

16.317: Microprocessor Systems Design I Using Visual Studio

In this tutorial, we will create a sample project to help illustrate the use of Visual Studio. Note that this document assumes the use of Visual Studio 2012.

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.

Important note: Your project name will not need to match the assignment name. To avoid confusion, I suggest choosing a generic name for the project (for example, "program1") and then naming your source file appropriately later.

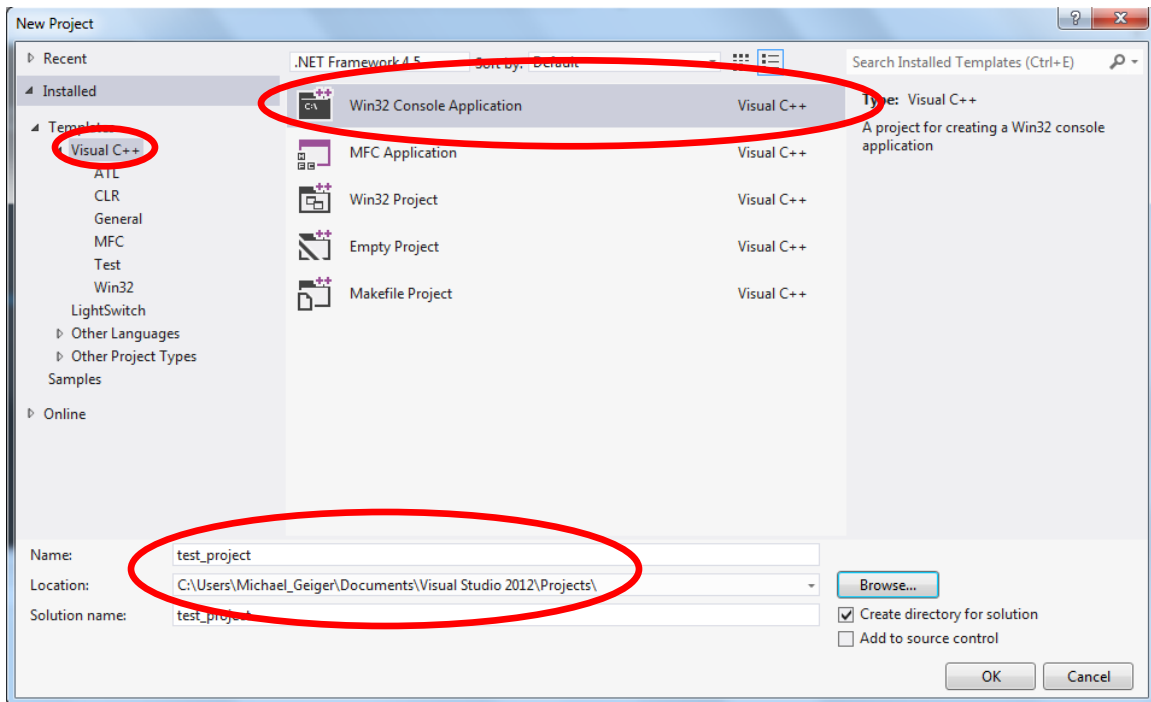


Figure 1: Creating a new Win32 Console Application by selecting "Visual C++" from the list of templates, "Win32 Console Application" from the list of project types, and specifying a name and location for your project. In this example, the project—not the source code file—is called "test_project" and stored in "C:\Users\Michael_Geiger\Documents\Visual Studio 2012\Projects".

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.

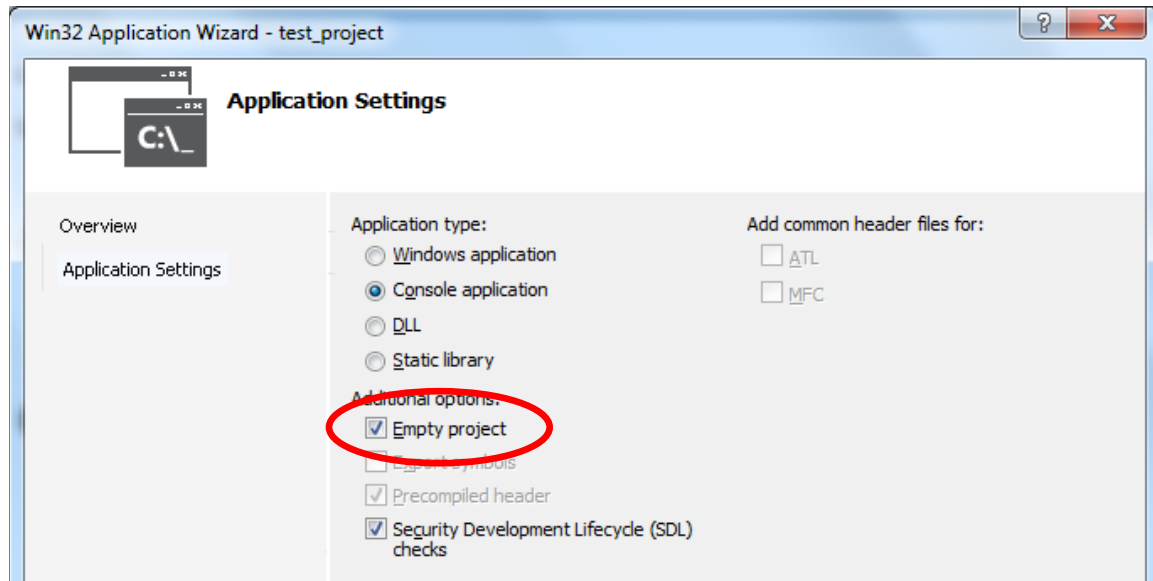


Figure 2: Initial application settings. After completing the steps shown in Figure 1, click “Next” in the first window that appears to reach this window—do not choose “Finish.” Once you reach this window, be sure to select the “Empty project” check box before clicking “Finish”.

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. **If the assignment requires you to write a program from scratch, the file name will be specified for you. You must choose a name with a .c extension so that the program will be saved as C source code, not C++ source code.** See Figures 3 and 4 below.

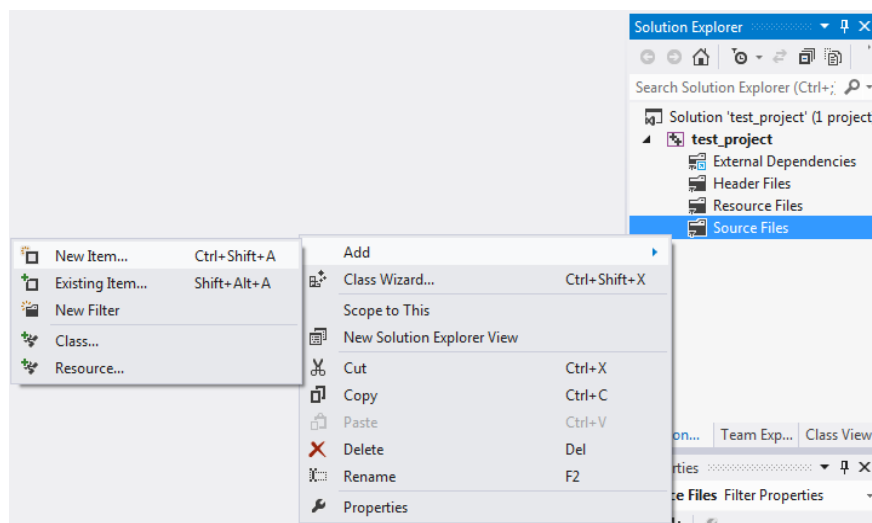


Figure 3: Adding a new source file to your project

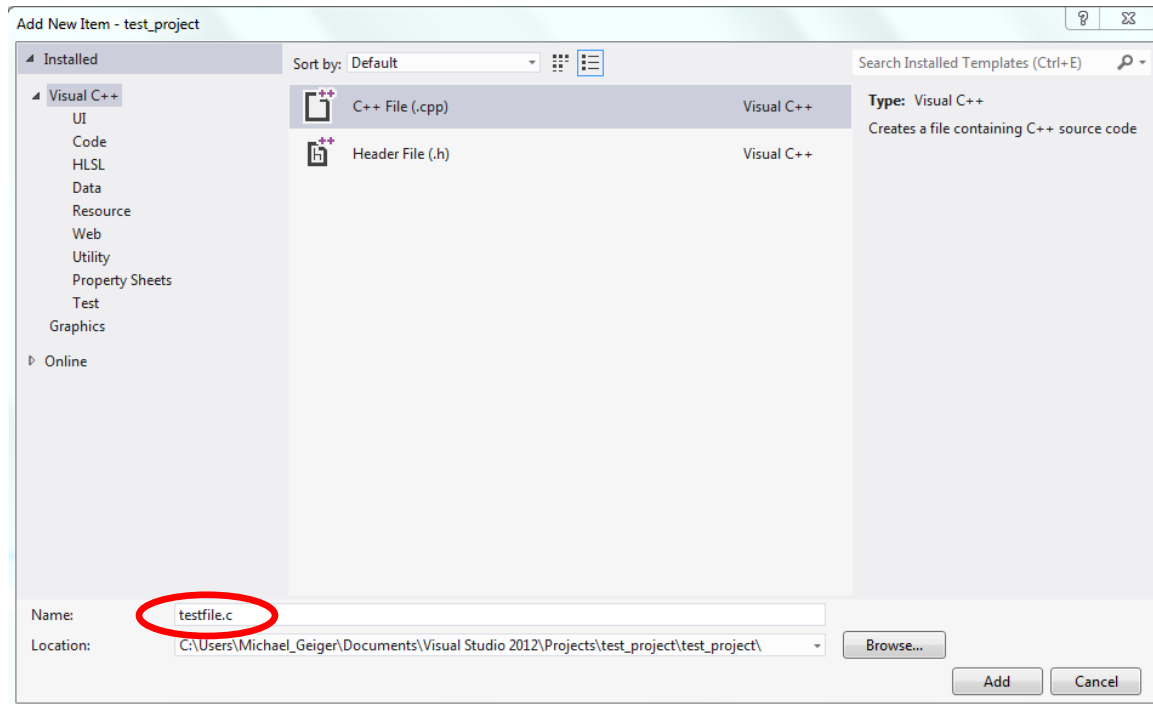


Figure 4: Naming your source file. Note that the file name must end with “.c”.

At this point, you should be able to write a C file with embedded assembly code. Note that assignments in the later part of the semester may require you to generate different types of projects (i.e., CLR code for more Windows-specific programming using graphical interfaces) or source files (i.e. assembly only, C++ with embedded assembly). Details about these files will be provided as needed.

Adding an existing file to a project: In some assignments, you will be given code to execute (and possibly modify). To incorporate an existing file into a project, choose **Add → Existing Item** instead of **Add → New Item** after right clicking on **Source Files**. You can then navigate to the directory containing the file and add it to your current project.