Compiling C code in Visual Studio 2012

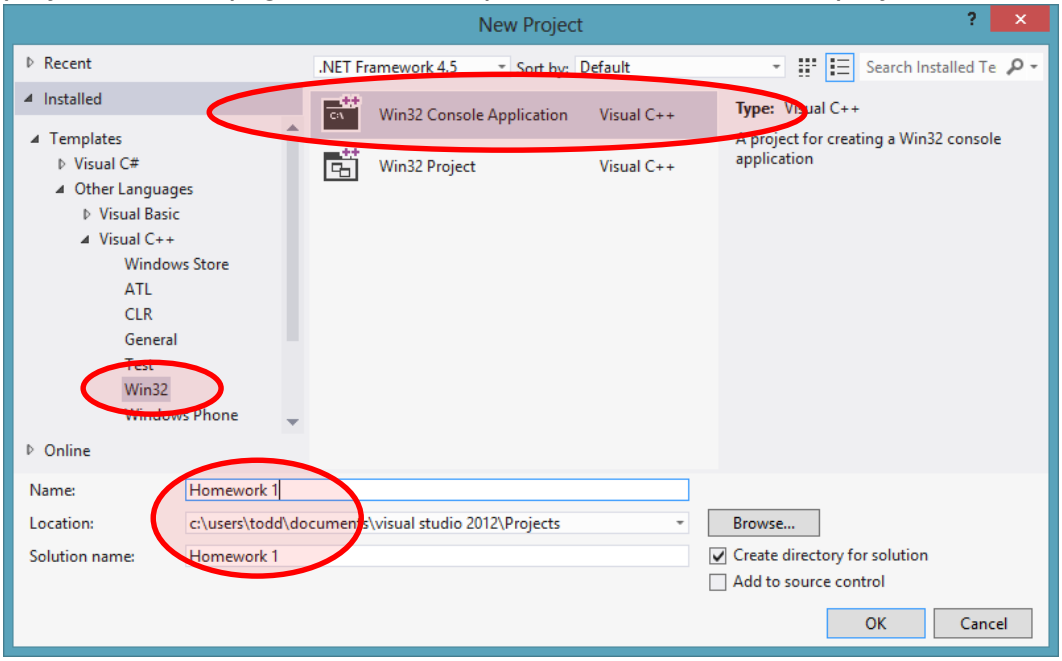
All of the Windows computers in the KEC computer lab already have Visual Studio Professional 2012.

Optionally, you can install it on your own PC by going to https://secure.engr.oregonstate.edu:8000/teach.php?type=msdnaa and logging in with your ENGR account (Visual Studio 2012 is under Developer Tools). Visual Studio Express 2012 for Windows Desktop should work as well (http://www.microsoft.com/visualstudio/eng/products/visual-studio-express-for-windows-desktop#product-express-desktop).

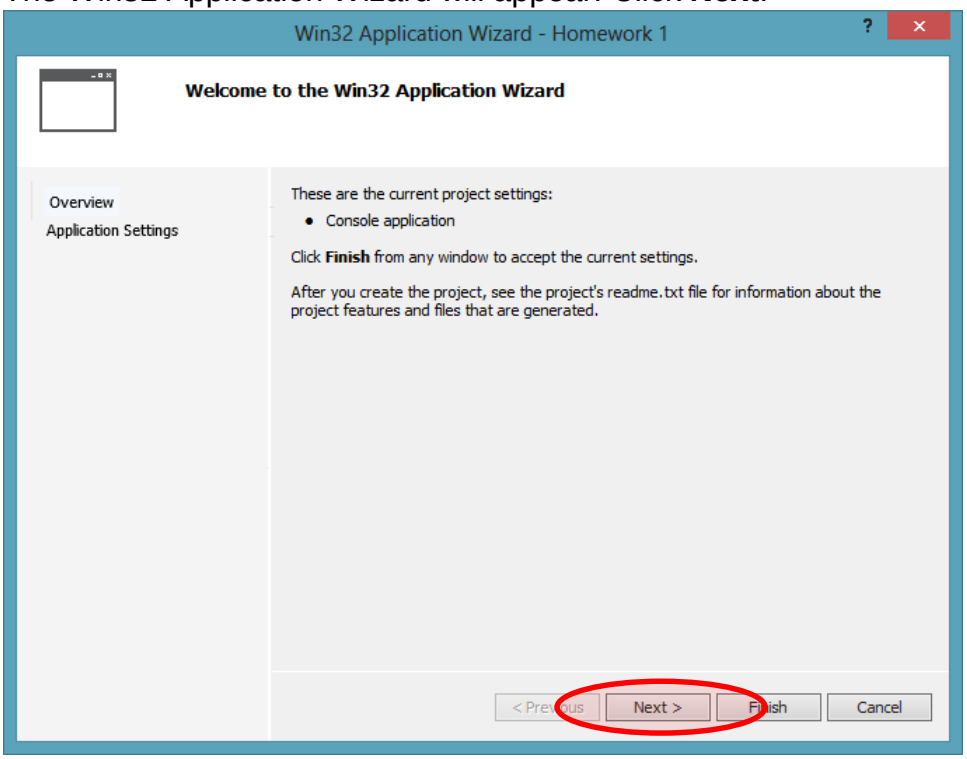
Using Visual Studio involves three steps: creating a project, adding files to the project, and testing/executing your project.

Creating a project

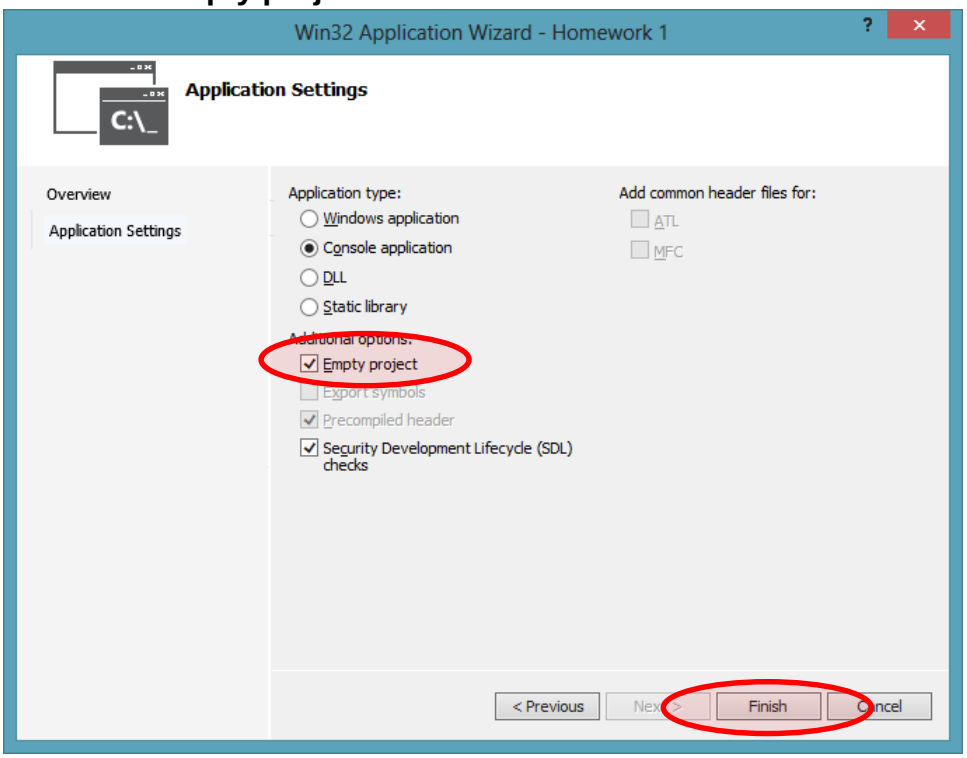
1. Click **File** → **New** → **Project…** from the menu bar at the top of the screen. Then click **Templates** → **Other Languages** → **Visual C++** → **Win32** from the list on the left side of the screen, and select **Win32 Console Application**. Give your project a name (e.g., *Homework 1*). Click **OK** to create the project.



2. The Win32 Application Wizard will appear. Click **Next**.

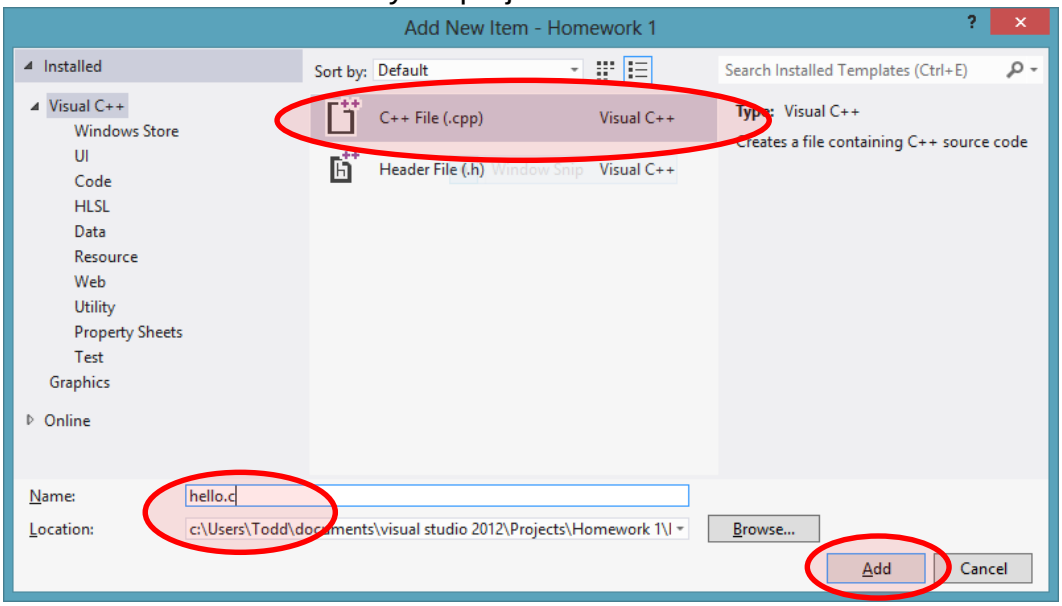


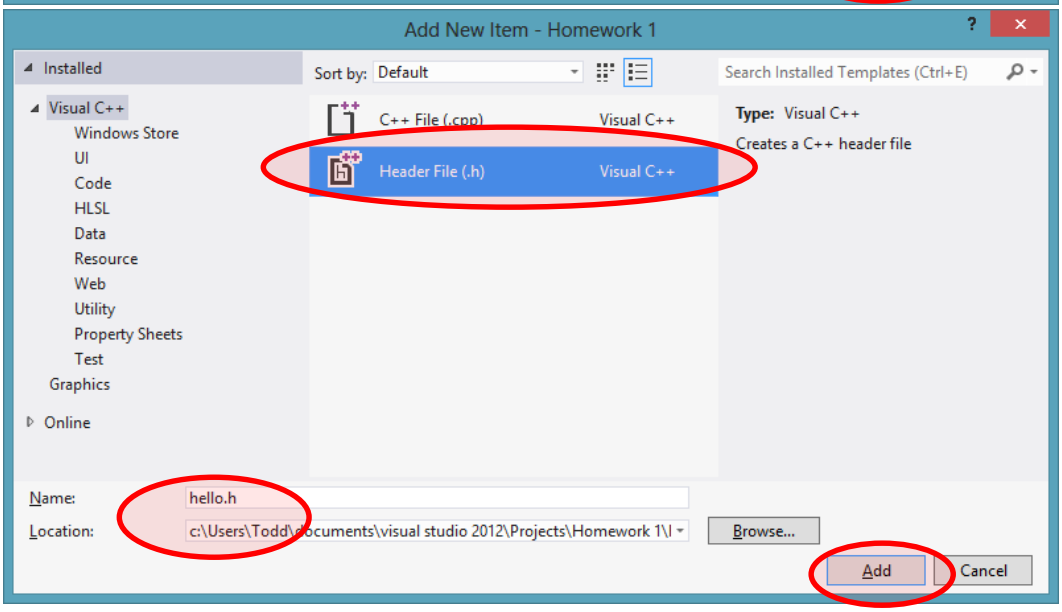
3. Check the **Empty project** box and click **Finish**.



Adding files to your project

1. To create a new file in your project, click **Project** → **Add new item…**. Select either **C++ File (.cpp)** to add a C source code file, or **Header File (.h)** to add a C header file. In either case, give your file a name. C source code files should end in .c, while C header files should end in .h (e.g., *hello.c* and *hello.h*). Click **Add** to create the file and add it to your project.

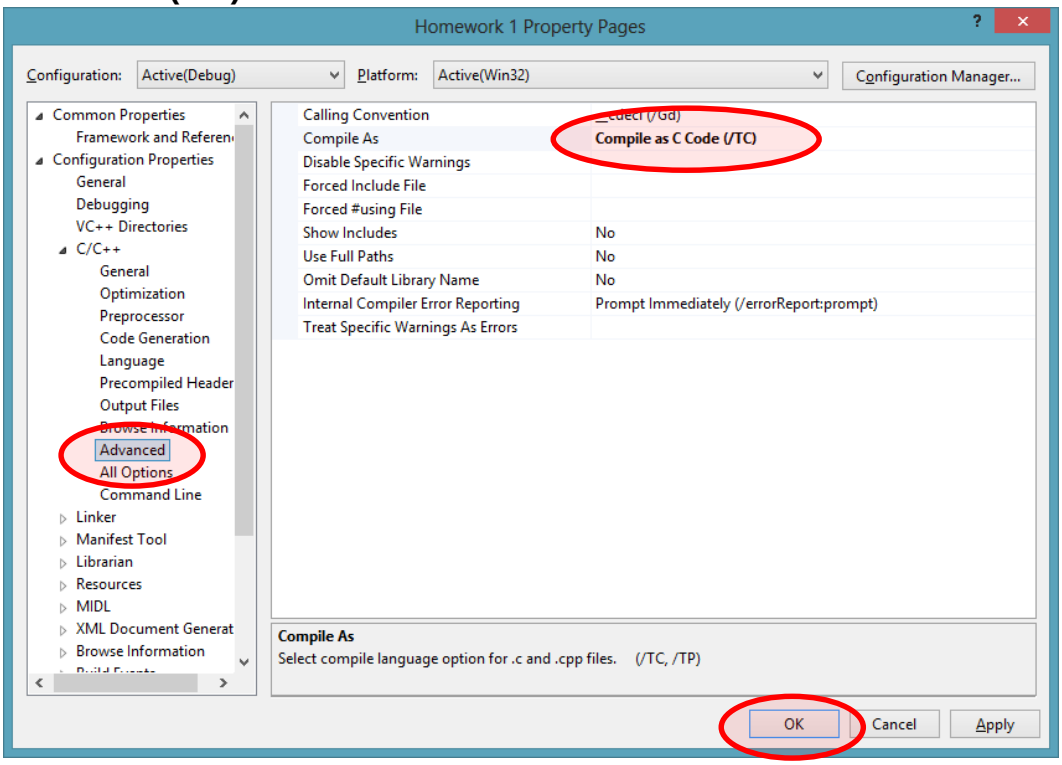




2. Sometimes we will provide you with a file to add to your project. To add an existing file, click **Project** → **Add existing item…**. Browse to the file you want to add to your project, select it, and click **Add**.

Testing/executing your project

1. Before you run your project, you'll need to tell Visual Studio that you've written C code; otherwise, Visual Studio will assume you've written C++ code and things will go wonky. Click **Project** → **Properties**. Expand **Configuration Properties** and then expand **C/C++**. Click on **Advanced**. Change **Compile As** to **Compile as C Code (/TC)** and click **OK**.



2. You can quickly test if your code compiles by pressing the *F7* key (or by clicking **Build** → **Build Solution** from the menu bar).

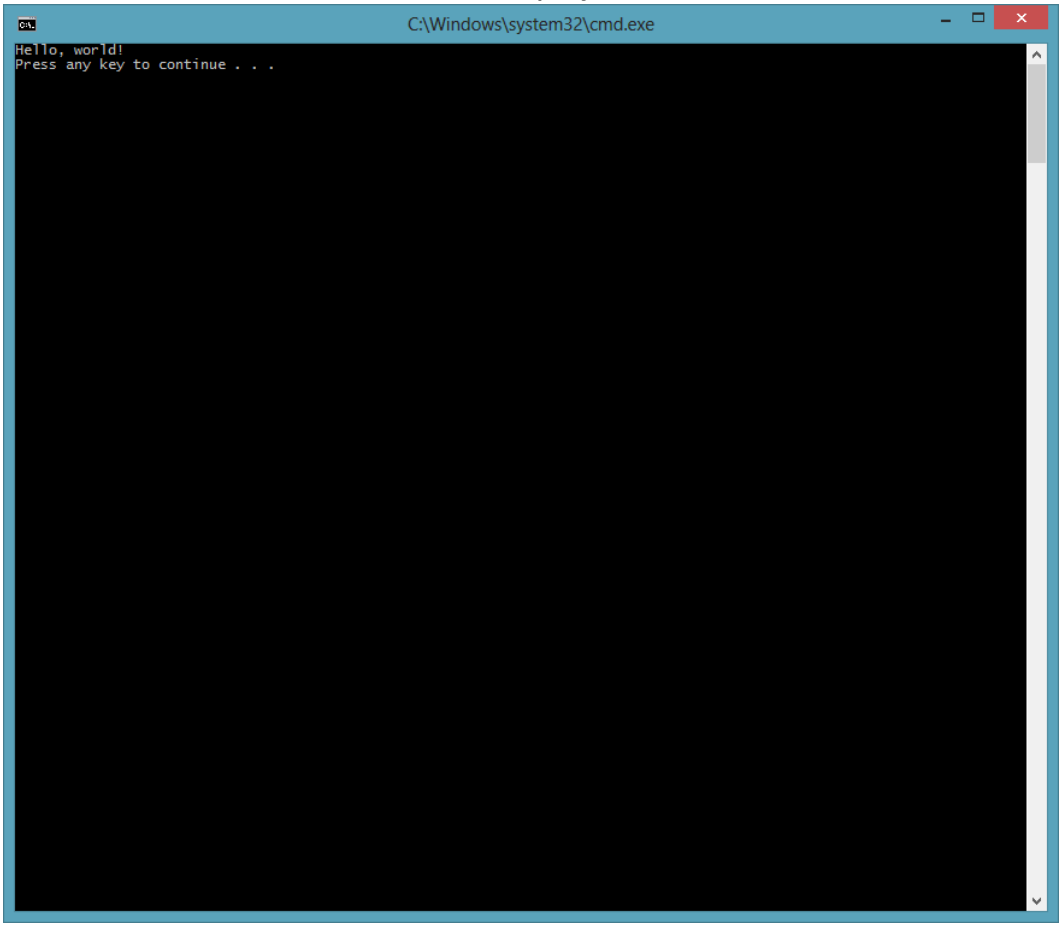
3. Just because your code compiles doesn't mean it works correctly. To test that, you'll need to run your code, either by pressing *Control-F5* or by clicking **Debug** → **Start Without Debugging** from the menu bar.

To test your setup, follow the instructions above to create a new project named *HelloWorld* and add a .c file named *hello.c*. Don't forget to change the compilation options to compile it as C code! Then, enter the following into the empty *hello.c* file:

```
#include <stdio.h>

void main() {
     printf("Hello, world!\n");
}
```

Press *Control-F5* to build and run the project. You should see a window like this:



Congratulations! You've just written the classic *Hello world* program[1] in C, the language that made it famous. More importantly, it means that Visual Studio is setup properly, so you'll be able to start writing more interesting programs soon!

[1] http://en.wikipedia.org/wiki/Hello_world_program#History