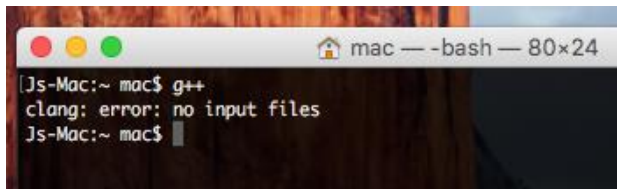# Eclipse IDE and C++ Compiler Setup Guide – Mac

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

Installing the C++ compiler

See if the clang C++ compiler is already installed:

Open up a terminal window and type **g++**

If it says **clang: error: no input files**, you can skip the rest of this step.
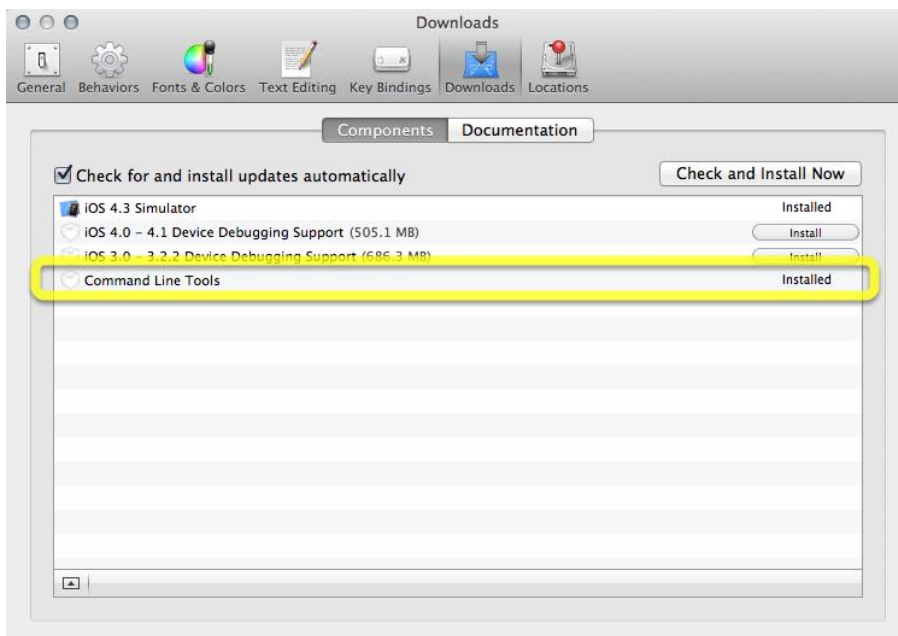
If it doesn't show up:

Install Xcode from the App Store.

Open Xcode to complete the final installation steps.

Open Xcode's Preferences.

View the Downloads section of the Xcode Preferences.

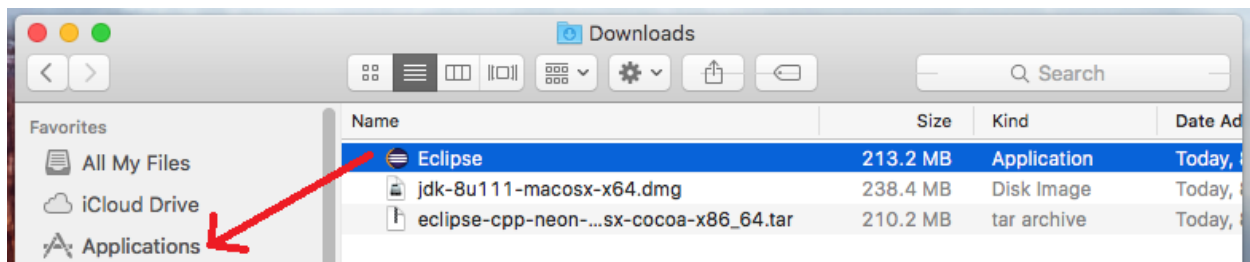Click the Install button next to the Command Line Tools.

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, double click on the tar file to extract the Eclipse app.

Then, drag the Eclipse app to the Applications folder to the left. Now the tar file can be deleted.
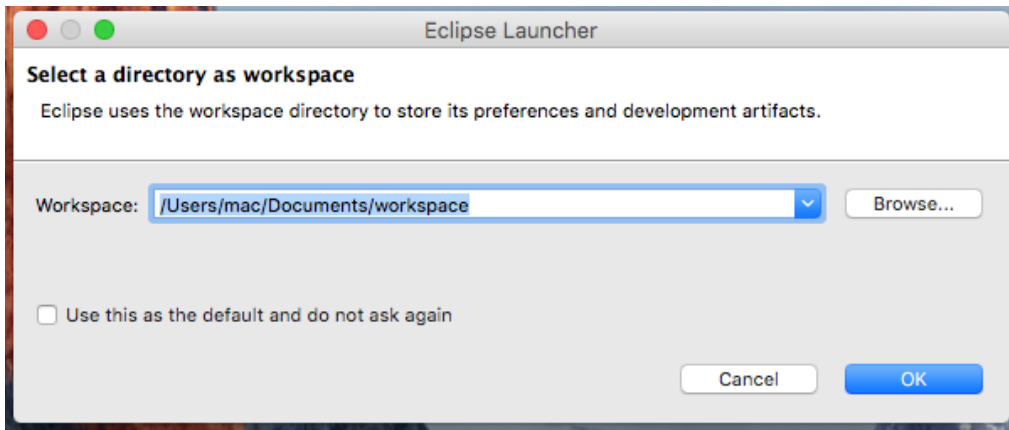
Go into the Applications folder, then drag the Eclipse app to the dock.

Open the Eclipse app from the dock.

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 OSX dmg file. Open the dmg file, then double click on the icon to install Java 8. Java is used to run the Eclipse IDE. Once installed, close the relevant windows and click on the Eclipse app again from the dock.
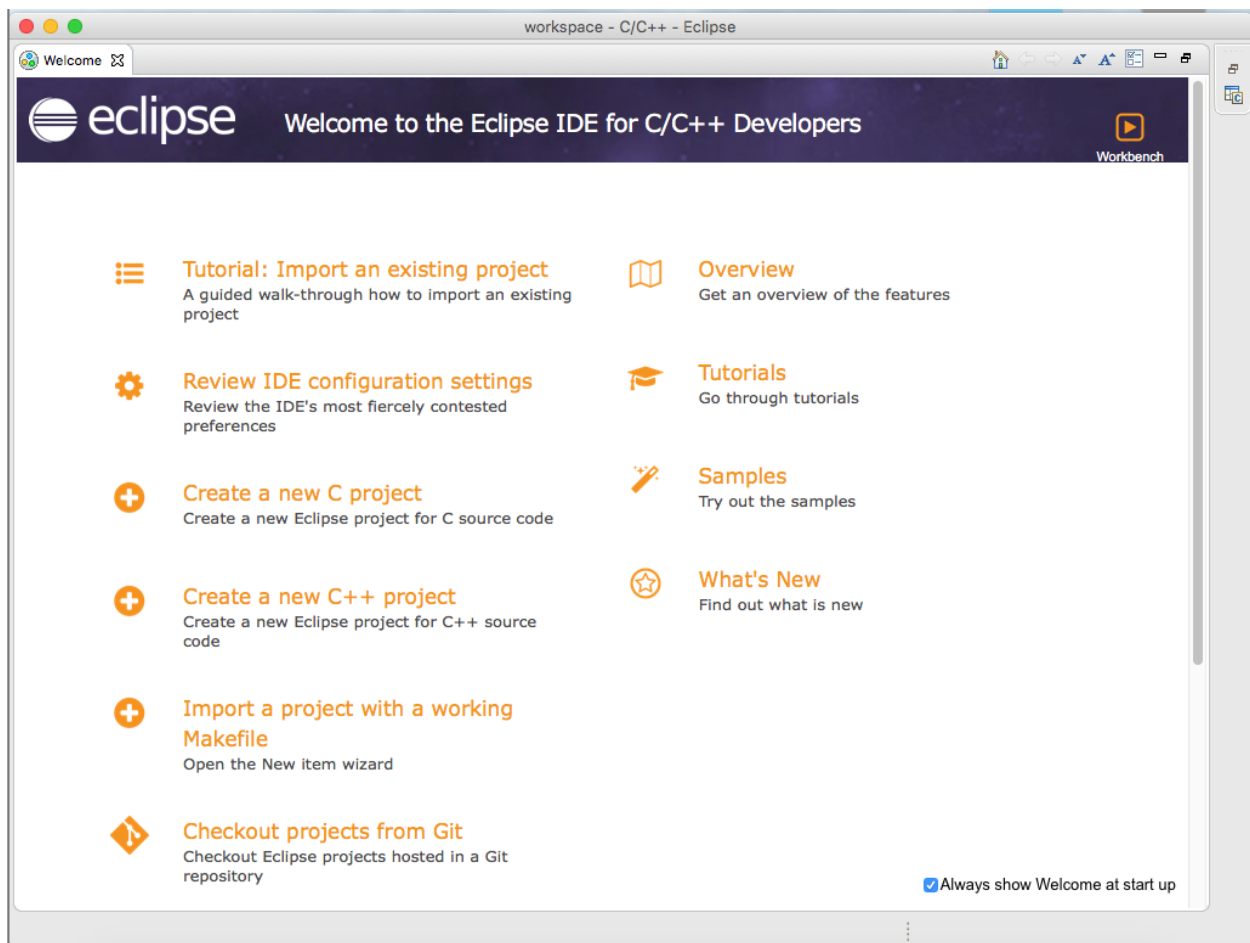
Launching Eclipse

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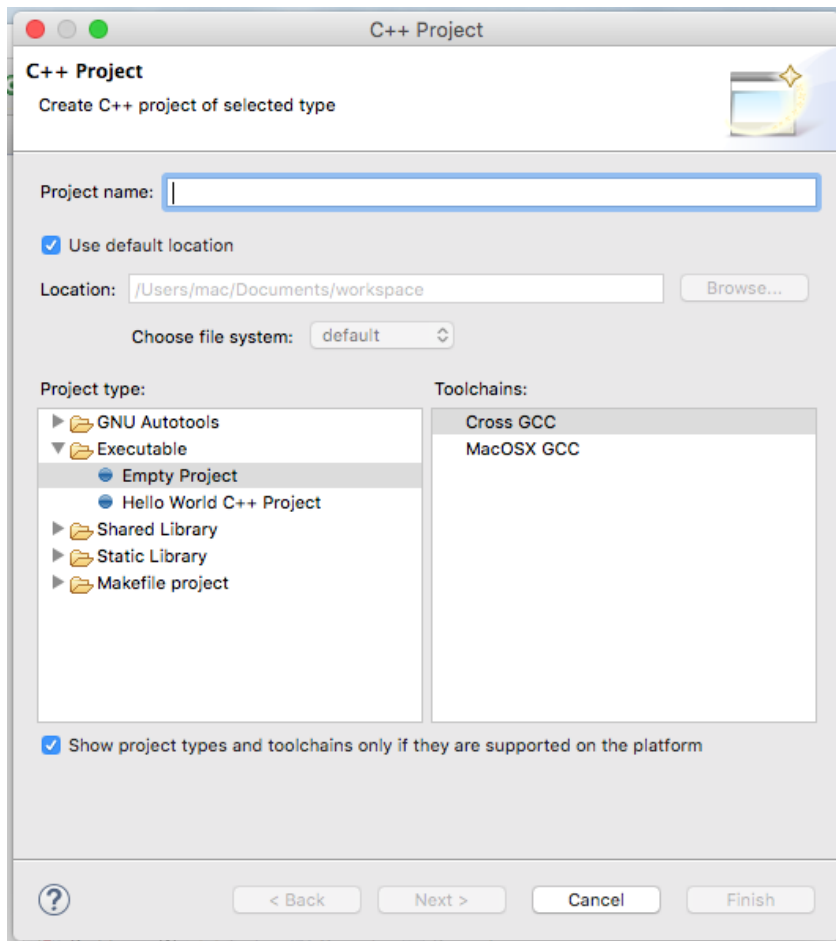
You'll now see the Welcome screen. Press the X on the Welcome Tab near the top of the window.

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

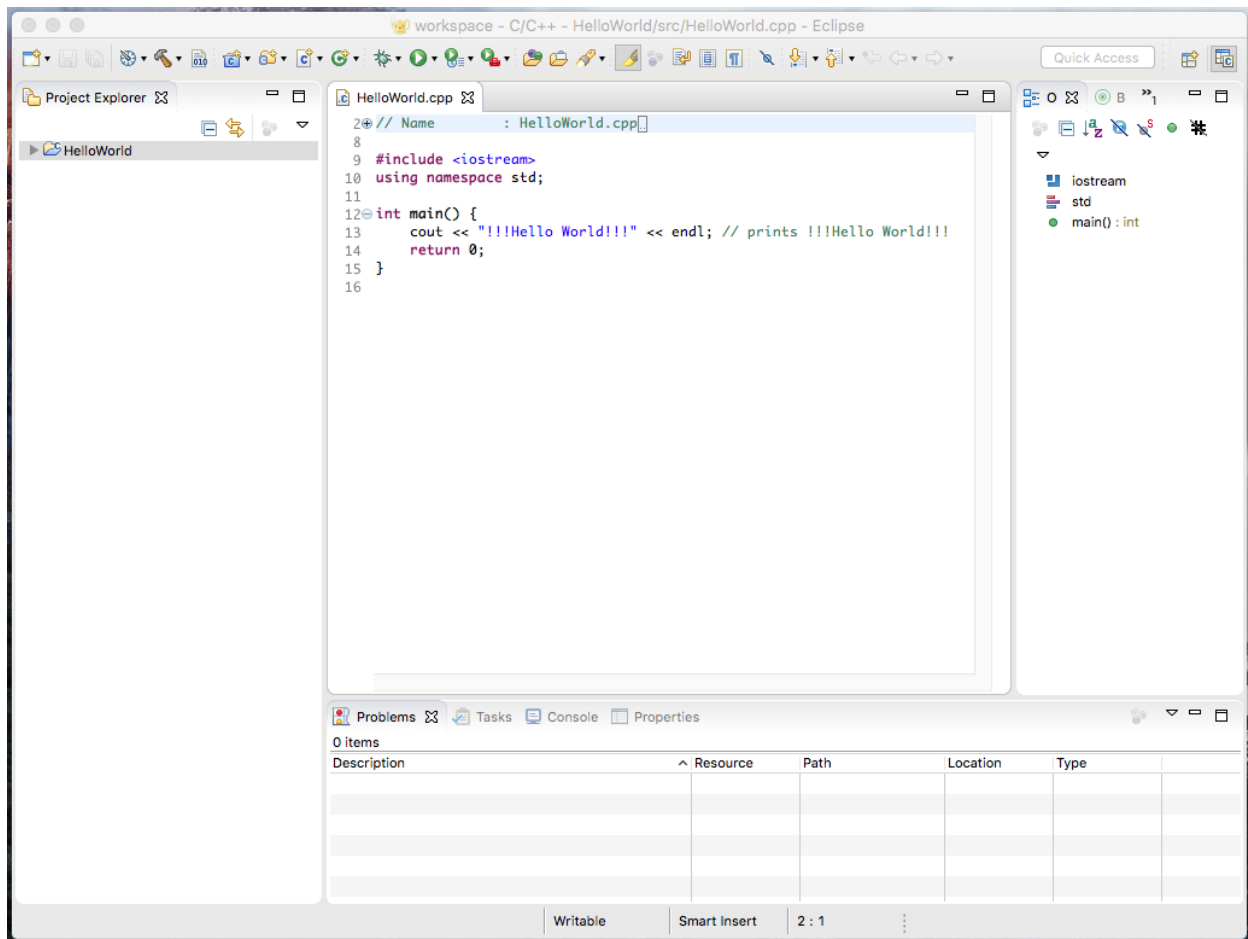Go to File > New > C++ Project. You'll see this pop up window:

Give it a project name, for example HelloWorld. Make sure the MacOSX 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:
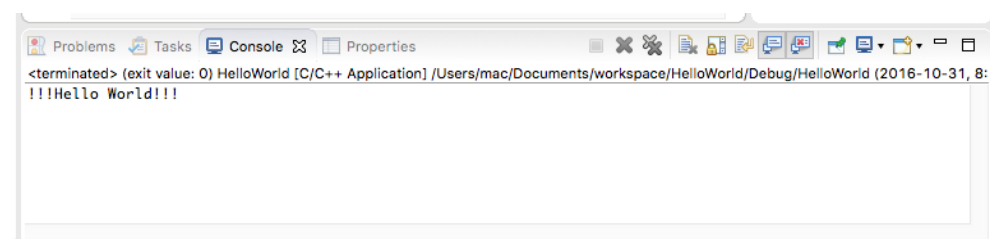
Compiling and Running C++ Programs

Compiling: Go to Project > Build Project or use the keyboard shortcut Command + 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 Shift + Command + F11.

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

If this works then you're all set!