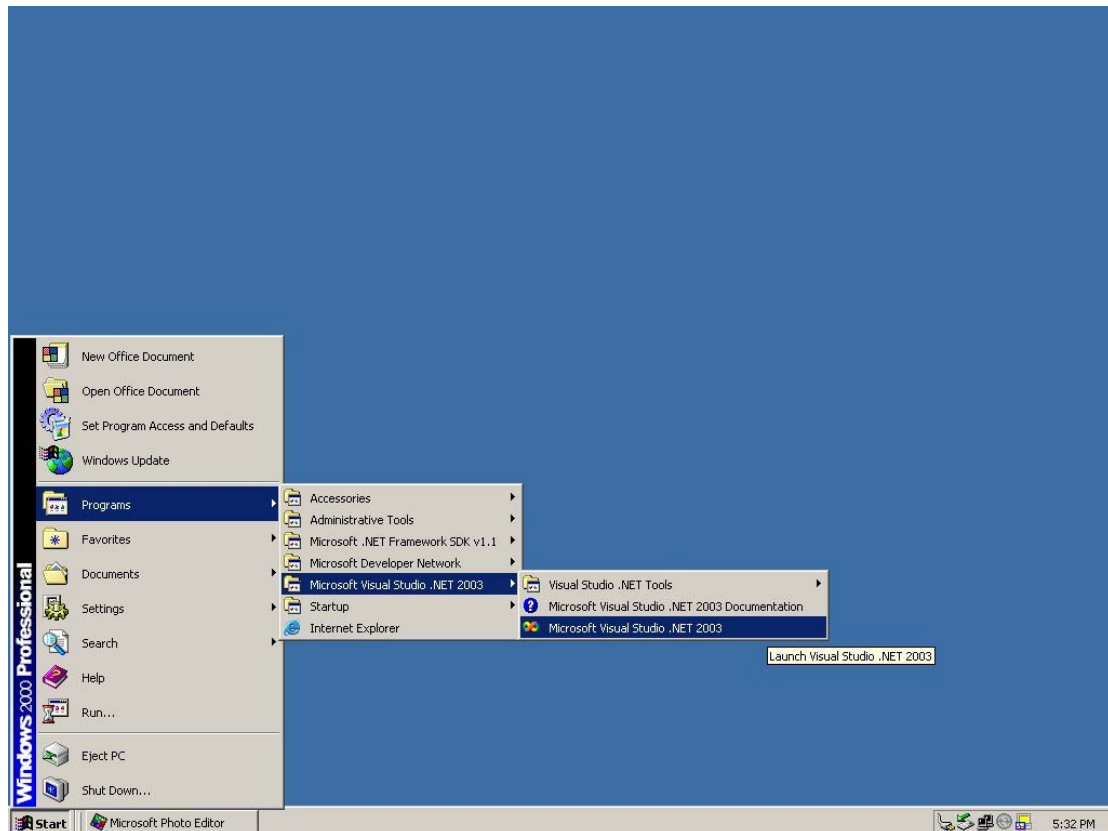


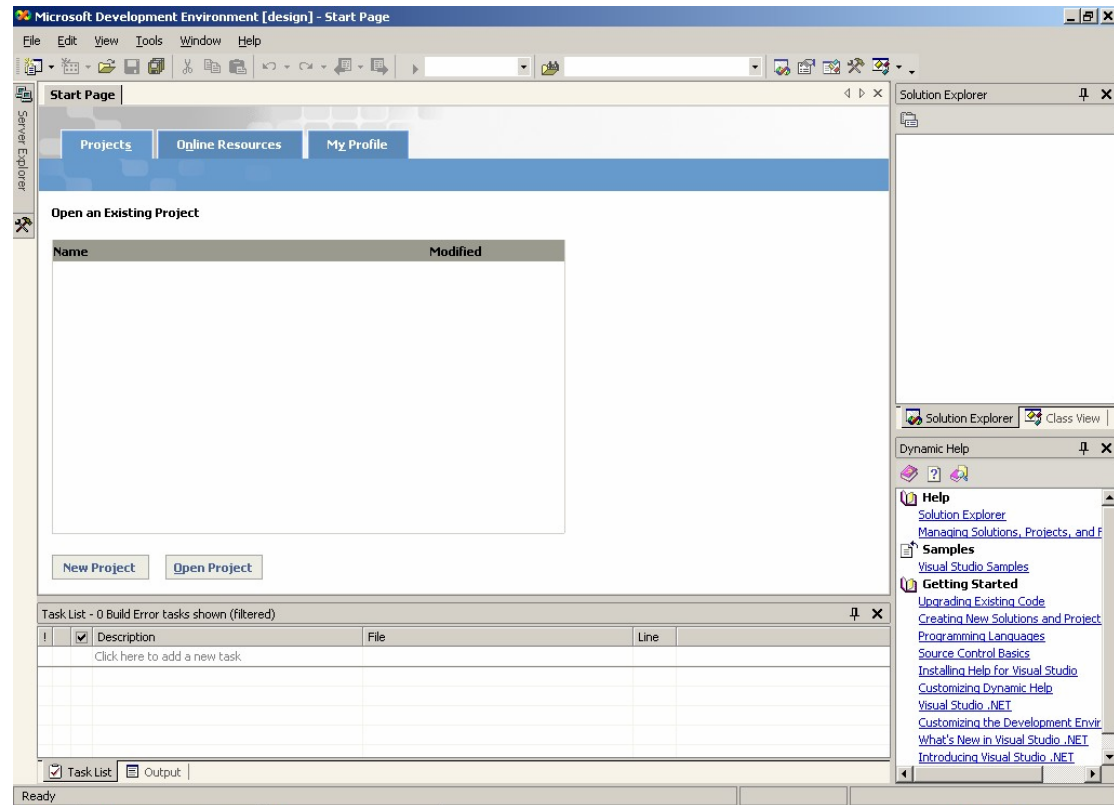
Programming 1: Tutorial 1

Log on to your PC and use [Windows Explorer](#) to create a folder in your network file store to store your programming work. In this example I have named mine C:\PROJ, you can call it what you want but calling it something like programming may help. This folder will be referred to as your programming directory. Once you have created your folder close Windows Explorer.

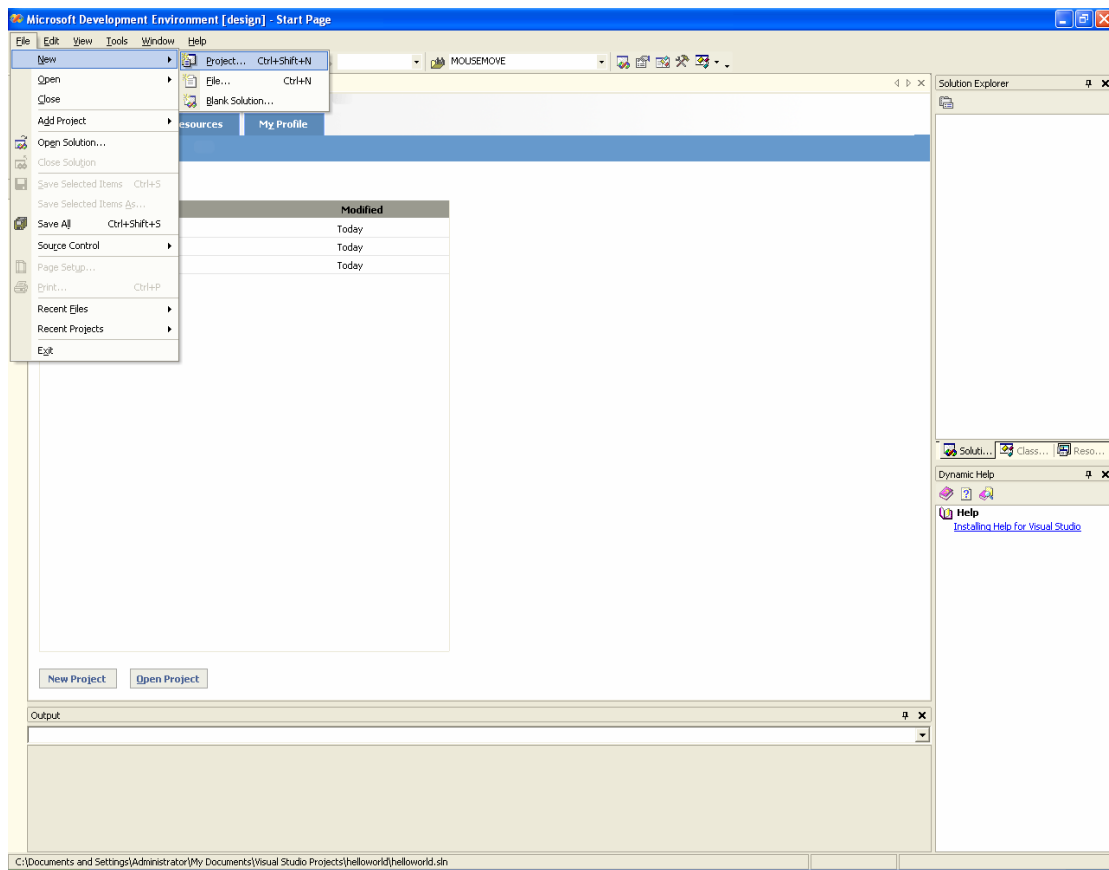
Start [Microsoft Visual Studio .NET 2003](#) using the Start button from Windows. This is how it looks on my system:



Once you have started Visual Studio you should see a screen similar to the following image:



Click the menu item [File | New | Project...](#) or press [CTRL+SHIFT+N](#) or click the [New Project](#) button.



A dialog box is displayed.

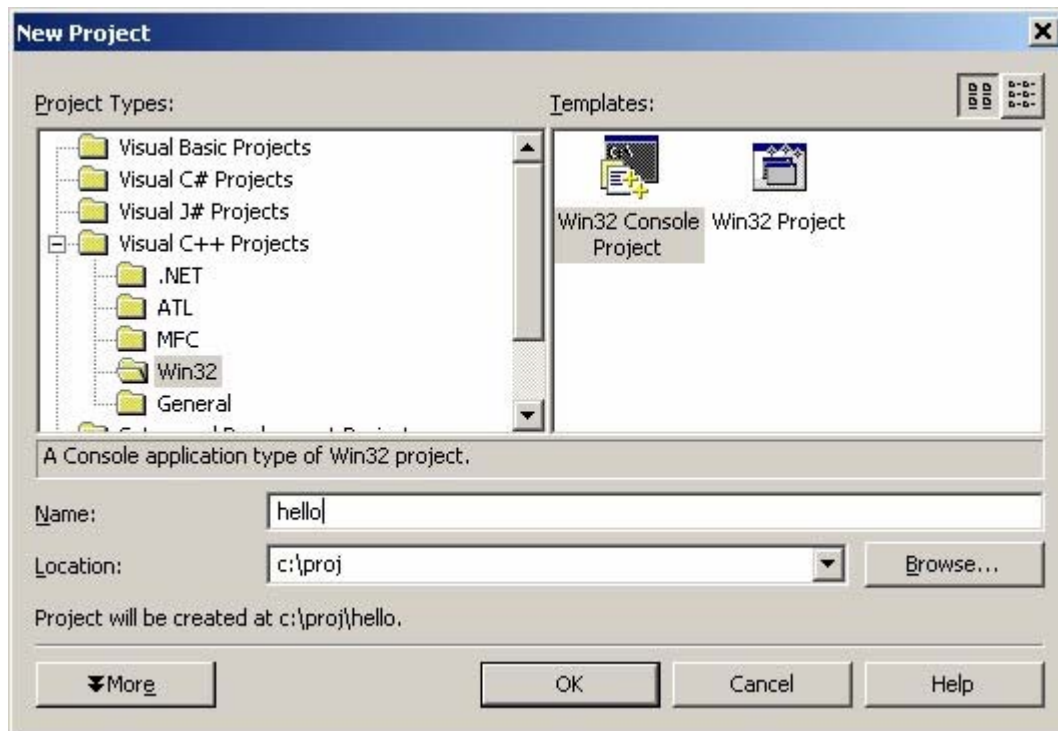
In the left pane expand the selection named **Visual C++ Projects** and then select **Win32**.

In the right pane, select **Win32 Console Project**.

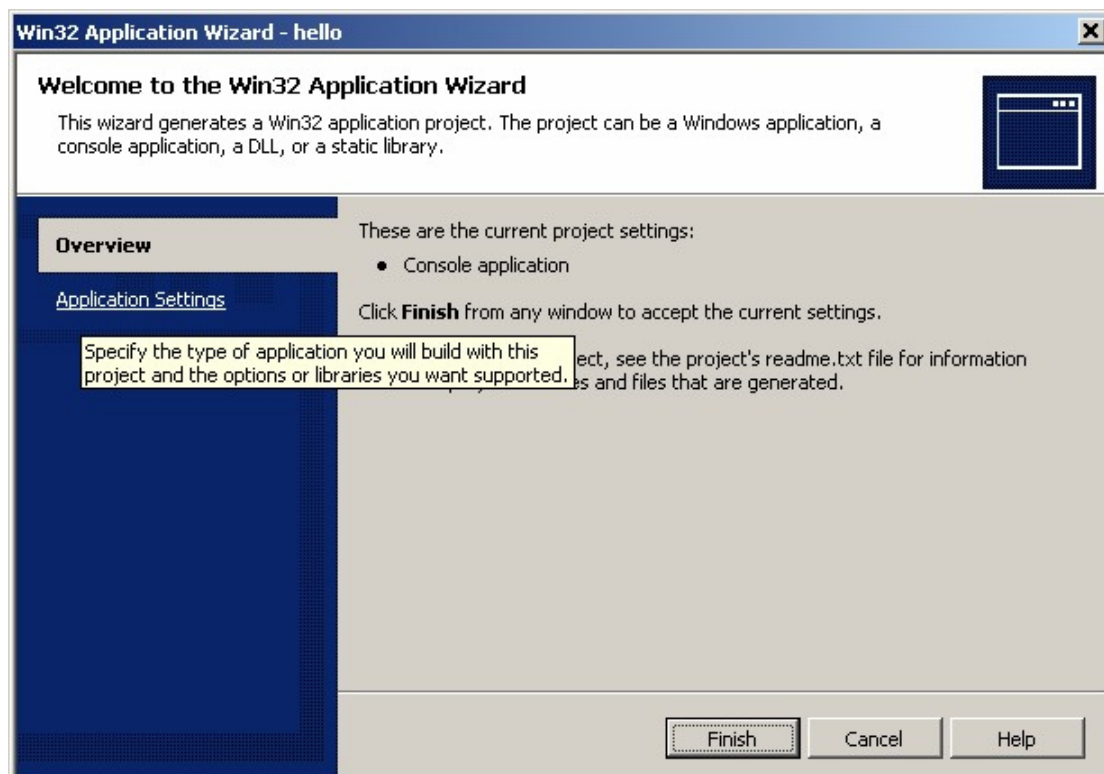
In the **Name:** text box type **hello**.

In the **Location:** text box, click on the button to browse to the folder you created in the previous step.

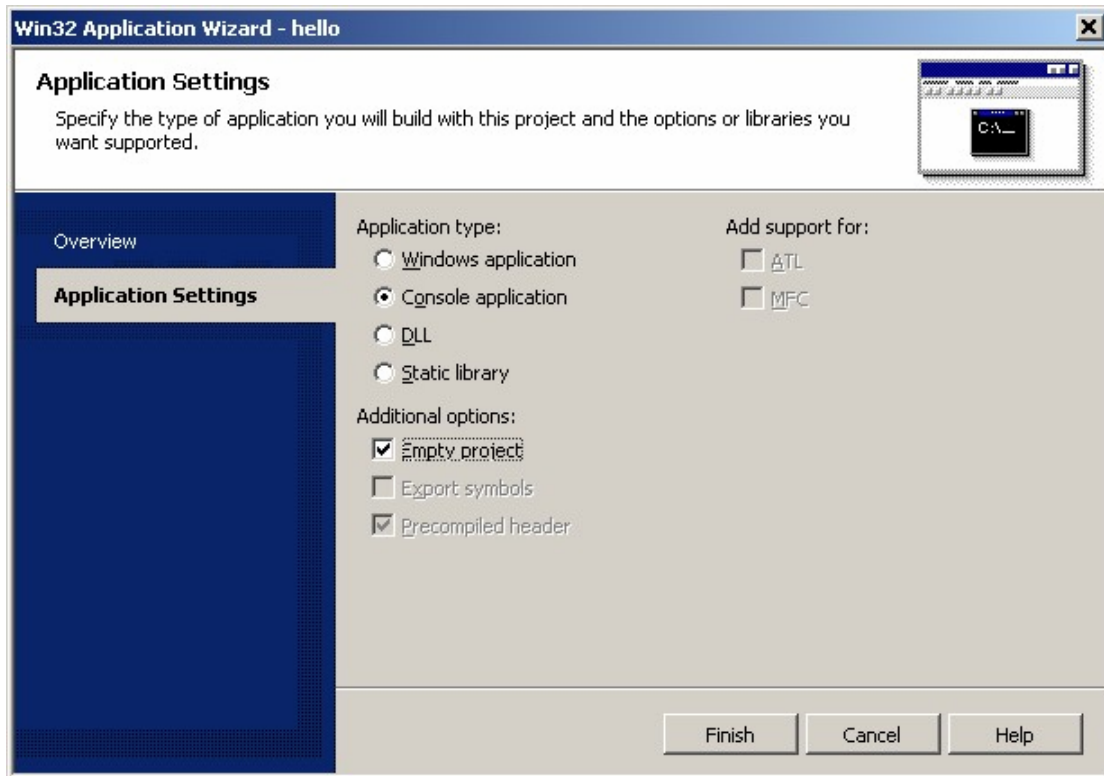
The screen should look like this:



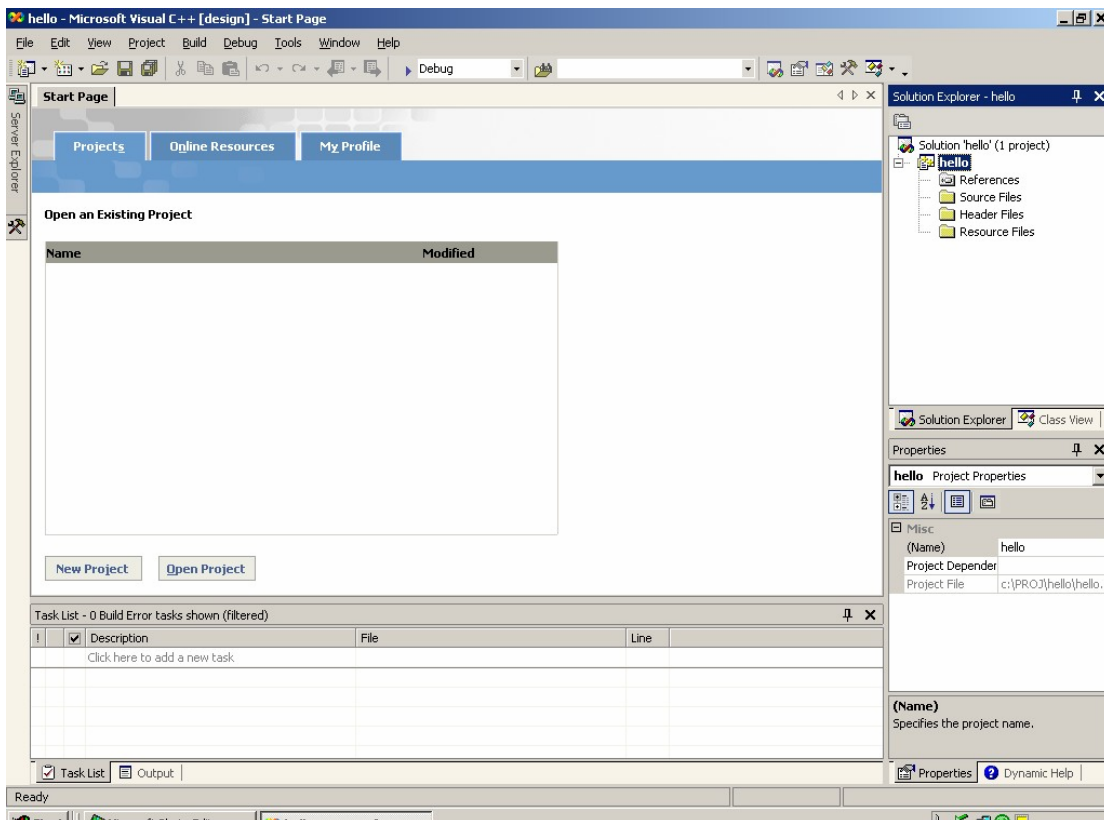
Click the OK button to continue. You should see the following window:



Click Application Settings on the left side of the window and then place a check in the box marked Empty project. The screen should look like this:

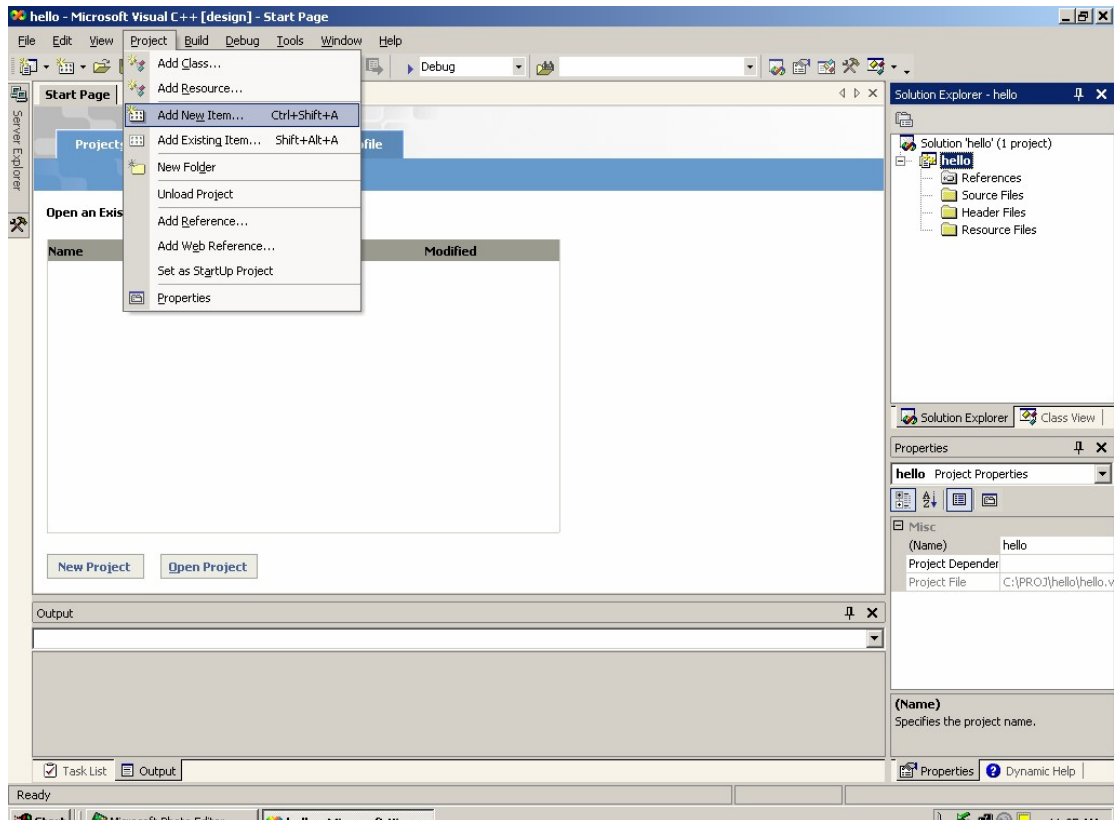


Click the Finish button to create the empty project that looks like this:

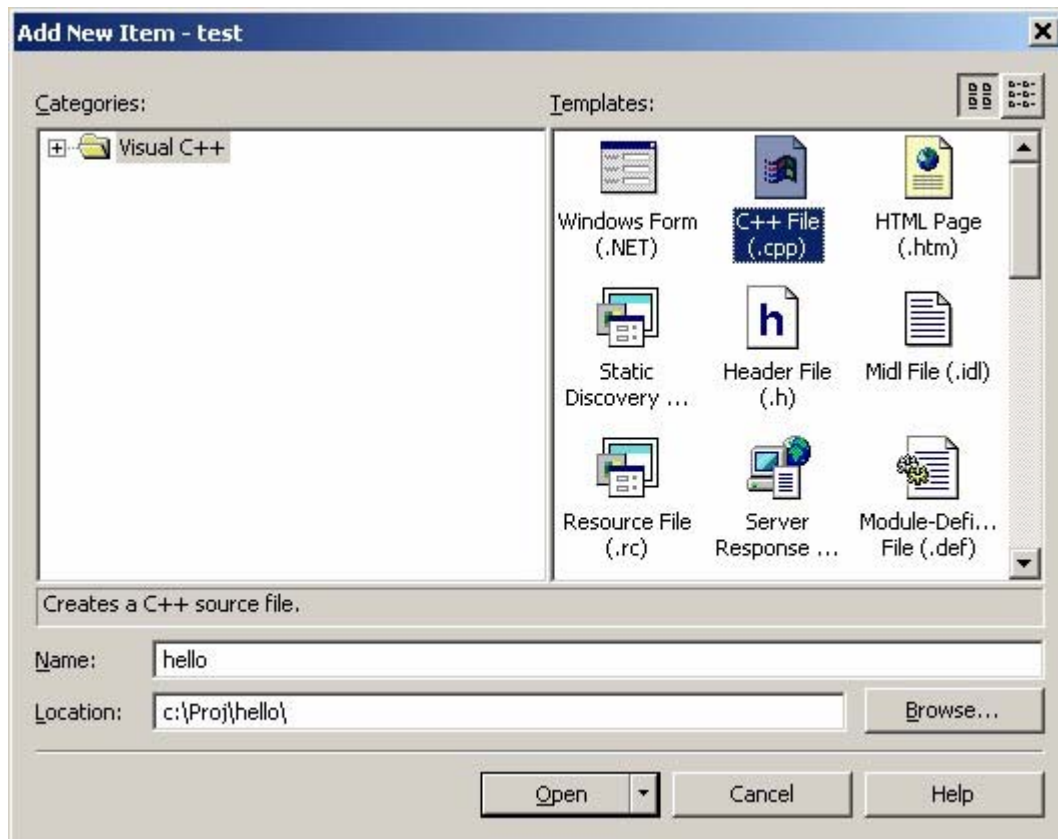


Step 2: Typing your Program Code

Click the menu item **Project | Add New Item...** or press **CTRL + SHIFT + A** or click the **Add New Item** button.

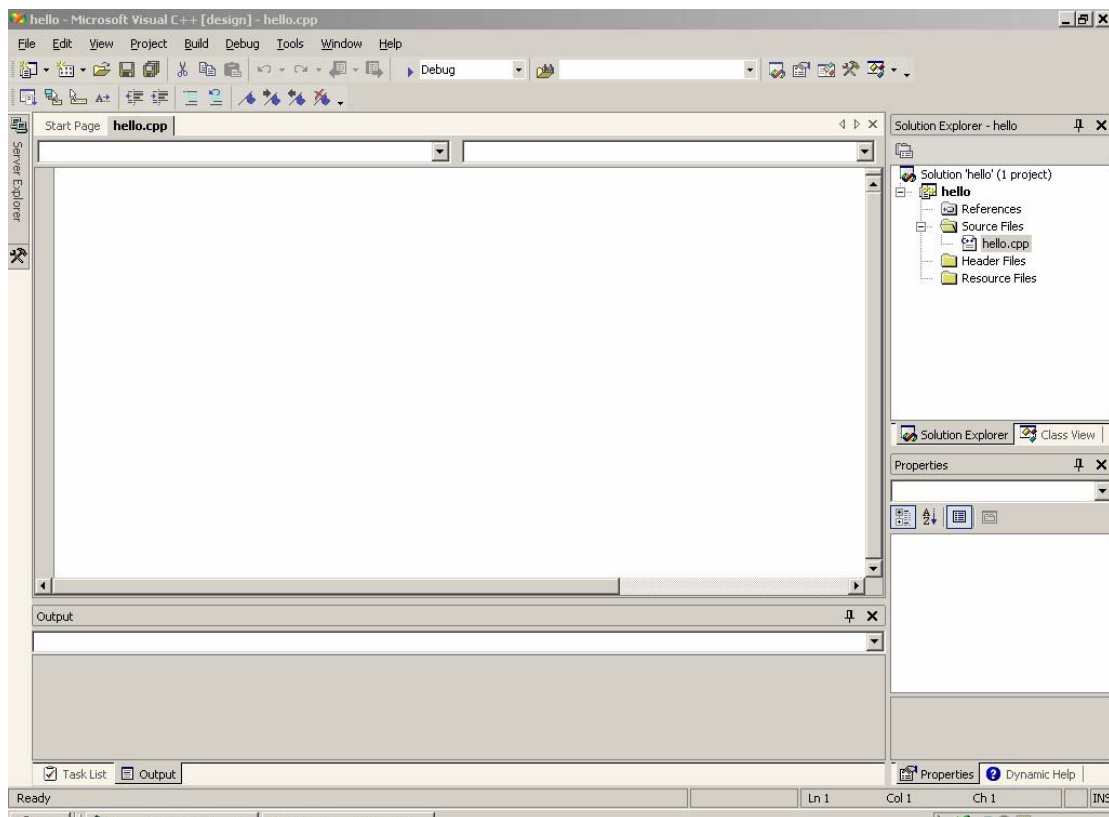


Select **C++ File (.cpp)** from the list on the right and type the name **hello** in the text box labelled **Name**:



Click the [Open](#) button to enter the edit mode. The file, [hello.cpp](#), will appear in the Source file list in the Solution Explorer pane.

You should see the following screen:



Enter the following program:

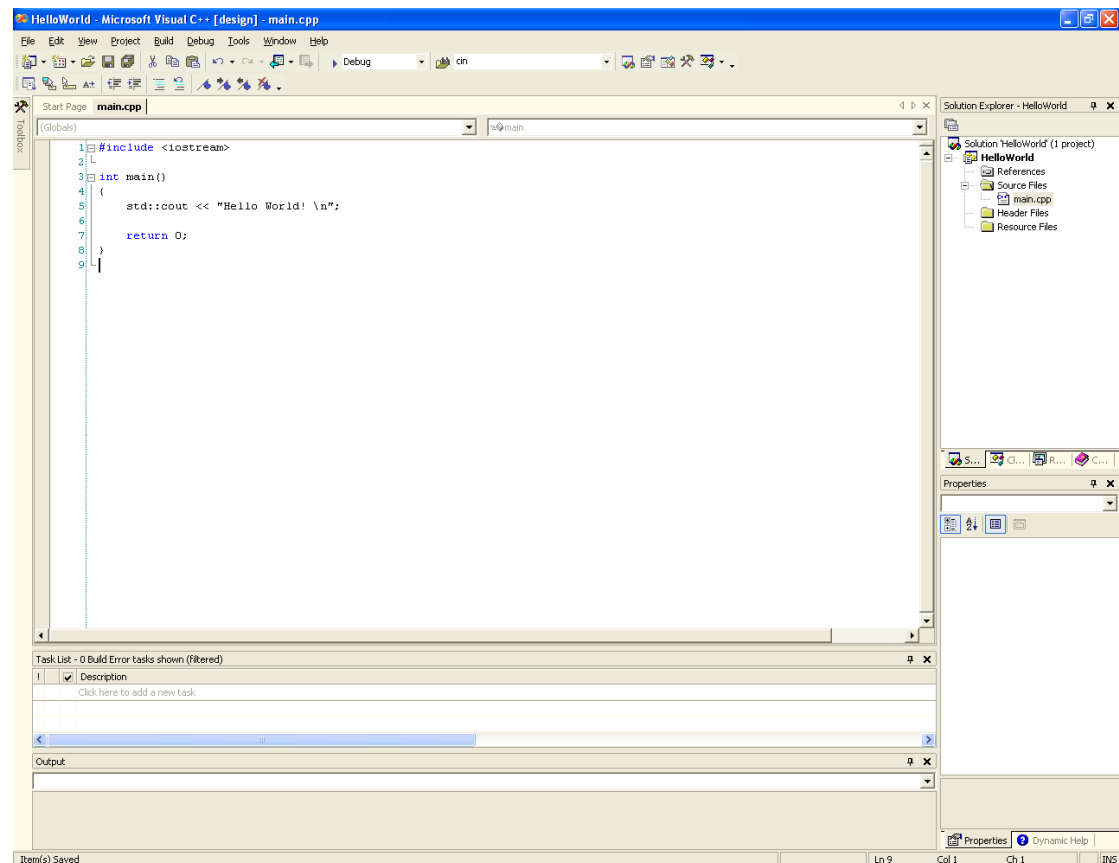
```
#include <iostream>

int main()
{
    std::cout << "Hello World! \n";

    return 0;
}
```

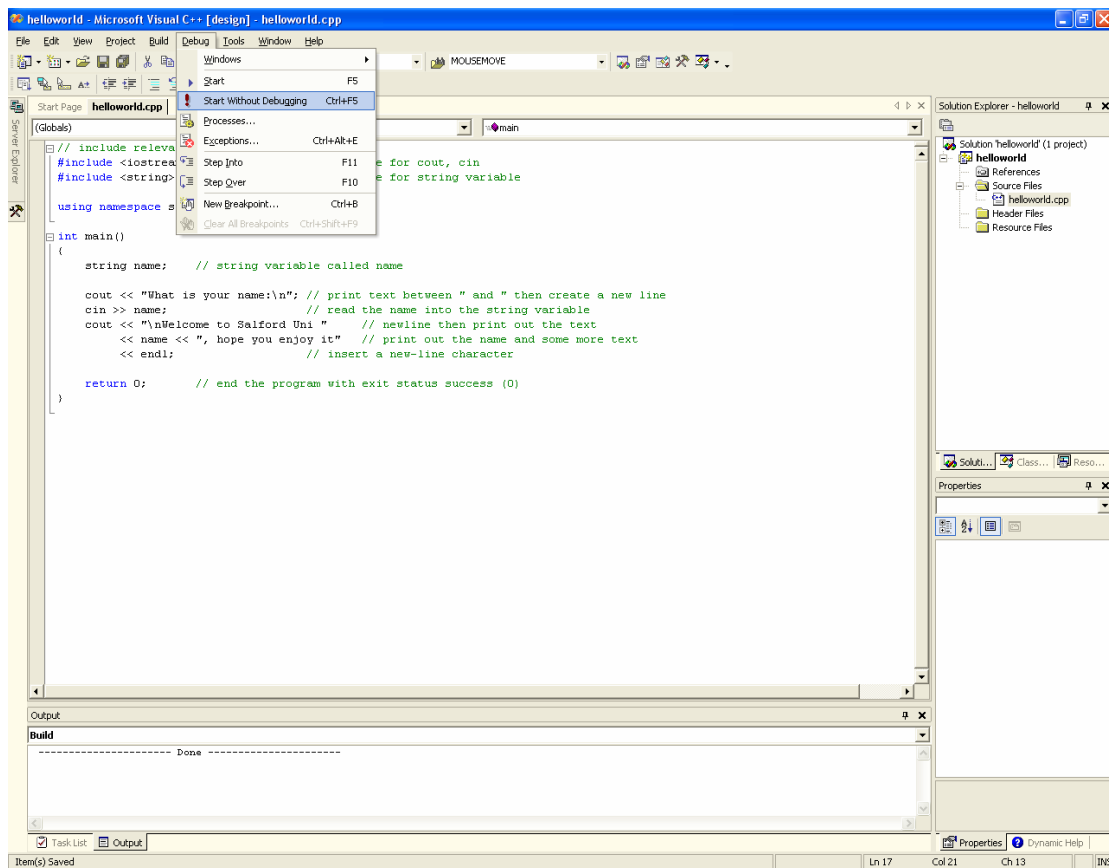
The end of this tutorial explains what each part of the code means.

Once you have typed the program in the edit window, your screen should look like this:



Save your program by clicking on the icon that looks like a floppy disk (4th icon from the left).

To execute your program click the menu item [Debug | Start Without Debugging](#) or press [CTRL + F5](#).



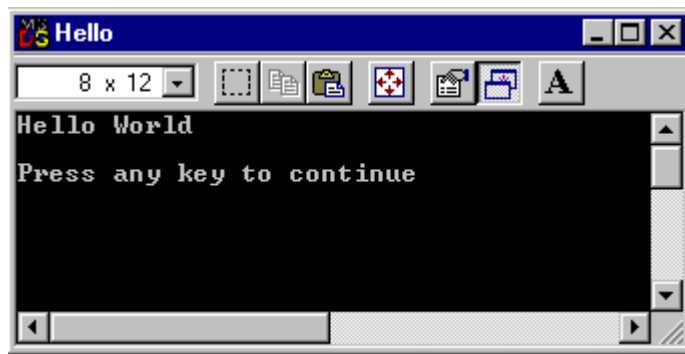
The following message box will appear:



Click the **Yes** button to compile your program. If you receive any error messages recheck your program code and make sure it appears exactly as shown above. If your code has no errors it will compile and execute.

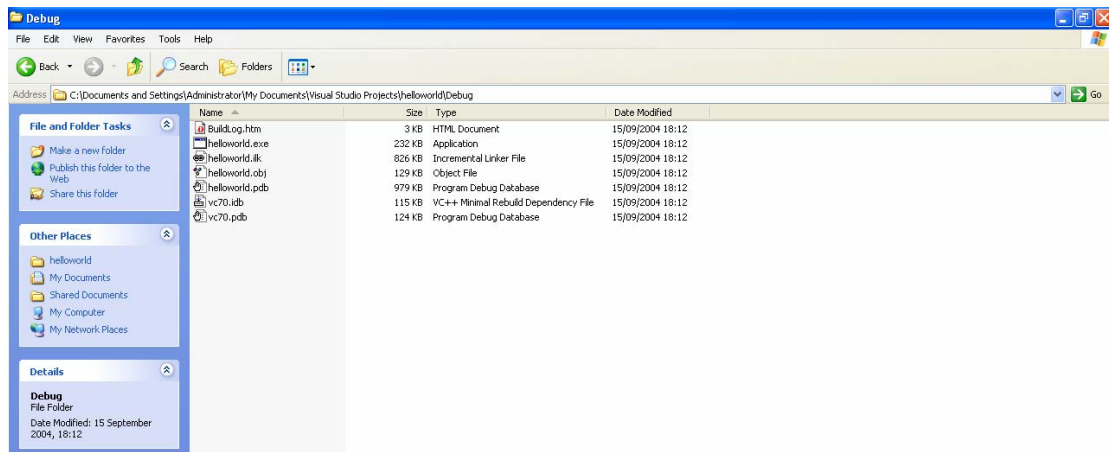
A **DOS Console Window** is created by the **Developer Studio** for the **Hello** program, as shown below.

You should eventually see the following screen:



Normally the [DOS Window](#) would be destroyed immediately the program finished executing and would disappear before you could read its contents. To avoid this happening, the [Developer Studio](#) displays the message, **Press any key to continue**, on the third line and waits for the user to press a key before destroying the window. Press a key now, to continue.

Use [Windows Explorer](#) now, to look at the contents of the project directory and its [Debug](#) sub-directory. Notice that [hello.cpp](#) has been created in the project directory, while [Hello.exe](#), and several other files, have been created in the [Debug](#) sub-directory. (See below.) The [hello.obj](#) object file is an intermediate version of [hello.cpp](#), which is produced by the [Compiler](#). The [Linker](#) combines this file with library files (and usually with other user created object files) to produce the executable file. The other files in the [Debug](#) sub-directory are mostly required by the [Microsoft Developer Studio](#) debugger system.



Finished

After you have done this you've finished the introductory tutorial and can go! At the moment we are getting you used to using the compiler so don't worry if what you typed didn't mean much to you, it will all become clear later on. As long as you can create a new project with the same properties using visual studio again then you have taken away from this tutorial what you need.