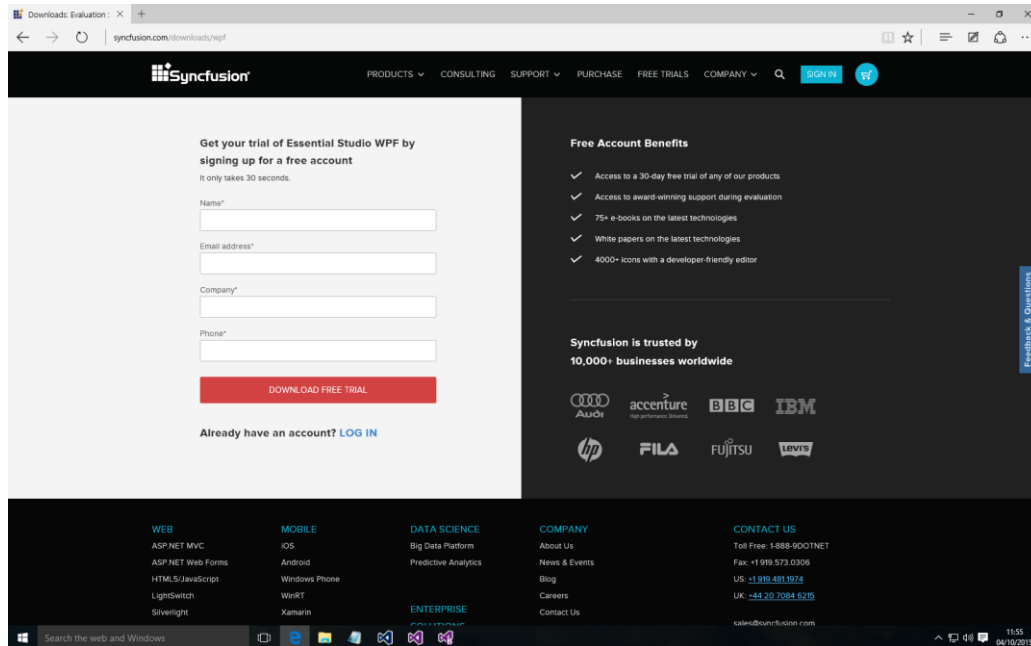
The Syncfusion Essential Studio WPF web page.

4. If you don't have a Syncfusion account, create a free account.
5. If you already have an account, click the SIGN IN link at the top right of the web page.
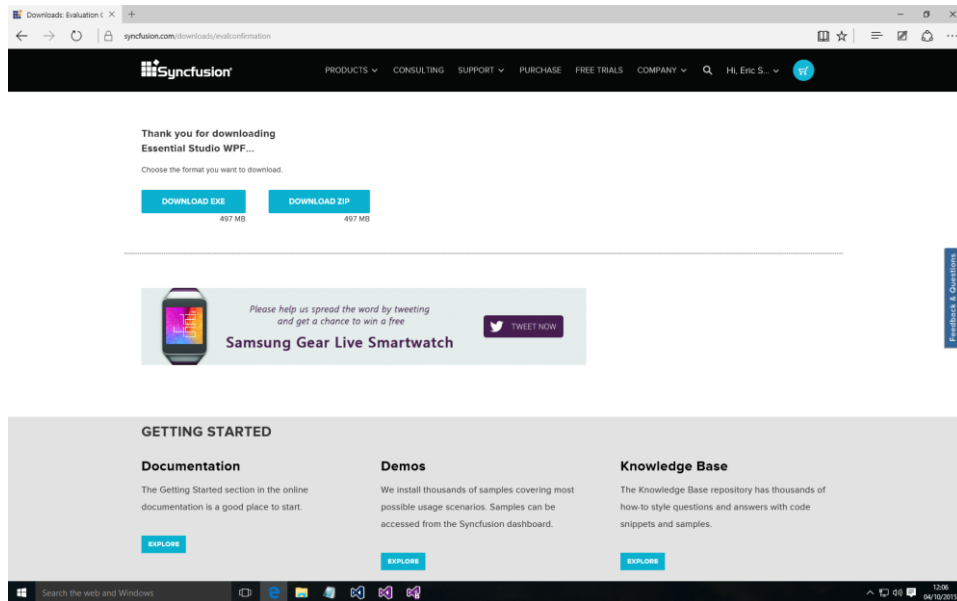6. The SIGN IN web page is shown.

The SIGN IN web page.

7. Enter the email address that was used to create the account.
8. Enter the password.
9. Click the SIGN IN button.
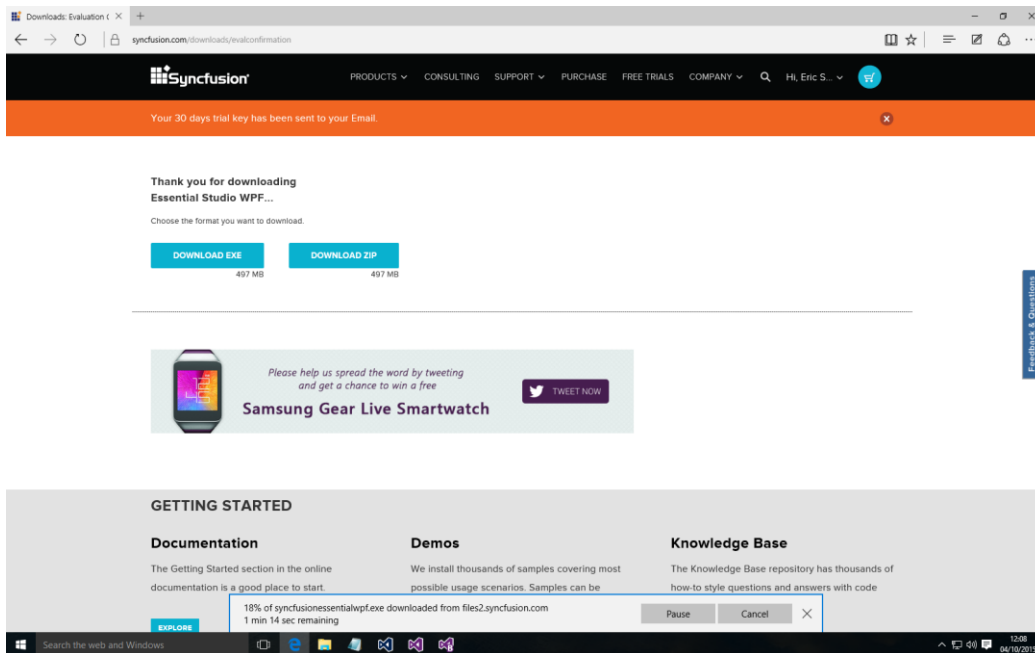10. The Download page is shown.

The Download page.

11. Click the DOWNLOAD EXE or DOWNLOAD ZIP button.
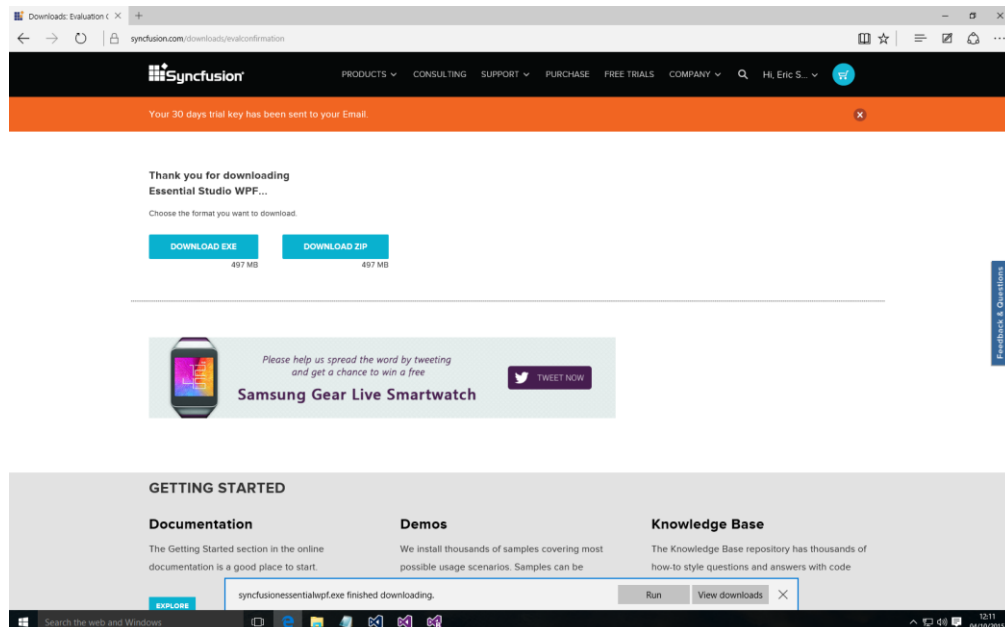12. The download will start. The progress is shown in the popup at the bottom of the page.

Download started.

WARNING: The download may take a long time.

13. When the download finished popup is shown at the bottom of the page, close the website.
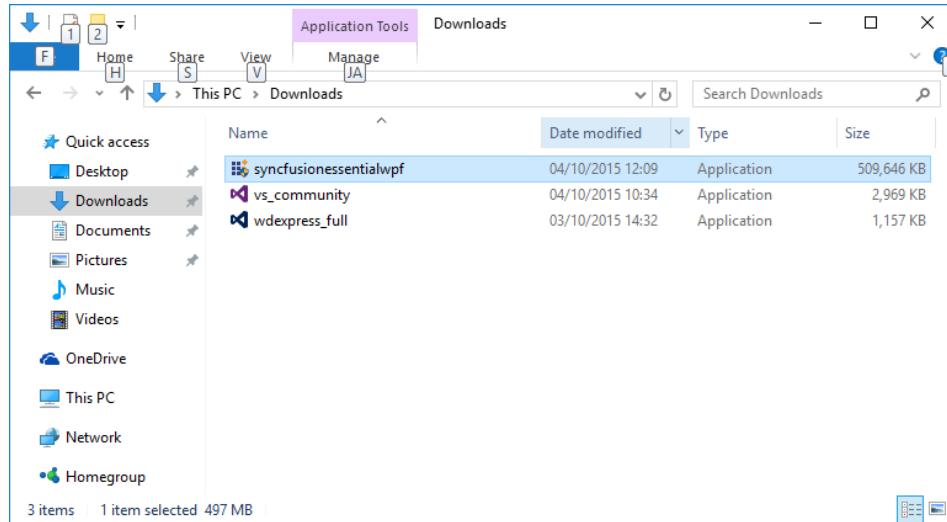

Software successfully downloaded.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

B. Install Syncfusion WPF:

1. Open the File Explorer.
2. Click the Downloads folder to the left of the dialog.
3. The Downloads Window is shown.

The Downloads Window.

4. Double click the syncfusionessentialwpf file in the Downloads folder.
5. The User Account Control dialog may be shown.
6. If it is shown, click the Yes button.
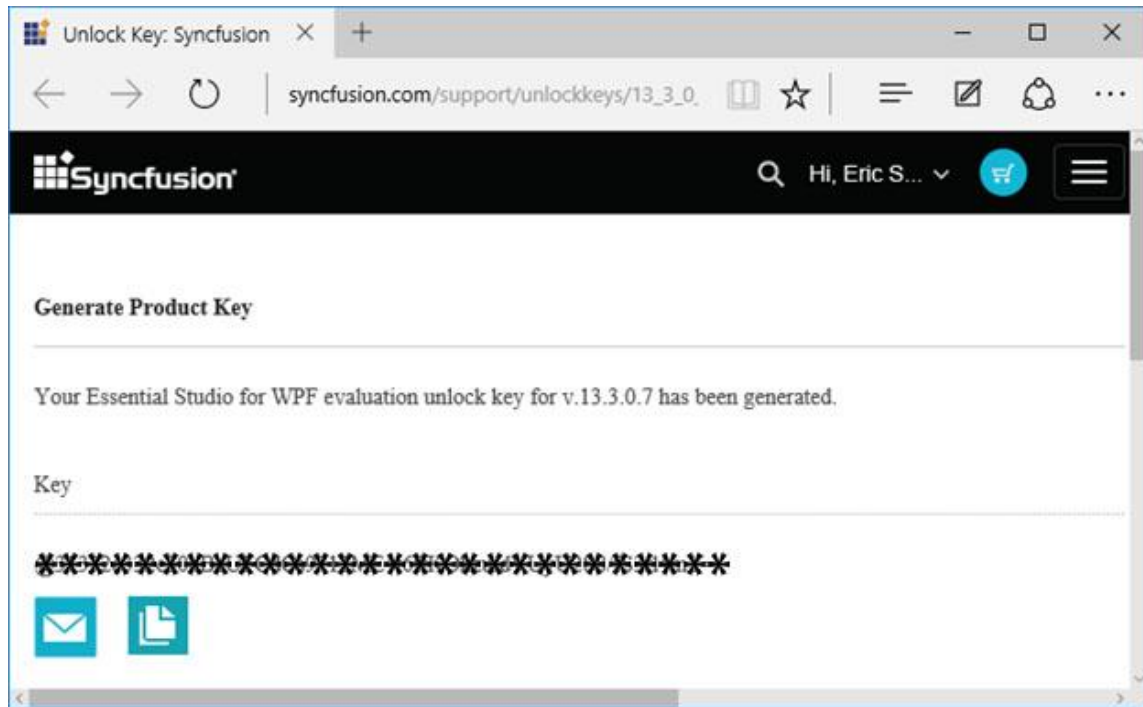7. The Syncfusion license wizard is shown.

The Syncfusion license wizard.

8. Enter your User Name.
9. Enter your Organization if you are associated with a company.
10. If you have an unlock key enter it.
11. Otherwise, click the blue Free Evaluation Key button at the bottom left of the dialog.
12. The "Generate Product Key" page is shown.

The "Generate Product Key" page.

13. Copy the evaluation key to the clipboard or email the key.
14. Paste the evaluation key into the Unlock Key text box on the license wizard.
15. Click the NEXT button.
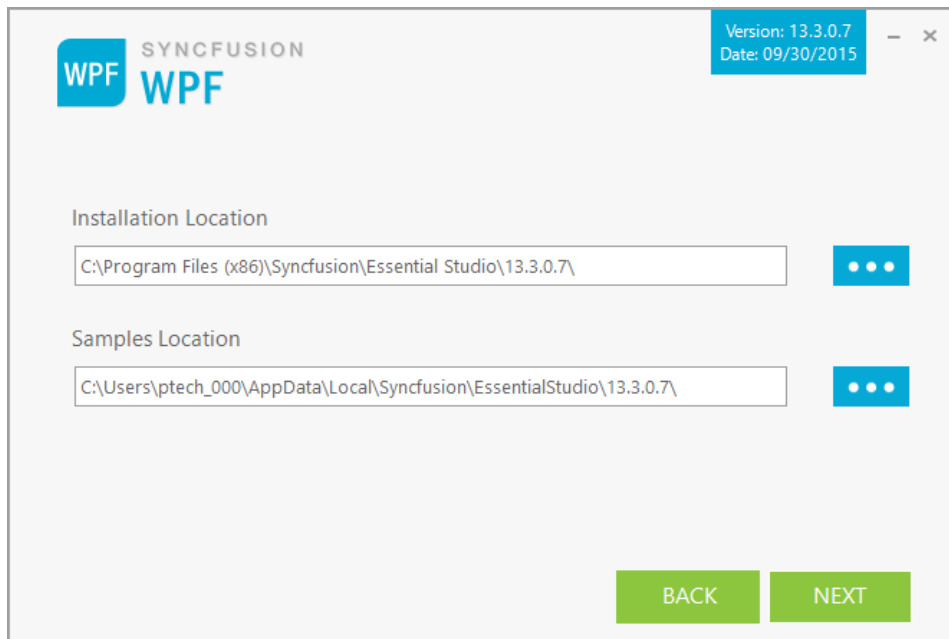16. The "License Agreement" Wizard Window is shown.

The "License Agreement" Wizard Window.

17. Accept the license agreement by checking the check box at the bottom of the wizard window.
18. Click the NEXT button.
19. The "Installation and Samples Location" Wizard Window is shown.

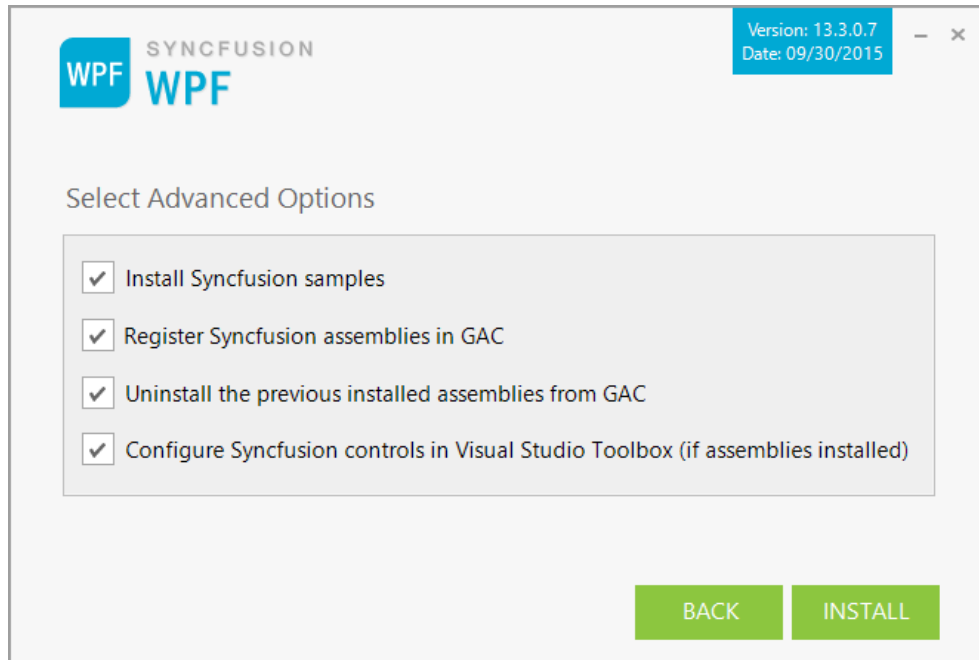The "Installation and Samples Location" Wizard Window.

20. Keep or change the Installation and Samples file paths.
21. Click the NEXT button.

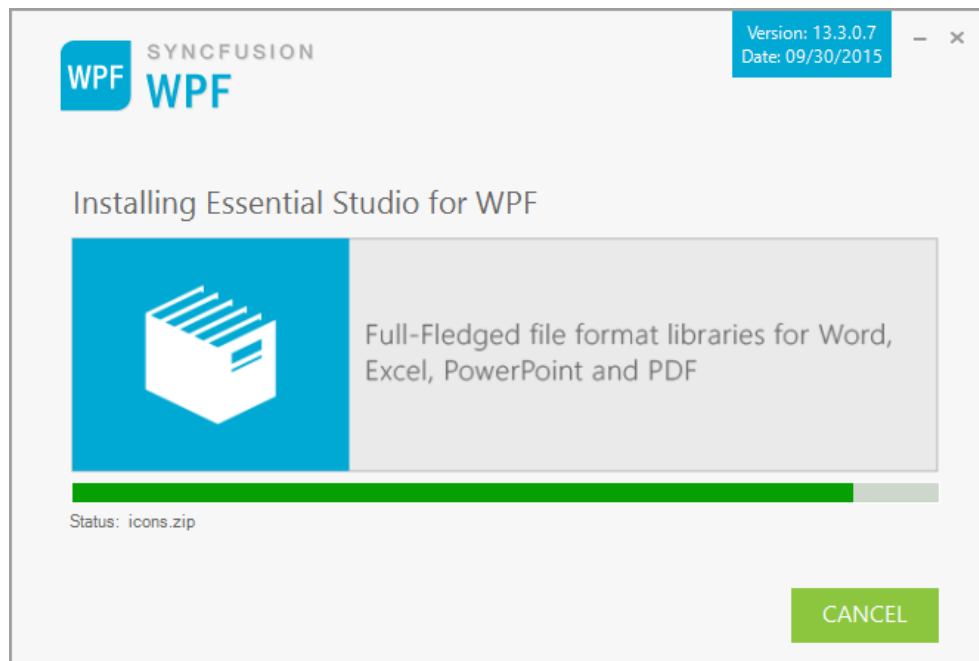22. The "Select Advanced Options" Wizard Window is shown.

The "Select Advanced Options" Wizard Window.

23. Select the Advanced Options that you want on the "Select Advanced Options" wizard window. (I suggest that you keep the defaults).
24. Click the INSTALL button.
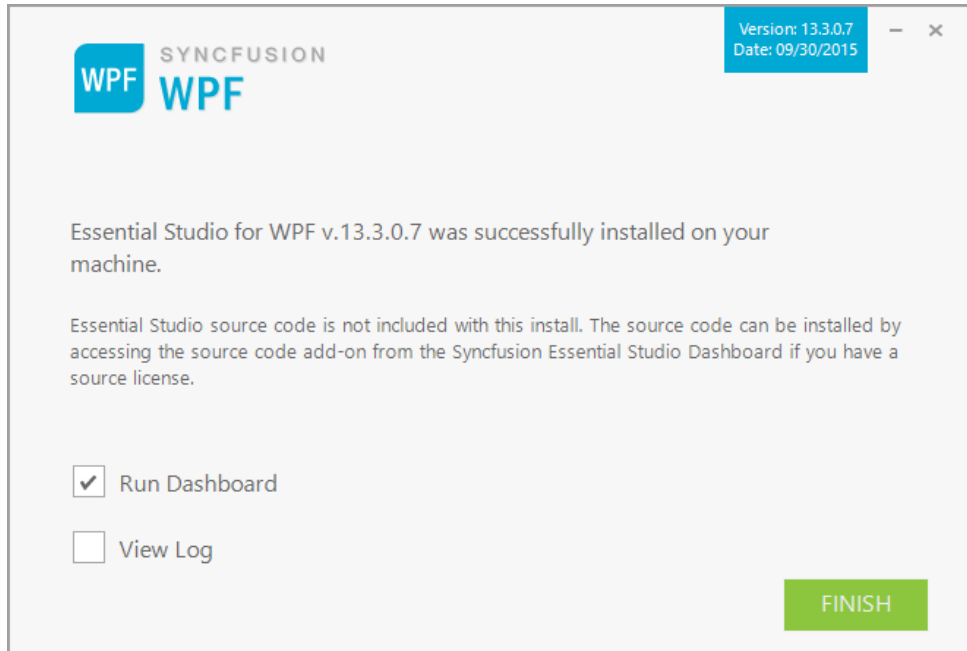25. The "Installing Essential Studio for WPF" Wizard Window is shown.

The "Installing Essential Studio for WPF" Wizard Window.

WARNING: The installation may take a long time.

26. After the installation ends, the "Essential Studio for WPF was successfully installed" Wizard Window is shown.

The "Essential Studio for WPF was successfully installed" Wizard Window.

27. If you want to see the WPF examples leave the Run Dashboard checkbox checked.
28. Check the View Log checkbox to see the installation log file or leave it unchecked.
29. Click the FINISH button.

C. Download Nunit
1. Open Microsoft Edge or your browser of choice.
2. Navigate to the Nunit download Website:
   http://nunit.org/
3. The website is shown:
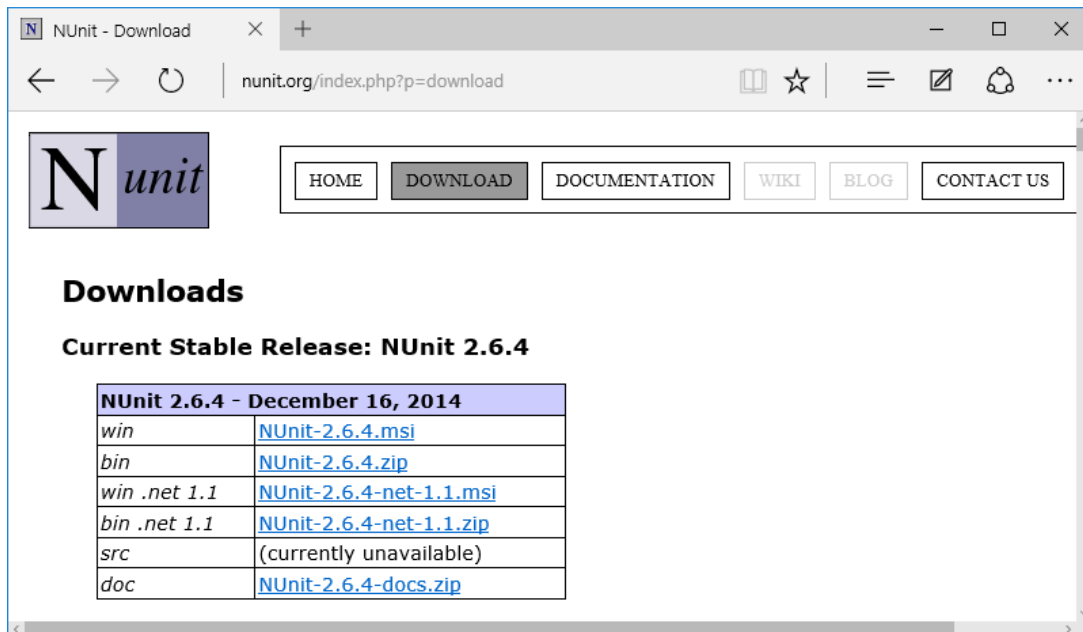
The Nunit website.

4. Click the DOWNLOAD link at the top of the web page.
5. The Nunit Downloads page is shown.
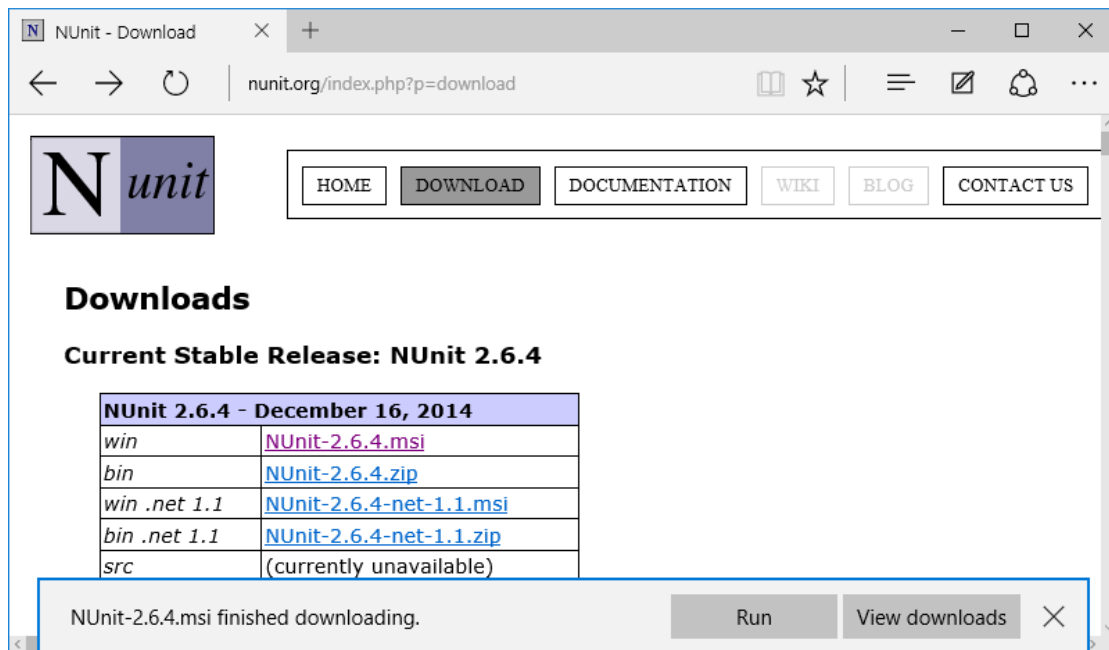

The Nunit Downloads page.

6. Click the Nunit-2.6.4.msi link. (If there is a newer version use it.)
7. The download starts.

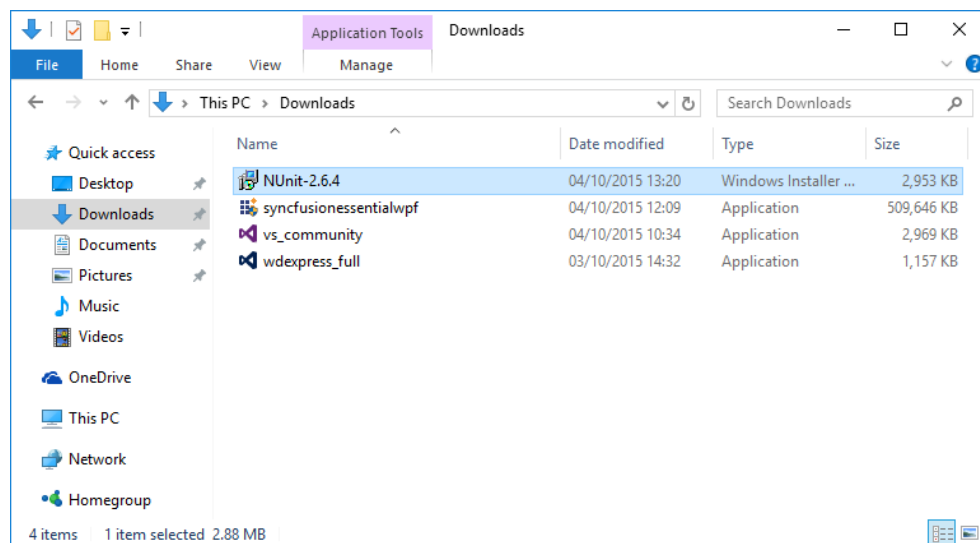8. When the download is finished, the "Finished downloading" popup is shown at the bottom of the page.

The Nunit Download Finished popup.

9. Close the website.

D. Install Nunit

1. Open the File Explorer.
2. Click the Downloads folder to the left of the dialog.
3. The Downloads Window is shown.

The Downloads Window

4. Double click the NUnit-2.6.4 file in the Downloads folder.
5. The "Open File - Security Warning" dialog may be shown.
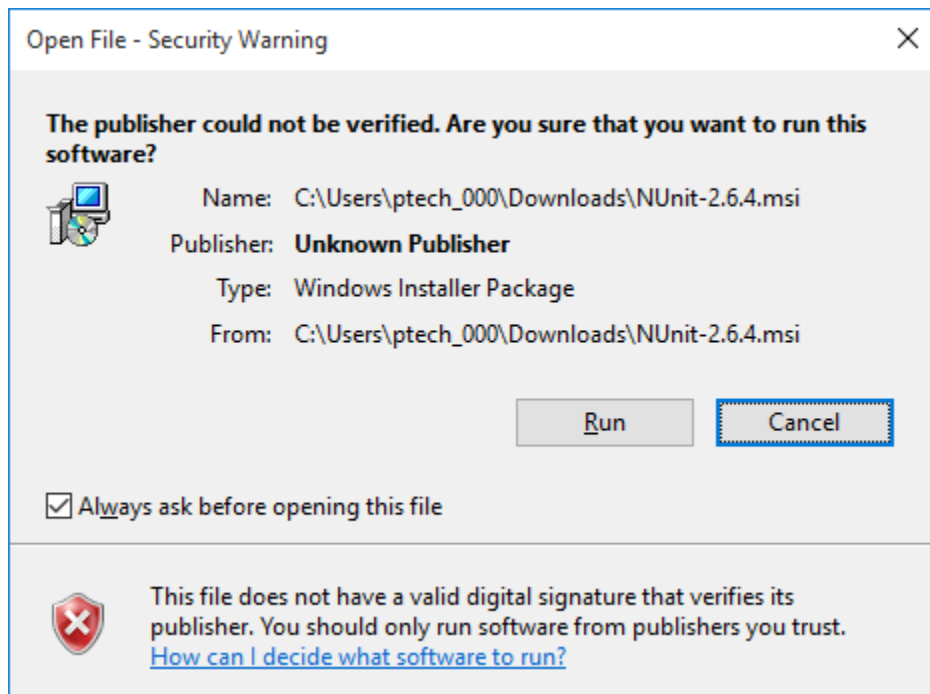
The "Open File - Security Warning" dialog.

6. If it is shown, click the Run button.
7. The Nunit Setup Wizard is shown.
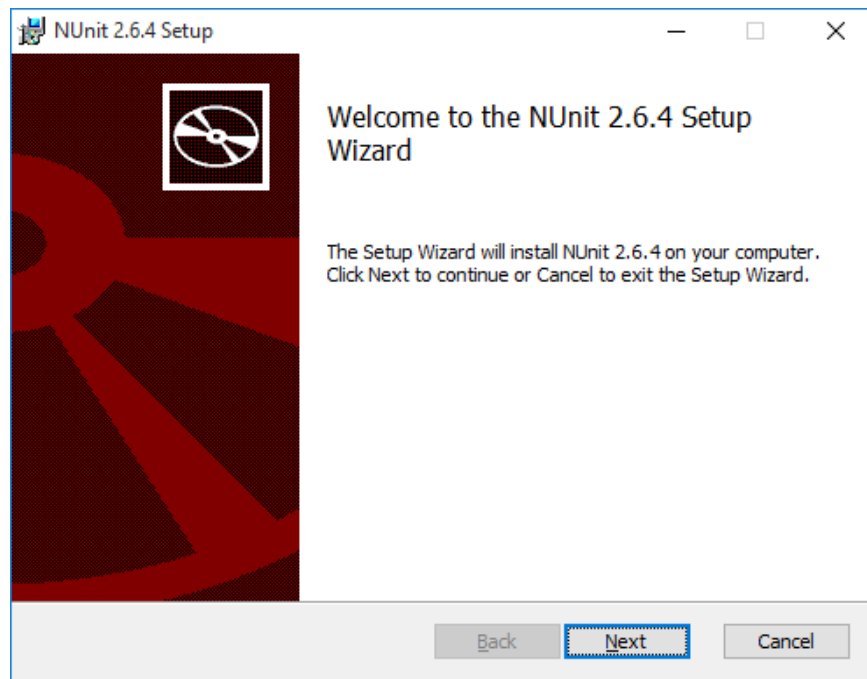
The Nunit Setup Wizard.

8. Click the Next button.
9. The "End-User License Agreement" Window is shown.
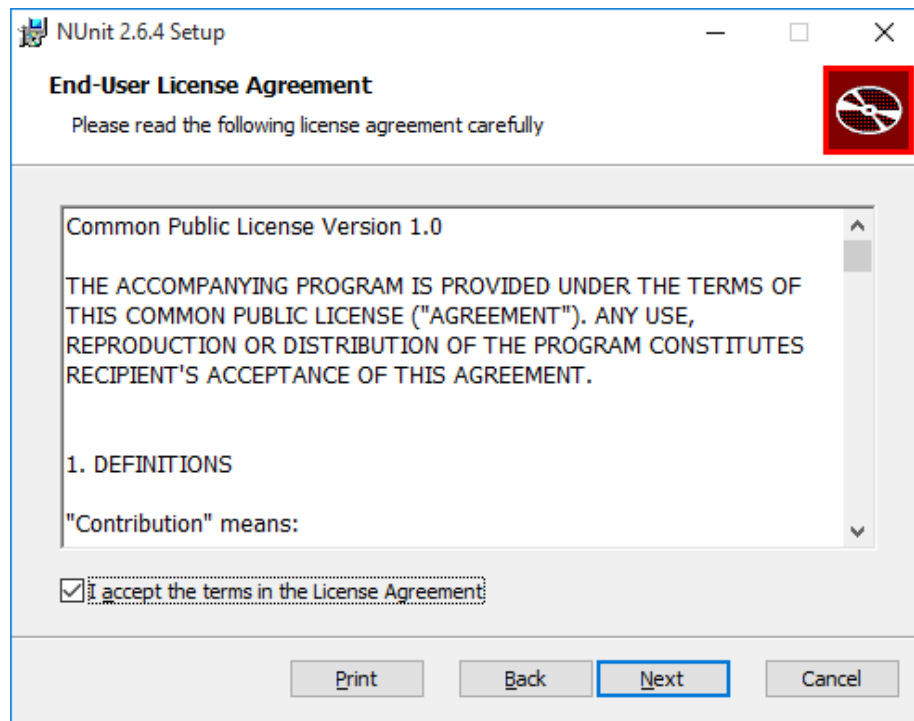
The "End-User License Agreement" Window.

10. Check the "I accept the terms in the License Agreement" checkbox.
11. Click the Next button.
12. The "Choose Setup Type" Wizard Window is shown.

The "Choose Setup Type" Wizard Window.

13. Click the Typical, Custom or Complete button. (I use the Complete button).
14. The "Ready to Install Nunit 2.4.6" Wizard Window is shown.

The "Ready to Install Nunit 2.4.6" Wizard Window

15. Click the Install Button.
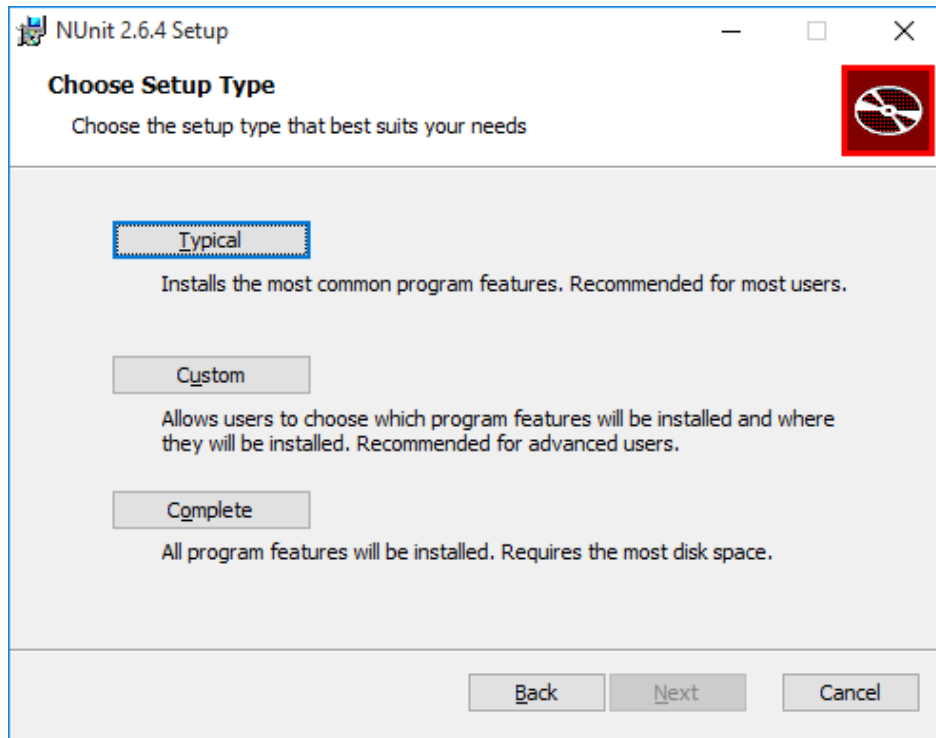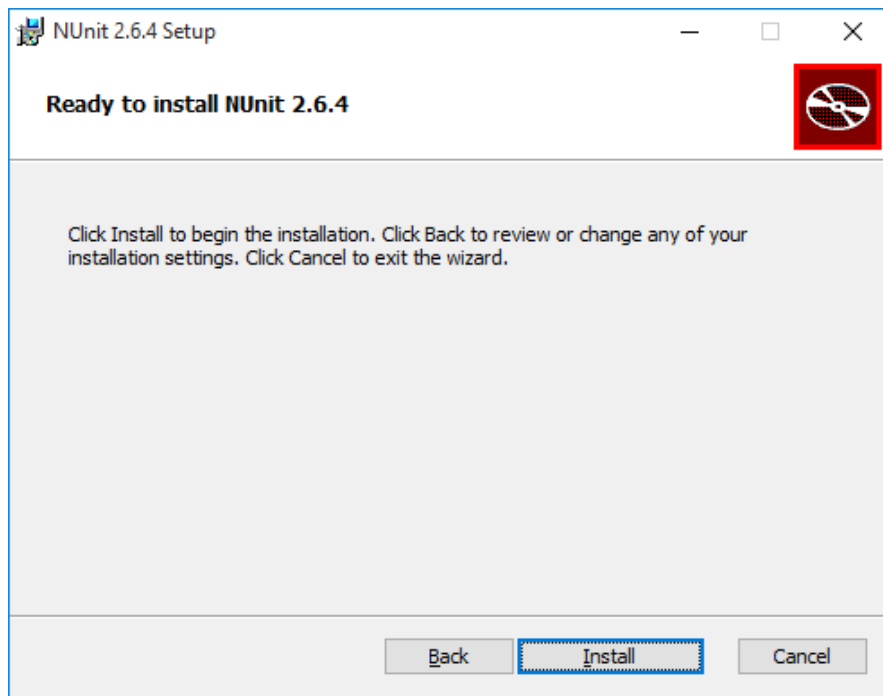16. The User Account Control dialog may be shown.
17. If it is shown, click the Yes button.
18. The application will install.
19. After the installation is completed, the "Completed the Nunit 2.6.4 Setup Wizard" page will be shown.
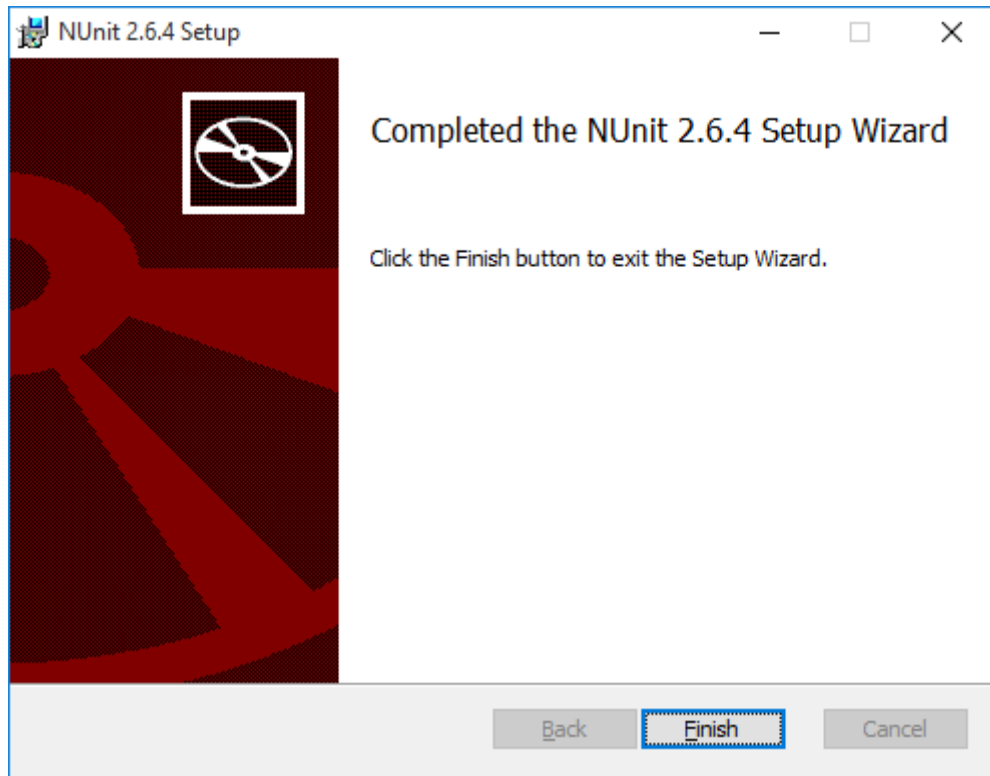
The "Completed the Nunit 2.6.4 Setup Wizard" page.

20. Click the Finish button.

WARNING: It may be necessary to down load and install the .NET Framework 3.5 library to use Nunit. If this is necessary, just follow the instructions.

E. To run the Virtual Calculator unit tests, take the following steps:
1. Open Nunit.
2. The Nunit Main Window is shown.

The Nunit Main Window.

3. Select File – Open Project from the IDE.
4. The Nunit Open Project dialog is shown.
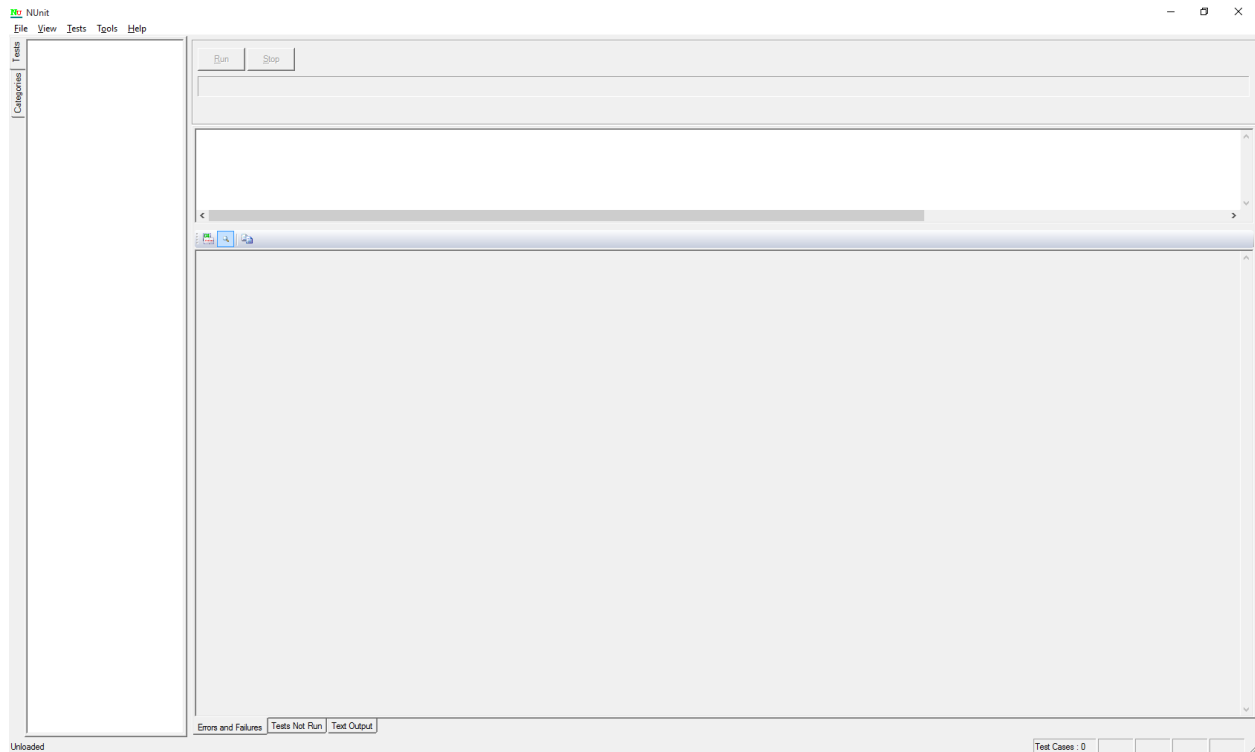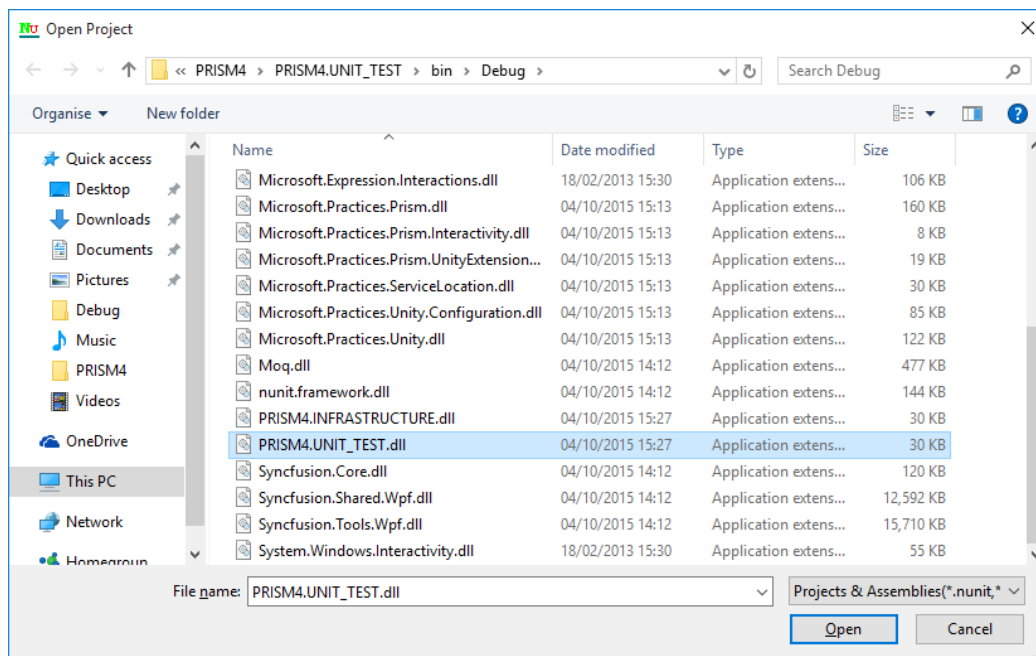

The Nunit Open Project dialog.

5. Find the PRISM4.UNIT_TEST.dll file in the Virtual Calculator Solution's Debug folder.
6. Select the file.
7. Click the dialog's Open button.
8. All tests that are in the DLL are shown in the Nunit Window.
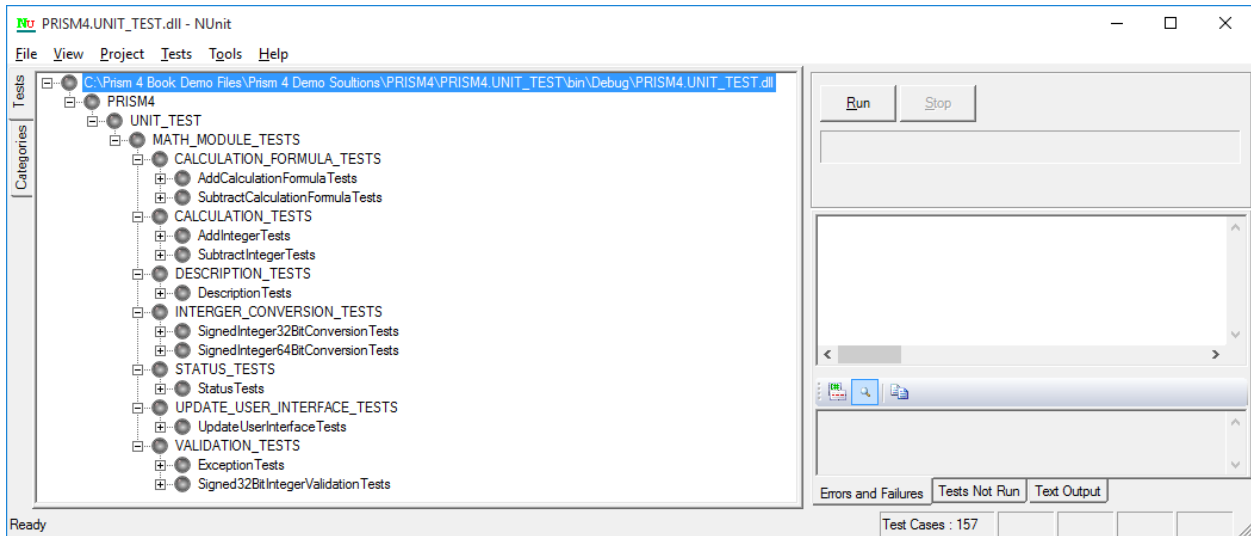
The Virtual Calculator unit tests loaded into Nunit.

9. Click the Nunit Run button to start the tests.
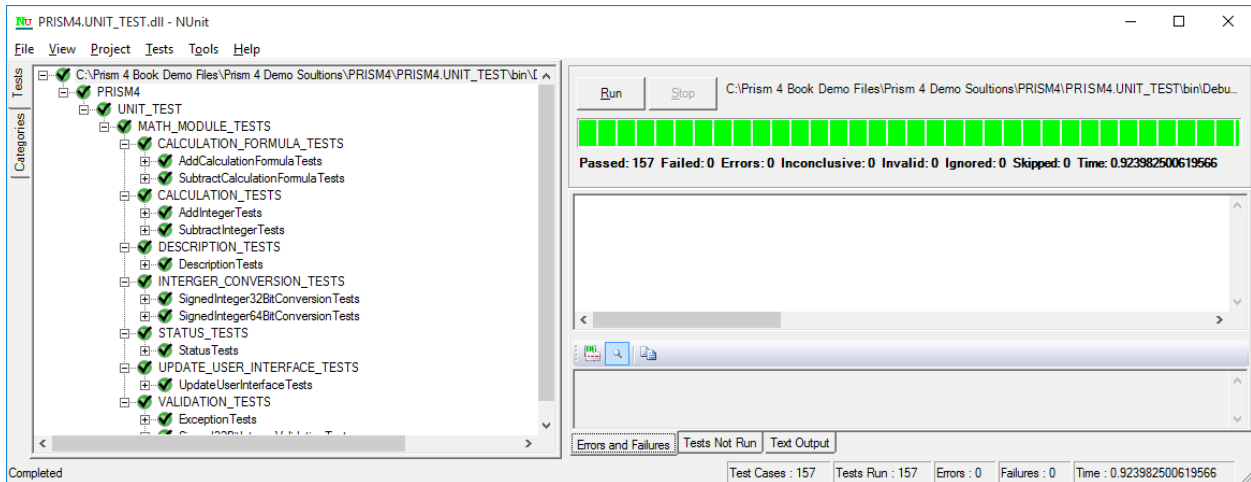
The result of the unit test run.

10. A green bar indicates that all tests ran with no errors.

F. Download the Prism 4 Book Demo Applications:
    1. Open Microsoft Edge or your browser of choice.
    2. Navigate to the Prism 4 download Website:
    3. **https://www.dropbox.com/s/6cr31img7gkegos/Prism%204%20Demo%20 Solutions.zip**

4. The Prism 4 Download web page is shown:
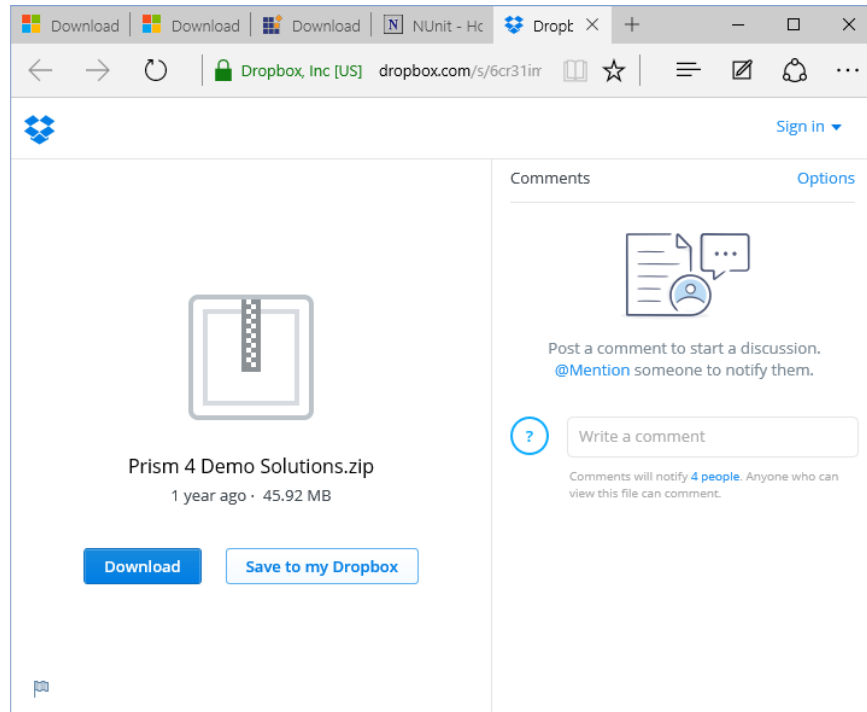
The Prism 4 Download web page

5. Click the blue Download button on the bottom left of the web page.
6. The download starts.
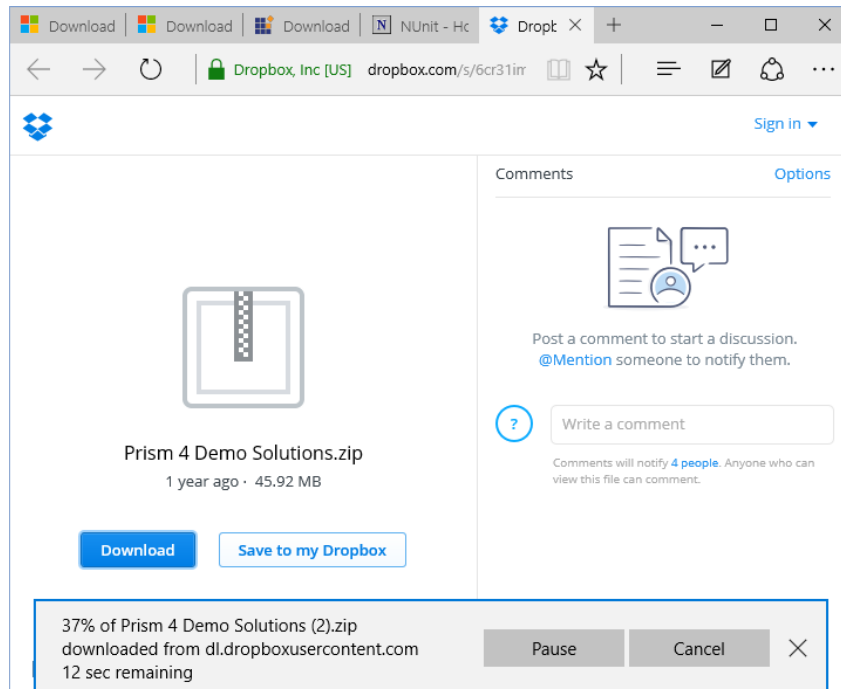
Downloading the Demo Files.

7. When the download is finished, the Finished Downloading popup is shown at the bottom of the web page.
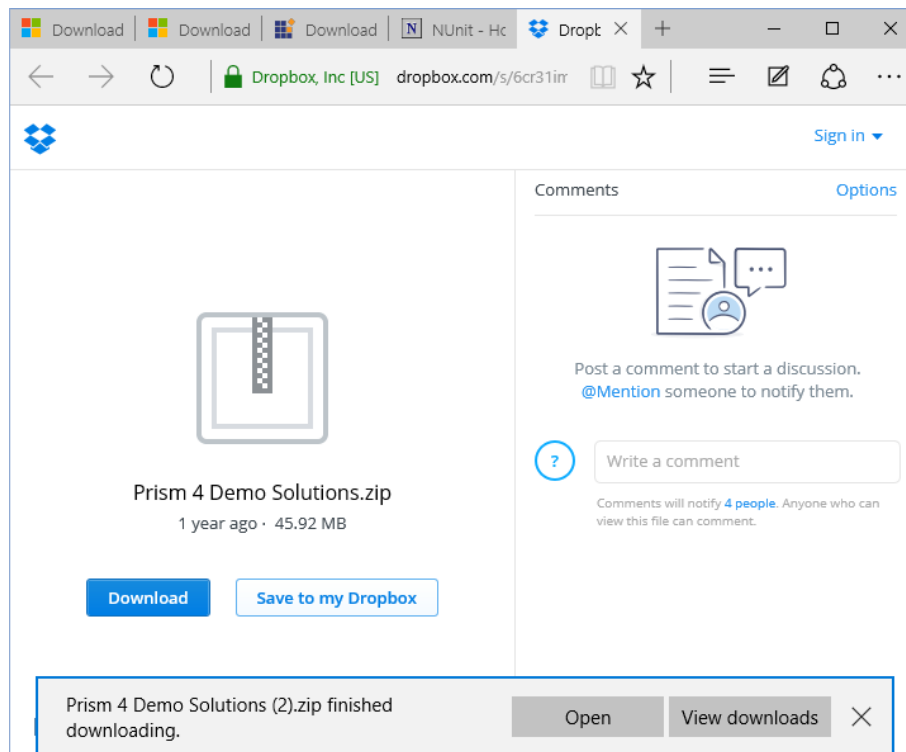
The Finished Downloading popup.

8. Close the webpage.

G. Install the Prism 4 Book Demo Applications:
1. Open File Explorer.
2. Click the Downloads folder to the left of the dialog.
3. The Downloads Window is shown.
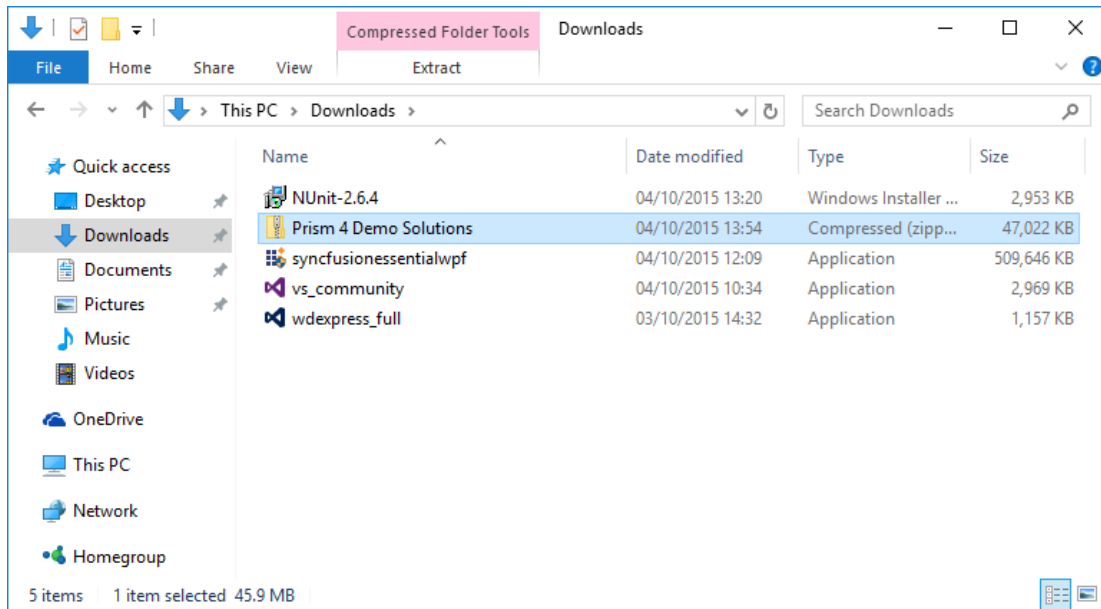
The Downloads Window.

4. Find the Prism 4 Demo Solutions Zip file.
5. Select the Prism 4 Demo Solutions zip file.
6. The Compressed Folder Tools - Extract tab is shown at the top of the window.
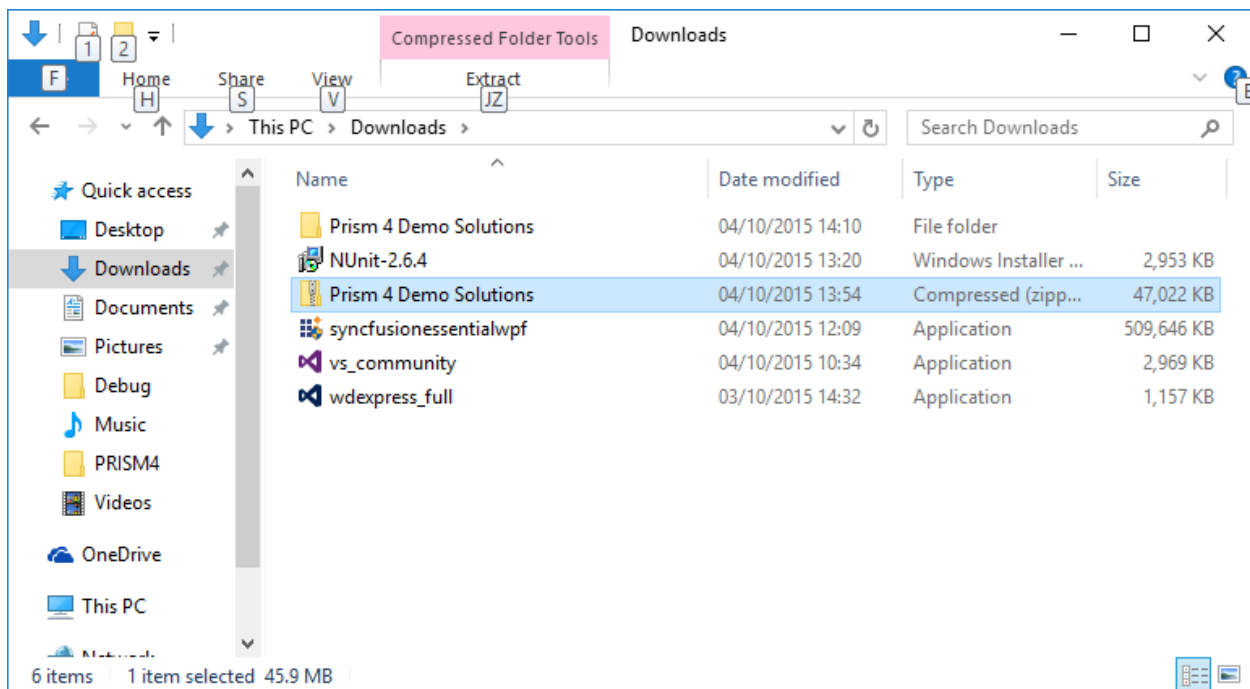
7. Click the Extract tab.
8. The Extract tab is exposed.
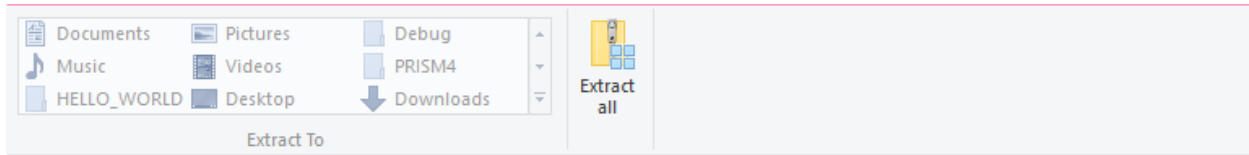
The Extract Tab.

9.   Click the Extract all button.
10.   The "Extract Compressed (Zipped) Folders" Dialog is shown.
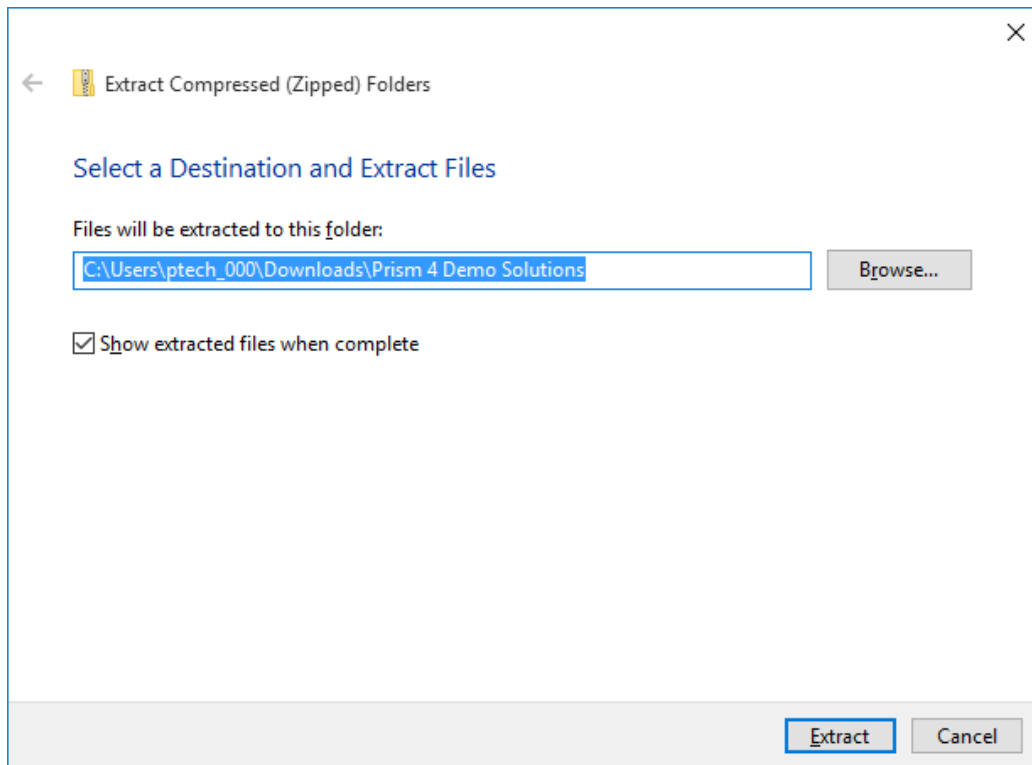
The "Extract Compressed (Zipped) Folders" Dialog.

11.   Change the extracted files location if necessary.
12.   Click the Extract button.
13.   The files are extracted to the destination folder.
14.   Navigate to the folder where the files were extracted.

The extracted files folder.

15.   There should be two folders, HELLO_WORLD and PRISM4.
16.   Close the File Explorer.

H. Configure the Prism 4 Book Hello World Application:
1.   Open Visual Studio 2013 for Windows Desktop or Visual Studio 2015 Community Edition.
2.   Click on The Open Project link on the Start Page.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

3. Navigate to the HELLO_WORLD solution that is located in the folder where the extracted Prism 4 files were located.
4. Double click on the HELLO_WORLD folder.
5. Double click the HELLO_WORLD solution file.
6. The Security Warning for HELLO_WORLD.MAIN may be shown.
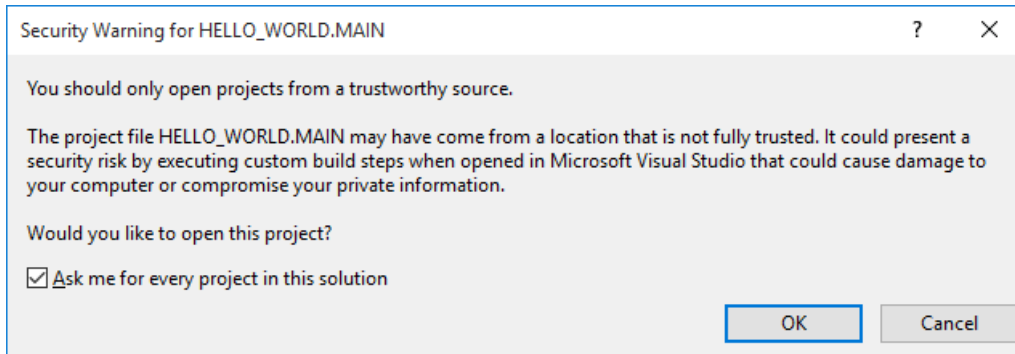
The Security Warning for HELLO_WORLD.MAIN

7. If the dialog is shown, click the OK button.
8. The solution opens in Visual Studio.
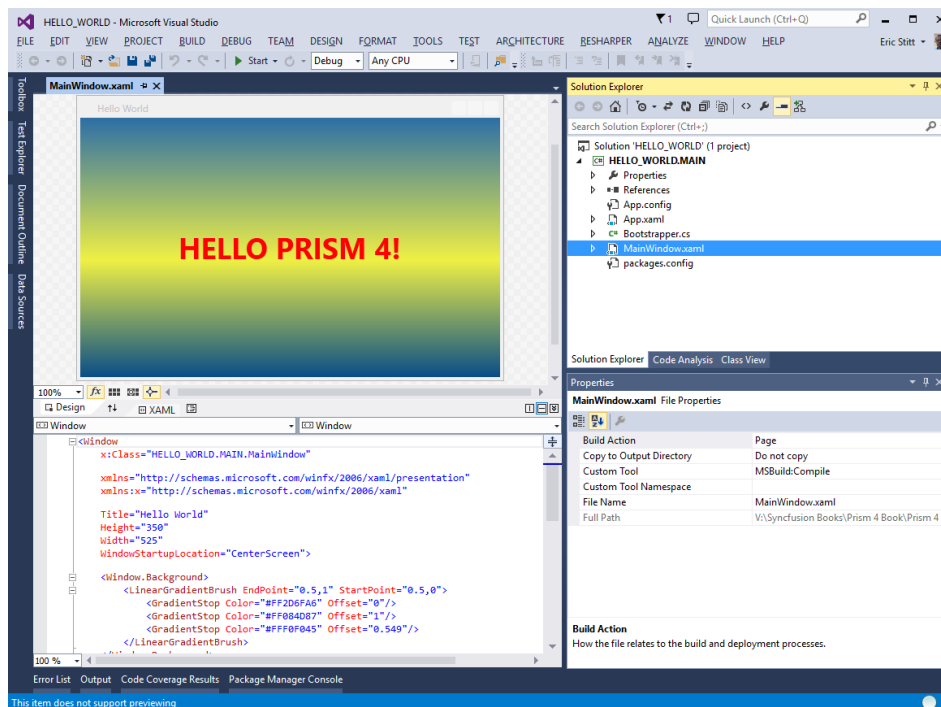
The HELLO_WORLD solution loaded into Visual Studio.

I. Test the Prism 4 Book Hello World Application:
1. Save and Build the solution.
2. If the solution builds successfully, run the solution by clicking the Start button in the Visual Studio IDE.
3. The "Hello World" Window should be shown.

The "Hello World" Application.

4. Close the Hello World Window.
5. Close Visual Studio.
6. You can now view the sample code in the solution to get a better understanding of how to start Microsoft Prism 4 solutions.

J. Configure the Prism 4 Book Virtual Calculator Application:
1. Open Visual Studio 2013 for Windows Desktop or Visual Studio 2015 Community Edition.
2. Click on The Open Project link on the Start Page.
3. Navigate to the PRISM4 solution that is located in the folder where the extracted Prism 4 files were located.
4. Double click on the PRISM4 folder.
5. Double click the PRISM4 solution file.
6. The Security Warning for PRISM4.MAIN may be shown.
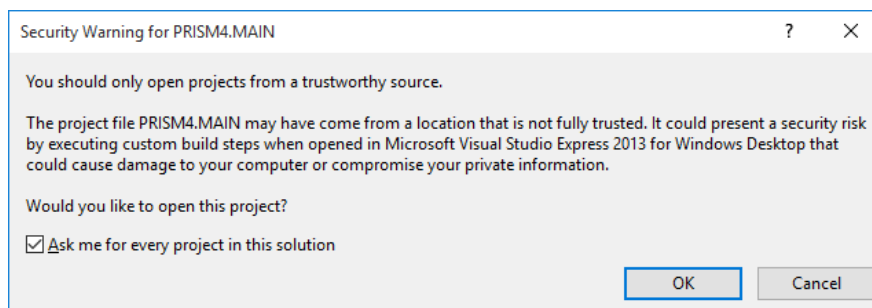
The Security Warning for PRISM4.MAIN

7. If the dialog is shown, uncheck the "Ask me for every project in this solution" checkbox.
8. Click the OK button.
9. The solution opens in Visual Studio.
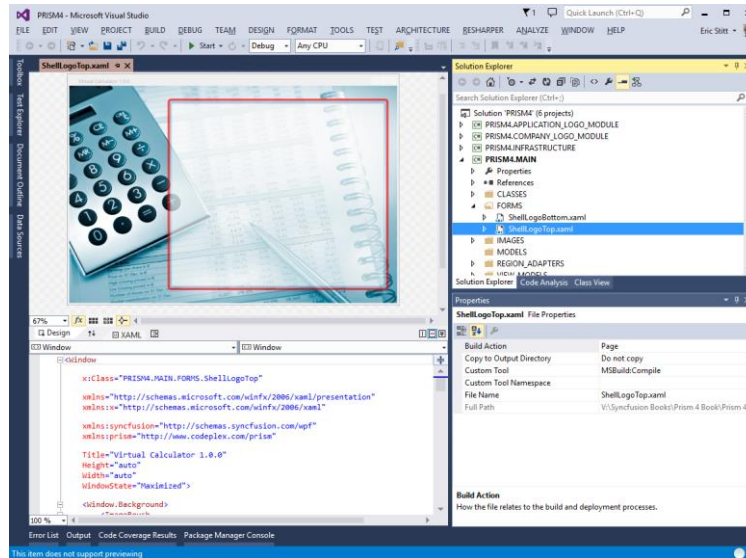
The PRISM4 solution loaded into Visual Studio.

K. Test the Prism 4 Book Virtual Calculator Application:
1. Save and Build the solution.
2. If the solution builds successfully, run the solution by clicking the Start button in the Visual Studio IDE.
3. The Virtual Calculator Window should be shown.
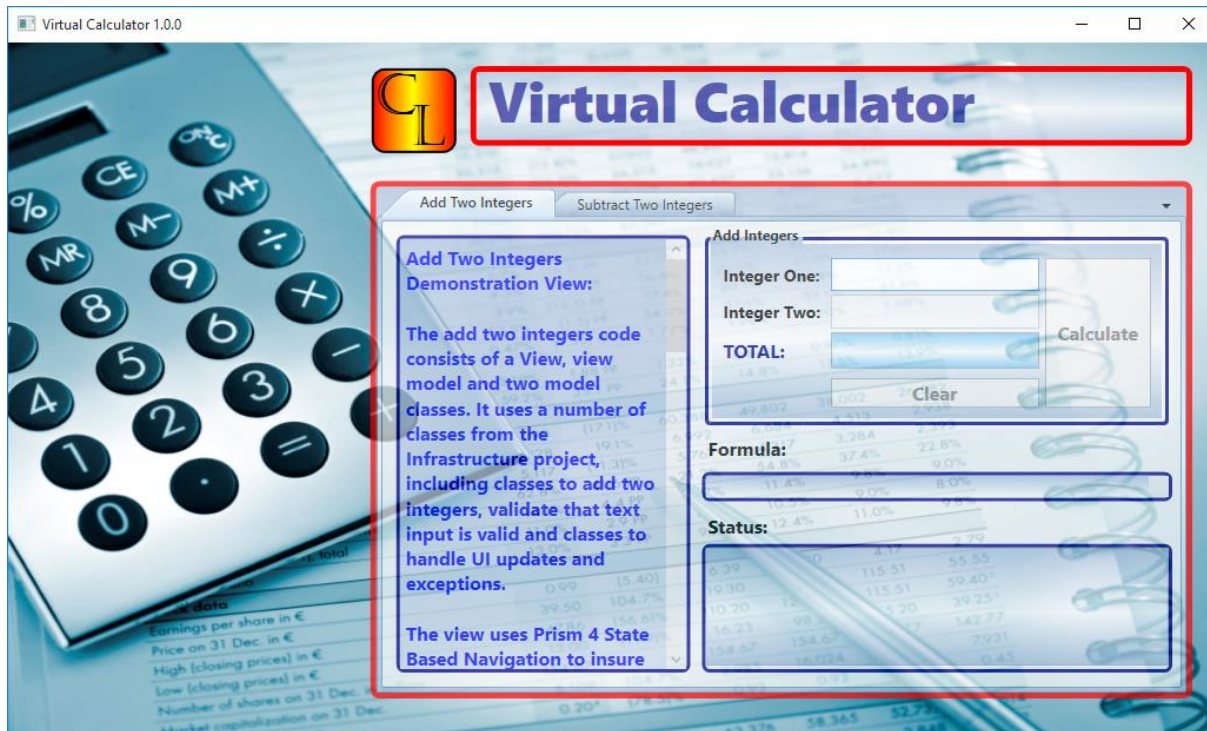
The Virtual Calculator Application.

4. Enter some values into the Add Two Integers and Subtract Two Integers tabs to determine if the solution is working correctly.
5. Enter some invalid entries to determine if the solution handles exceptions correctly.
6. Close the Virtual Calculator Window.
7. Close Visual Studio.
8. You can now view the sample code in the solution to get a better understanding of how to work with Microsoft Prism 4 solutions.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

If the solutions don't work correctly:

The above instructions assumes that the applications are loaded on a virtual machine with a clean Windows Operating System. If you load the demo applications on a computer with previous or newer versions of the Syncfusion suite, you may experience issues. I have found that the following actions can resolve these issues.

Change the Target Framework in each project to the latest .NET version.

- ➢ You may find that the solution builds and runs but the XAML files that contain Syncfusion controls don't work correctly.
- ➢ If your XAML files don't work, set the target .NET framework to the highest version loaded on your computer. In this case it's version 4.6.
- ➢ Use the following instructions to set the target .NET framework:
    1. Right click on a project.
    2. The context menu is shown for the project.
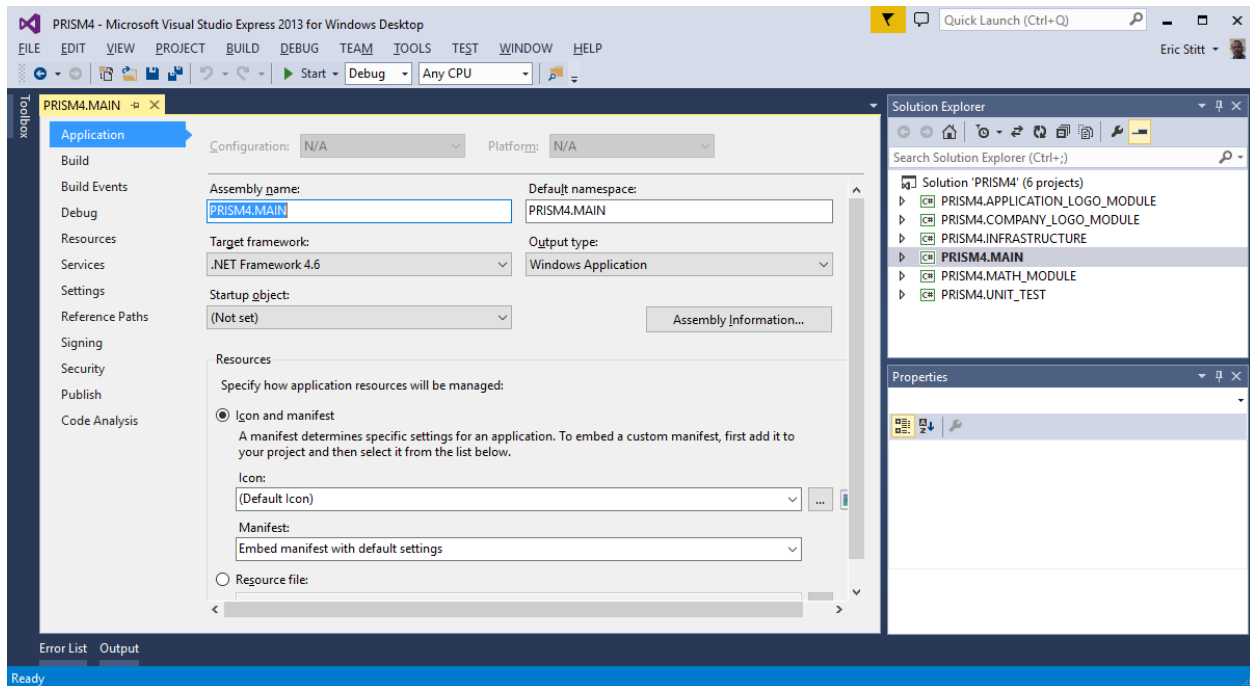   3. Click on the Properties menu item at the bottom of the menu.
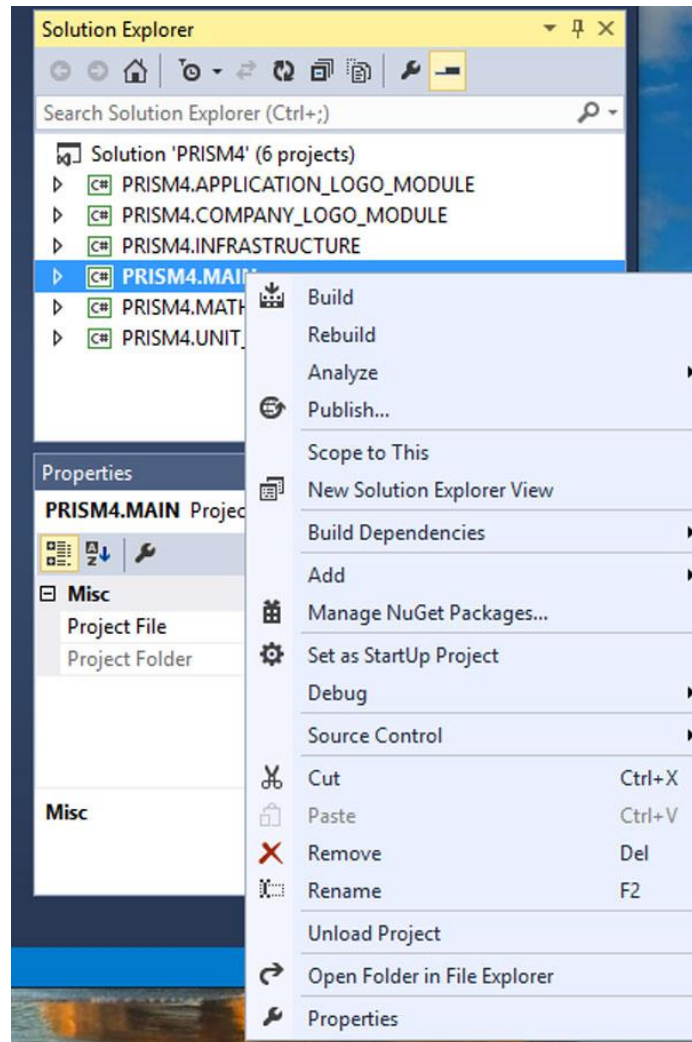
The Properties menu item.
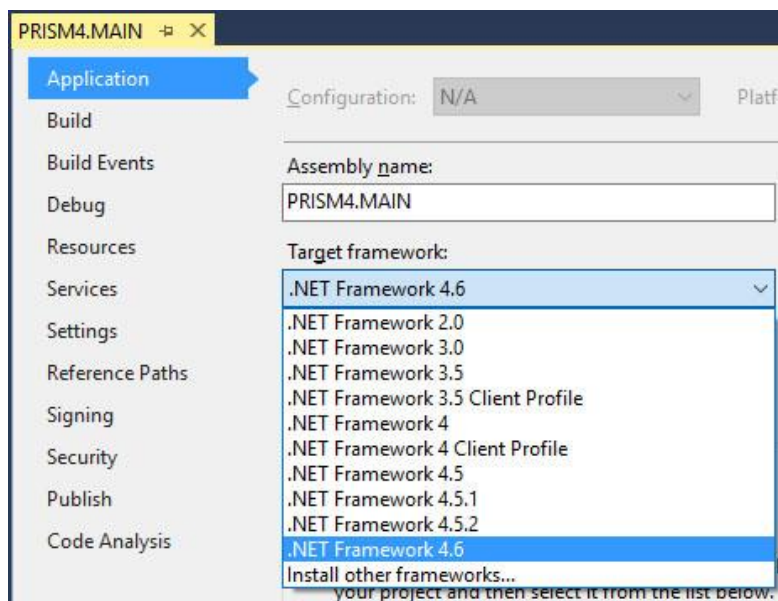
4.   The Properties tab is shown for the selected project.

The Properties tab.

5.   Select the Application tab to the left of the properties tab.
6.   Expand the Target framework drop down list.

The Main PRISM4 project Properties - Application tab -Target framework in Visual Studio set to .NET Framework 4.6.

7.   Click on the highest .NET Framework version. (4.6 in this case)

8. Save the changes.

WARNING: You must do this for each project in the solution. The screenshots are for the MAIN project.

Reload Microsoft Unity Extensions for all projects via NuGet.

➢ If you are getting build errors that include the Unity container, take the following steps:
1. Remove the Unity and Unity Extensions libraries from each project in the solution.
2. In Visual Studio, go to TOOLS – NuGet Package Manager – Manage NuGet Packages for Solution.
3. The Manage NuGet Packages dialog is shown.
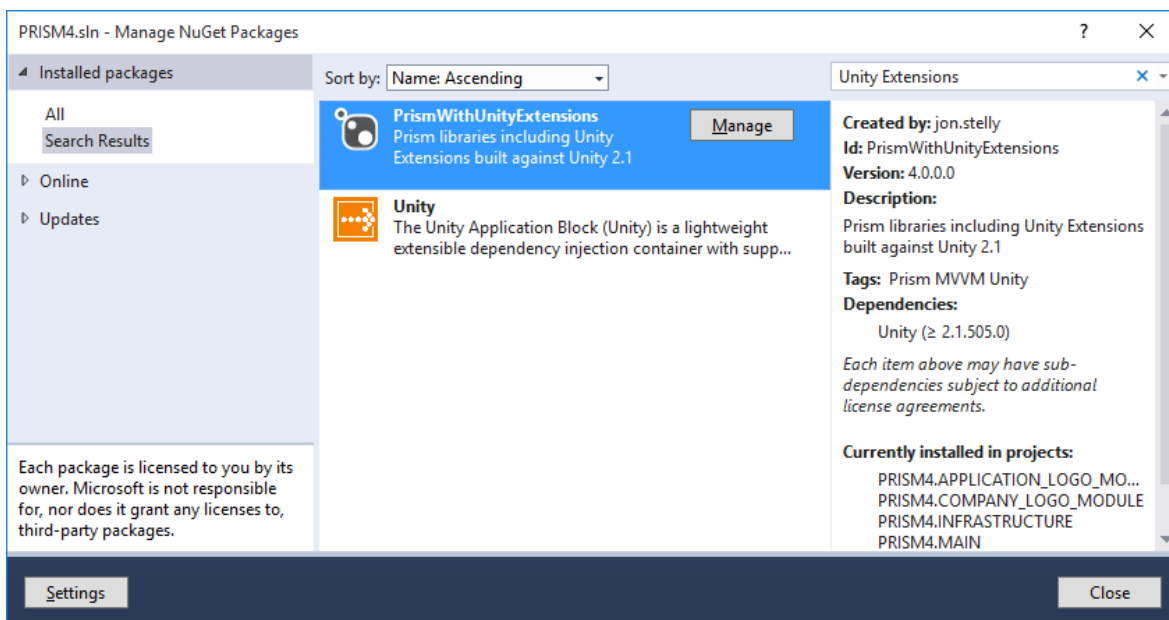
Unity Extensions in the NuGet package manager.

NOTE: In the screenshot, the button says, "Manage", because the libraries are already installed. The Manage button can be clicked to make any necessary changes to the projects.

4. Enter Unity Extensions into the Search Online textbox on the upper right of the dialog.
5. Select the Unity Extensions item in the center list.
6. Click the Install button
7. The Select Projects dialog is shown.
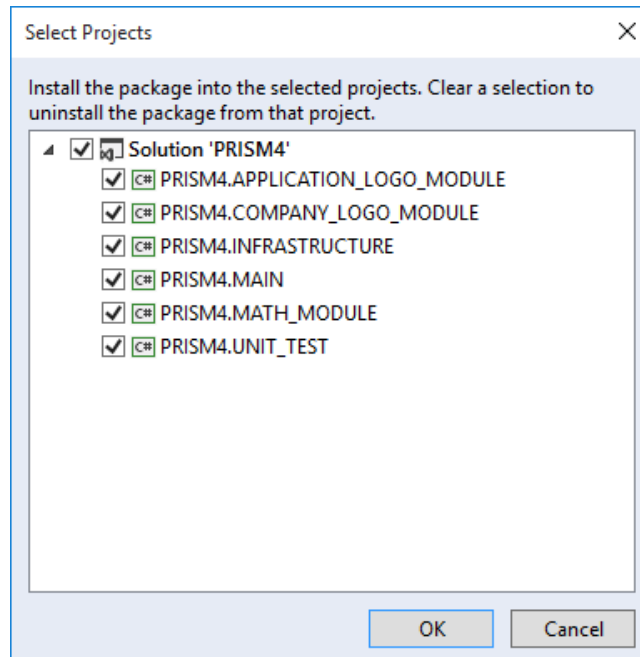
Updating all projects with the Unity Extensions library.

8. Select all projects.
9. Click the OK button.
10. The latest version of Unity will be added to each project.

NOTE: Because the Unity Extensions library is dependent on the Unity library, loading Unity Extensions will also load the dependent Unity library to each project.

Replace the following Syncfusion libraries (DLLs) in each project with the latest version of the Syncfusion Toolset.

> ➤ The Virtual Calculator solution uses the following Syncfusion libraries:
>   1. Syncfusion.Core
>   2. Syncfusion.Shared.Wpf
>   3. Syncfusion.Tools.Wpf
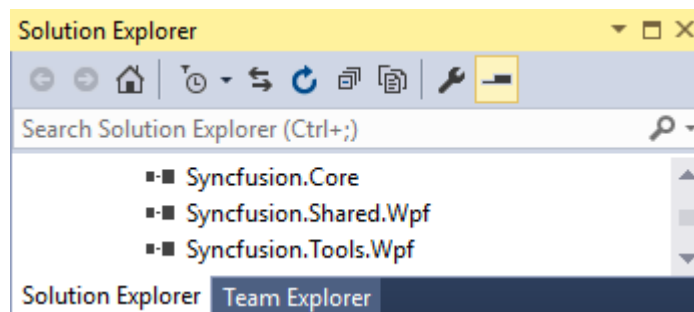
The Syncfusion libraries in the Prism 4 solution.

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

By: Eric Stitt

- ➢ To resolve issues with the Syncfusion library, remove the three libraries from each project in the solution and replace them with the highest version of the libraries that are loaded on your computer.

Using these techniques should resolve any issues that you encounter with the demo solutions.

Enjoy!

Eric Stitt

Demo Solutions Help for the Syncfusion Prism 4 Succinctly Book

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NOTES: