
Appendix G3

Getting started with Visual Studio 2010 IDE and Visual C++ 2010 Express Edition IDE

G.1 Install Visual Studio 2010 or Visual C++ 2010 Express Edition


If not already installed on your computer, you may purchase a copy of **Visual Studio 2010** and follow the installation instructions, which come with it, or download and install the free **Visual C++ 2010 Express Edition** from <http://www.microsoft.com/express/vc/>

G.2 Creating and running an executable program

The steps are:

1. Create a new project
2. Add a C++ source file to the project
3. Enter your source code
4. Build an executable file
5. Execute the program
6. Save the program

G.2.1 Create a new project

1. Open the Visual C++ IDE (Integrated Development Environment) by clicking the Microsoft Visual Studio 2010 icon , or select it from **Start > Programs > Microsoft Visual Studio 2010 > Microsoft Visual Studio 2010**.

2. Open the **File** menu, point to **New**, and click **Project** or press **CTRL+SHIFT+N**.

3. Under Project Types, select **Visual C++**.

4. In the Templates section, select **Win32 Console Application**.

5. In the **Name** textbox type the name of your project; for example, **HelloWorld**.

6. Choose a directory for your project; for example, choose the default XP directory

C:\Documents and Settings\Your Name\My Documents\Visual Studio 2010 Projects

The **Vista** default directory is `..\Your Name\Documents\Visual Studio 2010 Projects`

7. Click **OK**.
8. The WIN32 Application Wizard should appear.
9. Select “**Application Settings**” on the left side of the dialog box.
10. Under “**Additional options**” select “**Empty Project**”.
11. Click “**Finish**”. All compiler settings should now be initialized for your console project.

To create a new project under **Visual C++ 2010 Express Edition**, follow a similar sequence (**File**→**New**→**Project**), but **Visual C++** will be the only Project Type presented. Select **Win32**, and then select the template **Win32 Console Application**. Enter the **Name** of the Project, like **Hello World**, and click **OK**. It will be placed in the default Project location. The **Win32 Application Wizard** appears, and click **Next**. In the **Application Settings** screen, check **Empty Project**, and select **Finish**. The video at his link: <http://www.youtube.com/watch?v=Jud497WjF-E> may be helpful, but to accomplish the same steps, it walks menu selections and uses different Names in its illustrations. If you prefer a written document, you might find it useful to read the PDF at this link: ftp://ftp.prenhall.com/pub/esm/sample_chapters/engineering_computer_science/deitel/VCppHTP2e/pdf/vcpphttp2_02.pdf

G.2.2 Add a C++ source file to the project

1. Click the “**Add New Item**” icon on the menu bar. That will open the **Add New Item** dialog box. Select **Code** under the **Visual C++** category.
2. Select the “**C++ File (.cpp)**” icon in the template window. Type the name of your program file (**HelloWorld.cpp**) in the **Name** text box and click “**Add**”.

You have created an empty source code file named **Hello World.cpp** in the **Hello World** project, which is the only project in the **Hello World** solution. You are now ready to enter the source code for the **Hello World.cpp** program.

G.2.3 Enter your source code

At this point you can either enter the source code by typing it directly into the IDE, or you can copy and paste it from another source. Note: **keep_window_open()** is not needed in **Visual Studio 2010**, but it is needed in **Visual C++ Express Edition**.

G.2.4 Build an executable file

When you believe you have properly entered the source code for your program, go to the “**Build**” menu and select “**Build Solution**” or press **F7**. The IDE will try to compile and link your program. If it is successful, the message:

Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped

should appear in the **Output** window. Otherwise a number of error messages will appear. Debug the program to correct the errors and **Build Solution** again.

G.2.5 Execute the program

Once all errors have been eliminated, execute the program by going to the **Debug** menu and selecting **Start Without Debugging** or press **CTRL+F5**.

Under Visual Studio 2010, the console window will pop up and you will see the program output, “**Hello World.**” On the next line you will see the prompt, “**Please any key to continue...**”

G.2.6 Save the program

Under the **File** menu, click **Save All**.

G.3 Enable the custom header file

Copy the custom header file `std_lib_facilities.h` from http://www.stroustrup.com/Programming/std_lib_facilities.h to the directory you used in step **G.2.1.6** above. This will be the “**./Visual Studio/Projects**” folder if you took the default.

Now to use it, insert the line

```
#include "../std_lib_facilities.h"
```

in your program. Also, insert the line: `keep_window_open();` prior to the `return 0;` statement.

When you execute the program, the console window will pop up and you will see the program output, “**Hello World.**” On the next line you will see the prompt, “**Please enter a character to exit.**”