How to Remotely Access Java Tools for EECS 1020

By Steven Castellucci (v2.3, September 2014)

You don't always need to be in the PRISM lab to work on your 1020 assignments. Working on your own computer is convenient if the lab is busy, closed, or if you live far from the University. To do so, you must first install software on your computer. Which software you install depends on how you wish to work:

- Using an Internet Connection [Windows] [OS X] [Linux]

- Working Offline [Windows] [OS X] [Linux] [Transferring Files To and From your EECS Account]

Using an Internet Connection

By using X11 via a high-speed internet connection, you can use the resources of the EECS server remotely.

Windows

Download and install Xming. The latest free version is 6.9.0.31. During installation, make sure to select the options to create desktop icons and associate the `.xlaunch` file extension.
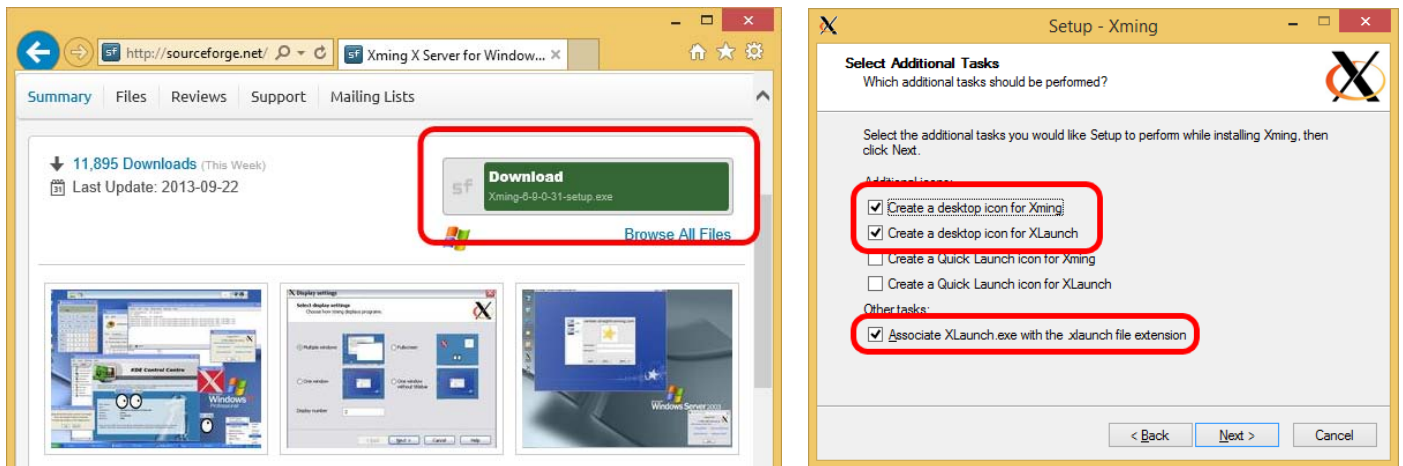
Start the XLaunch program to create a configuration file for the EECS server. Select "Multiple windows", and then click "Next". Select "Start a program", then click "Next". Select "Using PuTTY", enter `red.eecs.yorku.ca` as the server and your username, then click "Next". Click "Next" again. Click "Save configuration" and save the file "EECS1020.xlaunch" to your desktop.
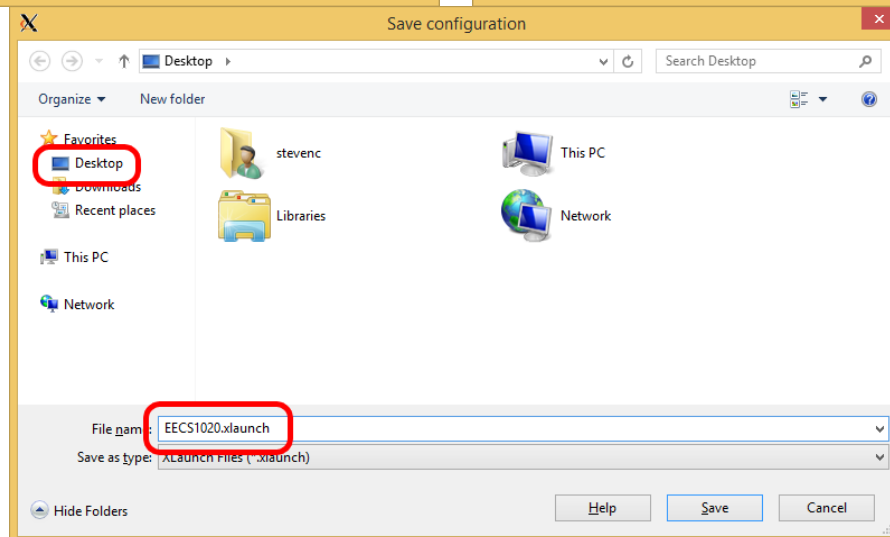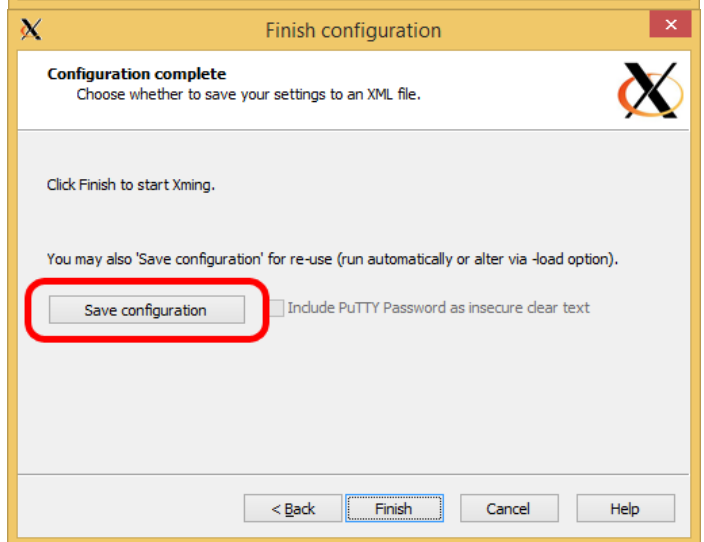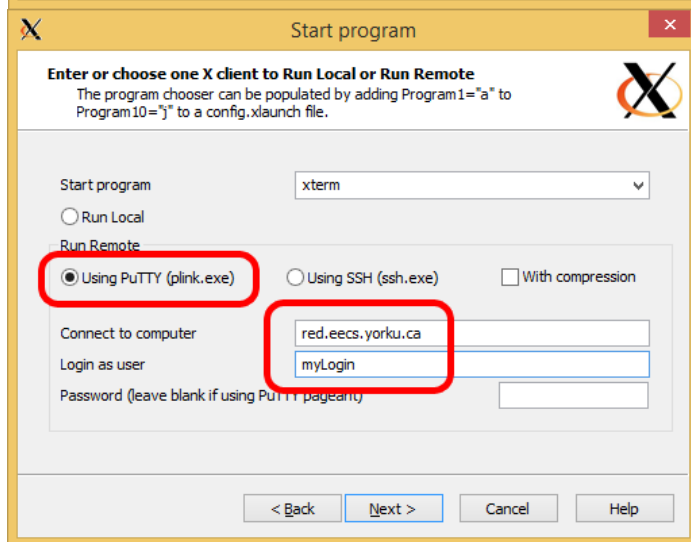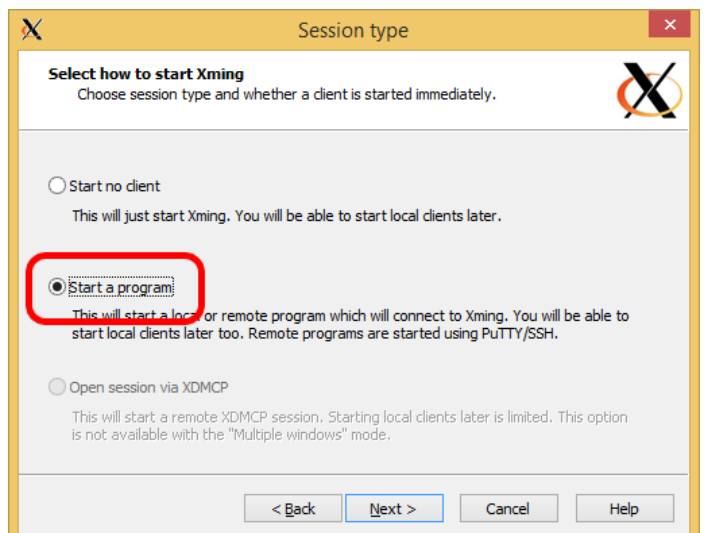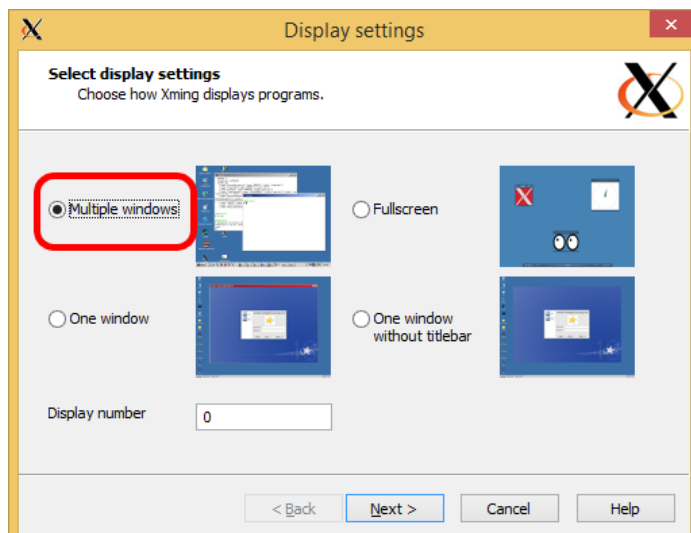
Double-click the `EECS1020.xlaunch` file that you just created. If necessary, give Xming permission to pass through your firewall. Enter your password. You can now start jEdit, and compile and run your programs, just as in the lab.
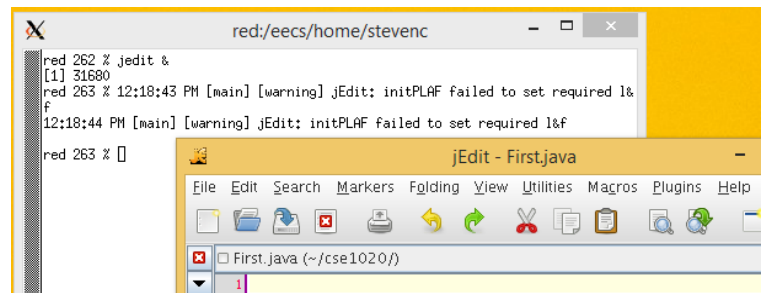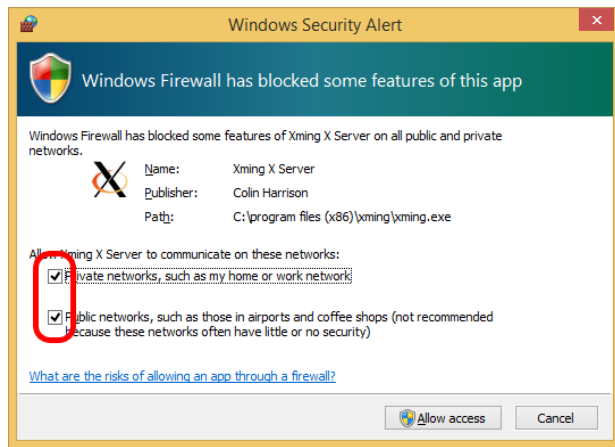
OS X

As of OS X 10.8 (Mountain Lion), Apple no longer includes an X11 application. Open the Utilities group in Applications and double-click "X11". Click "Continue" and install XQuartz after it downloads (approximately 70 MB).

After XQuartz installs, logout and login again. Return to the Utilities folder and double click the XQuartz icon. In the terminal window that appears, type `ssh -X myLogin@red.eecs.yorku.ca`, replacing "*myLogin*" with your EECS username. If you are prompted to save the server's key certificate, type "yes" and press `Enter`.
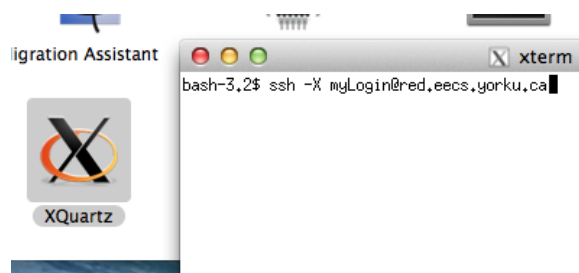

Enter your password when prompted. As you type, nothing will appear on the screen – don't worry. Press `Enter`. You can now start jEdit, and compile and run your programs, just as in the lab.
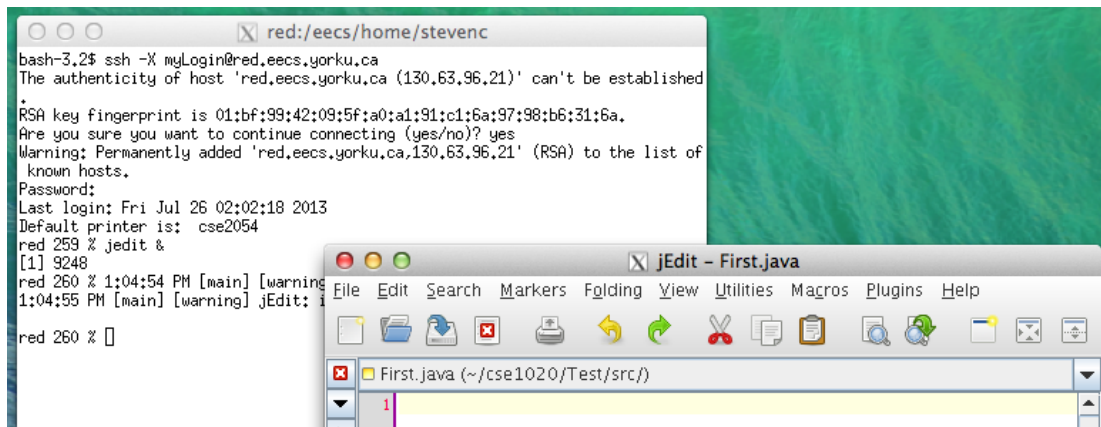
Linux

Open a terminal window and type `ssh -X myLogin@red.eecs.yorku.ca`, replacing "*myLogin*" with your EECS username. If you are prompted to save the server's key certificate, type "yes" and press `Enter`. Type your password when prompted and press `Enter`.
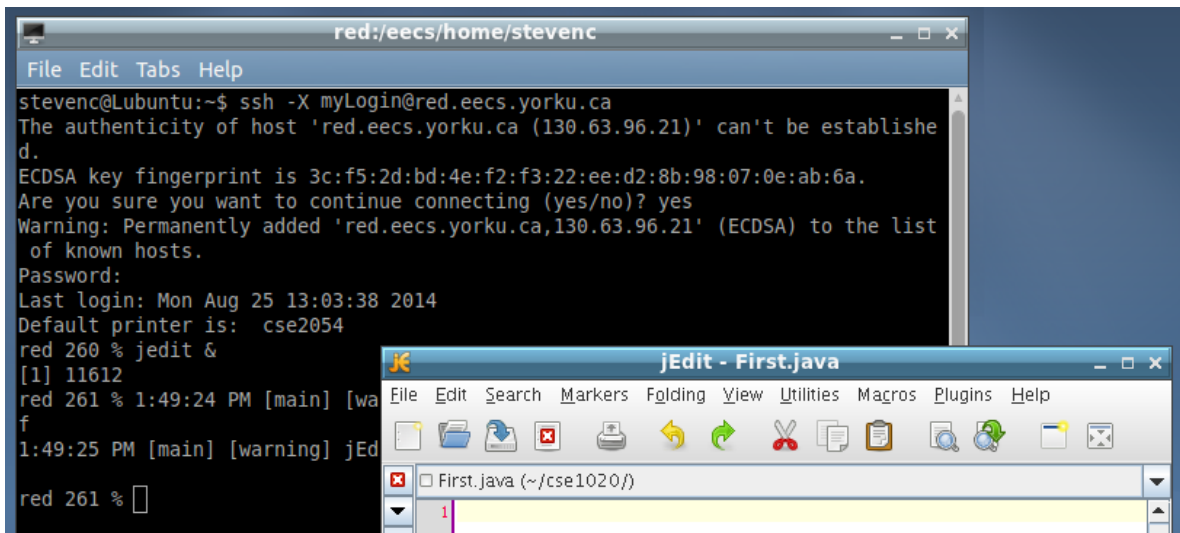

Working Offline

Working offline allows you increased freedom. With a laptop, you could work on you assignments during your commute to and from campus. Working offline is also convenient if you have a slow or problematic internet connection. However, this method can require downloading, installing, and configuring numerous programs.

Windows
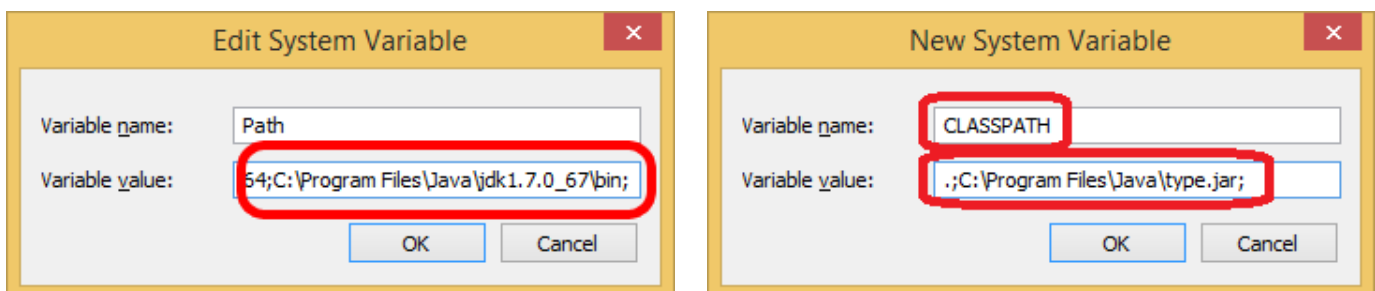
Download and install the [Java SE Development Kit 7 (JDK) from Oracle](). (Version 8 has not yet passed EECS compatibility evaluation.) Use the 64-bit version (x64) if you have a 64-bit version of Windows. Otherwise, use the 32-bit version (x86). During installation, you can accept all the default values.
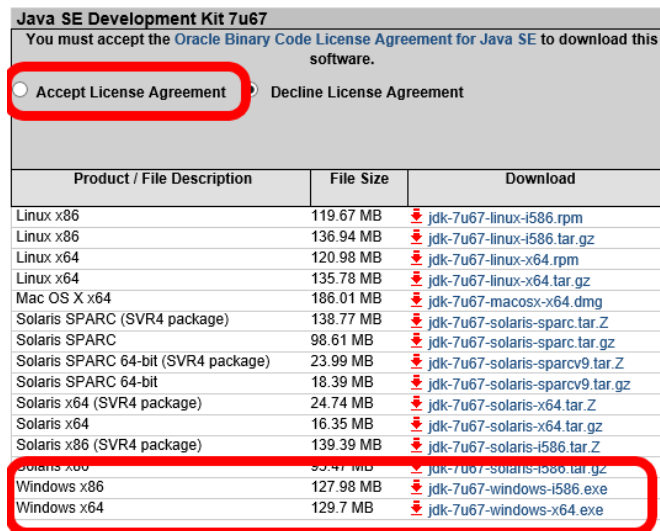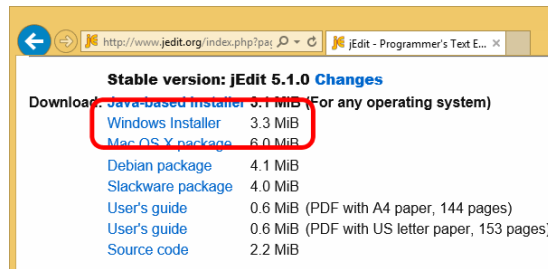
Also download the TYPE package to eCheck your work. Move the `type.jar` file to the `C:\Program Files\Java` folder. Next, open the system properties window by right-clicking the Windows logo in the bottom-left corner. Select "Advanced system settings" and then "Environment Variables".
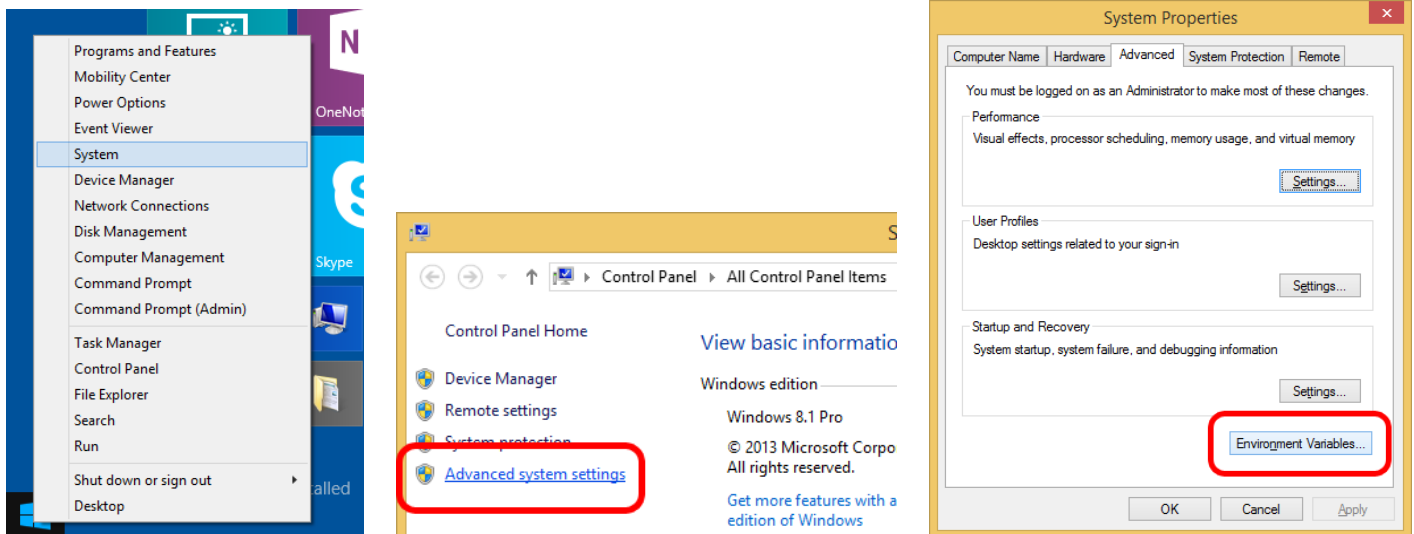
Find and select the system variable "Path". Click on "Edit…". At the end of the existing value, type a semicolon (";"), the path to the Java bin folder (using the above example, `C:\Program Files\Java\jdk1.7.0_67\bin`), then another semicolon. Click "OK". Create a new variable called "CLASSPATH", with `.;C:\Program Files\Java\type.jar;` as the value. Click "OK" three times to close all the dialogs.
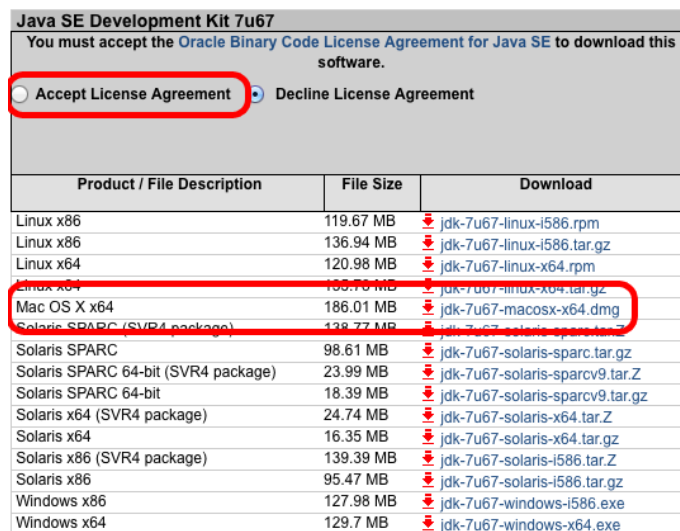
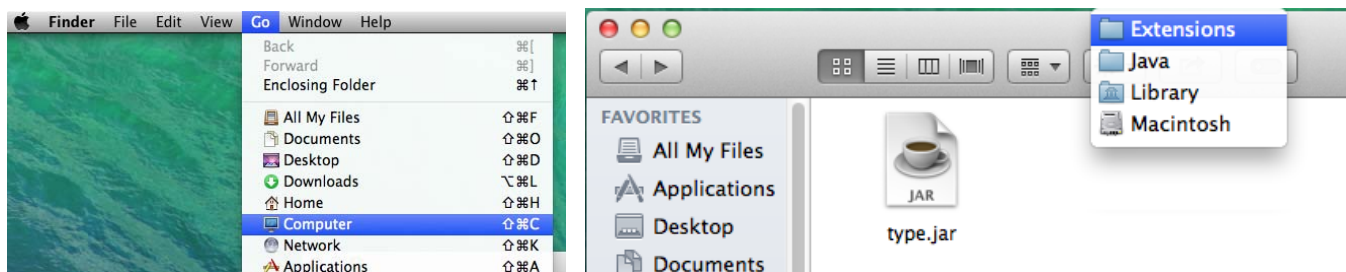Next, download and install jEdit. You can accept the default values during setup, or change them if you wish.

OS X

Download and install the Java SE Development Kit 7 (JDK) from Oracle. (Version 8 has not yet passed EECS compatibility evaluation.)
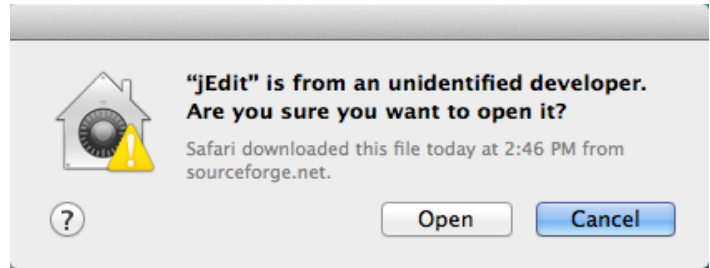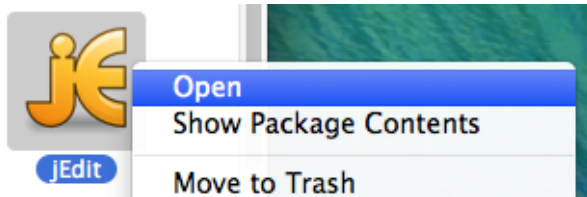

Also download the TYPE package to eCheck your work. Move the `type.jar` file to the `Extensions` subfolder of your JDK installation.

Next, download and install jEdit. Unfortunately, version 5.1 is not compatible with JDK 7 for OS X, so select version 5.2 *pre-release* instead. Double click on the jEdit package and install it by dragging the jEdit icon to the Applications folder.

Because this is a pre-release version, it won't be signed. Ctrl-click the jEdit icon in the Applications folder and select "Open". Click "Open" again to confirm. This only has to be done the first time you run jEdit.

Linux

Download and install the Java SE Development Kit 7 (JDK) from Oracle. Also download the TYPE package to eCheck your work. Save the `type.jar` file in the `jre\lib\ext` subdirectory of your JDK installation.

You will need to update your path environment variable as shown below. The example assumes the JDK was installed in `/usr/lib` (change it as appropriate). If you use the `bash`, `ksh`, or `sh` shell, modify the `~/.bashrc`, `ENV`, or `~/.profile` file, respectively.
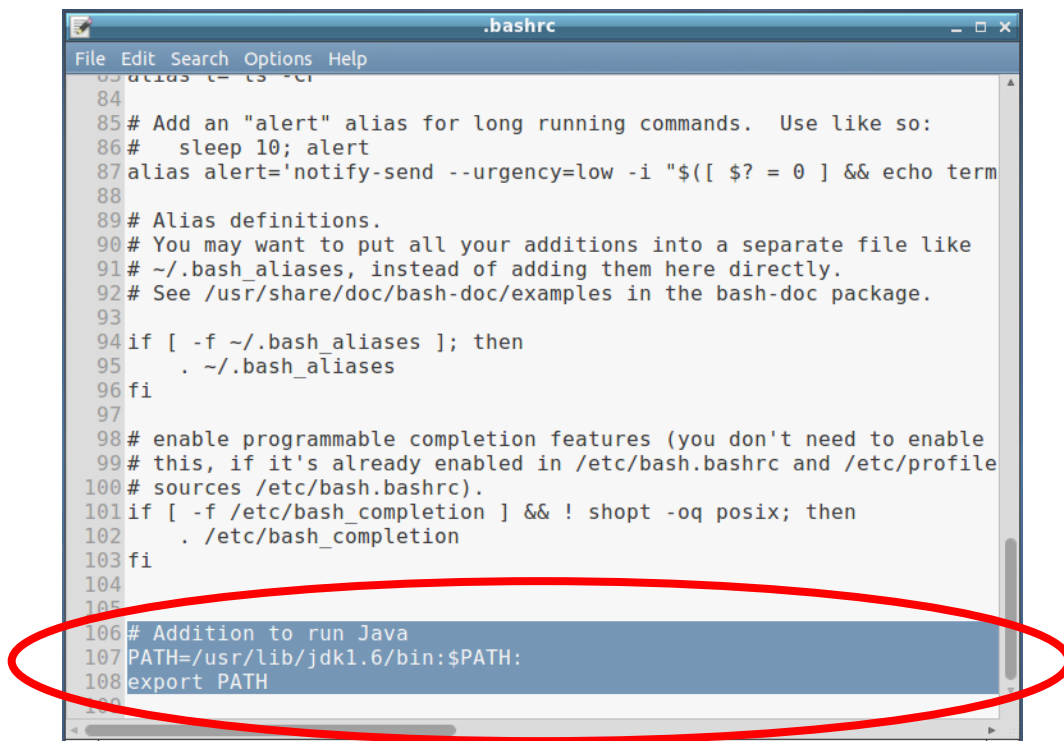
Transferring Files To and From your EECS Account

Download and install an FTP client. FileZilla is a client that is free, popular, and available for Window, OS X, and Linux.
You can connect to the EECS server using the "Quickconnect" bar near the top of the window. The details are as follows:

Host: red.eecs.yorku.ca
Username and Password: (your EECS username and password)
Port: 22

If this is your first time connecting, accept the server's key certificate.

Once connected, you will see files and directories in two panes. The left pane represents your local computer's file system. The right pane represents your EECS account on the server. Select the desired files/directories, right-click them, and select "Upload" or "Download" to transfer the files.