Eclipse IDE and C++ Compiler Setup Guide – Windows

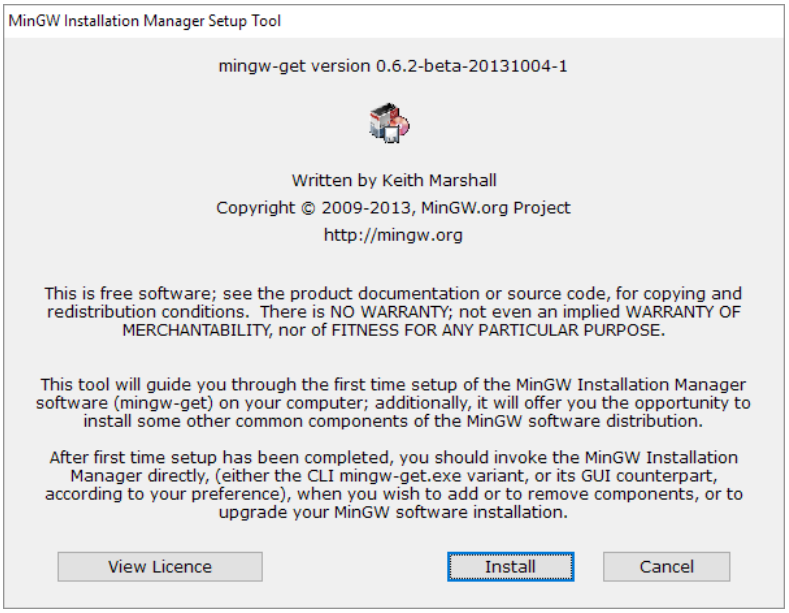
The Windows installation is in two major steps. The C++ compiler must be installed before Eclipse.

Installing the C++ compiler

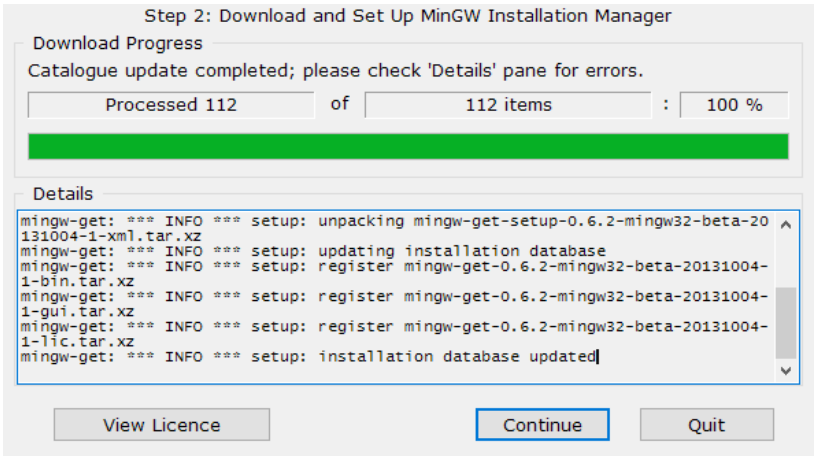
The are actually a number of C++ compilers, the most popular is the GNU C++ compiler which is implemented independently for all operating systems. For windows, there are two implementations but we'll use the one provided by the Minimalist GNU for Windows project (MinGW).

Go to https://sourceforge.net/projects/mingw/files/Installer/mingw-get-setup.exe/download wait 5 seconds and let the download begin for the mingw-get-setup.exe file.

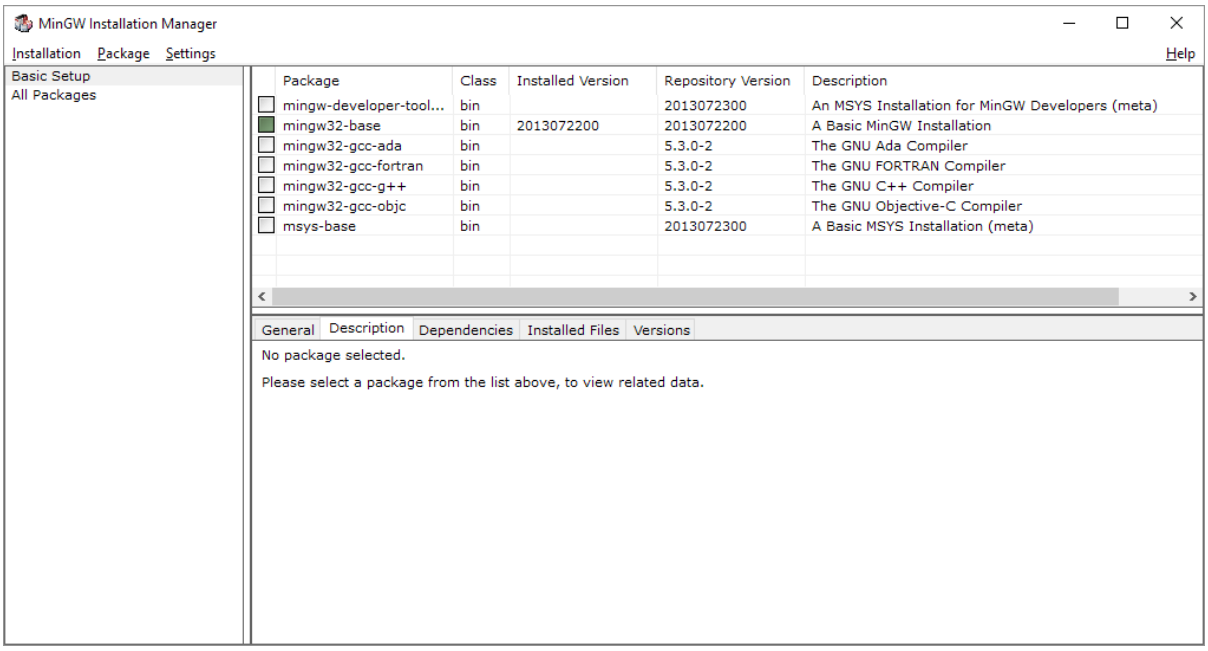
Open the file and install the MinGW Installation Manager using default options.



Once you see this screen, press continue:

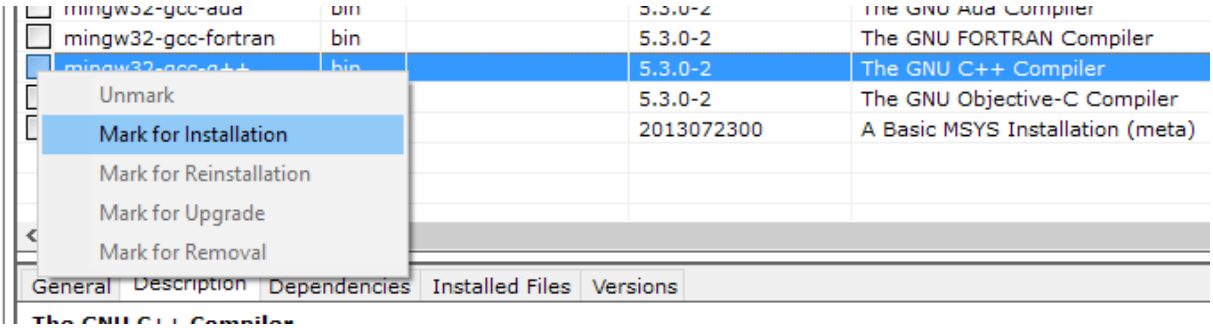


The MinGW Installation Manager is now on your computer. This Manager lets you pick and install any of the GNU compilers, for the languages ada, fortran, c/c++, and objective c.

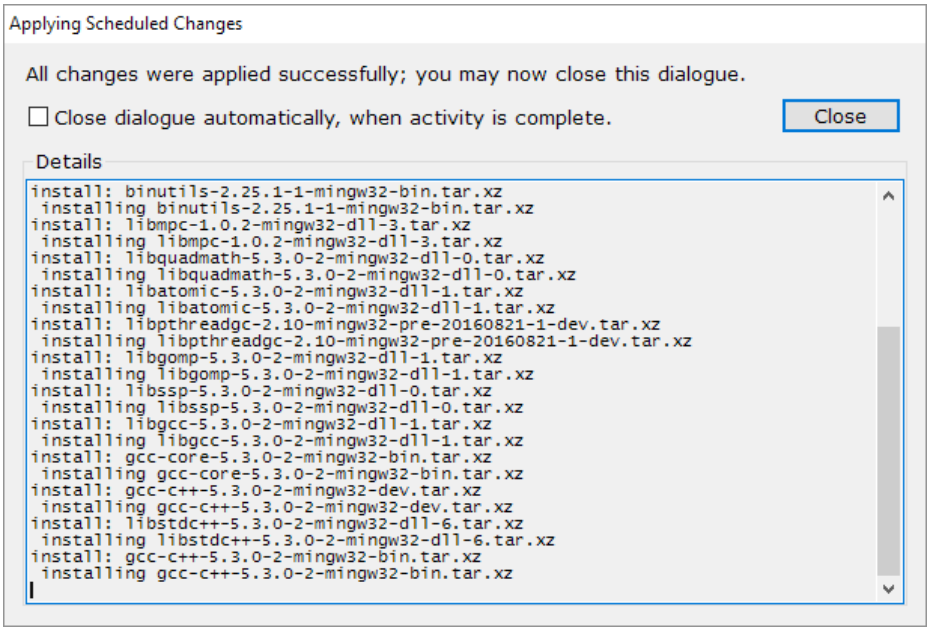


From the top menu, select Installation > Update Catalogue. Once that's done, close the pop up window.

Then, select the square button beside mingw32-gcc-g++ and select Mark for Installation.



Select Installation > Apply Changes, and press Apply in the pop up window. The manager will now download and install the GNU C++ compiler.

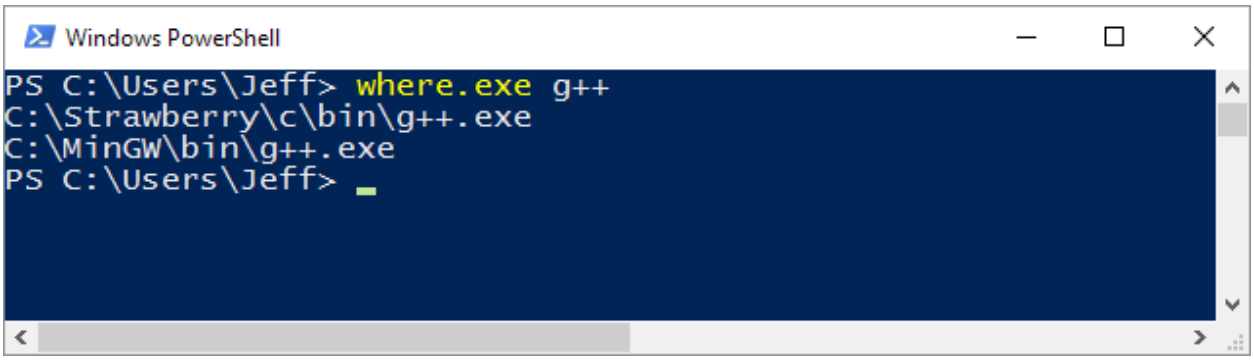


Wait for it to finish, as show above, then close the window and close the manager.

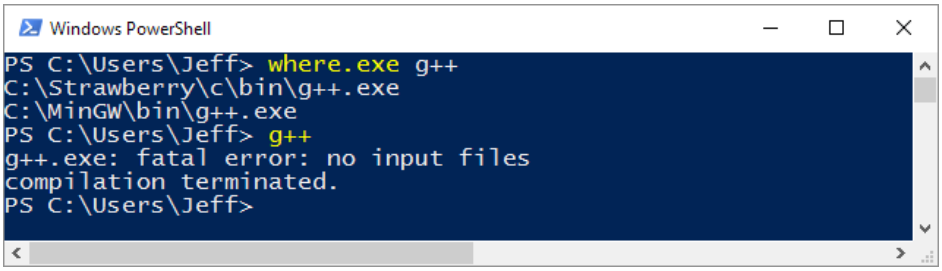
Quick check

Open up power shell and type **where.exe g++**

By default, MinGW manager should install the compiler at C:\MinGW\bin\g++.exe



If you have multiple editions of the C++ compiler, then it is possible for more than one answer to appear. If the MinGW version appears, then type **g++.** This should give you a fatal error saying that there's no input files:



If you see this, you have successfully installed the GNU C++ compiler! There's a way to use command line to compile C++ programs, but we will be using Eclipse's UI to do that for us.

Installing Eclipse IDE

IDE stands for Integrated Development Environment, which pairs a file / project management window, code editor, console, and compilation support into a single GUI with super helpful coding features. We will demonstrate some of these in a Lab in the future.

Go to https://www.eclipse.org/downloads/eclipse-packages/ and download **Eclipse IDE for C/C++ Developers** for your operating system. Remember whether you downloaded the 64 bit or 32 bit edition.

Once downloaded, open/unzip the zip file and copy the entire eclipse folder to a folder location where you want the program.

Once copied, open the eclipse folder, right click on eclipse.exe > Send to > Desktop (create shortcut)

Installing Java

Double click on the desktop Eclipse icon. If it asks you to install Java SE, click ok. Head over to http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html, accept the license agreement and download the JDK 8 windows exe file. If you downloaded the 32 bit Eclipse then download the x86 edition of Java. If you downloaded the 64 bit Eclipse then download the X64 edition of Java.

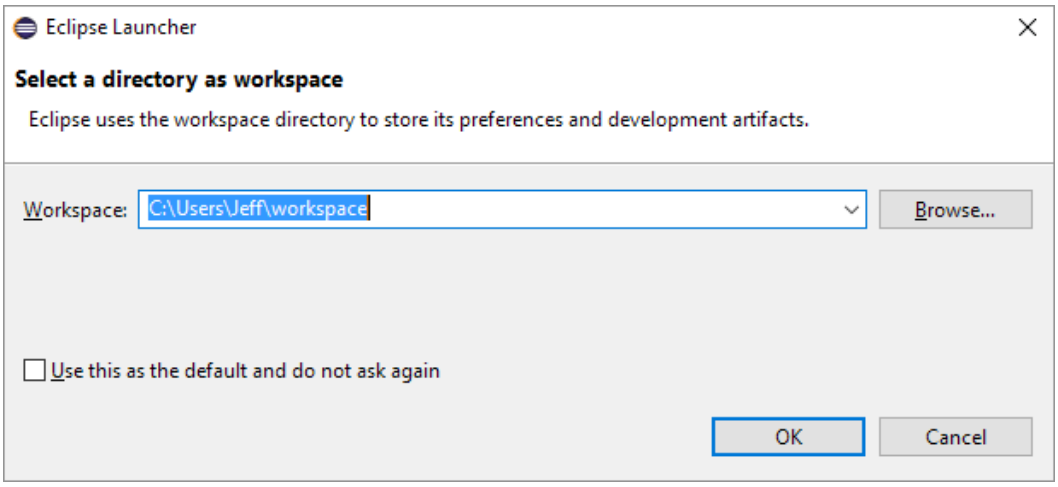
Once downloaded, run the exe file to install Java using all default install options.

Launching Eclipse

Feel free to drag the desktop Eclipse icon onto the task bar.

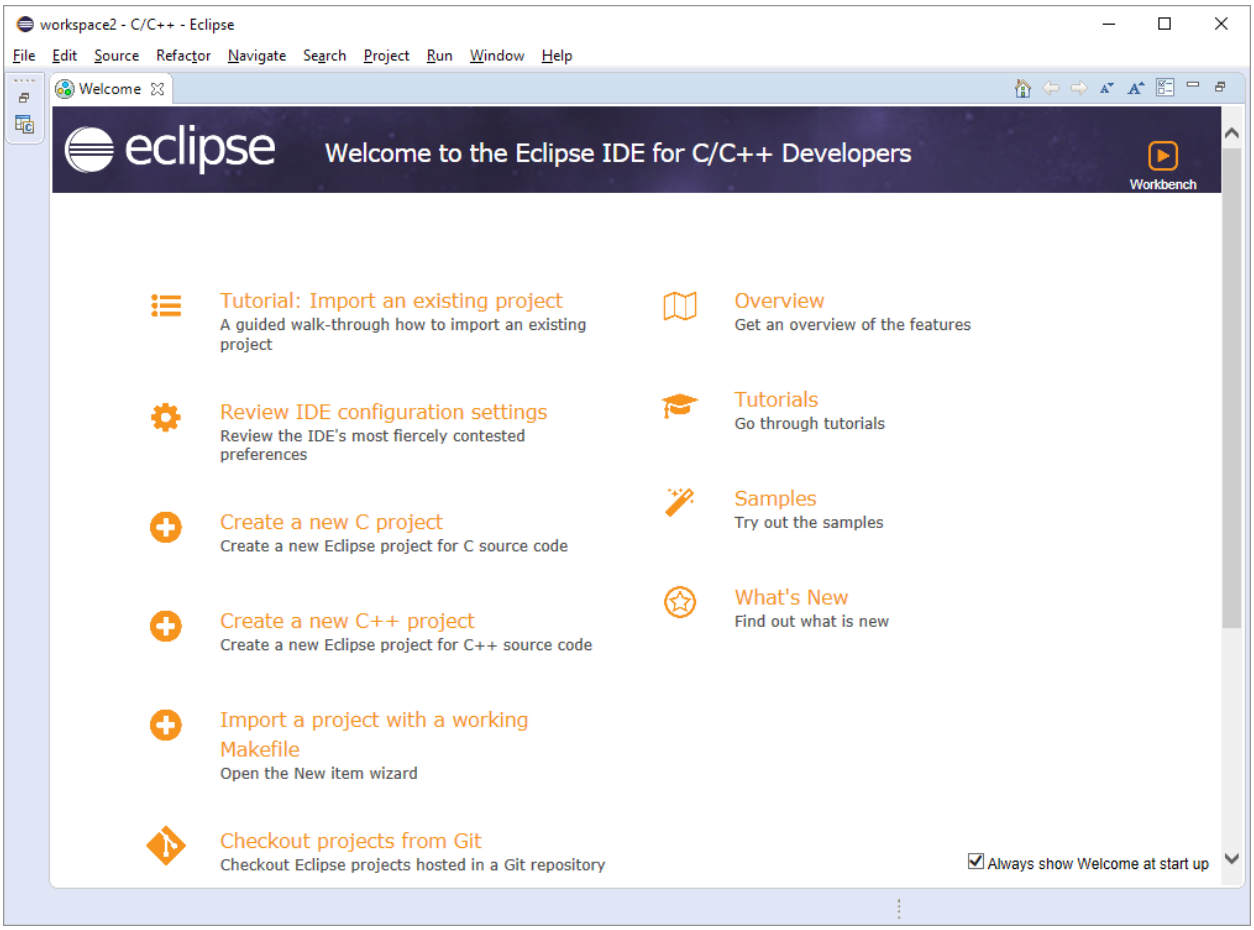
Double click on your desktop Eclipse icon.

It should show a splash screen then followed by a screen asking you to select a directory for the workspace:



All of your eclipse projects will be located as subfolders in this workspace directory. The default workspace is fine. Change it if you'd like, or just press OK to continue.

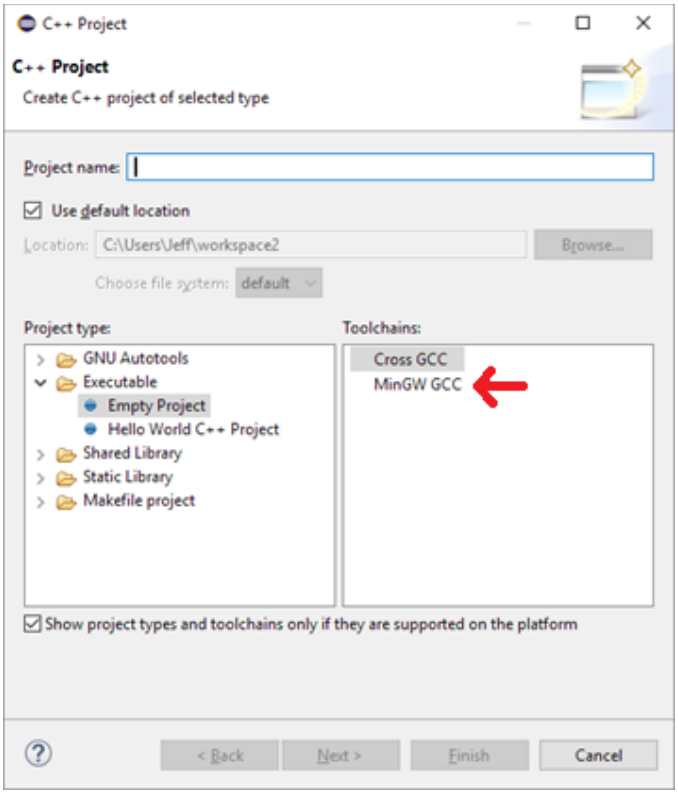
You'll now see the Welcome screen. Press the X on the Welcome Tab near the top of the window.



You can always access the Welcome screen from the top menu bar at Help > Welcome, and browse through any of the tutorials.

Creating C++ Projects

Go to File > New > C++ Project. You'll see this pop up window:

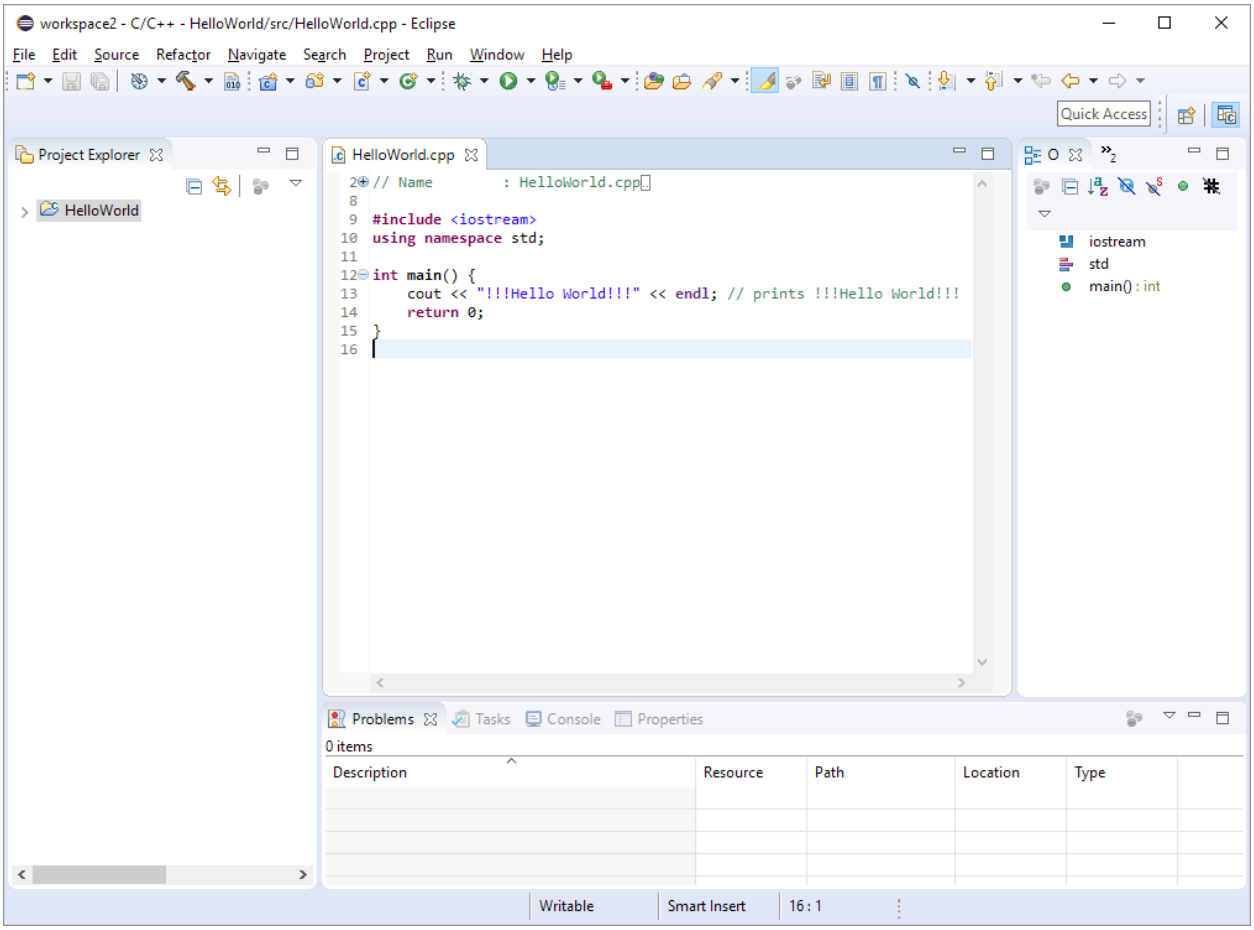


Give it a project name, for example HelloWorld. Make sure the MinGW GCC Toolchain is selected.

For the HelloWorld program, you can also select the "Hello World C++ Project" from the left menu. Normally we will be choosing the Empty Project.

Press Finish to create the project.

If you chose the Hello World project, you should now see a similar screen as follows with the C++ version of the Hello World program:



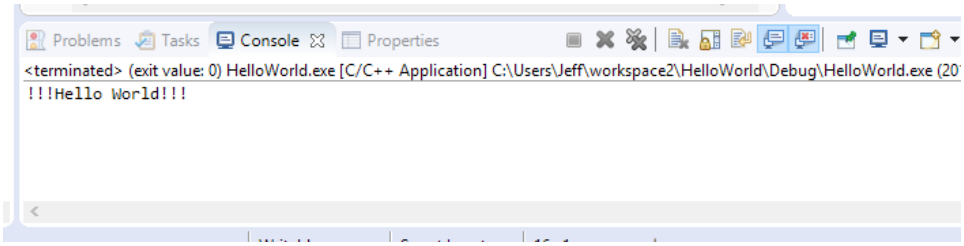
Compiling and Running C++ Programs

Compiling: Go to Project > Build Project or use the keyboard shortcut Ctrl + B.

The bottom window panel of the IDE should switch to the Console tab and show you the compiler's outputs.

Running: Go to Run > Run or press Ctrl + F11.

The Console tab should now show you the output of the program.



If this works then you're all set!