

# Microsoft Visual Studio 2010 Instructions For C Programs

# **Creating a NEW C Project**

After you open Visual Studio 2010,

- 1. Select File > New > Project from the main menu. This will open the New Project dialog box.
- Select the Visual C++ option from the Installed Templates panel on the left hand side of the New Project dialog box.



3. Select the **Empty Project** option from the middle panel of the **New Project** dialog box.



 Enter the name of your <u>NEW</u> project, such as 'MyProject', in the Name textbox located at the bottom of the New Project dialog box.

New Project				? 💌
Recent Templates	.NE	T Framework 4    Sort by: Default	• •	Search Installed Templates
Installed Templates				Type: Visual C++
▲ Visual C++		Win32 Console Application	Visual C++	An empty project for creating a local
ATL CLR	Ē	MFC Application	Visual C++	application
General MFC		Win32 Project	Visual C++	
Vin32		🔩 Empty Project	Visual C++	E
<ul> <li>Other Languages</li> <li>Other Project Types</li> <li>Database</li> </ul>		ATL Project	Visual C++	
Test Projects	M	MFC DLL	Visual C++	
Online Templates		Windows Forms Application	Visual C++	
		CLR Console Application	Visual C++	
	7	🔩 ULR Empty Project	Visual C++	
		Class Library	Visual C++	
		Custom Wizard	Visual C++	v
<u>N</u> ame: M	MyProject			
Location: \\	\puma\home\studer	nt\Visual Studio 2010\Projects	•	Browse
Solution na <u>m</u> e: N	/lyProject			✓ Create <u>directory</u> for solution Add to so <u>u</u> rce control
				OK Cancel

5. Change the **Location** of where you would like to save your <u>NEW</u> project. Note that your Home Directory on the Business/CS Lab computers resides on drive Z: and your USB usually resides on drive E:.

New Project		8	x
Recent Templates	.NET Framework 4   Sort by: Default	Search Installed Templates	٩
Installed Templates ✓ Visual C++ ATL CLR	Win32 Console Application	Visual C++ Visual C++ Visual C++ Visual C++	
General MFC Test	Win32 Project	Visual C++	
Win32	tupty Project	Visual C++	
<ul> <li>Other Project Types</li> <li>Database</li> </ul>	ATL Project	Visual C++	
Test Projects     Opline Templater	M MFC DLL	Visual C++	
Online remplates	Windows Forms Application	Visual C++	
	CLR Console Application	Visual C++	
	CLR Empty Project	Visual C++	
	Class Library	Visual C++	
	Custom Wizard	Visual C++	
Name: Location: Solution seme: MyProj. et	10\Projects	Browse Create girectory for solution Add to source control OK Cancel	
t the <b>Create directory fo</b>	<b>r solution</b> check box.	OK Cancel	

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7. Press the **OK** button to continue.

At this point in time your <u>NEW</u> project should open up in **Visual Studio** and you should be able to see your project assets in the **Solution Explorer** on the left hand side of your **Visual Studio** window.

Right click on the Source Files folder in the Solution Explorer and select Add > New Item.
 The Add New Item dialog box should appear at this time.

9. Select the **C File (.cpp)** option from the middle panel of the **Add New Item** dialog box.

	Add New Item - MyProj	ject					? 💌
	Installed Templates	_	Sort by:	Default 🔹			Search Installed Templates
	✓ Visual C++ UI			Windows Form	Visual C++	*	Type: Visual C++ Creates a file containing C++ source code
	Data	7	**	C++ File (.cpp)	Visual C++		>
	Web			HTML Page (.htm)	Visual C++	Ξ	
	Property Sheets		<b>4</b>	Static Discovery File (.disco)	Visual C++		
			h	Header File (.h)	Visual C++		
<ul> <li>Image: A set of the set of the</li></ul>			-E	Midl File (.idl)	Visual C++		
			<b>e</b>	Resource File (.rc)	Visual C++		
			ATL	Server Response File (.srf)	Visual C++		
				Module-Definition File (.def)	Visual C++		
			÷	Registration Script (.rgs)	Visual C++		
				MFC Ribbon Definition XML File	Visual C++		
				Property Sheet (.props)	Visual C++	Ŧ	
	<u>N</u> ame:	<enter_name></enter_name>					
	Location:	e:\Visual Studio 20	)10\Proje	cts\MyProject\MyProject\		•	Browse
							Add



10. Enter the name of your <u>NEW</u> C file in the **Name** textbox located at the bottom of the **Add New Item** dialog box with a **.c extension** (ie., **MyFile.c**). Note that you should not have to change the **Location** of your file as it should automatically appear in the directory you specified in **Step 5** of these instructions.

Installed Templates	Sort by: Default	Search Installed Templates
✓ Visual C++ UI	Windows Form	Visual C++ Creates a file containing C++ source co
Code Data	C++ File (.cpp)	Visual C++
Resource Web Utility Property Sheets	HTML Page (.htm)	Visual C++ E
	Static Discovery File (.disco)	Visual C++
	h Header File (.h)	Visual C++
	Midl File (.idl)	Visual C++
	Resource File (.rc)	Visual C++
	Server Response File (.srf)	Visual C++
	Module-Definition File (.def)	Visual C++
	Registration Script (.rgs)	Visual C++
	MFC Ribbon Definition XML File	Visual C++
	Property Sheet (.props)	Visual C++
Name: MyProject	t.c	Browse
C (VISUAL	italio 2010 (Figlets (My Figlet (My Figlet (My	Add Capes

11. Press the **Add** button to continue.

At this point in time your <u>NEW</u> C **Source File** should appear as a project asset under the **Source Files** folder in the **Solution Explorer** on the right hand side of your **Visual Studio** window. Your <u>NEW</u> C Source File should open under a <u>NEW</u> Tab on the left hand side of the **Visual Studio** window as shown below. You can now type your program into the Visual Studio 2010 editor.



#### Saving a C Project / Source File

- 1. Select the Tab that contains the Source Code you wish to save.
- 2. Select **File > Save** *filename.c* from the main menu. This will automatically save the source code in that is open in the active tab of your **Visual Studio 2010** workspace.



# **Compiling and Running a C Program**

1. To compile and link your program, press F7 on your keyboard or select Build > Build Solution from the main menu. This will allow you to build an executable file which will be saved in your projects **Debug** directory.



At the bottom of your screen you should see the results of the compilation process which look similar the results in the picture below which indicate that your program has been built successfully:



2. To Run or Execute your program, press CTRL-F5 on your keyboard or choose Debug > Start without Debugging from the main menu.

A new window should open and this should contain the results of your programs execution. Proceed to the following page if you do not see this window on your computer.



If an execution window does not appear or does not stay open, make the following changes in Visual Studio:

a. Select the **Project Name** in your **Solution Explorer**.



b. Select **Project > Properties** from the main menu.



- c. Expand the **Configuration Properties** option in the left panel of the **Property Pages Dialog** box by clicking on the  $\triangleright$  to the left of the Configuration Properties option.
- d. Under the Configuration Properties, expand the **Linker** option in the left panel of the **Property Pages Dialog** box by clicking on the ▷ to the left of the Linker option.
- e. Under the Linker option, select the System option in the left panel of the Property Pages Dialog box.

Project Property Pages		
Configuration: Active(Debug)	Platform: Active(Win32)	Configuration Manager
Common Properties	SubSystem	
Framework and References	Minimum Required Version	
Configuration Properties	Heap Reserve Size	
General	Heap Commit Size	
Debugging	Stack Reserve Size	
VC++ Directories	Stack Commit Size	
⊳ C/C++	Enable Large Addresses	
⊿ Linker	Terminal Server	
General	Swap Run From CD	No
Input	Swap Run From Network	No
Manifest File	Driver	Not Set
Embedded ID Advanced Command Line Manifest Tool XML Document Generator Browse Information Build Events Custom Build Step		
۰ III ا	SubSystem The /SUBSYSTEM option tells the operating syst entry point symbol (or entry point function) tha	tem how to run the .exe file. The choice of subsystem affects the t the linker will choose.
		OK Cancel Apply

f. In the right panel of the **Property Pages Dialog** box, change the **SubSystem** option by clicking on the on the far right and select '**Console** (/**SUBSYSTEM: CONSOLE**)' as is shown below:

Not Set	
Console (/SUBSYSTEM:CONSOLE)	
Windows (/SUBSYSTEM:WINDOWS)	
Native (/SUBSYSTEM:NATIVE)	
EFI Application (/SUBSYSTEM:EFI_APPLICATION)	
EFI Boot Service Driver (/SUBSYSTEM:EFI_BOOT_SERVICE_DRIVER)	
EFI ROM (/SUBSYSTEM:EFI_ROM)	
EFI Runtime (/SUBSYSTEM:EFI_RUNTIME_DRIVER)	
WindowsCE (/SUBSYSTEM:WINDOWSCE)	
POSIX (/SUBSYSTEM:POSIX)	

g. Select **Apply** and **OK** at the bottom of the **Property Pages Dialog** box for the changes to take place the next time you run your program.

# **Closing a C Project**

 Select File > Close Solution from the main menu. If your Project has not been saved recently, a Microsoft Visual Studio message box will be opened prompting you to confirm any changes you have made to your Project and/or Source Code files.



MyProject.sln MyProject			
MyProject.vcxproj.filter	s		

 Press the Yes button to confirm saving changes to your Project. Upon confirmation, all of your open files should be closed and your Solution Explorer should be void of information. At this point you can either close Visual Studio OR open a NEW or existing C Project.

#### **Exiting Visual Studio**

1. Select File > Exit from the main menu. At this point Visual Studio will close.



#### **Opening an EXISTING C Project**

- 1. Select **File > Open > Project/Solution** from the main menu. This will open the **Open Project** dialog box.
- Using the Open Project dialog box, locate the Visual Studio Project you wish to open. Your existing projects should be located either on the Z: drive or your USB drive. Once you have located the Project, select it and Press the Open button at the bottom of the dialog box.

🐱 Open Project						
🔾 🗢 🖡 « visual stud	lio 2010 → Projects → MyProject →	✓ 4 Search	MyProject	٩		
Organize 🔻 New folder	r			0		
🚥 Microsoft Visual St 🗂	Name	Date modified	Туре	Size		
Projects	퉬 ipch	9/13/2011 5:37 PM	File folder			
	퉬 MyProject	9/13/2011 5:37 PM	File folder			
🔆 Favorites	😕 MyProject	9/13/2011 5:08 PM	Microsoft Visual S.			
🧮 Desktop						
📕 Downloads						
🔚 Recent Places						
🥽 Libraries 🛛 🗧						
Documents						
🎝 Music						
Pictures						
😸 Videos						
🖳 Computer						
🏭 Local Disk (C:)						
🔮 CD Drive (E:)						
👊 Network 📃 💌	•			•		
File na	me: MyProject	👻 🛛 All Proje	ct Files (*.sln;*.dsw;*.	vc 👻		
		Oper				

3. At this point your Project should be open in your Visual Studio Workspace.