# Download and Installation Instructions
### *for*
# Java JDK Software for Mac OS X

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The CompuScholar *Java Programming* and *Android Programming* courses use the Java Development Kit (JDK) software. This software is a free download specifically created for building Java applications.

This document will guide you through the download and installation procedure for setting up the JDK on your computer.  This software is required for students in order to complete the course.   Teachers who wish to view activity solutions or projects on their own computer are also encouraged to install this software.

## Changes to 3rd Party Websites

3rd parties such as Oracle, Inc. may change their websites without notice.  Your download experience may not match the exact screen shots shown below in minor cosmetic ways.  If you encounter significant changes, please contact us for updated instructions.

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## Let's Get Started!

Note: All highlights below are added for emphasis and are not present on the actual pages.

### Mac Versions

On most installs of Mac OS X, the Java Development Kit (JDK) is already installed. If you don't know what version of OS X you have on your Mac, you can find out by choosing "About this Mac" from the "Apple" menu. You will see a screen like the one below:
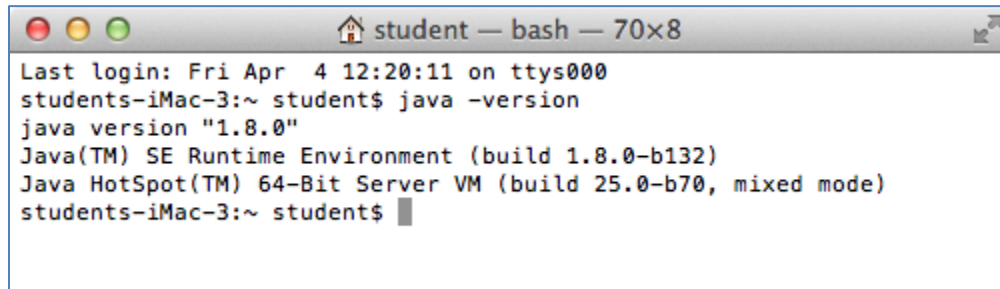


If you have OS X version 10.5.x or 10.6.x, then the JDK is already installed and there is nothing left for you to install. You can open a Terminal window and verify the Java version by following the instructions on the next page.

If you have OS X version 10.7 or later, then the JDK may not be installed. You can follow the steps below to install the JDK on your machine.

## Installing the JDK on Mac OS X 10.7+

Installing the JDK on Mac OS X or greater is extremely simple.  Both the JRE and JDK are always installed as a pair.

First, you need to open the Terminal program by clicking on "Go" → "Utilities" → "Terminal". Then type "java -version" and hit Enter.  If the JDK is already installed, you will see the version:
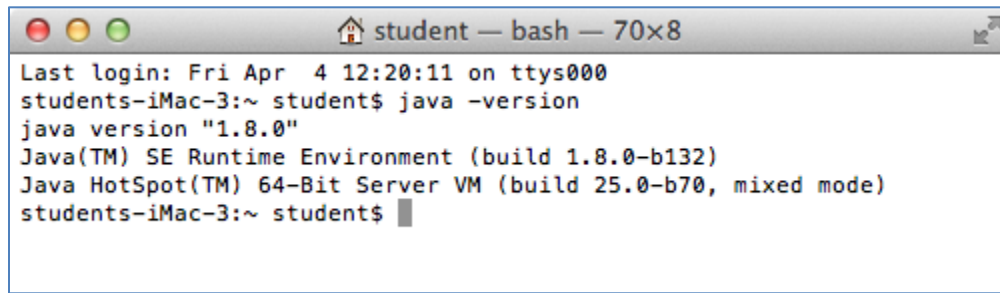


If the JRE and JDK are not installed, you may see a message like this one:



To install the JRE and the JDK, just choose the "Install" button and follow the directions on the screen. Once the install is complete, you can go back to the Terminal program and type in "java -version" again. This time you should see information about the currently installed JRE and JDK:

```
●●●                 ⌂ student — bash — 70×8
Last login: Fri Apr  4 12:20:11 on ttys000
students-iMac-3:~ student$ java -version
java version "1.8.0"
Java(TM) SE Runtime Environment (build 1.8.0-b132)
Java HotSpot(TM) 64-Bit Server VM (build 25.0-b70, mixed mode)
students-iMac-3:~ student$ ▌
```

Note that any recent version of Java (1.8, 1.10, 1.11 or later) will work for this course.  Your actual version of Java may not match the one shown above.  Oracle may also list the versions as 8, 10 or 11.

Now your JDK is installed and ready to use.

## Upgrading Your Mac OS Java Version (from 10.6 or 10.7)

If you have an older version of Java, you may want to upgrade your Java version to a more recent version (e.g. version 10 or 11). This process is fairly simple on Mac OS.

The first step is to find the appropriate Java download for your Mac. The current version can be found at the following location: www.oracle.com/technetwork/java/javase/downloads/index.html.
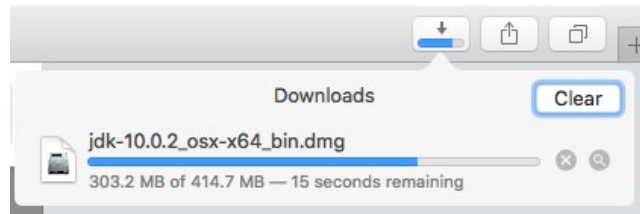
**Java Platform, Standard Edition**

**Java SE 10.0.2**
Java SE 10.0.2 is the latest feature release for the Java SE Platform
Learn more ▸

- Installation Instructions
- Release Notes
- Oracle License
- Java SE Licensing Information User Manual
    - Includes Third Party Licenses
- Certified System Configurations
- Readme

**JDK**
DOWNLOAD ⬇

**Server JRE**
DOWNLOAD ⬇

**JRE**
DOWNLOAD ⬇

Then click on the Download button for the most recent version of the Java Platform (JDK).

You should then be sent to a download screen that looks like the one below.



You will want to choose the file that is designed for your Mac OS. When you click on that file, your web browser will download the program to your computer.



Once the file has completed downloading, find and run the program. You should see the following screen:
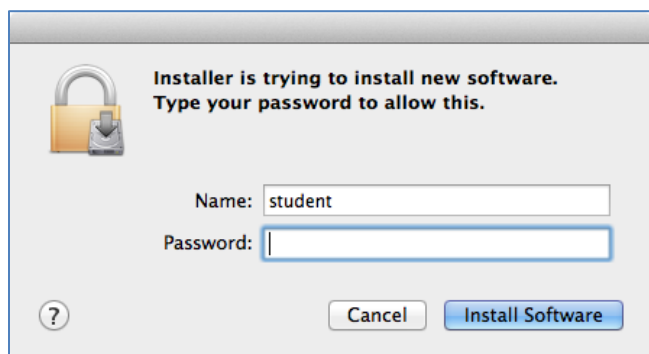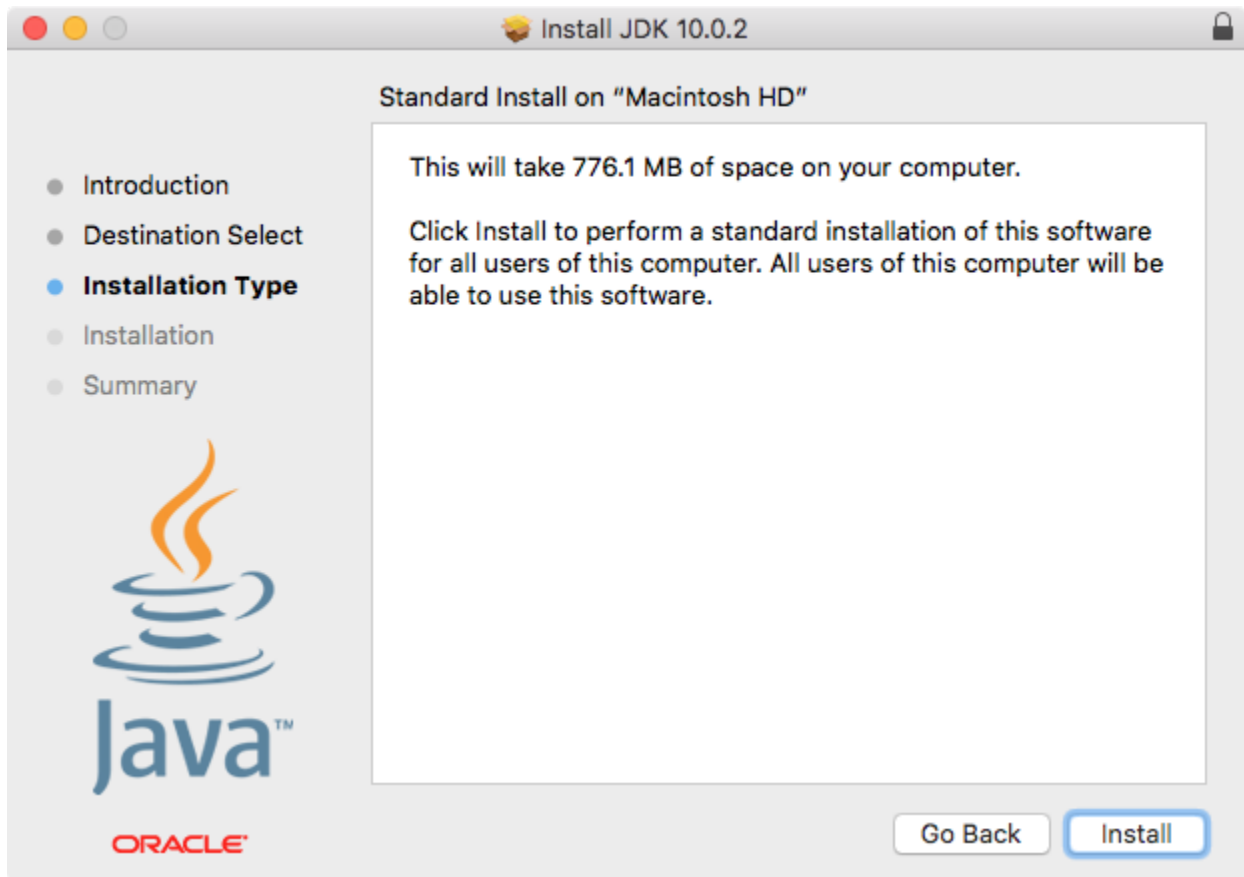
To begin the installation process, double click on the brown and yellow "package" on the screen. The installation will take you through a series of screens to install the new Java version.



The first screen will just tell you about the program that you are installing. Just click on "Continue" here.
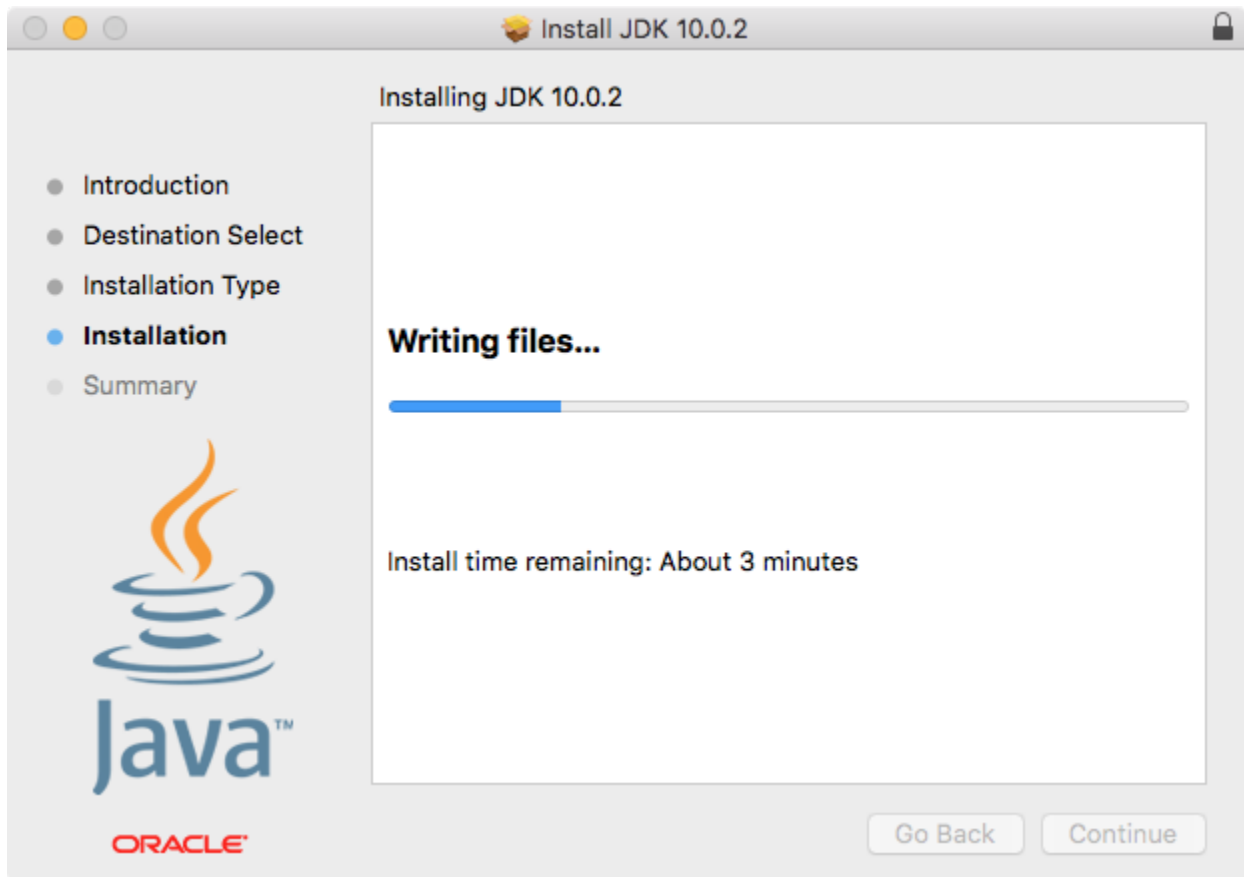
The second screen will tell you how much space will be required to install the Java software on your computer. You can then click on the "Install" button.
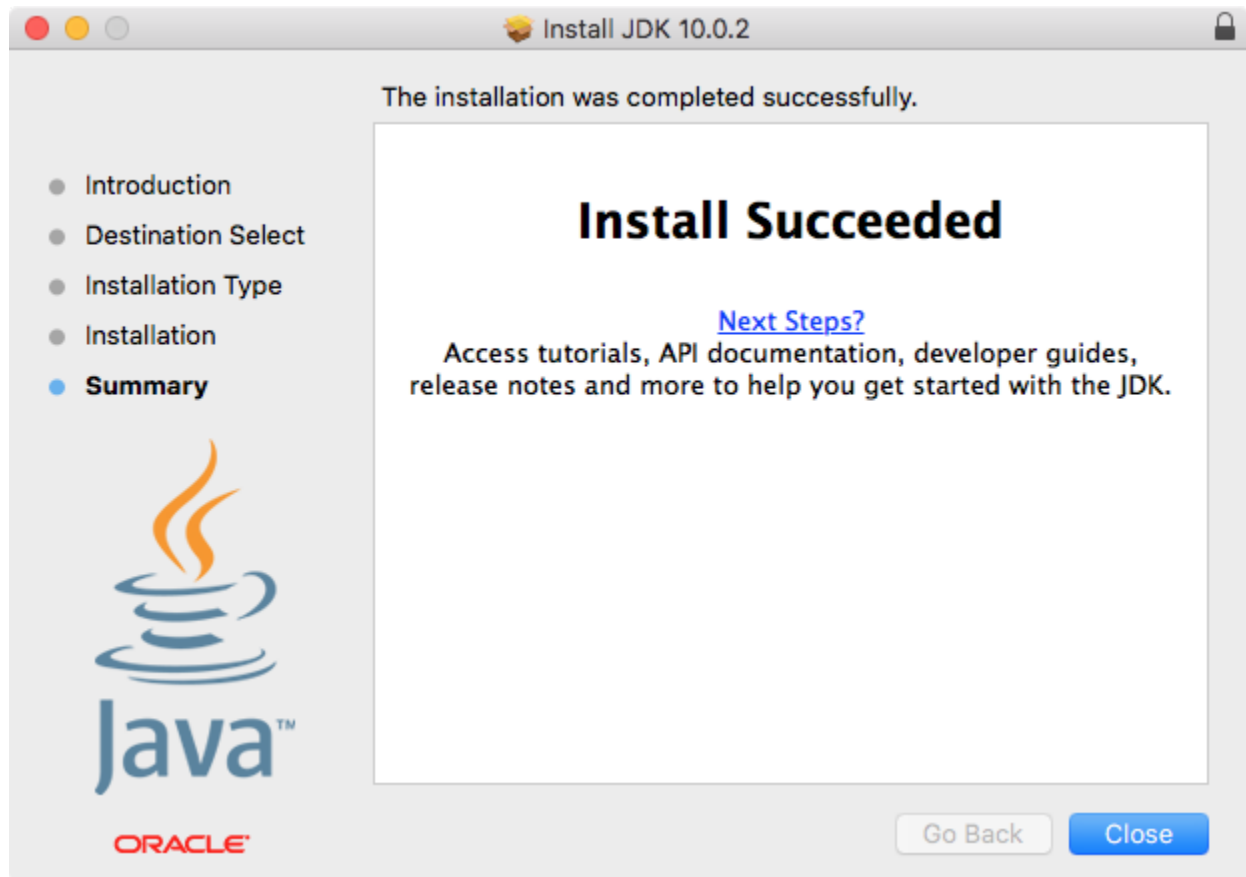


You may be required to give the Administrator username and password in order to install the software. Once you have provided this information, you can click on "Install Software".

The next screen will display progress information as the Java software is installed on your computer.

Finally, the software will let you know the installation process was completed successfully.



To confirm the installation was successful, you can open the Terminal program again and re-type "java -version" and hit Enter. You should now see the current version installed: