

Lab # 1: IDE Installation and First Project

EC-102 – Computer Systems and Programming

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Outline

1 Setting Up Integrated Development Environment

- What is IDE?
- Downloading Setup Files
- Installing the IDE

2 My First Project

- Creating a New Project
- Adding Files to the Project

What is IDE?

A programming environment packaged as an application program, typically consisting of

- a code editor,
- a compiler,
- a debugger, and
- a graphical user interface (GUI) builder.

Downloading Setup Files

Step # 1: Download Visual Studio 2010 Professional/Ultimate from [here](#).



The following links for Visual Studio 2010 trial version are available:

106

ISO images (offline installers):



- [Visual Studio 2010 Ultimate](#)
- [Visual Studio 2010 Premium](#)
- [Visual Studio 2010 Professional](#)
- [Visual Studio 2010 Test Professional](#)
- [Visual Studio Team Foundation Server 2010](#)
- [Visual Studio 2010 Express](#)
- [Visual Studio 2010 Service Pack 1](#) (all versions)

Web installers:

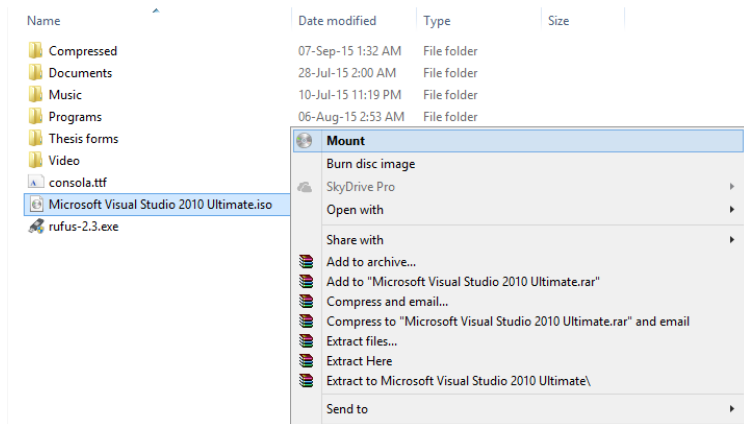
- [Visual Studio 2010 Ultimate](#)
- [Visual Studio 2010 Premium](#)
- [Visual Studio 2010 Professional](#)
- [Visual Studio 2010 Test Professional](#)
- [Visual Studio 2010 Service Pack 1](#) (all versions)

For some versions, you can also download the ISO image in parts:

- Visual Studio 2010 Ultimate: [Part 1](#), [Part 2](#), [Part 3](#), [Part 4](#)
- Visual Studio 2010 Premium: [Part 1](#), [Part 2](#), [Part 3](#), [Part 4](#)
- Visual Studio 2010 Professional: [Part 1](#), [Part 2](#), [Part 3](#), [Part 4](#)
- Visual Studio Team Foundation Server 2010: [Part 1](#), [Part 2](#), [Part 3](#)

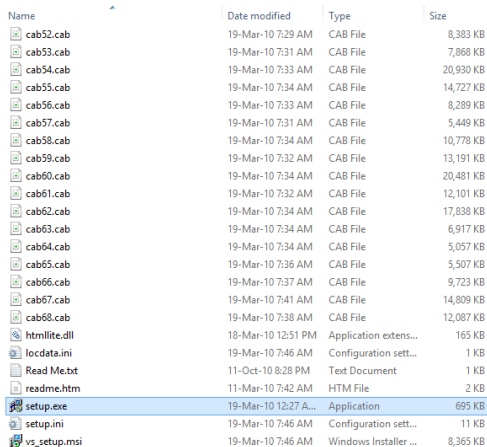
Downloading Setup Files

























Step # 2: Once it's downloaded, mount the image as a virtual drive. Windows 7 users might need to download and install [PowerISO](#) for 'Mount' option to appear in the menu.



Installing the IDE

Step # 1: Now, open the mounted/virtual drive and double-click the setup.exe file.



Name	Date modified	Type	Size
 cab52.cab	19-Mar-10 7:29 AM	CAB File	8,383 KB
 cab53.cab	19-Mar-10 7:31 AM	CAB File	7,868 KB
 cab54.cab	19-Mar-10 7:33 AM	CAB File	20,930 KB
 cab55.cab	19-Mar-10 7:34 AM	CAB File	14,727 KB
 cab56.cab	19-Mar-10 7:33 AM	CAB File	8,289 KB
 cab57.cab	19-Mar-10 7:31 AM	CAB File	5,449 KB
 cab58.cab	19-Mar-10 7:34 AM	CAB File	10,778 KB
 cab59.cab	19-Mar-10 7:32 AM	CAB File	13,191 KB
 cab60.cab	19-Mar-10 7:34 AM	CAB File	20,481 KB
 cab61.cab	19-Mar-10 7:32 AM	CAB File	12,101 KB
 cab62.cab	19-Mar-10 7:34 AM	CAB File	17,838 KB
 cab63.cab	19-Mar-10 7:34 AM	CAB File	6,917 KB
 cab64.cab	19-Mar-10 7:34 AM	CAB File	5,057 KB
 cab65.cab	19-Mar-10 7:36 AM	CAB File	5,507 KB
 cab66.cab	19-Mar-10 7:37 AM	CAB File	9,723 KB
 cab67.cab	19-Mar-10 7:41 AM	CAB File	14,809 KB
 cab68.cab	19-Mar-10 7:38 AM	CAB File	12,087 KB
 htmlite.dll	18-Mar-10 12:51 PM	Application extens...	165 KB
 locdata.ini	19-Mar-10 7:46 AM	Configuration sett...	1 KB
 Read Me.txt	11-Oct-10 8:28 PM	Text Document	1 KB
 readme.htm	11-Mar-10 7:42 AM	HTM File	2 KB
 setup.exe	19-Mar-10 12:27 A...	Application	695 KB
 setup.ini	19-Mar-10 7:46 AM	Configuration sett...	11 KB
 vs_setup.msi	19-Mar-10 7:46 AM	Windows Installer ...	8,365 KB

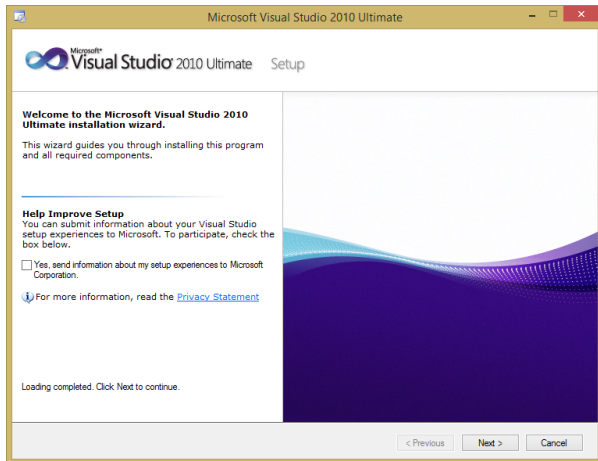
Installing the IDE

Step # 2: In the window that appears, click 'Install Microsoft Visual Studio 2010'.



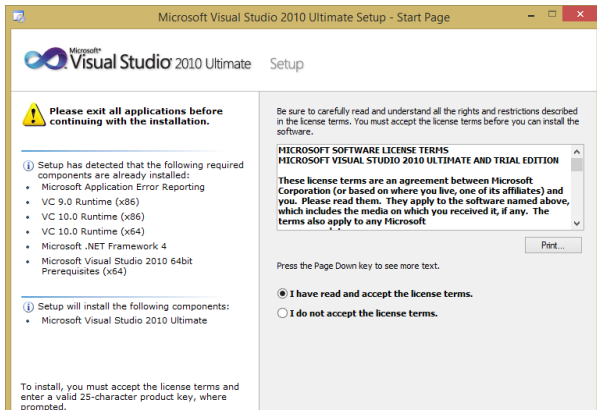
Installing the IDE

Step # 3: Or you can choose to keep the check-box checked. Click 'Next' to continue.



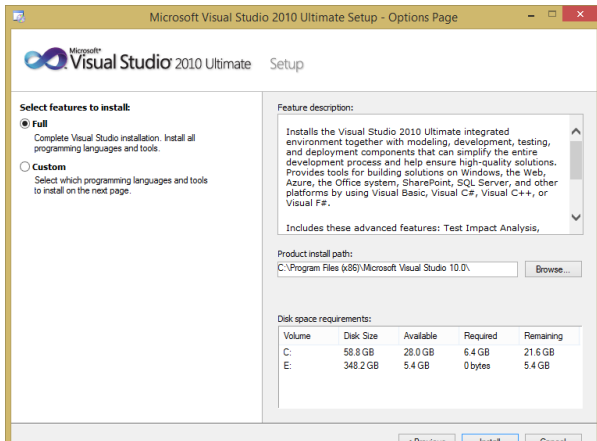
Installing the IDE

Step # 4: This window notifies you of any pre-installed dependencies and presents Microsoft's license terms. Click the radio-button corresponding to 'I have read and accept...' and click 'Next' to continue.



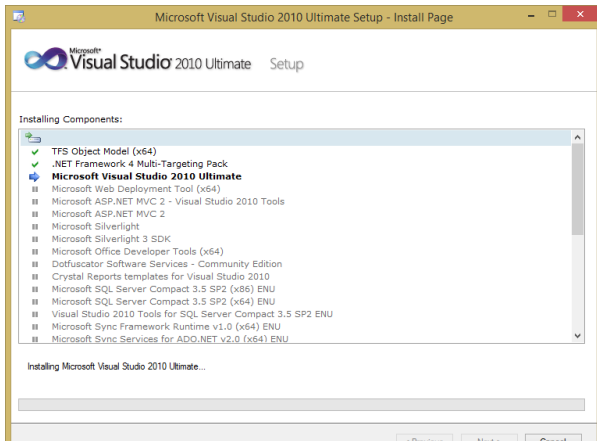
Installing the IDE

Step # 5: 6.4 GB does not look like a lot of space to spare given the feature description and the fact that we want to use this IDE for our future projects too.



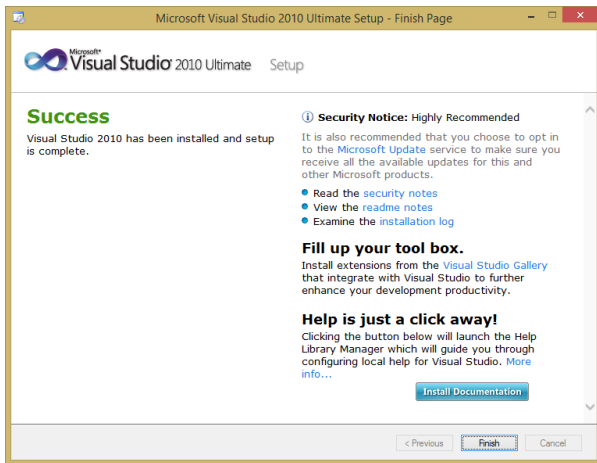
Installing the IDE

Step # 6: If everything goes as expected, you will see a window much like this one with a progress bar and a few details related to components being installed.



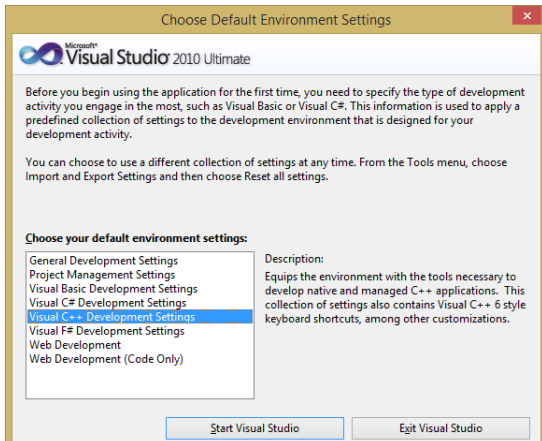
Installing the IDE

Step # 7: Click 'Finish' and you are all set to create your first project.



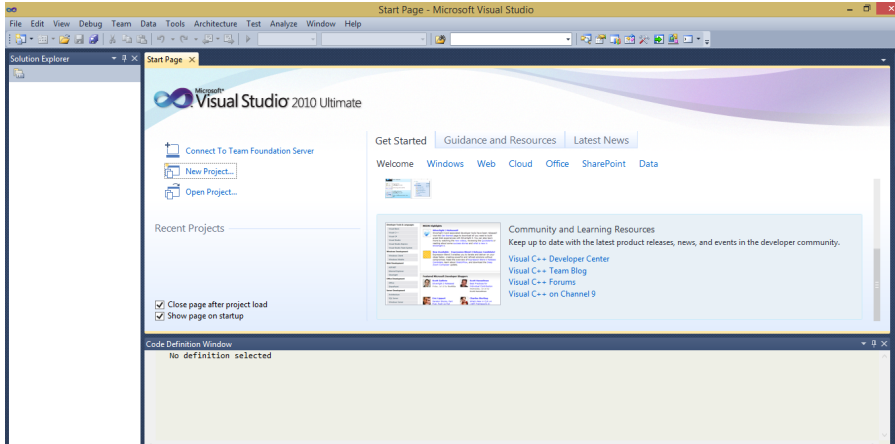
My First Project

Step # 1: Time to do something useful! Let's start the IDE and create our first project. Wait! Before we do that, let's first set the default environment settings to those of 'Visual C++'.



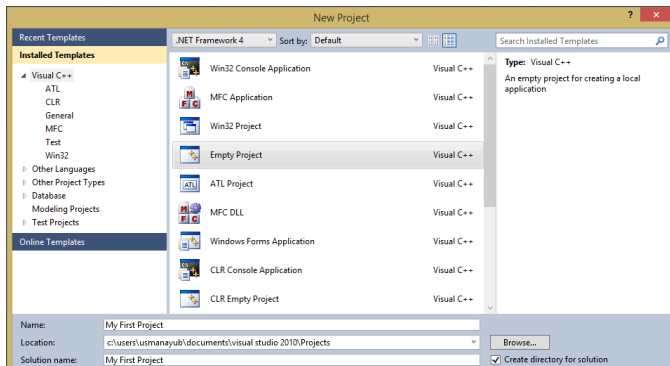
My First Project

Step # 2: Click 'New Project...' on the Start Page, 'Open Project...' is used to access an existing project.



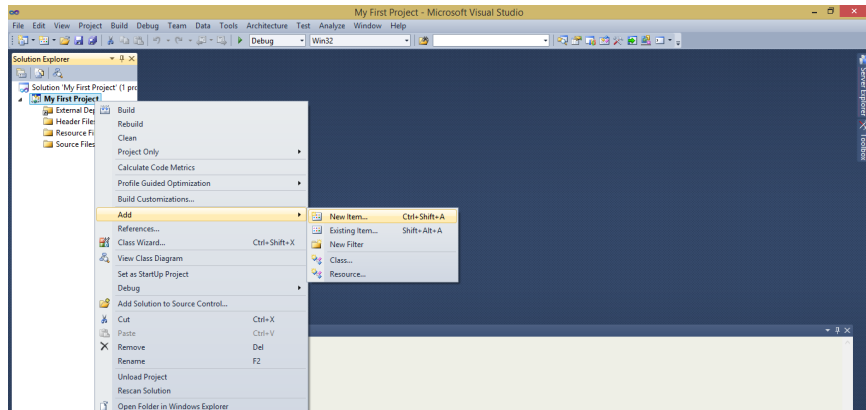
My First Project

Step # 3: Select 'Visual C++' in the 'Installed Templates', and then 'Empty Project' in the corresponding menu. Name the project, and if you don't want to save this project in the default location, use 'Browse' select one of your own choice. Once you have done that, click 'OK' to continue.



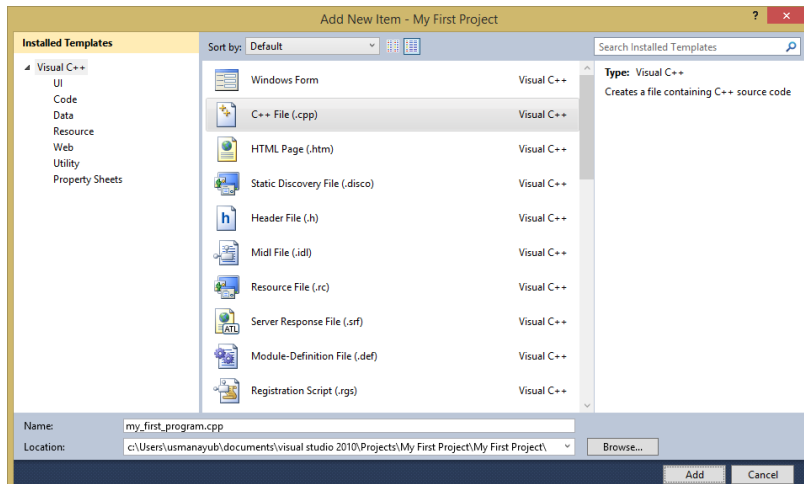
My First Project

Step # 4: Let's add something useful to this project. Right click on the project's name in the 'Solution Explorer', hover over 'Add' and click the 'New Item' in the menu that appears.



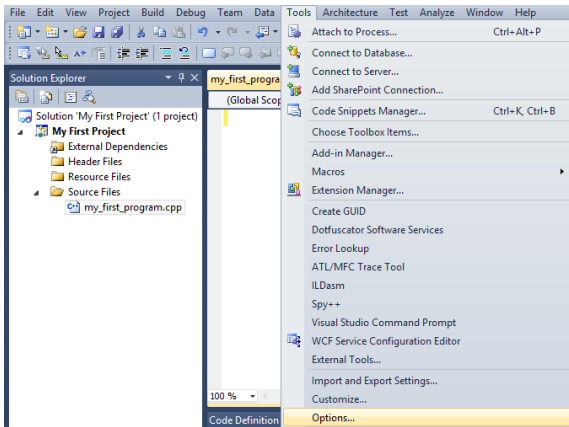
My First Project

Step # 5: Select 'C++ File (.cpp)', name the file and click 'Add' to continue.



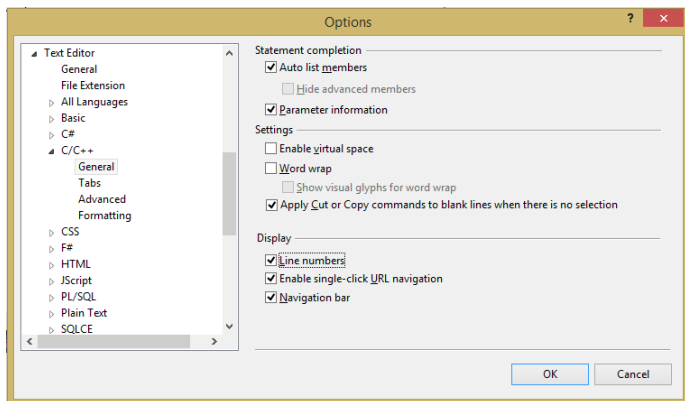
My First Project

Step # 6: Now, a few other settings. By default, the 'Line Numbers' are not enabled in the editor. To enable this feature, you'll need to go to 'Tools' in the main menu and select 'Options'.



My First Project

Step # 7: In the side bar of the window that appears, you'll need to expand the 'Text Editor', expand 'C/C++' from the sub-menu, select 'General' from the sub-sub-menu and then check the box right next to 'Line Numbers'.



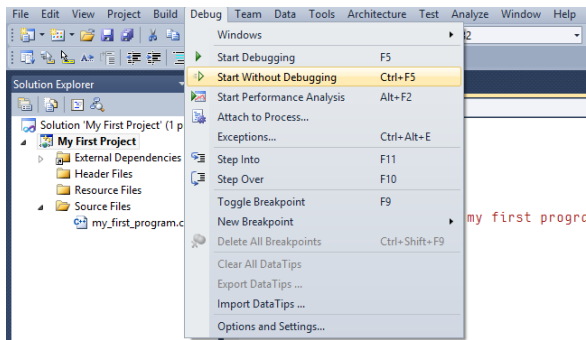
My First Project

Step # 8: Now that environment has been prepared, let's write our first program. Double-click the cpp file that you have created in Step 5 and start programming.

```
#include <iostream>
using namespace std;
int main()
{
    cout << "This_is_my_first_program!";
    cout << endl;
    return 0;
}
```

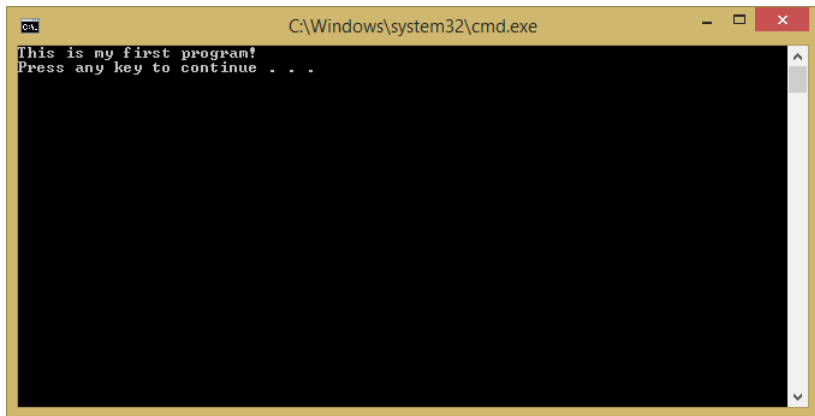
My First Project

Step # 9: In order to run this program, select 'Start Without Debugging' in the 'Debug' menu or use the short-cut CTRL + F5.



My First Project

Step # 10: There you go, there's the output of your first program.
Congratulations!



A screenshot of a Windows Command Prompt window. The title bar is yellow and contains the text "C:\Windows\system32\cmd.exe" and standard window control buttons (minimize, maximize, close). The command prompt itself has a black background with white text. The text displayed is "This is my first program!" followed by "Press any key to continue . . .". A vertical scrollbar is visible on the right side of the command prompt window.

```
C:\Windows\system32\cmd.exe  
This is my first program!  
Press any key to continue . . .
```

My First Project

Now let's play with this program a little bit. Let's remove different parts of it to see what happens, what error messages appear if we remove a semi-colon, let's add a few chunks to it and expand it's functionality somehow.

Contact

Email: usamawajhi.pk@gmail.com

Facebook group: <https://www.facebook.com/groups/ec102nust/>

Note: You can only ask questions related to this lab on facebook group.