

Lab 1 - CMPS 1044, Computer Science I

Introduction to Projects and Solutions in Visual Studio

(Revised from [Microsoft web site](#))

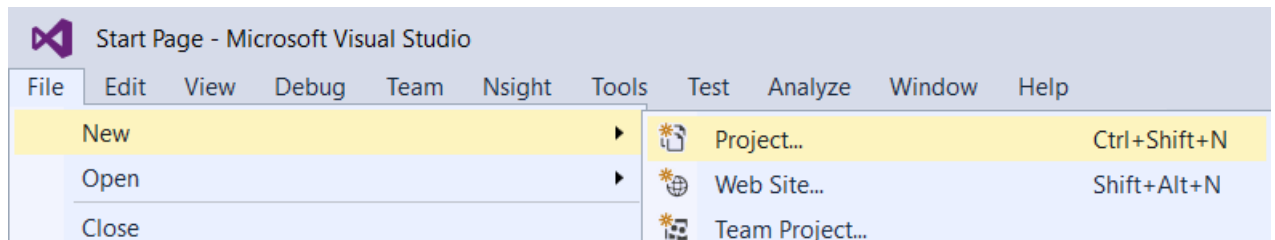
In Visual Studio, you organize your work in projects and solutions. A solution can contain more than one project.

Working with Projects and Solutions

The first step in writing a Visual C++ program with Visual Studio is to choose the type of project. For each project type, Visual Studio sets compiler settings and generates starter code for you.

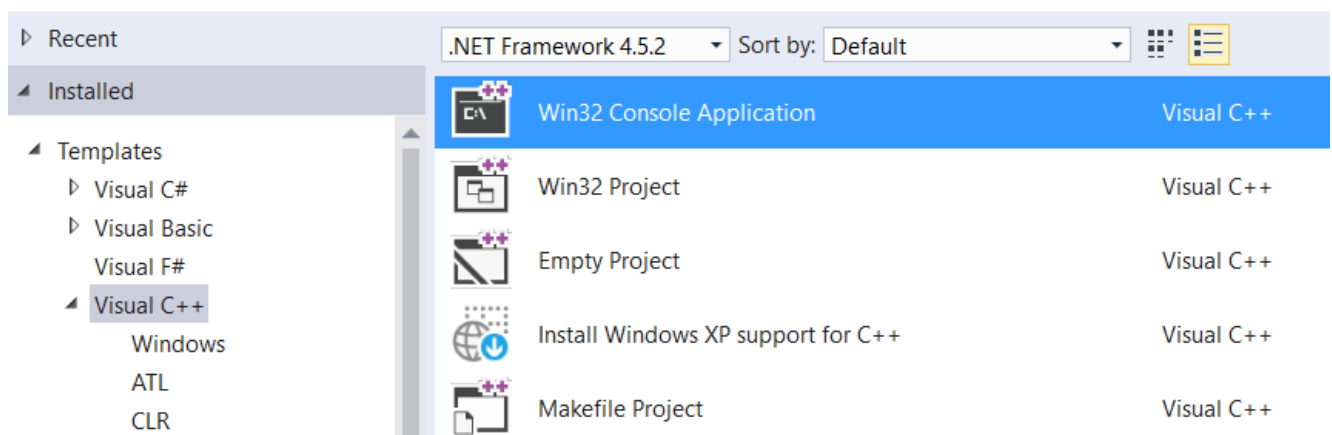
To create a new project

1. From the **File** menu, point to **New**, and then click **Project...**



2. In the left pane of the **New Project** dialog box, expand the **Installed Templates** node, expand the **Visual C++** node, and then select **Win32**. In the list of installed templates in the center pane, select **Win32 Console Application**.

New Project



3. Enter a name for the project in the Name box. For this example, enter **HelloWorldYourName**.

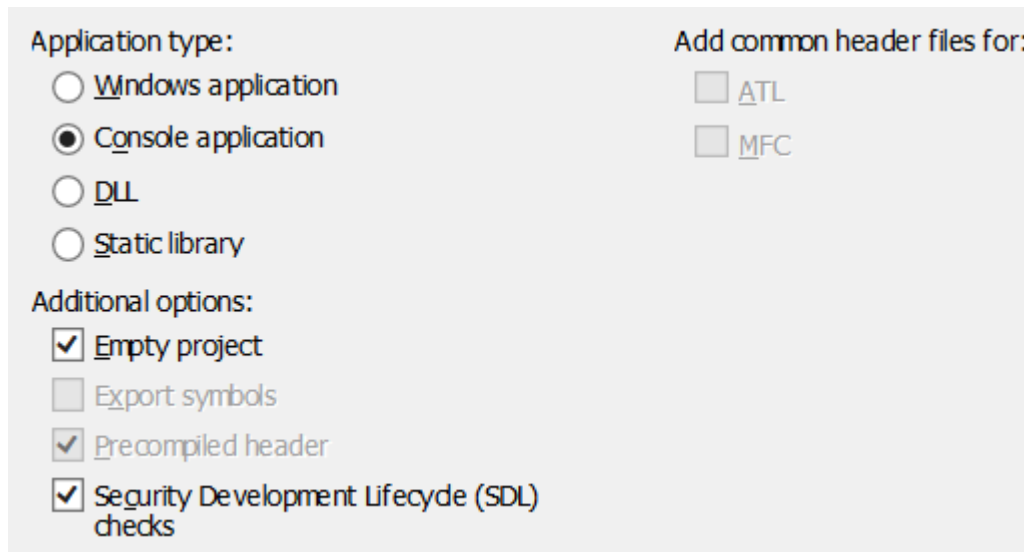
You can accept the default location in the **Location** drop-down list, enter a different location, or choose the **Browse** button to browse to a directory where you want to save the project. If you want to save your project to a flash drive, you must do so now. There isn't a way to move your project in Visual Studio once it has been created.

When you create a project, Visual Studio puts the project in a solution. By default, the solution has the same name as the project. You can change the name in the **Solution name** box, but for this example, keep the default name.

Choose the **OK** button to start the **Win32 Application Wizard**.

On the **Overview** page of the **Win32 Application Wizard**, choose the **Next** button.

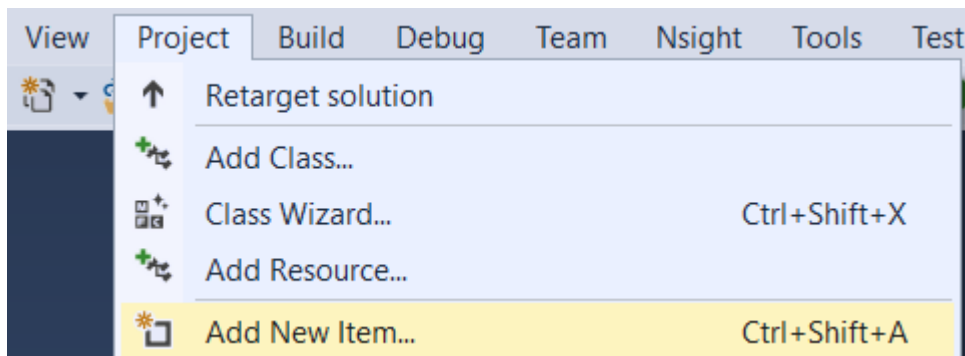
4. On the **Application Settings** page under **Application type**, select **Console Application**. Under **Additional options** select the **Empty Project** setting and click **Finish**.



You now have a project without source code files.

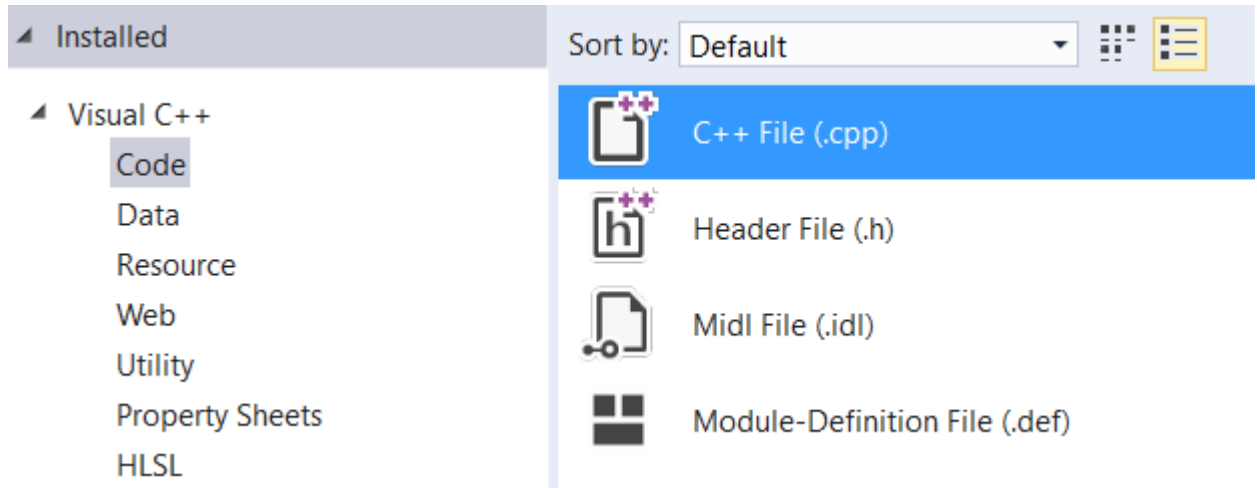
To add a new source file (program)

1. From the **Project** menu, click **Add New Item**.



Alternatively, to use **Solution Explorer** to add a new file to the project, right-click the **Source Files** folder in **Solution Explorer** and point to **Add**. Then click **New Item**.

In the **Visual C++** area, select **Code**. Then click **C++ File (.cpp)**.



2. Type the **Name** of the file to be added (for example, type **HelloWorld YourName**) and click **Add**.
The source file **HelloWorld YourName.cpp** will be added to the project.

3. In the **HelloWorld YourName.cpp** editing window, type the code below for the **HelloWorld YourName** program. In this example, **HelloWorld YourName.cpp** will be the main function. Note: spacing and indention are important!!

```
#include <iostream>

using namespace std;

int main()
{
    cout << "Hello YourName!!!\n";
    system("pause");
    return 0;
}
```

4. To compile the program, on the **Build** menu, click **Build Solution**.
You should see output from the build in the **Output** window indicating that the project compiled without errors. If not, correct the errors indicated in the **Output** window.

To execute the program

CTRL + F5 will compile and execute your program and will display your results in the display window. The window remains open until you close it.

Alternatively - On the **Debug** menu, select **Start Without Debugging**.

Documentation

Good programming practice insists that all program files must contain documentation. That is, comments from the programmer providing basic information about the program. Documentation lines begin with the `//` symbols. All programs should have at least the following documentation at the beginning of EVERY program. Your instructor may require additional documentation be included.

```
// Your First and Last Name
// Computer Science I - Instructor name
// Project # - Project Name
// Date
// Additional information as required by your instructor
```

This is the documented sample program from above.

```
// Your First and Last Name
// Computer Science I - Instructor name
// Lab 1 - Intro to Visual Studio
// Date
// Description of what the program does

#include <iostream>

using namespace std;

int main()
{
    cout << "Hello YourName!!!\n";
    system("pause");
    return 0;
}
```

LAB 1 – Assignment

After the lab instructor has walked you through the above material, close Visual Studio and start over.

- Open Visual Studio and redo the program above ON YOUR OWN, but ask questions of the lab assistants as necessary.
- Complete the documented program above (with your name & current date).
- Compile and execute, correcting any errors.
- Save on your flash drive OFTEN! Once a project is created, it cannot be moved to a flash drive using Visual Studio; you must move it using File Explorer. A project can be re-opened by double-clicking the `.sln` file for that project.
- Show your lab instructor that your program works correctly.

It is recommended that you try this exercise on your computer at home.