C++ Programming in easy steps, 4th edition Visual Studio 2015 Update



You can run the installer vs_community.exe at any time to add more components to your Visual Studio 2015 Community IDE.



If you do not see a **CLR** item in the **New Project** dialog, use the **Click here to go online and find templates** link to install the **CLR** template.

Programmimg Visually with Visual Studio 2015 Community Edition

Visual Studio 2015 Community Edition does not currently include the Windows Forms Application template for Visual C++ that was present in earlier editions of Visual Studio. Instead, a Windows Forms Application can be created in Visual Studio 2015 Community edition IDE like this:

1

2

3

4

5

On the **File** menu, click **New > Project...** – to open the "New Project" dialog

In the left-hand pane, expand **Installed > Templates > Visual C++ > Windows**, then choose **CLR**, and in the right-hand pane select **CLR Empty Project**

New Project				? ×		
P Recent		NET Framework 45.2 - Sort by:	Default	- 🔛 🖽 Search Installed Ter 🔎 •		
# Installed		Class Library	Visual C++	Type: Visual C++		
# Templates	1			An empty project for creating a local		
 Visual C# Visual Basic Visual F# 		CLR Console Application	Visual C++	application		
		CLR Empty Project				
I Vidual C		2006041				
ATL CLR						
General						
A.ME/*	1	Click here to go online and for	d tanking and			
* Online	3	STATISTICAL AND ADDRESS OF	A STREET			
Name Location Solution name	Lette					
	c/users/mike_\documents/vibual studio 2013/Projects *			Browse		
	Lotto					
				OK Cancel		

- Enter a project **Name**, for example "Lotto", then click the **OK** button to create the new project in the IDE
 - On the IDE's **Project** menu, click **Add New Item** to open the "Add New Item" dialog

In the left-hand pane, expand **Installed** > **Visual C++**, then choose **UI**

6

In the right-hand pane, select **Windows Form**, then click the **Add** button – to add a blank form to the project

Installed Visual C++ Ul Code Data Resource Web Utilby Property Sheets	Sort by	Default Windows Form CLR User Control	- III* 🔠 Visual C++ Visual C++	Search Installed Templates (Ctrl+E) Type: Visual C++ Creates a CLR form containing other Windows controls	ρ.
UE Code Deta Resource Web Utility	5 1			Creates a CLR form containing other	
Code Deta Resource Web Utility	5	CLR User Control	Visual C++		
Test HLSL Graphics P Online					
	4	lick here to go online e	nd find templates.		
Name: My	Fermh		1		
Location c'll	Users\mike_\document	s'ivisual studio 2015/Pro	Browse		



Leave the default name of the Windows Form addition as **MyForm.h**

7 Ignore the Error message window that may now appear for **MyForm.h** [**Design**] – simply click the **X** button to close the Error message window





The Error window that may appear is a known issue with the first release of Visual Studio 2015 Community edition. It is due to be fixed in the subsequent update release.

The Error window is created by a bug in the current release of the Visual Studio 2015 Community edition, at the time of writing.

...cont'd

8

9

{

}

10



If your project is named other than "Lotto" you will have to amend the using namespace line to substitute the name of your project for Lotto.



Double-click the **MyForm.cpp** file icon, to open that file in the "Code Editor" window, then edit the code to read exactly as below, and then click Save All - to save the changes

On the IDE's View menu, click Solution Explorer to open the "Solution Explorer" window, then expand the project's Source Files folder - to see a file MyForm.cpp

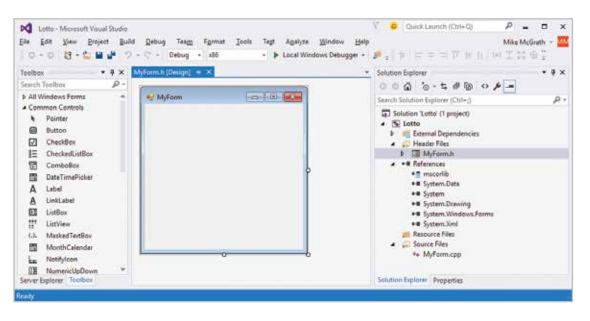
#include "MyForm.h" #include <Windows.h>

using namespace Lotto;

int stdcall WinMain(HINSTANCE hInst, HINSTANCE hPInst, LPSTR lpCmdLine, int nCmdShow)

```
MyForm frm ;
frm.ShowDialog() ;
return 0;
```

Back in the "Solution Explorer" window, expand the project's Header Files folder, then double-click the **MyForm.h** file icon – to see the form "Designer" window



Other changes to note

Creating a Windows Forms Application in this way with the Visual Studio 2015 Community IDE makes a number of changes to the generated code described in previous editions:

- The Windows Form added to the project has the default name "MyForm", so the form's header file is named MyForm.h – rather than Form1.h
- Similarly, the code in the **MyForm.h** header file describes a class named **MyForm** rather than **Form1**
- The generated code in the **MyForm.h** header file does not have a **Form1_Load** function, (or **MyForm_Load** function) – it now has a "constructor" function where you can place calls to run functions when the form first loads. The constructor code has a "TODO" reminder comment and looks like this:

```
public:
    MyForm( void )
    {
        InitializeComponent() ;
        // TODO: Add constructor code here
    }
```

• In our "Lotto" example, the **Clear** function can be called from the constructor, rather than **Form1_Load** as before, like this:

```
public:
    MyForm( void )
    {
        InitializeComponent() ;
        // TODO: Add constructor code here
        Clear() ;
    }
```

Other steps in the "Lotto" example can be implemented as before in earlier versions of Visual Studio Express edition.

