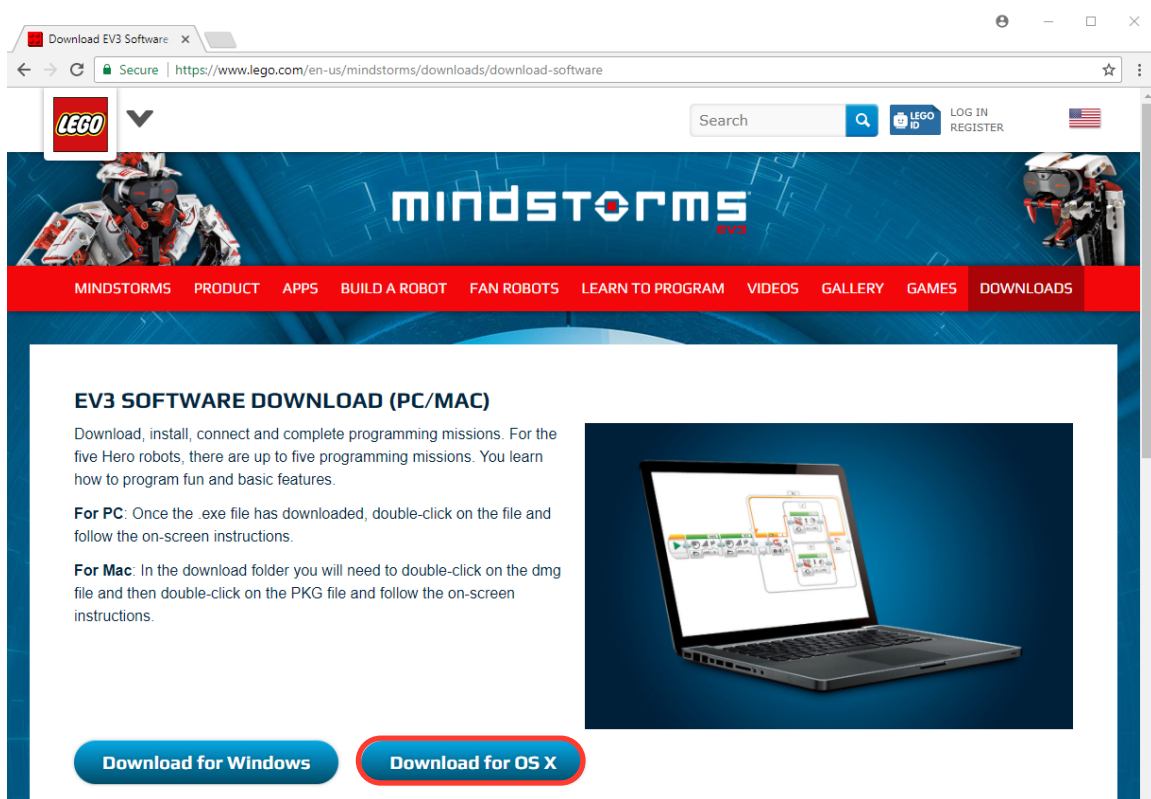# Tutorial on how to install and run Java on Lego Mindstorms EV3 using Eclipse on MAC OSX

1. Download the Mindstorm Software

https://www.lego.com/en-us/mindstorms/downloads/download-software

You will need the USB driver for your EV3 and the easiest way to install it is to install the complete EV3 Developer Software. This is LEGO's own software based on LabView. It is a graphical programming language and we will **NOT** be using it. We only need the USB driver that comes with it.

Just double click on the installer to launch the process. You will not only have the easy to use programming environment, but also the driver installed.
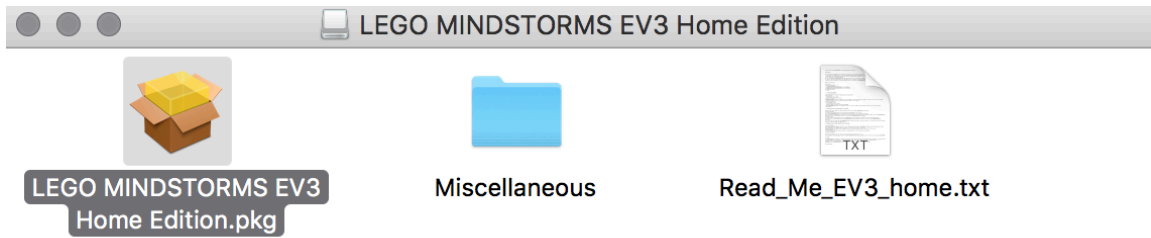
2. Install Java

Check if you already have java installed: open a terminal in the search box. And then type java –version

2.1 Download & install version 7 of the Java Development Kit (JDK)

Visit http://www.oracle.com/technetwork/java/javase/downloads/java-archive-downloads-javase7-521261.html to download the version 7. You will need the JDK version. Oracle did already release version 8 of Java, but not yet for the EV3 brick. To build a proper Java project you need to build it for version 1.7. The catch is that the latest version of Eclipse requires Java version 8, which we will download and install next. You can have multiple version of Java installed on your computer without any problems.
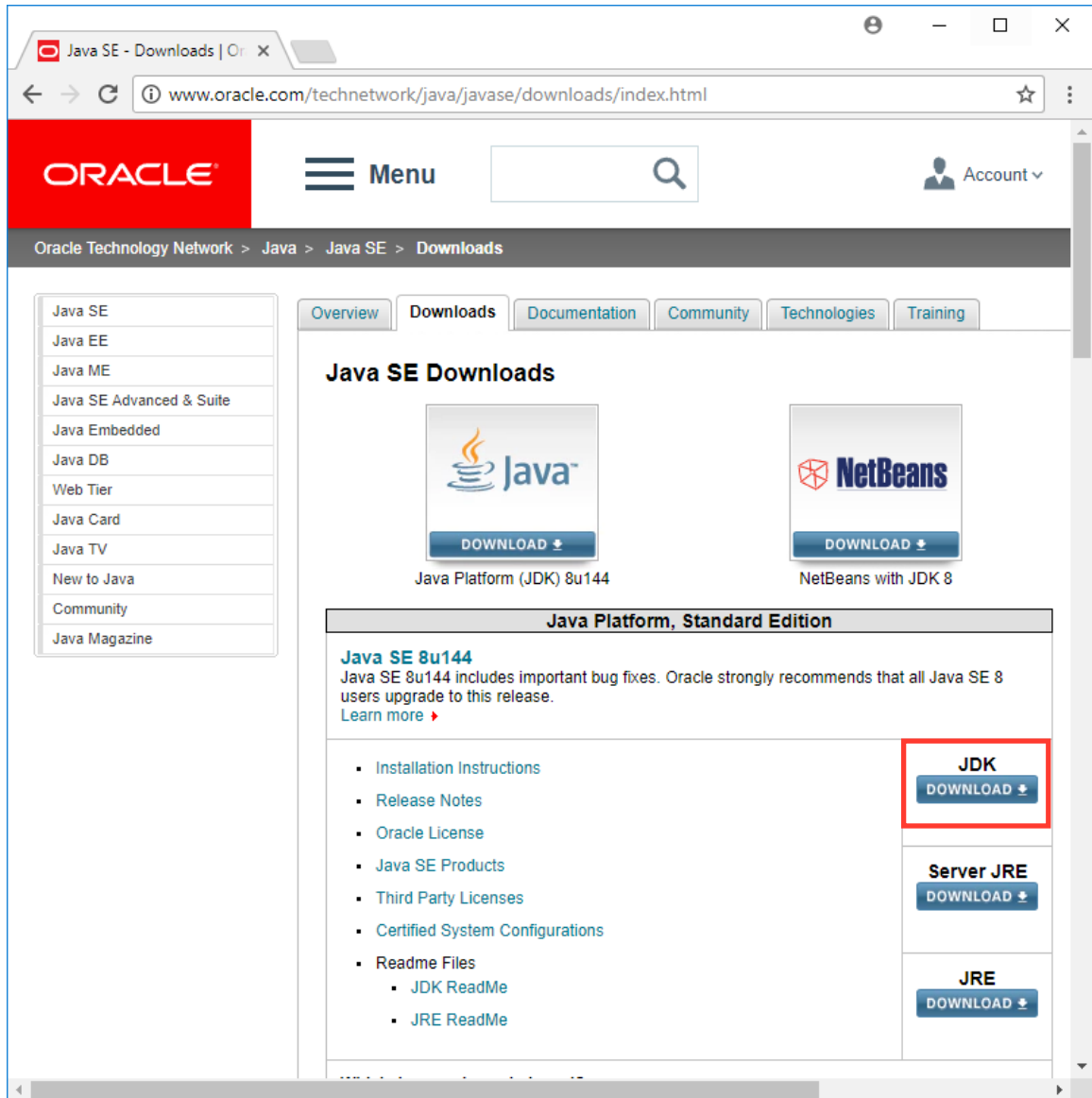
After downloading the DMG file double click it to mount the disk. A new window will appear with the JDK installer. Run the installer.

2.2 Download & install version 8 of the Java Development Kit (JDK) for Eclipse

You can skip this step if you already have java 8 (1.8) installed.

http://www.oracle.com/technetwork/java/javase/downloads/index.html

After downloading the DMG file double click it to mount the disk. A new window will appear with the JDK installer. Run the installer.

3. Install LeJOS

The heart of any EV3 Java project is LeJOS. Let's install it on your computer

3.1 Download LeJOS

Visit https://sourceforge.net/projects/ev3.lejos.p/files/ to download the latest version of LeJOS. Once the download is complete uncompress the file.

Do not leave LeJOS in the download folder. Move it to a permanent location, such as your Documents folder. I renamed the folder to "leJOSEV3" since we will need its name and location later.
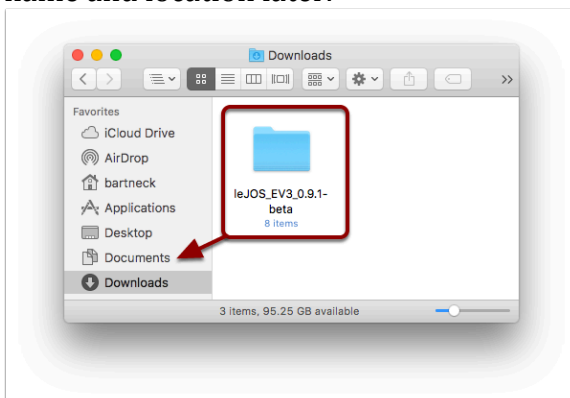
4. Install Eclipse IDE

The Eclipse Integrated Development Environment is a great software editor for your Java projects. It is free and open source.

4.1 Download the Eclipse IDE

Go to https://www.eclipse.org/downloads/ and download the Eclipse Oxygen version
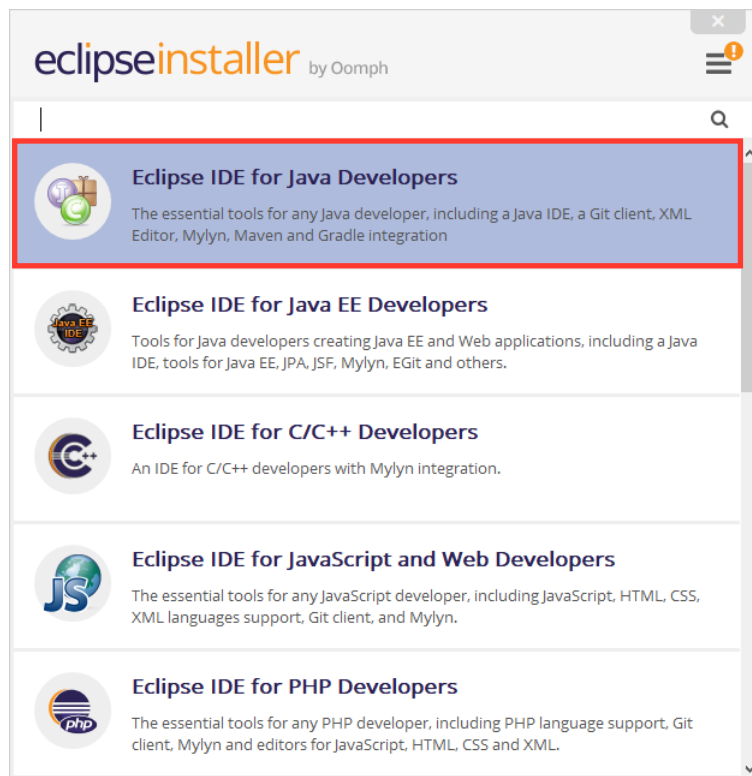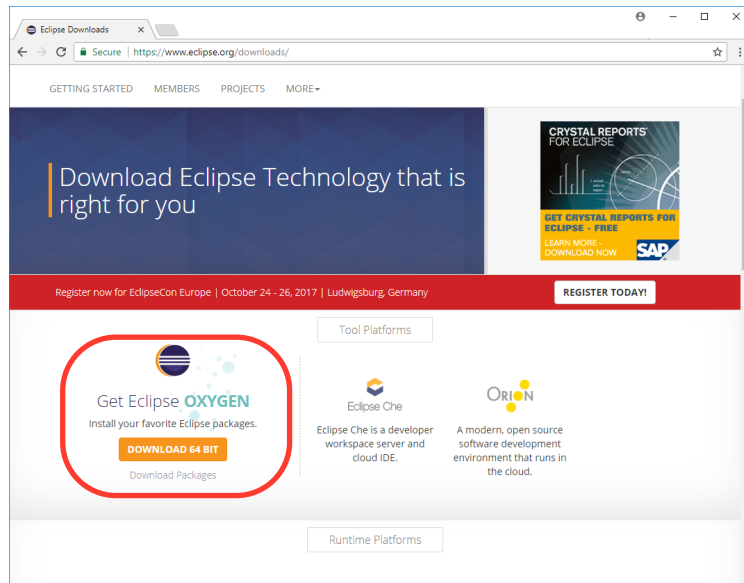
5. Configure Eclipse

You will find the Eclipse Marketplace in the Help Menu.

Enter "lejos" in the search field and then click on install in the EV3 Plugin.

Select "I accept the terms of the license agreement" and click on Finish.

You will be asked to restart eclipse.

After Eclipse restarts you need to enter the Preferences, which are available under the Window Menu.
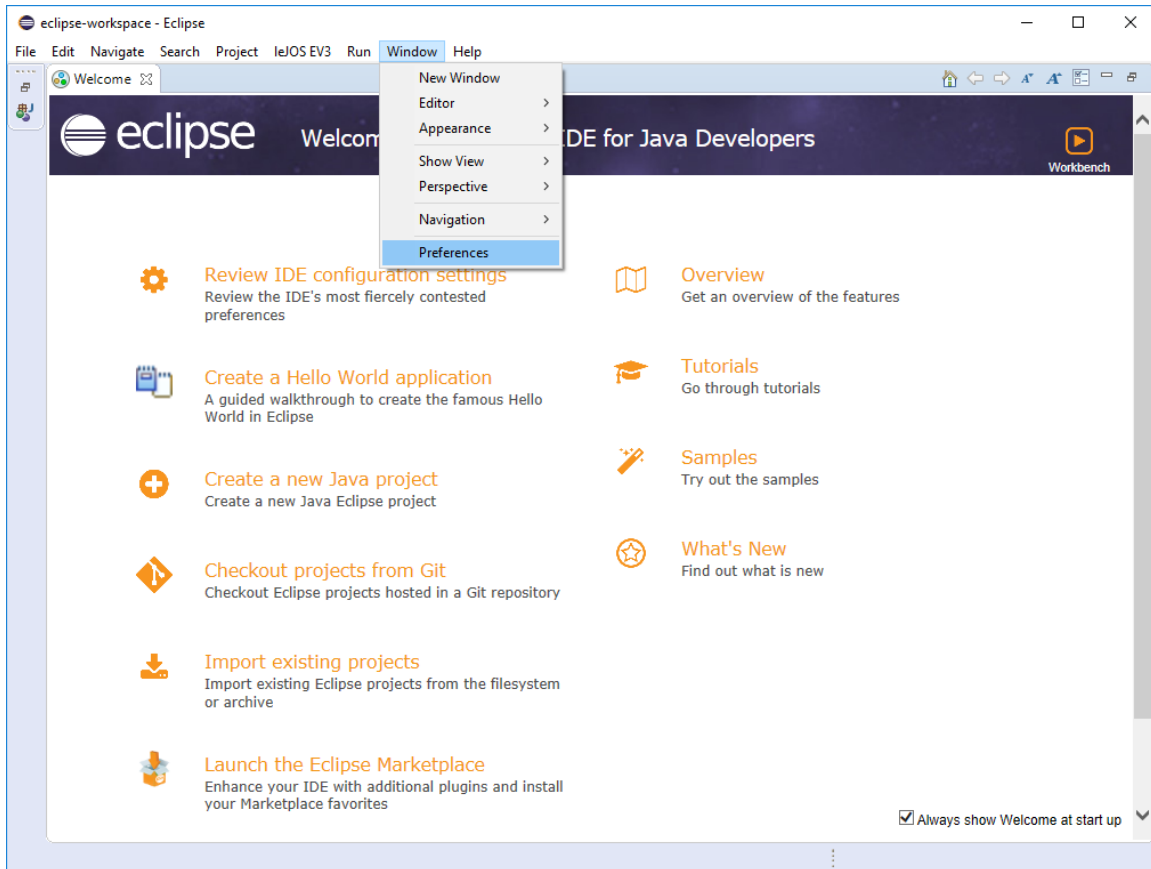
Set the EV3_HOME

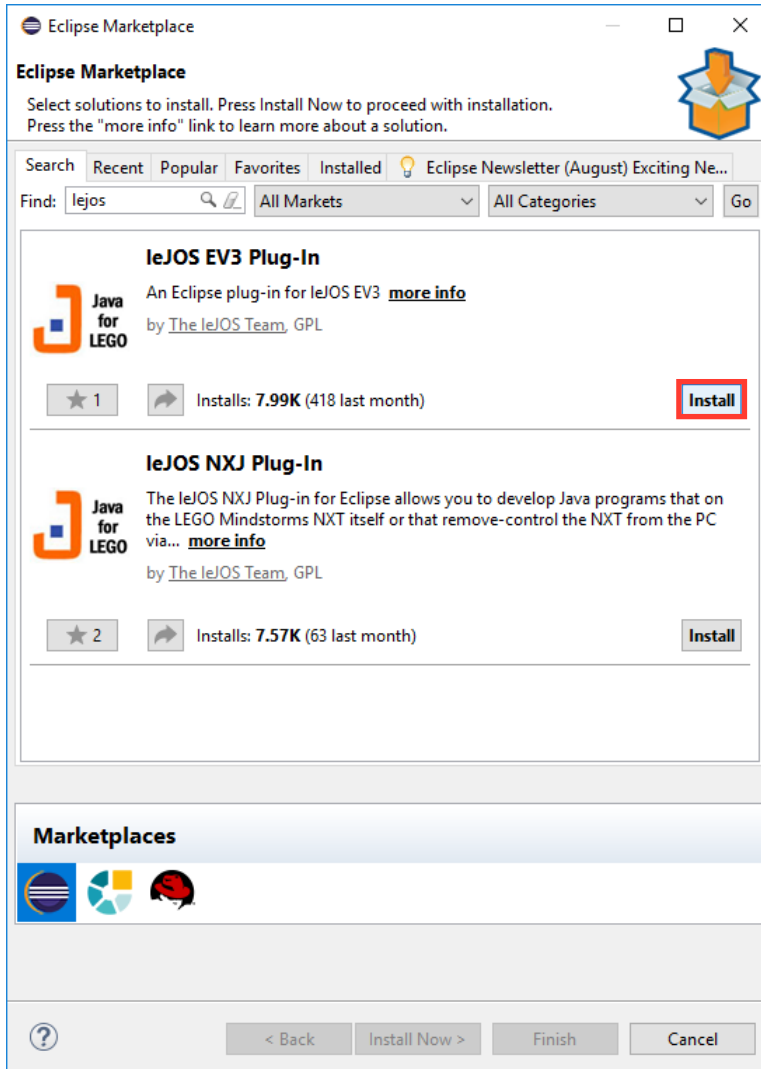First, you need to select the "leJOS EV3" tab on the left before clicking on "Browse" to select the directory in which you installed LeJOS. Click on "Apply" to complete the setup.

Setup the different versions of Java
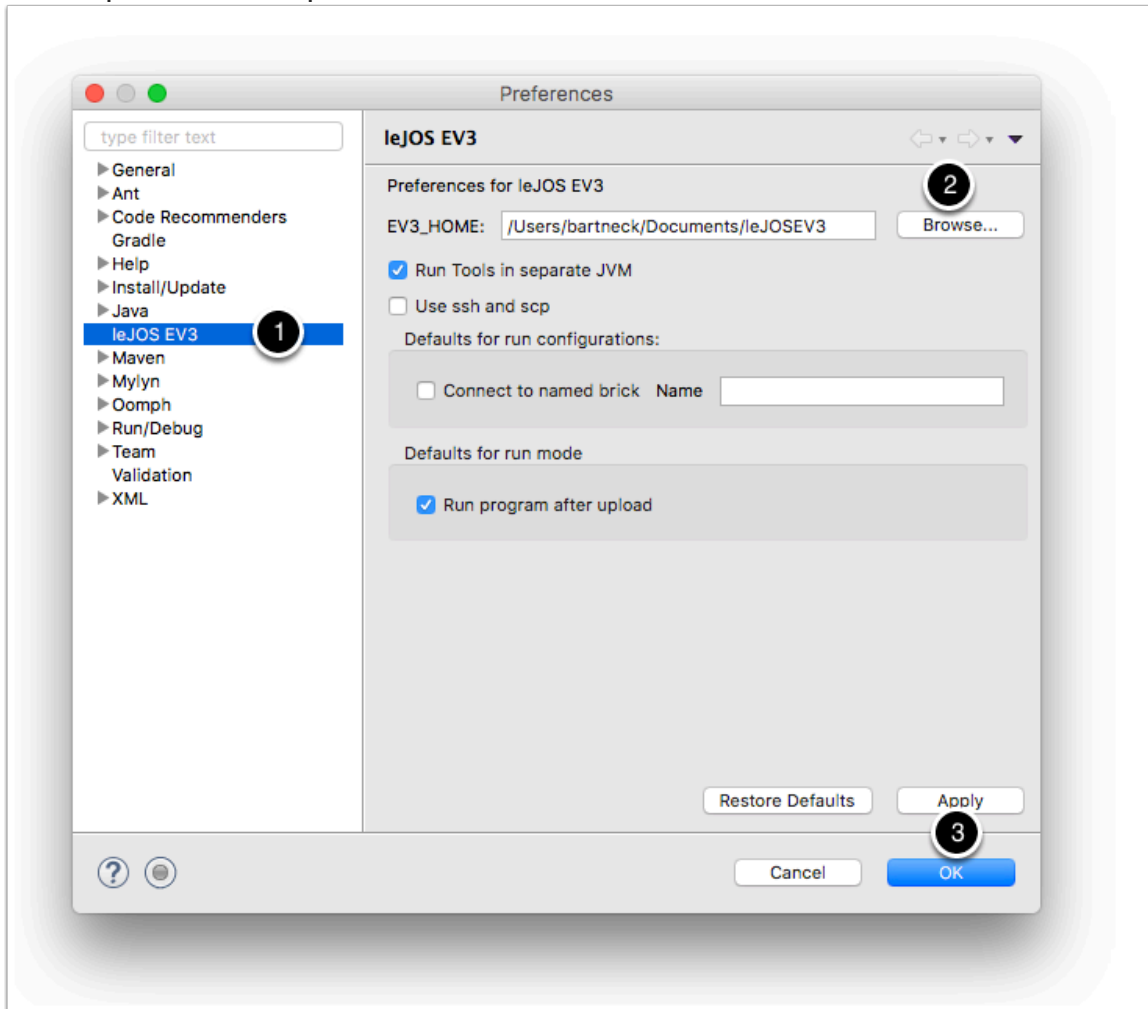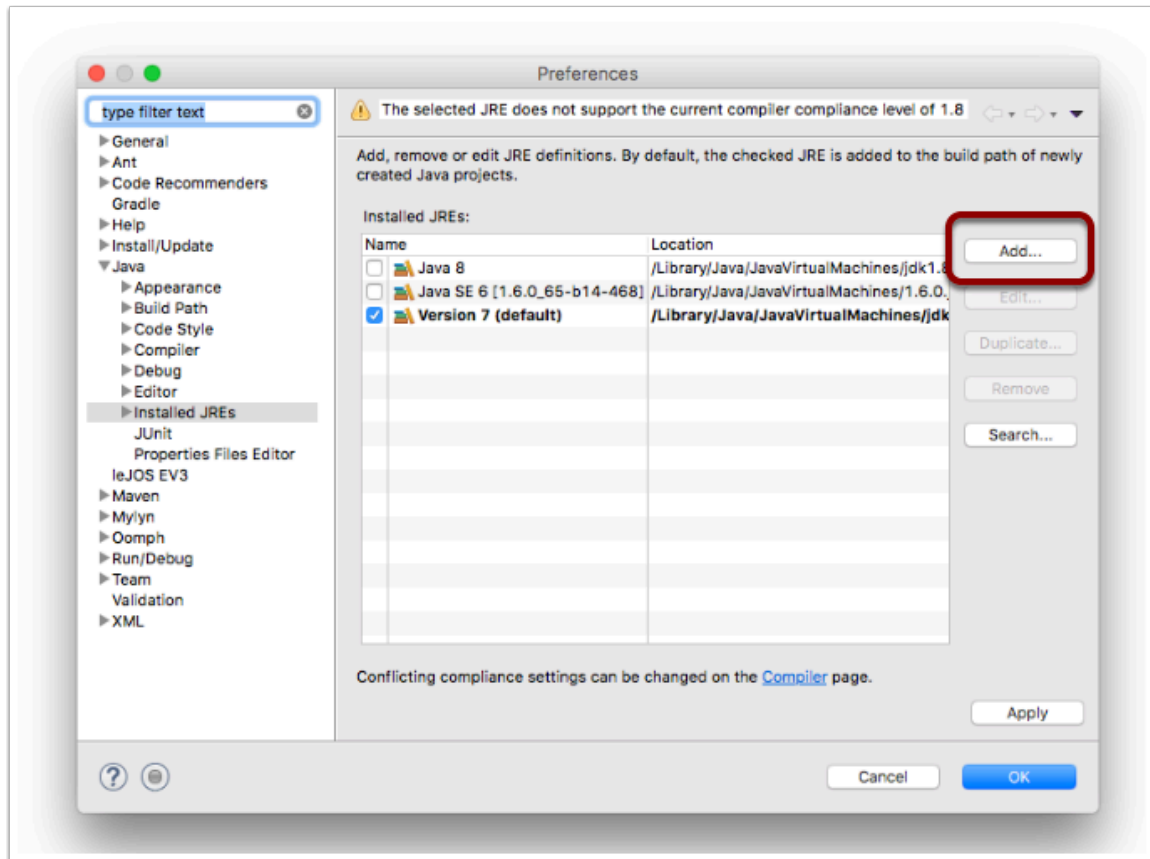
While you are in the Preferences, go to the "Java" tab and then on the "Installed JREs". Use the "Add" button to add any missing JREs to the list. Setup Version 7 as the default, since you will be building your EV3 programs towards that target.

Instructions adapted from : http://www.bartneck.de/2017/06/04/tutorial-on-how-to-install-and-run-java-on-lego-mindstorms-ev3-using-eclipse-on-mac-os-x/