Lab # 0: Yak Shaving
EC-102 – Computer Systems and Programming

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Outline

yak shaving!

Any *apparently* useless activity which, by allowing you to overcome intermediate difficulties, allows you to solve a larger problem.

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.

Step # 1: Download Visual Studio 2010 Professional/Ultimate from here.

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.
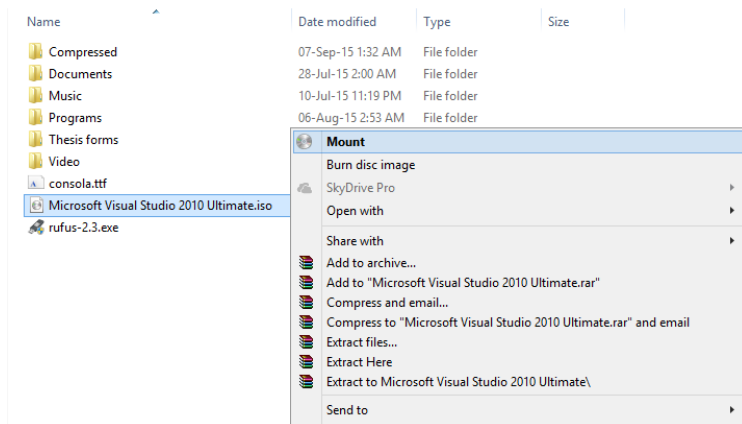
Installing the IDE

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

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.
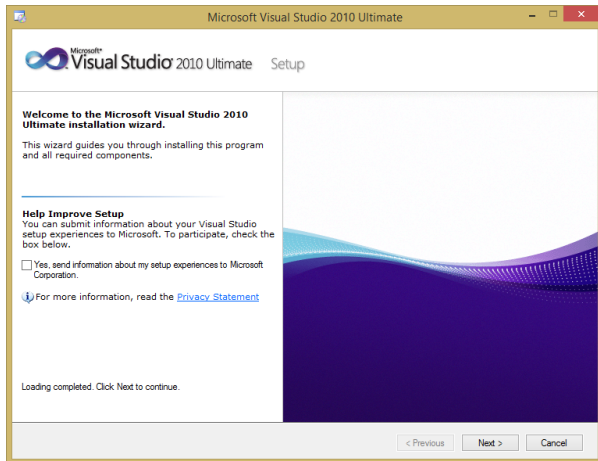
Installing the IDE

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.
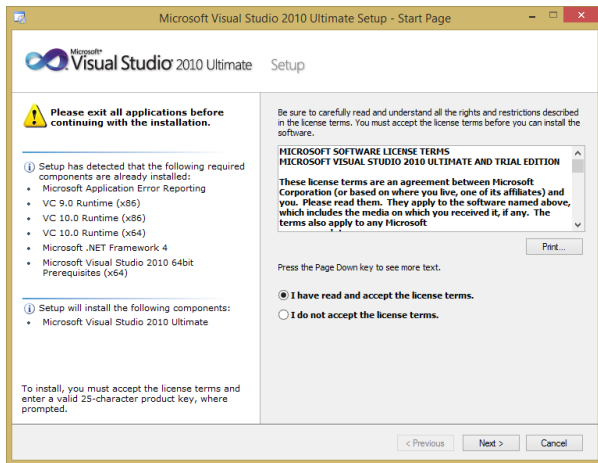
Installing the IDE

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.
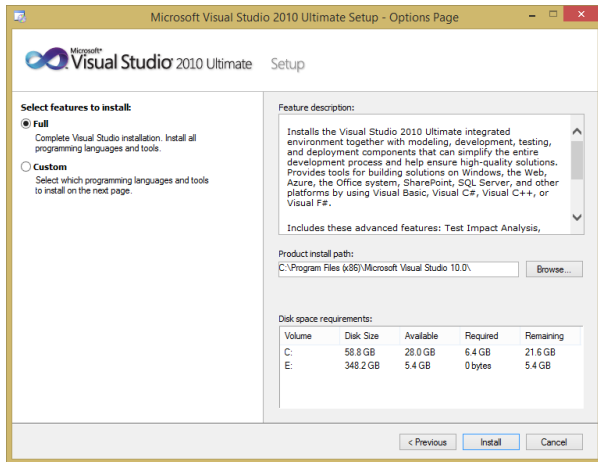
Installing the IDE

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.
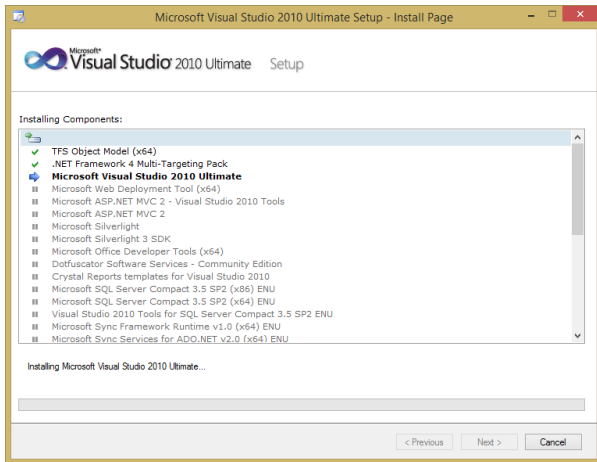
Step # 7: "Patience is bitter, but its fruit is sweet." – Aristotle
Click 'Finish' and you are all set to create your first project.
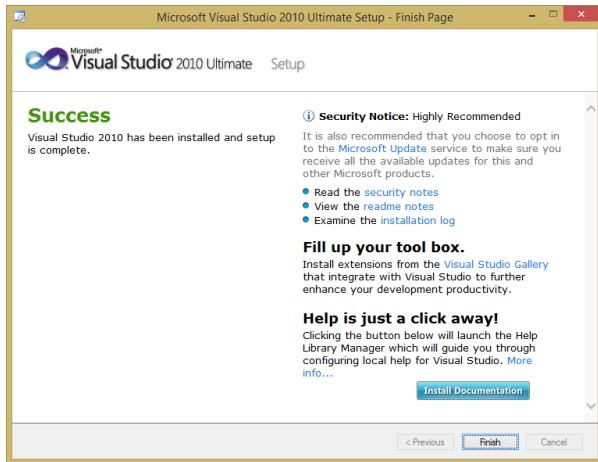
My First Project

Step # 1: Time to do something useful! Let's fire-up 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.
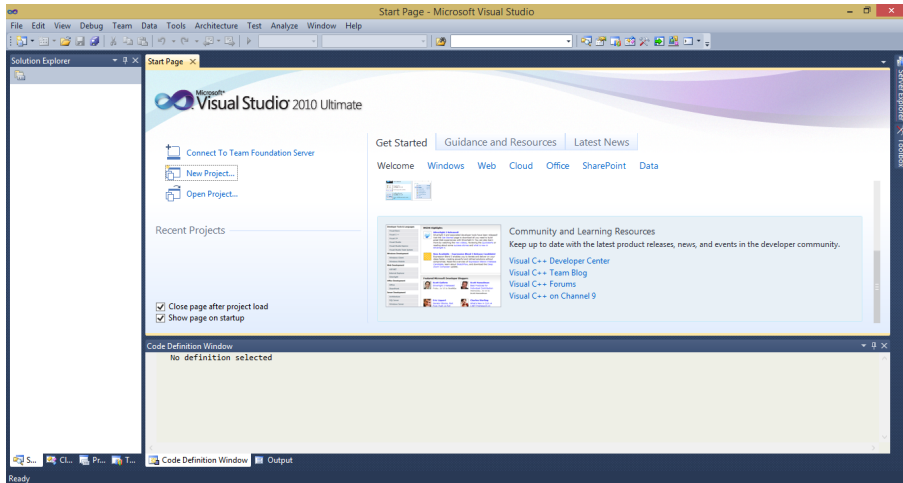
My First Project

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.
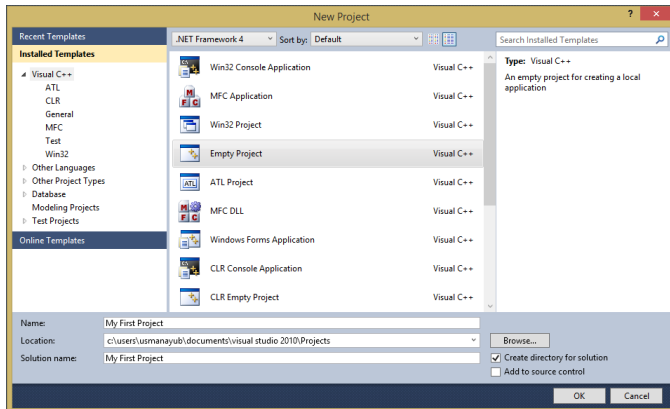
My First Project

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.
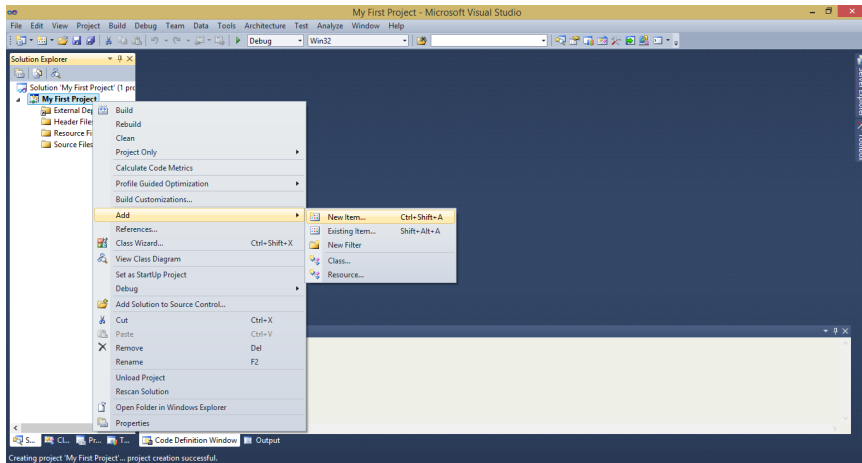
My First Project

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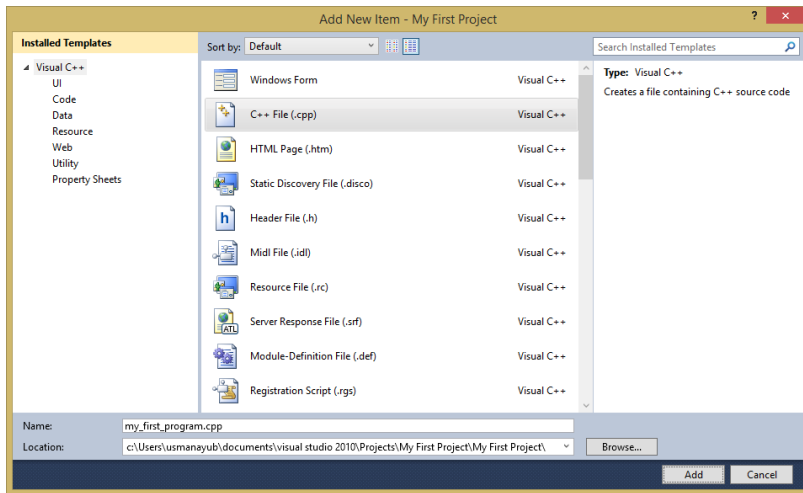
My First Project

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'.
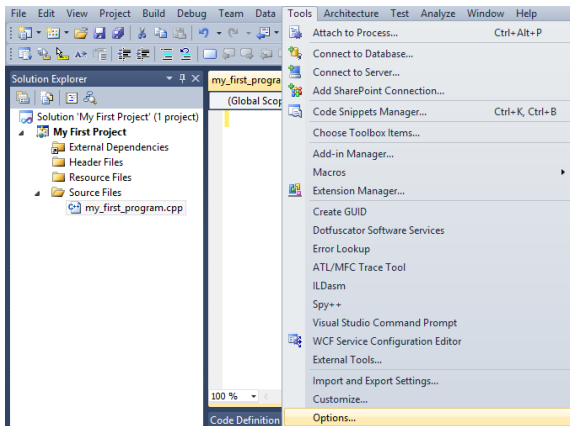
My First Project

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'.
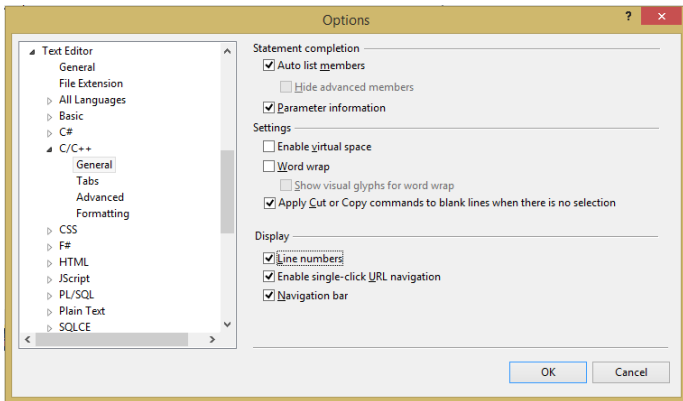
My First Project

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.

```cpp
#include <iostream>
using namespace std;
int main()
{
    cout << "This is my first program!";
    cout << endl;
    return 0;
}
```
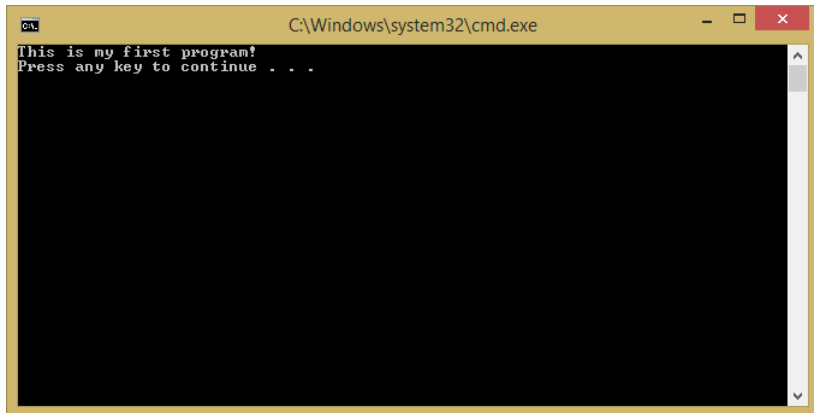
My First Project

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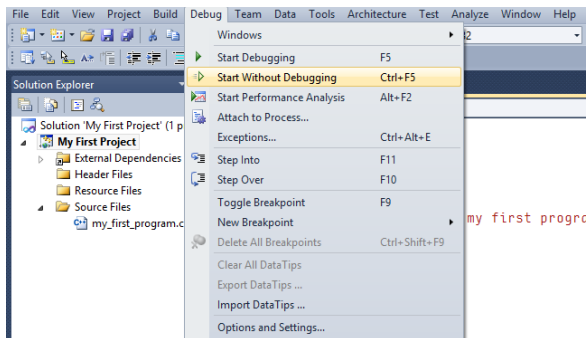
My First Project

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

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.