# Visual C++ Express 2012: Creating a Windows Form Project

## 1. File > select New Project.



 New Project Window > 1 (under Visual C++) CLR > 2 select CLR Empty Project > 3 enter <Project\_name> > 4 click OK.

New Project	arrested torontation		? ×
▶ Recent	Sort by: Default		Search Installed Templates (Ctrl+E)
<ul> <li>Installed</li> <li>Templates</li> </ul>	Class Library	Visual C++	Type: Visual C++ An empty project for creating a local
▷ Visual Basic	CLR Console Application	Visual C++	application
Visual C# 1 Visual C++ 1 CLR	CLR Empty Project	Visual C++	
General Test Win32 Visual Studio Solutions Samples ♪ Online	3		
Name: NewProject	←		4
Location: c:\users\done\ Solution name: NewProject	documents\visual studio 2012\Projects	•	Browse
New Figer			Add to source contra
			OK Cancel

> **Optional:** Change the **Location** of the Project.

### 3. Project > select Add New Item.



Add New Item - NewProject		8 <b>x</b>
▲ Installed	Sort by: Default	Search Installed Templates (Ctrl+E)
<ul> <li>✓ Visual C++</li> <li>Code</li> <li>Web</li> <li>Test</li> <li>Utility</li> <li>Property Sheets</li> <li>▷ Online</li> </ul>	Visual C++	Type: Visual C++ Creates a CLR form containing other Windows controls
Name: MyForm.h		3
Location: c:\Users\done\o	ocuments\visual studio 2012\Projects\NewProject\NewProject\	Browse Add Cancel

4. 1 (Under Visual C++) > UI > 2 select Windows Form > 3 click OK.

5.	(Under Solution Explore	r) > right-click on < <b>Proj</b>	<pre>ect_name&gt; &gt; select Properties.</pre>
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*	Build		ternal Depend	dencies	5
	Bulla		eader Files	dencies	45
	Project Only		MyForm.h		
			source Files		
	Scope to This		ource Files		
œ	New Solution Explorer View		MyForm.cp	р	
	Build Customizations				
	Add		<b>F</b>		
	References				
в‡	Class Wizard	Ctrl+Shift+X			•
苗	Manage NuGet Packages		Project Propo	rtier	
ø	Set as StartUp Project		Project Prope	nies	
	Debug		F		
10	Add Solution to Source Control			NewProject	
¥	Cut	Ctrl+X	endencies	NewFojeer	
â	Paste	Ctrl+V		c:\Users\dor	ne\documents
×	Remove	Del	space	NewProject	
10	Rename	F2			
	Unload Proiect				
	Rescan Solution				
ð	Open Felder in File Suplayer		_		
C	Open Folder in File Explorer		-		

6. Project Property Pages (pop-up window) > Configuration Properties > Linker > System > (righthand panel) System SubSystem (dropdown menu) > select **Windows (/SUBSYSTEM:WINDOWS)**.

NewProject Property Pages		२ <mark>×</mark>
Configuration: Active(Debug)	▼ Platform: Active(Win:	32)  Configuration Manager
Common Properties	SubSystem	Net Set
General	Hean Personia Size	
Debugging	Heap Commit Size	Windows (/SUBSYSTEM:WINDOWS)
VC++ Directories	Stack Personia Size	Native (/SUBSYSTEM:NATIVE)
▷ C/C++	Stack Commit Size	EFI Application (/SUBSYSTEM:EFI APPLICATION)
⊿ Linker		EFI Boot Service Driver (/SUBSYSTEM:EFI BOOT SERVICE DRIVER)
General	Transie al Carge Addresses	EFI ROM (/SUBSYSTEM:EFI ROM)
Input	Sugar Bug Frage CD	EFI Runtime (/SUBSYSTEM:EFI_RUNTIME_DRIVER)
Manifest File	Swap Run From CD	POSIX (/SUBSYSTEM:POSIX)
Debugging	Swap Run From Network	Net Cet
System	Driver	Not Set
Optimization		
Embedded IDL		
Windows Metadata		
Advanced		
All Options		
Command Line		
Manifest Tool		
XML Document Generator		
Browse Information		
Build Events		
Custom Build Step		
Code Analysis	SubSystem	
	The /SUBSYSTEM option tells the op entry point symbol (or entry point for	erating system how to run the .exe file. The choice of subsystem affects the unction) that the linker will choose.
		OK Cancel Apply

(Still in the Project Property Pages window) > Advanced > (right-hand panel) > Entry Point > 1 type in main > 2 click Apply > 3 click OK.

NewProject Property Pages	Platform: Active(Win32)	Configuration Manager
Common Properties	Entry Point	
a Configuration Properties	No Entry Point	
Debugging	Set Checksum	NO
VC++ Directories	Base Address	V (D) (111 (CD 1 CD)
	Randomized Base Address	Yes (/DYNAMICBASE)
A Linker	Fixed Base Address	No (/FIXED:NO)
General	Data Execution Prevention (DEP)	Yes (/NXCOMPAT)
Input	Turn Off Assembly Generation	No
Manifest File	Unload delay loaded DLL	
Debugging	Nobind delay loaded DLL	E
System	Import Library	
Ontimization	Merge Sections	
Embedded IDI	Target Machine	MachineX86 (/MACHINE:X86)
Windows Metadata	Profile	No
Advanced	CLR Thread Attribute	
All Options	CLR Image Type	Default image type
Command Line	Key File	
Manifest Tool	Key Container	
XML Document Generator	Delay Sign	
Browse Information	CLR Unmanaged Code Check	
Build Events	Detect One Definition Rule violations	
Custom Build Step	Error Reporting	PromptImmediately (/ERRORREPORT:PROMPT)
Code Analysis	Entry Point	
	The /ENTRY option specifies an entry point f	unction as the starting address for an .exe file or DLL. (2)
4 III +		<b>₩</b>
		3 OK Cancel Apply

8. Go to <*Project\_name*>.cpp > **enter the following code**:

```
using namespace System;
using namespace System::Windows::Forms;
[STAThread]
int main(array<System::String ^> ^args)
{
    Application::EnableVisualStyles();
    Application::SetCompatibleTextRenderingDefault(false);
    NewProject::MyForm form;
    Application::Run(%form);
}
```

- **Note:** The highlighted green area should be your unique project's name.
- **Note:** Change MyForm as well if you also gave the code file a different name.
- **Recommended:** Run the debugger to check for errors.

MyForm.cpp 🗢 🗙 MyForm.h [Design]		Solution Explorer	ų ×
(Global Scope)		이 이 슈 '이 - 루 레 🍙 💠 👂 💭	
#include "MyForm.h"	+	Search Solution Explorer (Ctrl+;)	p-
<pre>Busing namespace System; [using namespace System::Windows::Forms; [STAThread] Bint main(array<system::string ^=""> ^args) { Application::EnableVisualStyles(); Application::SetCompatibleTextRenderingDefault(false); NewProject:)byForm form; wollcate::Run(%form); } </system::string></pre>		Solution 'NewProject' (1 project)     SewProject     SewExternal Dependencies     SewExternal Dep	
		Properties	ų×
100 % + <	► 		

9. Got to <*Project\_name*>.h [Design] > Toolbox > add **Button** to the form.





10. (Under) Properties > Appearance > Text > enter **<button text>**.

Prope	rties		١X
butto	on1 Statem.Windows.Fo	orms.Button	
	₽(₽)} ◄──		
Acc	cessibleRole	Default	
🗆 Арр	pearance		
Bac	ckColor	Control	
Bac	ckgroundImage	(none)	
Bac	ckgroundImageLayout	Tile	
Cur	rsor	Default	
⊞ Flat	tAppearance		
Flat	tStyle	Standard	
⊞ For	nt	Microsoft Sans Serif, 8.25pt	
For	reColor	ControlText	
Ima	age	(none)	
Ima	ageAlign	MiddleCenter	
Ima	ageIndex	(none)	
Ima	ageKey	(none)	
Ima	ageList	(none)	
Rig	htToLeft	No	_
Tex	dt 🗌	Exit	-
Tex	ktAlign	MiddleCenter	-
Text			
The te	ext associated with the c	ontrol.	

## 11. On the form > click the **button**.

(This will route to the <project\_name>.h file where a user may enter the proper code.)

🖳 MyForm	- • •
Exit	

#### 12. In the <project\_name>.h file, under

```
#pragma endregion
private: System::Void button1_Click(System::Object^ sender, System::EventArgs^ e) {
```

#### enter the following code:

Application::Exit();

**Recommended:** Run the debugger again and test.

## **Notes:**

Credits:

YouTube video by Ong Hoe Yuan URL: http://youtu.be/U14ZpnAmoXg

Arduino Serial Communication With C++ URL: http://webhole.net/2010/05/01/arduino-visual-c-plus-plus-tutorial/

The void main() from Yuan's code was generating an error so int main(array<System::String ^> ^args) was utilized from the WebHole article.

Other references:

MSDN forum post with answers: http://social.msdn.microsoft.com/Forums/en-US/Vsexpressvc/thread/a6d92d96-4a86-4ef7-a815-7f588a6073ea