16.216: ECE Application Programming

Fall 2011

Programming Assignment #1: A Simple C Program

Due **Friday, 9/9/11**, 11:59:59 PM

1. Introduction

This program simply tests your ability to write, compile, execute, and submit programs using the tools available for this course. You will write a simple C program that prints some basic information, thus building upon the basic example shown in class. Please note that, unlike most assignments, this program is worth **50 points** due to its simplicity. A typical assignment will be worth 100.

2. Deliverables

Submit your source file directly to Dr. Geiger (Michael_Geiger@uml.edu) as an e-mail attachment. Ensure your source file name (project name does not matter) is ***prog1_simple.c***. You should submit only the .c file. Failure to meet this specification will reduce your grade, as described in the program grading guidelines, which you are strongly encouraged to read before starting the assignment.

3. Specifications

For this assignment, write a simple C program that prints the following information. Each bullet point below corresponds to a single line of output:

- Your name
- Your major
- Your class (i.e. freshman, sophomore, etc.)
- The name and semester of this course

Ensure that your code contains appropriate documentation (i.e., comments), as discussed in the grading guidelines and in class. For this simple program, you can just write a header comment that gives your name and other information, and briefly describes the purpose of the assignment.

4. Using Visual Studio

We will create a sample project to help illustrate the use of Visual Studio. Note that this tutorial assumes the use of Visual Studio 2010.

After starting Visual Studio, select **File→New→Project** from the main menu, or simply click the "**New Project …** " link on the welcome screen.

The dialog window that appears allows you to choose the type and name of your project. After selecting **Visual C++** in the list of templates on the left, choose **Win32 Console Application** from the list of project types in the middle. (Note that your choices may not exactly match those shown in Figure 1.) Use the boxes at the bottom of this window to specify a name and location for your project.

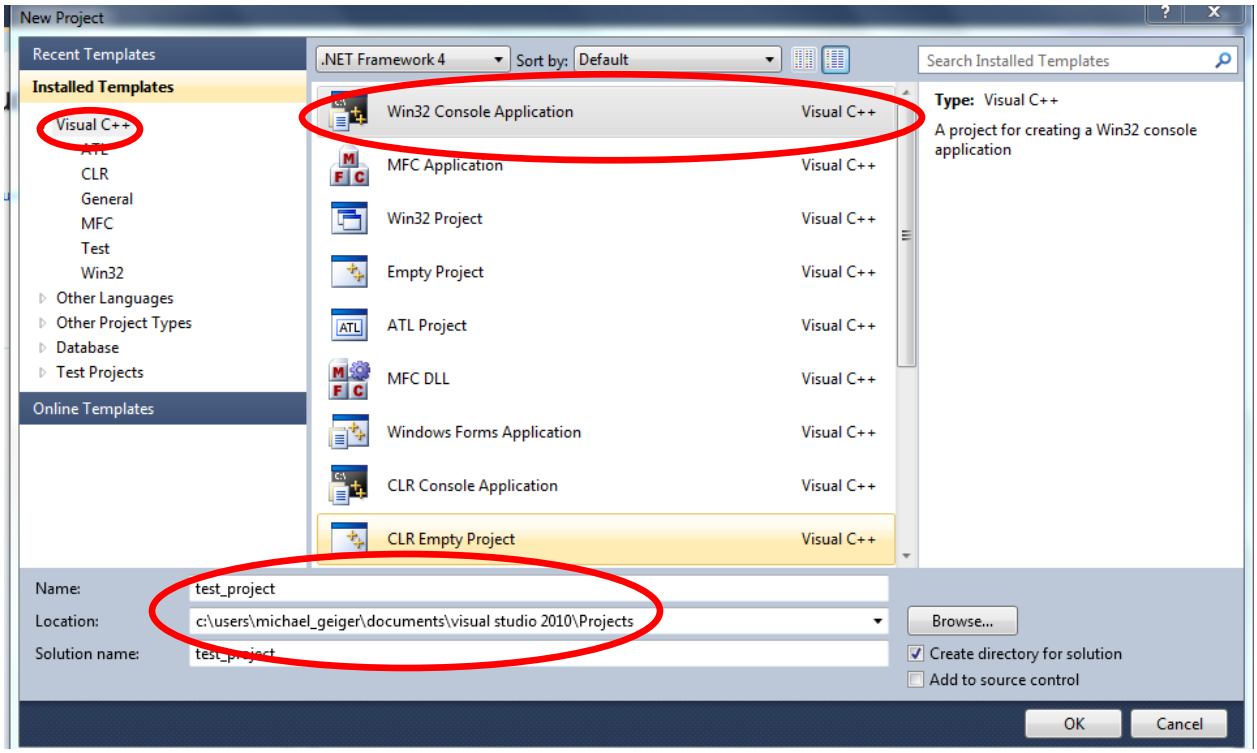


Figure 1: Creating a new Win32 Console Application

After accepting these settings, a window appears that you can use to set application settings. Click **Next**, then select the check box next to **Empty project**, which is under **Additional options**, in the following window. Click **Finish** to create your project.

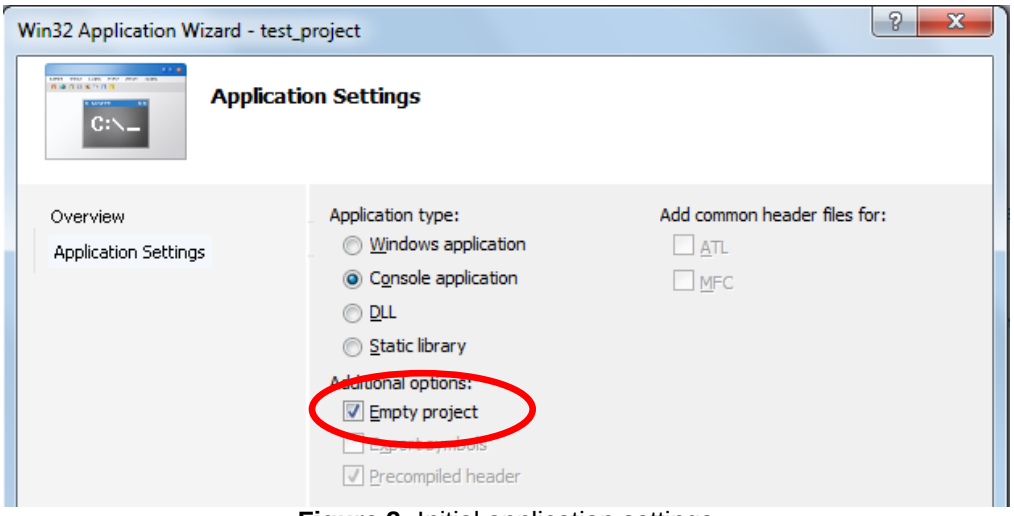


Figure 2: Initial application settings

To create your first C++ file, right click on **Source Files**, in the **Solution Explorer** window. Choose **Add → New Item**. In the list that appears, choose **C++ file (.cpp)**, then name your file. Remember that, in your programming assignments, file names are specified for you. If you choose a name with a .c extension, the program will be saved as C source code, not C++ source code. See Figures 3 and 4 below.

Note that, for future assignments, you can add existing files to your project, which can be useful when reusing code from previous projects. Right click on the appropriate files folder (typically Source Files or Header Files), then choose **Add → Existing Item**. Find the desired file, then click **Add** to add it to the project.

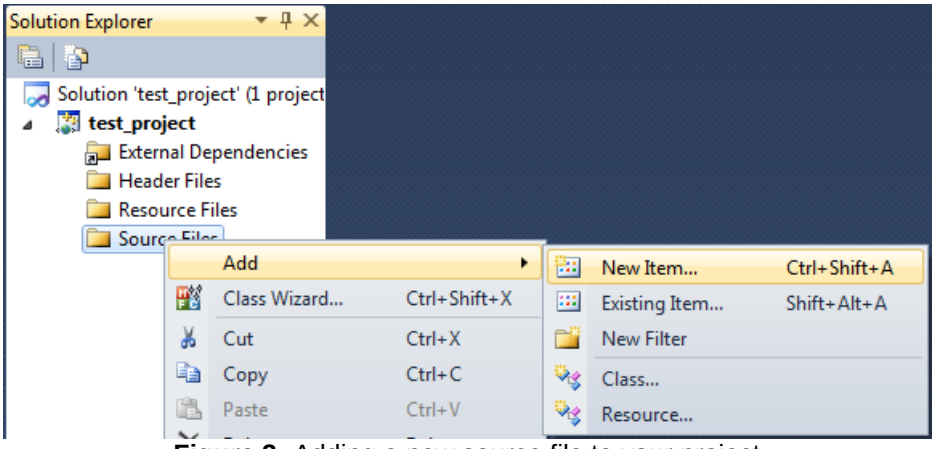


Figure 3: Adding a new source file to your project

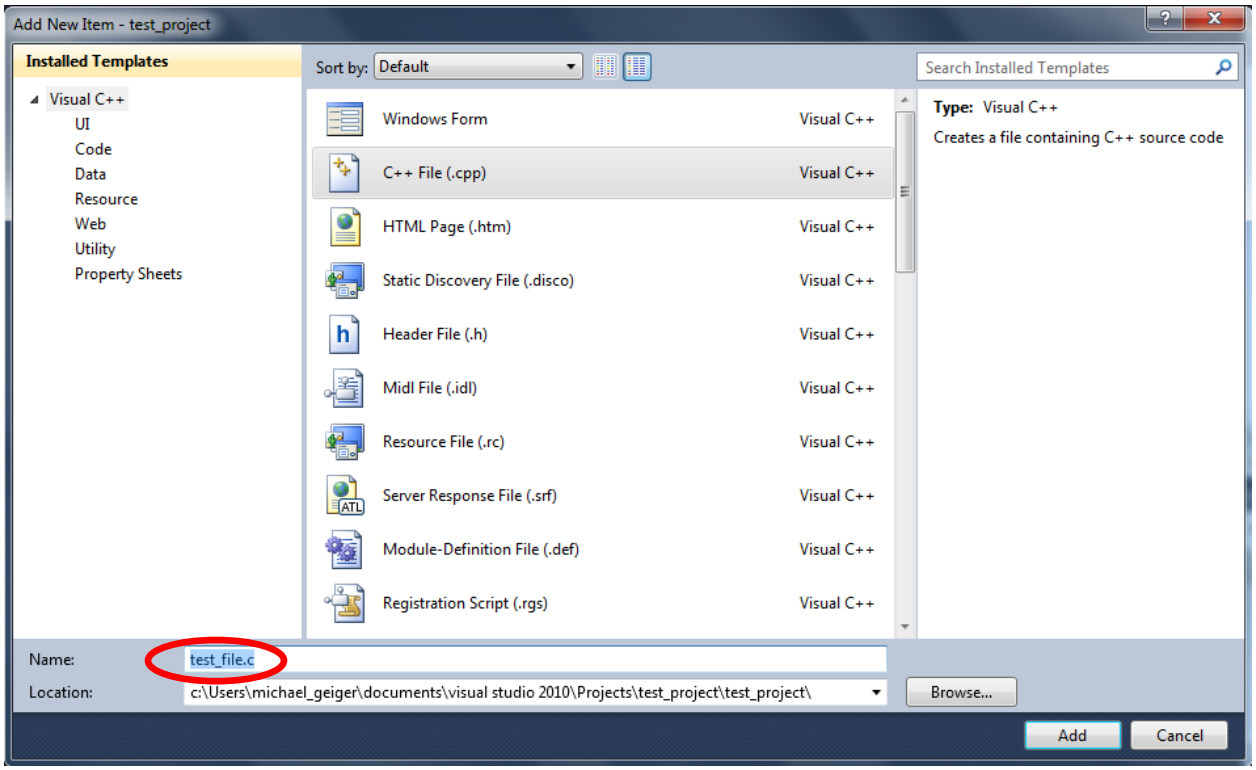
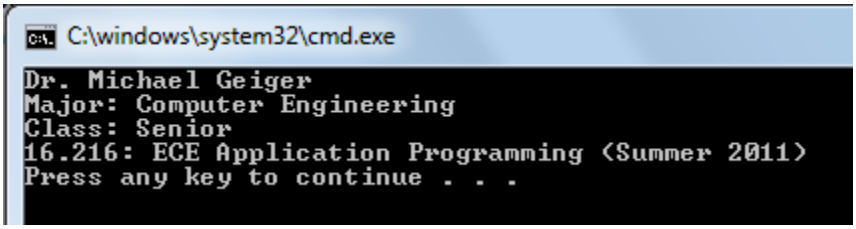


Figure 4: Naming your source file

5. Test Cases

Given the simplicity of this assignment, the "test cases" simply show the appropriate formatting for your output:



Note: to get your program to terminate with a message saying, “Press any key to continue …”, use the **Start Without Debugging** command (press Ctrl + F5) to run your code. Do not use the `system(“pause”)` function in your code to achieve the same result—doing so will render our grading program useless.