

Guide to Creating, Compiling, and Running a Windows 32 Console Application Using Microsoft Visual C++ Express Edition

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Condensed written instructions from: [Creating a Standard C++ Program \(C++\) Help File](http://msdn.microsoft.com/en-us/library/ms235629%28VS.80%29.aspx) (from: <http://msdn.microsoft.com/en-us/library/ms235629%28VS.80%29.aspx>)

To create a new project and add a source file:

1. Create a new project:

On the File menu, point to New, and then click Project....

2. From the Visual C++ project types, click Win32, and then click Win32 Console Application.
3. Enter a project name.

By default, the solution that contains the project has the same name as the new project, but you can enter a different name. You can enter a different location for the project if you want.

Click OK to create the new project.

4. In the Win32 Application Wizard, select Empty Project and click Finish.
5. If Solution Explorer is not visible, click Solution Explorer on the View menu.
6. Add a new source file to the project:

- o Right-click on the Source Files folder in Solution Explorer, point to Add, and click New Item.
- o Click C++ File (.cpp) from the Code node, enter a file name, and then click Add.

The **.cpp** file appears in the Source Files folder in Solution Explorer and a tabbed window appears where you type in the code.

7. Click in the newly created tab in Visual Studio and type a valid C++ program that uses the Standard C++ Library, or copy and paste one of the sample programs.

For example, you can use the `set::find` (STL Samples) sample program in the Standard Template Library Samples topics in the help.

If you use the sample program for this procedure, notice the `using namespace std;` directive. This directive allows the program to use **cout** and **endl** without requiring fully qualified names (**std::cout** and **std::endl**).

8. On the Build menu, click Build Solution.

The Output window displays information about the compilation progress, such as the location of the build log and a message that indicates the build status.

9. On the Debug menu, click Start without Debugging.

If you used the sample program, a command window is displayed that shows whether certain integers are found in the set.

Instructions and screen shots from Creating a Standard C++ Program (C++) Help File

1. Figure 1: Creating a new project. To create a new project:
On the File menu, point to New, and then click Project....

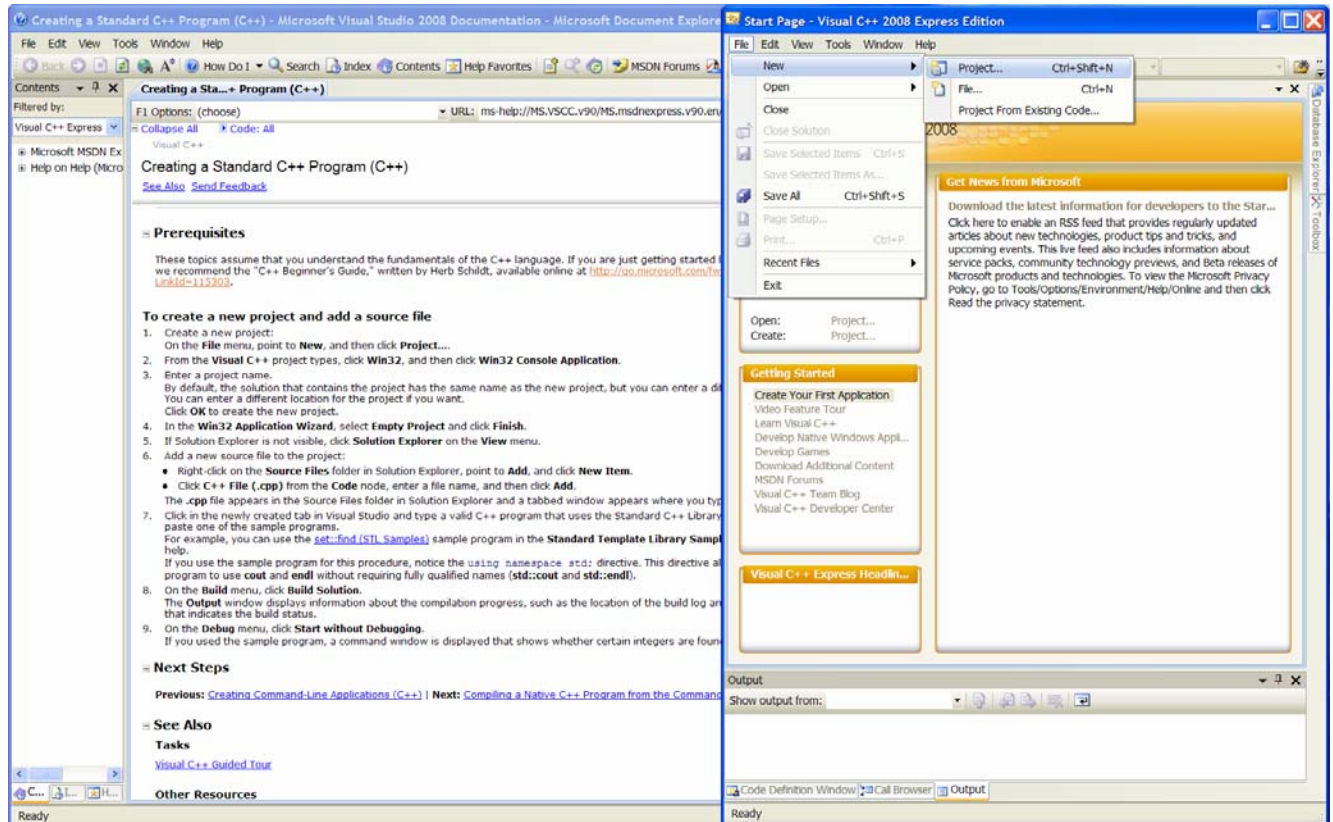


Figure 1. Create a New Project. From the File menu, select: New | Project

2. Figure 2: Starting a Win32 Console Application. From the Visual C++ project types, click Win32, and then click Win32 Console Application.
3. Enter a project name.

By default, the solution that contains the project has the same name as the new project, but you can enter a different name. You can enter a different location for the project if you want.

Click OK to create the new project.

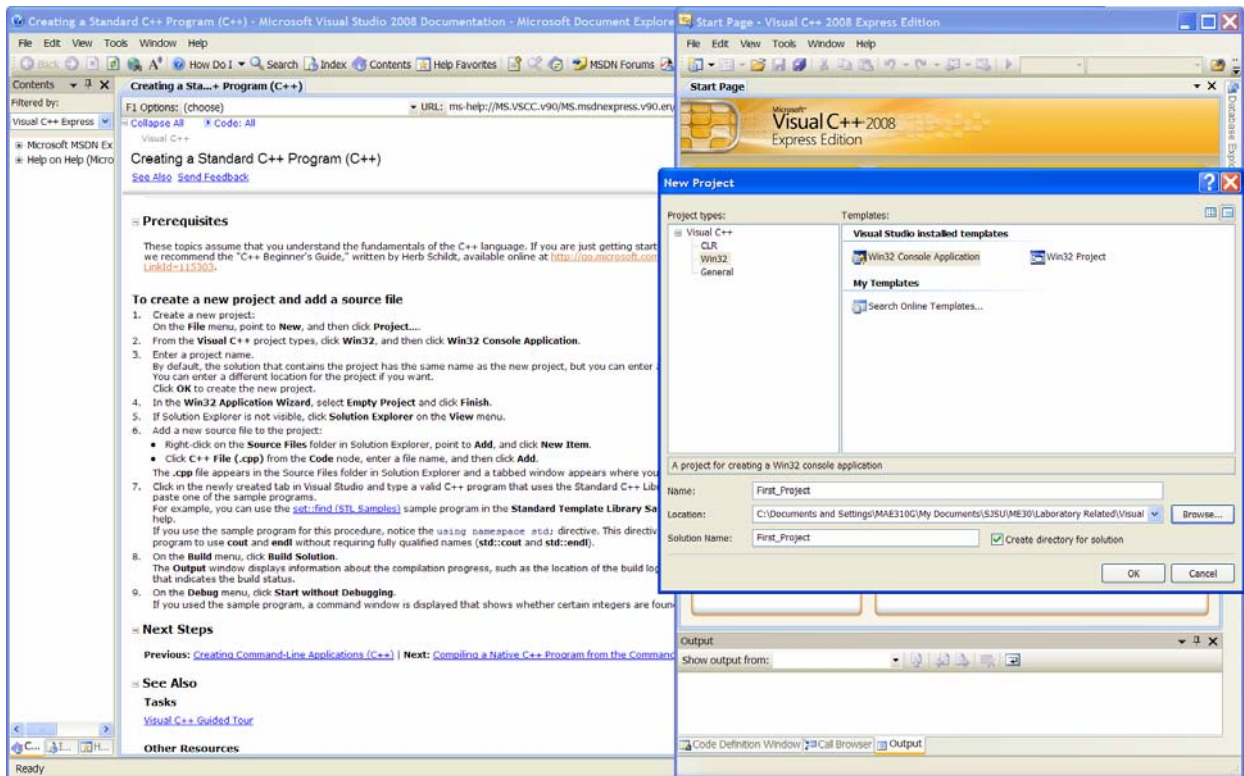


Figure 2. Select Project Type. Choose the Win32 Console Application from the list of templates. Enter a project name and location.

4. Figure 3: Completing the empty project. In the Win32 Application Wizard, select Empty Project and click Finish.

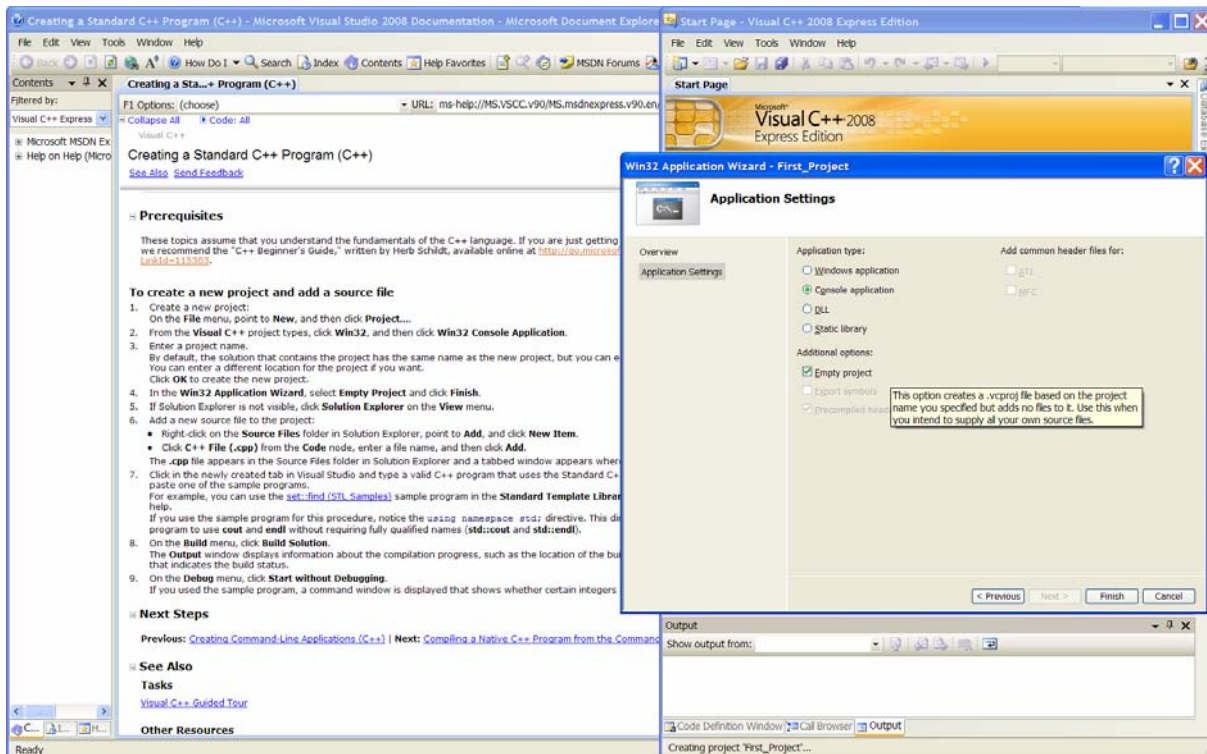


Figure 3. Win32 Application Wizard. Choose, 'Empty Project', then Finish.

5. Figure 4: Making Solution Explorer visible. If Solution Explorer is not visible, click Solution Explorer on the View menu.

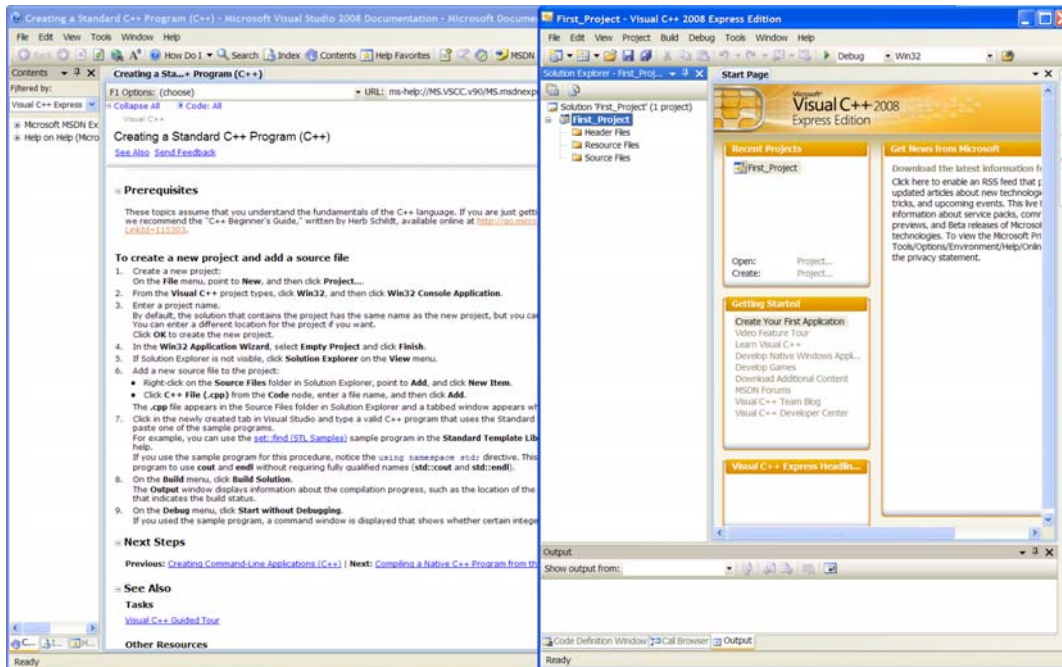


Figure 4. Solution Explorer. If not opened, go to the View menu, and click on Solution Explorer. This will allow you to see the source files associated with your program.

6. Figures 5 and 6: Adding a new source file to the project:
- o Right-click on the Source Files folder in Solution Explorer, point to Add, and click New Item.
 - o Click C++ File (.cpp) from the Code node, enter a file name, and then click Add.

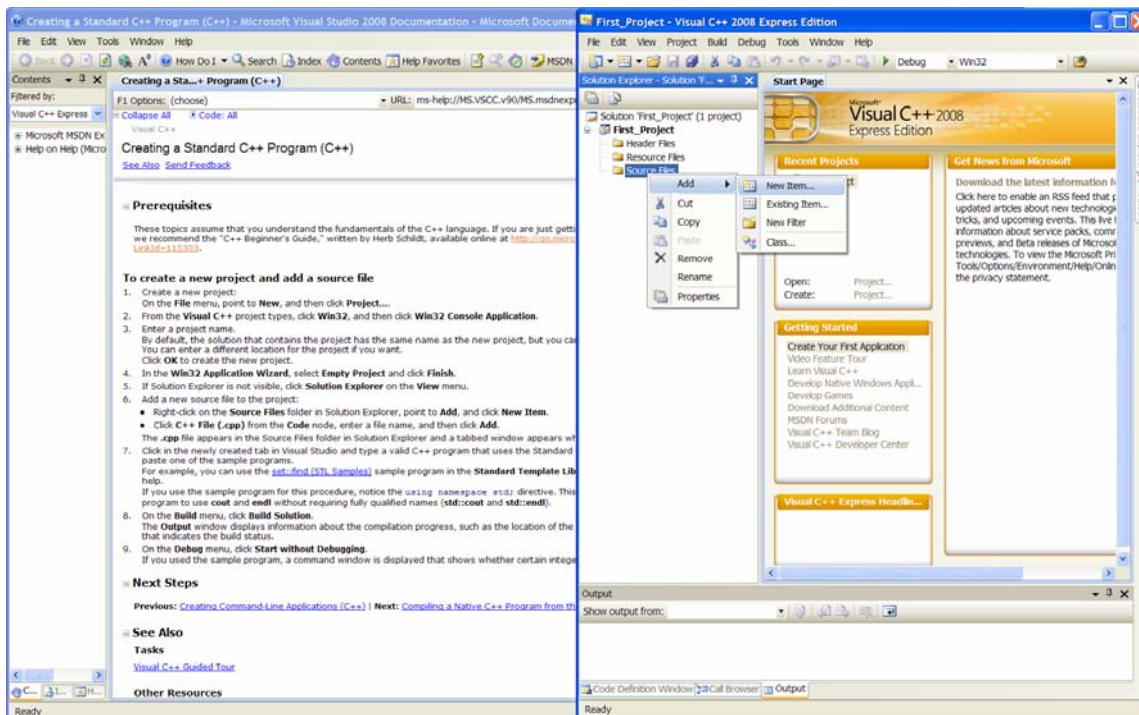


Figure 5. Adding a New Source File to the Project. Your project will consist of various source (.c files) and header (.h) files, which you need to add to the project.

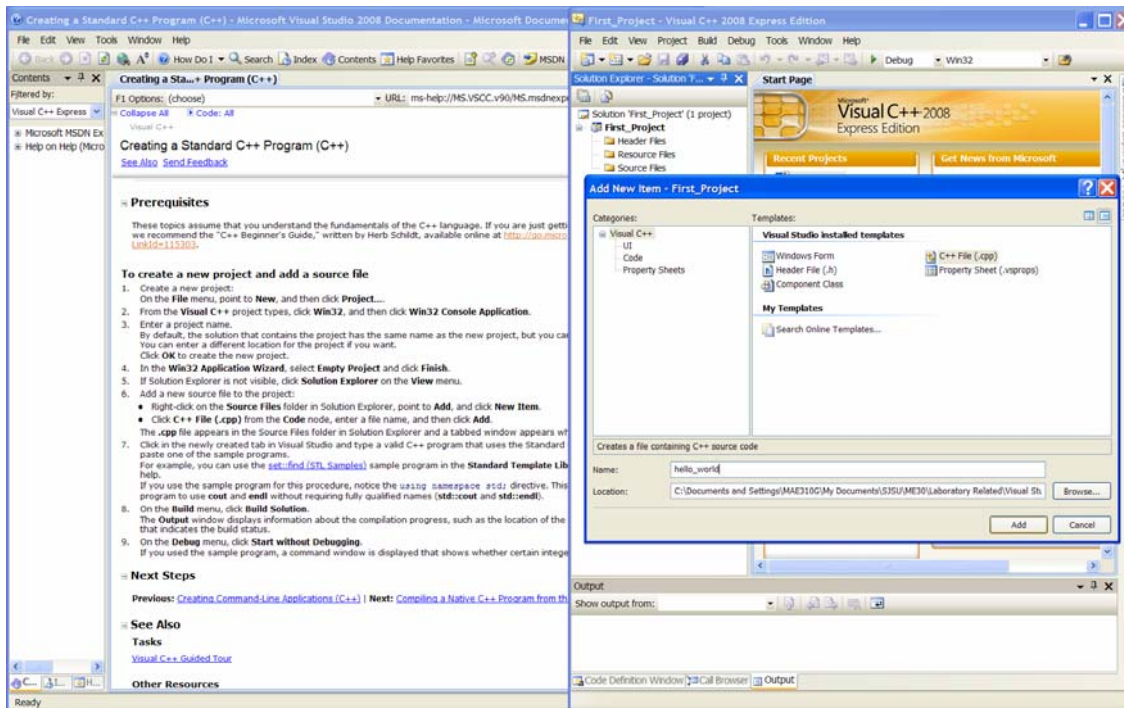


Figure 6. Adding a New Source File to the Project, cont. Your project will consist of various source (.c files) and header (.h) files, which you need to add to the project. Give them descriptive names. The name, 'hello_world.c' is shown as the name of a source file in this example.

Figure 7 shows how the .cpp file appears in the Source Files folder in Solution Explorer and a tabbed window appears where you type in the code.

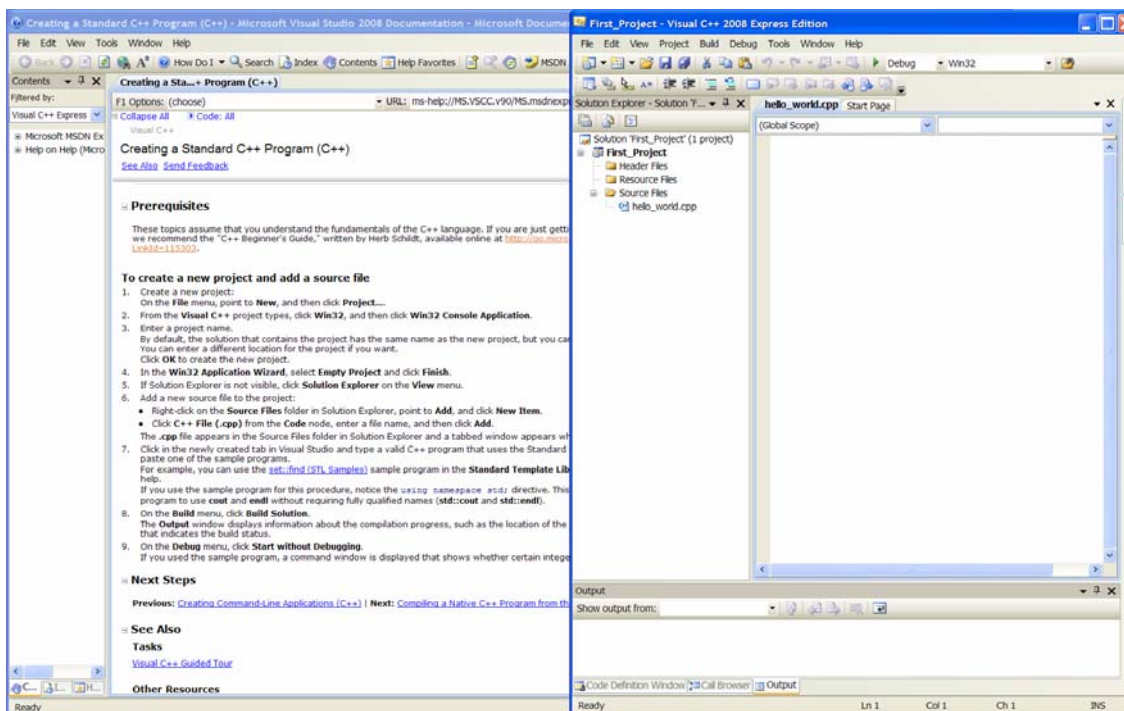


Figure 7. Source File Opened for Editing. Your project will consist of various source (.c files) and header (.h) files, which you need to add to the project. Give them descriptive names. The name, 'hello_world.c' is shown as the name of a source file in this example.

7. **Figure 8: Entering your program.** Click in the newly created tab in Visual Studio in the main editing window, and type a valid C++ program that uses the Standard C++ Library, or copy and paste one of the sample programs.

For example, you can use the `set::find` (STL Samples) sample program in the Standard Template Library Samples topics in the help.

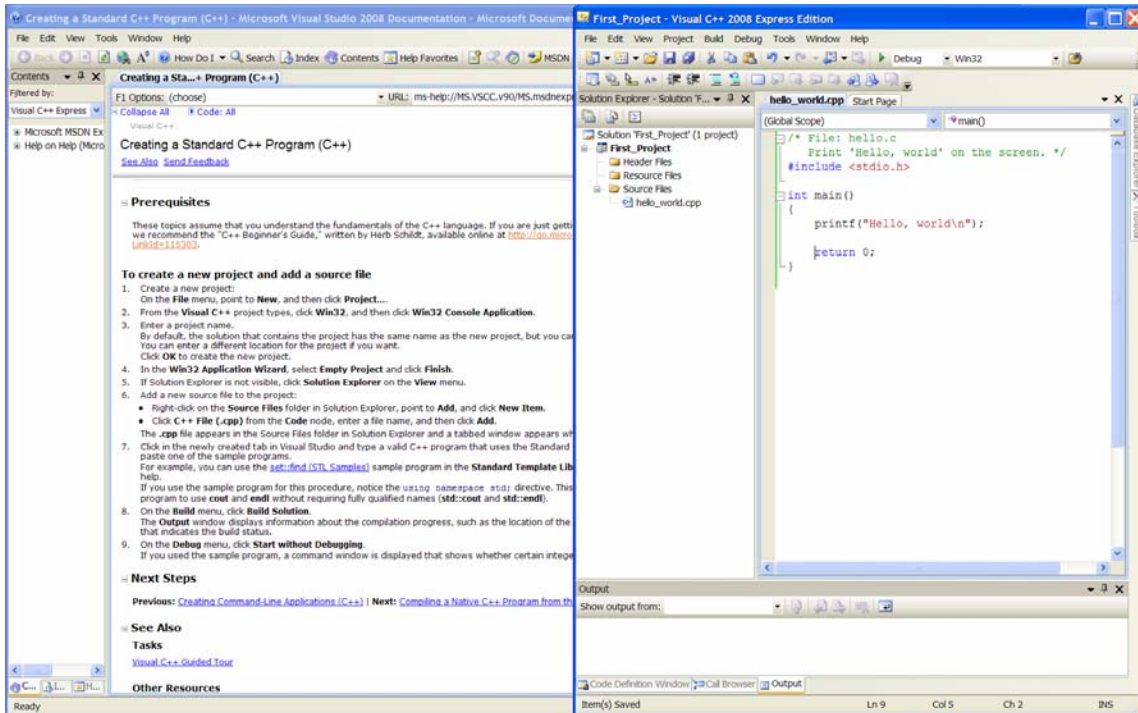


Figure 8. Entering C Code. You can start typing your program or cut-and-paste from some other source.

8. **Figure 9: Compiling your program.** On the Build menu, click Build Solution. The Output window displays information about the compilation progress, such as the location of the build log and a message that indicates the build status.

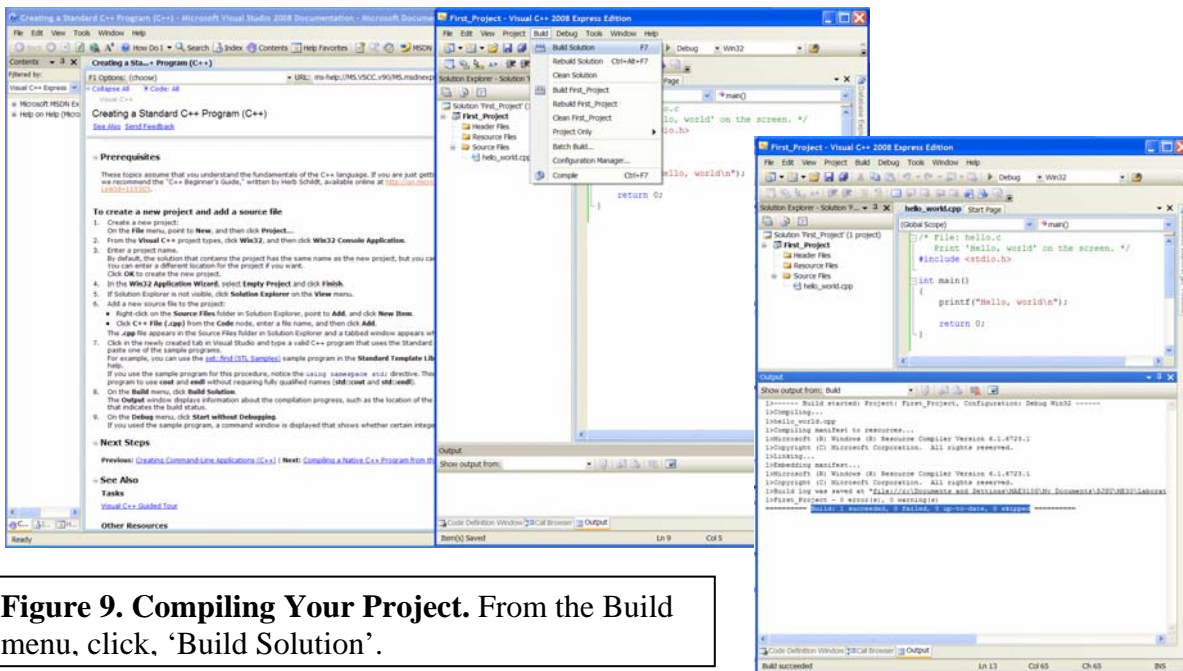


Figure 9. Compiling Your Project. From the Build menu, click, 'Build Solution'.

9. Figure 10. Seeing how your program works. On the Debug menu, click ‘Start without Debugging’.

The console window will be displayed with your output and a prompt to ‘Press any key to continue...’ If you give the console window focus (click in it or on it), and press any key, the console window will close.

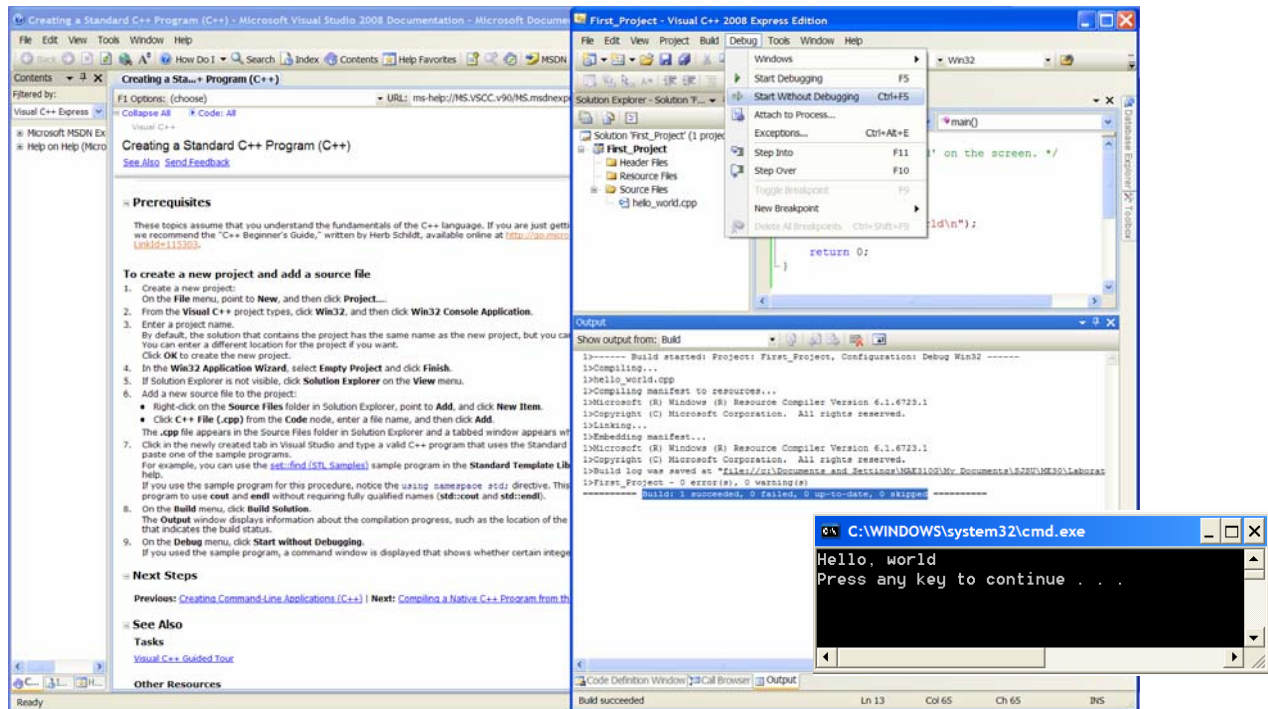


Figure 10. Running Your Program. To see how your program runs, go to the Debug menu, and select, ‘Start without Debugging’ (or Ctrl+F5). This will run your program and show the output in a console window, which will stay open until you press any key (when the console has window focus) to continue or select, ‘Stop Debugging’ from the Debug menu.

Debugging is actually extremely helpful, because it allows you to see how your program works, line-by-line. Try debugging by first right-clicking in the gray margin at a statement you want the program to stop at. You should see a big red dot. This is a ‘breakpoint’, which means that the program will run up to the breakpoint and stop. Then go to the Debug menu, and select, ‘Start Debugging’ (or F5). The program will run up to your breakpoint and stop.

It is very instructive to use the F11 key to go through your program line-by-line. Instead of selecting ‘Start Debugging’, press the F11 key to step into your program. You can go line-by-line through the operation of your program and look at the contents of variables, etc.

You can stop debugging by selecting that option on the Debug menu or pressing Shift+F5.