

Pre-Android Workshop

Environment Setup

Java JDK Installation

- Goto the following link: <http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>
- You should see a page like the one below...

Oracle Technology Network - Java - Java SE - Downloads

Java SE Development Kit 7 Downloads

End of Public Updates for Oracle JDK 7

This release will be the last Oracle JDK 7 publicly available update. For more information, and details on how to receive longer term support for Oracle JDK 7, please see the [Oracle Java SE Support Roadmap](#).

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications, applets, and components using the Java programming language.

The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

Looking for JavaFX SDK?
JavaFX SDK is now included in JDK 7 for Windows, Mac OS X, and Linux x86/x64.

See also:

- [Java Developer Newsletter](#) (tick the checkbox under Subscription Center > Oracle Technology News)
- [Java Developer Day](#) hands-on workshops (free) and other events
- [Java Magazine](#)

[7u79 JDK MD5 Checksum](#)
[7u80 JDK MD5 Checksum](#)

What is the difference between a Java CPU (7u79) and PSU (7u80) release?
Java SE Critical Patch Updates (CPU) contain fixes to security vulnerabilities and critical bug fixes. Oracle strongly recommends that all Java SE users upgrade to the latest CPU releases as they are made available. Most users should choose this release.
Java SE Patch Set Updates (PSU) contain all of the security fixes in the CPUs released up to that version, as well as additional non-critical fixes. Java PSU releases should only be used if you are being impacted by one of the additional bugs fixed in that version.

Visit [Java CPU and PSU Releases Explained](#) for details.

Looking for JDK on ARM?
JDK 7 for ARM downloads have moved to the [JDK 7 for ARM download page](#).

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

☐ Accept License Agreement ☒ Decline License Agreement

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz

Java JDK Installation

- Scroll down until you see the following menu under **Java SE Development Kit 7u79**

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

☐ Accept License Agreement ☒ Decline License Agreement

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

Java JDK Installation

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

☐ Accept License Agreement ☒ Decline License Agreement

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

- Click the “Accept License Agreement” radio button

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

- This field should now look like this

Java JDK Installation

- The option you choose will depend on your system.
- The next few slides will walk you through which option you should choose

Java SE Development Kit 7u79		
You must accept the Oracle Binary Code License Agreement for Java SE to download this software.		
Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.		
Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

Java JDK Installation

Mac Book (Apple Systems)

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

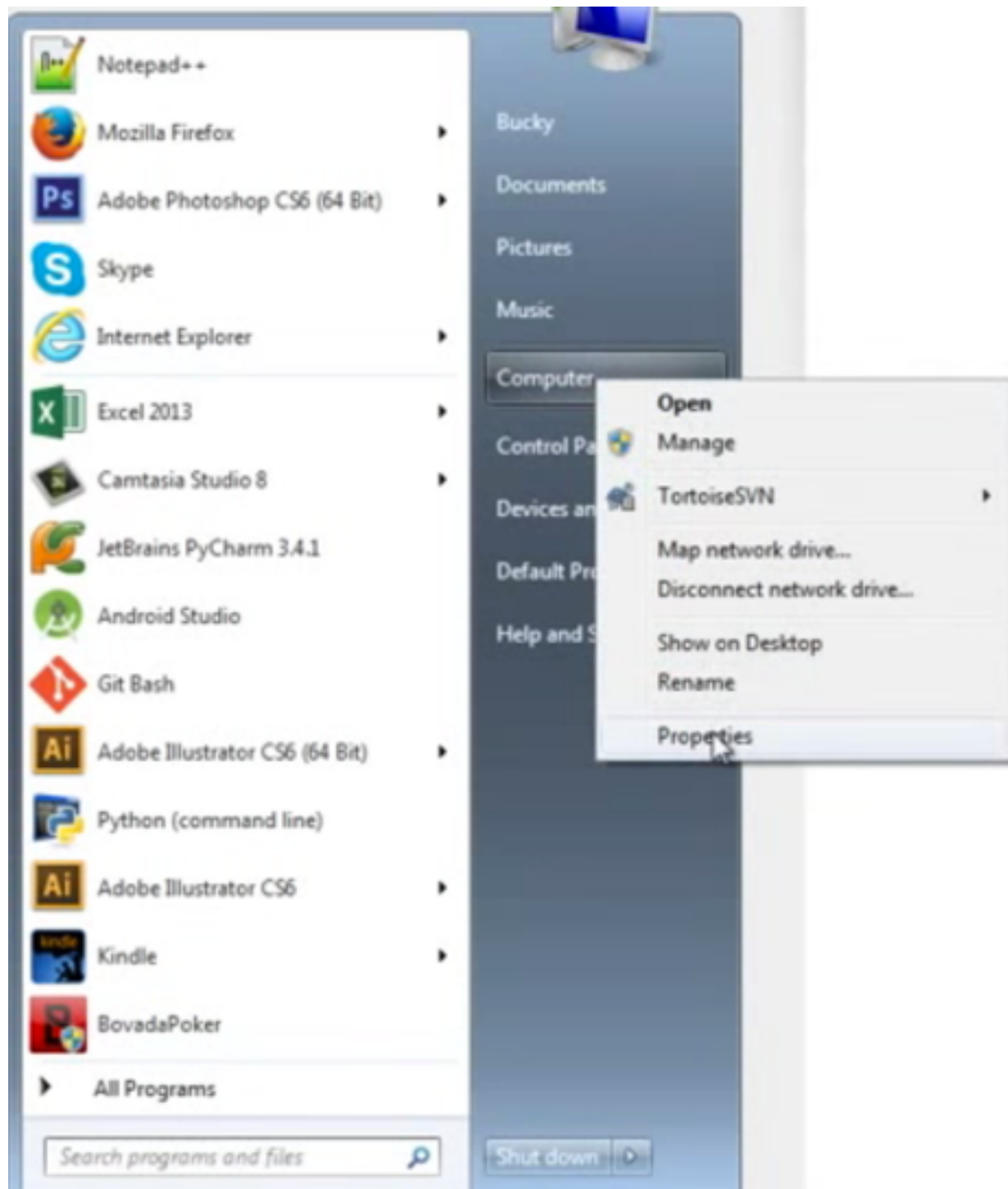
Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	118.78 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

• Click on the “Mac OS X 64” option

Windows Machines

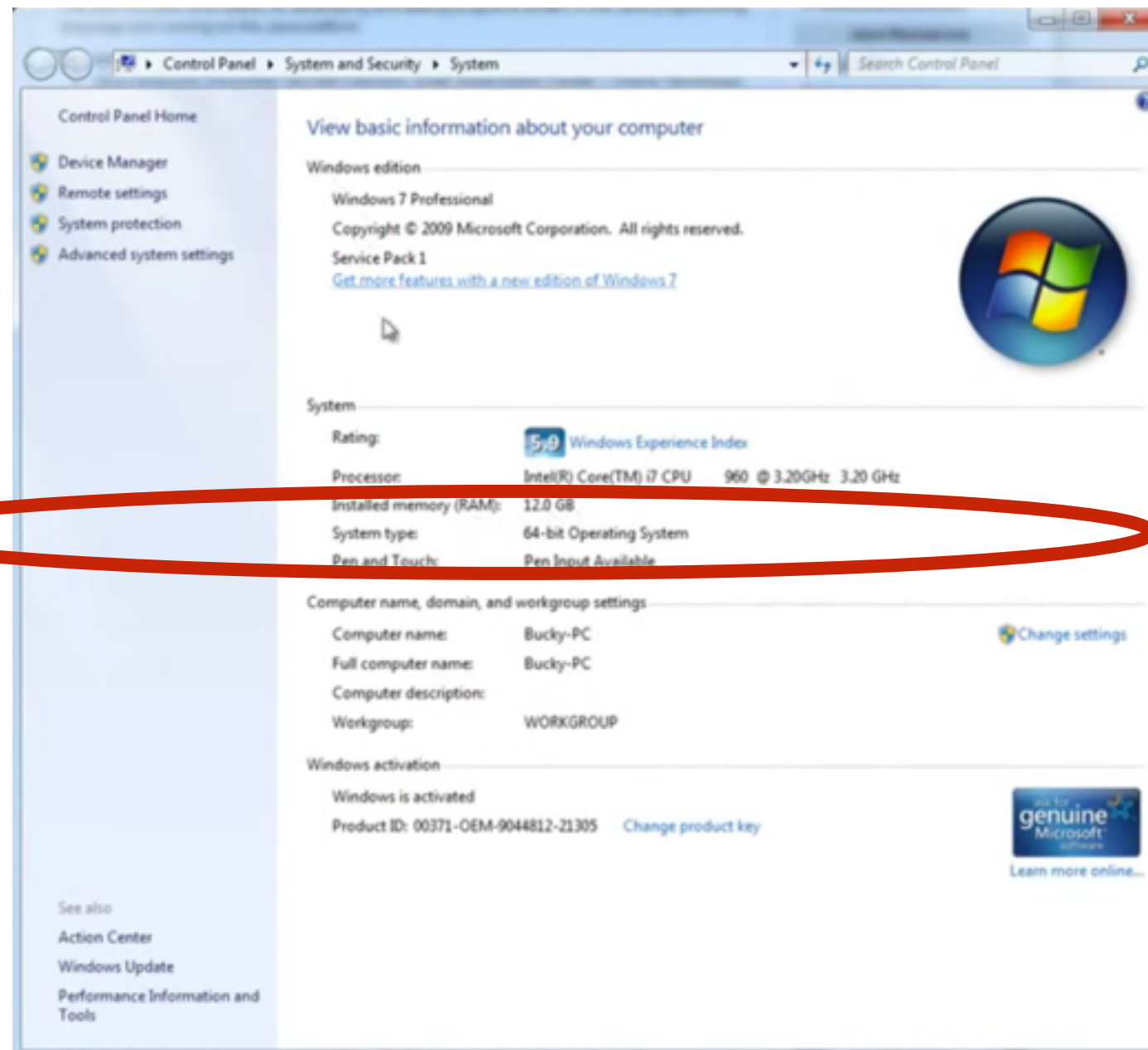
To determine your version of Windows...

1. Press Start
2. Right Click on "Computer"
3. Select "Properties"



Windows Machines

- You will then see a screen such as the one below



- You should see your operating system version in the “System Type” Section

Java JDK Installation

Windows 32Bit Machines

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

- Click on the “Windows x86” option

Java JDK Installation

Windows 64Bit Machines

Java SE Development Kit 7u79

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux x86	130.4 MB	jdk-7u79-linux-i586.rpm
Linux x86	147.6 MB	jdk-7u79-linux-i586.tar.gz
Linux x64	131.69 MB	jdk-7u79-linux-x64.rpm
Linux x64	146.4 MB	jdk-7u79-linux-x64.tar.gz
Mac OS X x64	196.89 MB	jdk-7u79-macosx-x64.dmg
Solaris x86 (SVR4 package)	140.79 MB	jdk-7u79-solaris-i586.tar.Z
Solaris x86	96.66 MB	jdk-7u79-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	24.67 MB	jdk-7u79-solaris-x64.tar.Z
Solaris x64	16.38 MB	jdk-7u79-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	140 MB	jdk-7u79-solaris-sparc.tar.Z
Solaris SPARC	99.4 MB	jdk-7u79-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	24 MB	jdk-7u79-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	18.4 MB	jdk-7u79-solaris-sparcv9.tar.gz
Windows x86	138.31 MB	jdk-7u79-windows-i586.exe
Windows x64	140.06 MB	jdk-7u79-windows-x64.exe

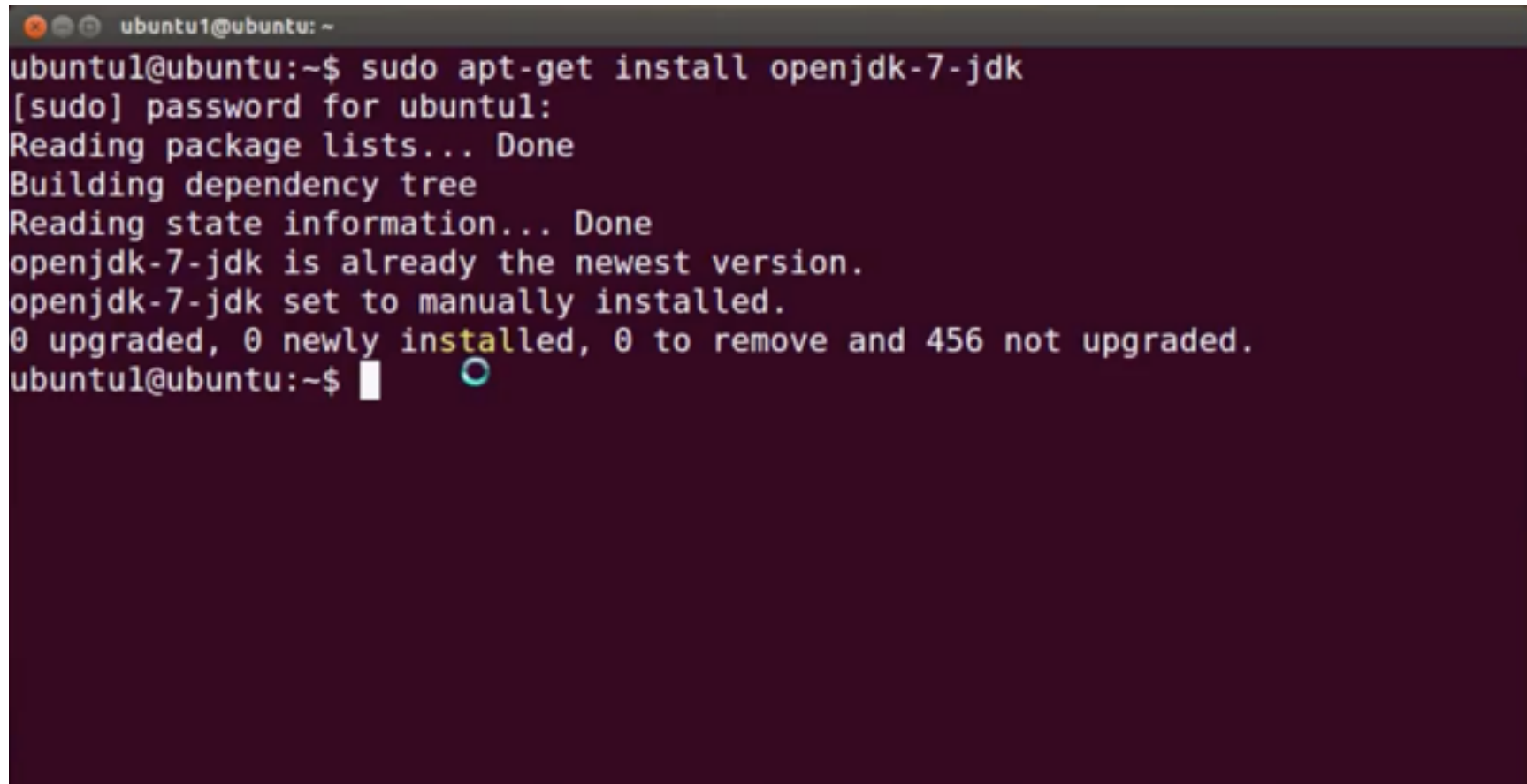
• Click on the “Windows x64” option

Java JDK Installation Linux Machines

- Open terminal and type the following command...

```
sudo apt-get install openjdk-7-jdk
```

- Press Enter

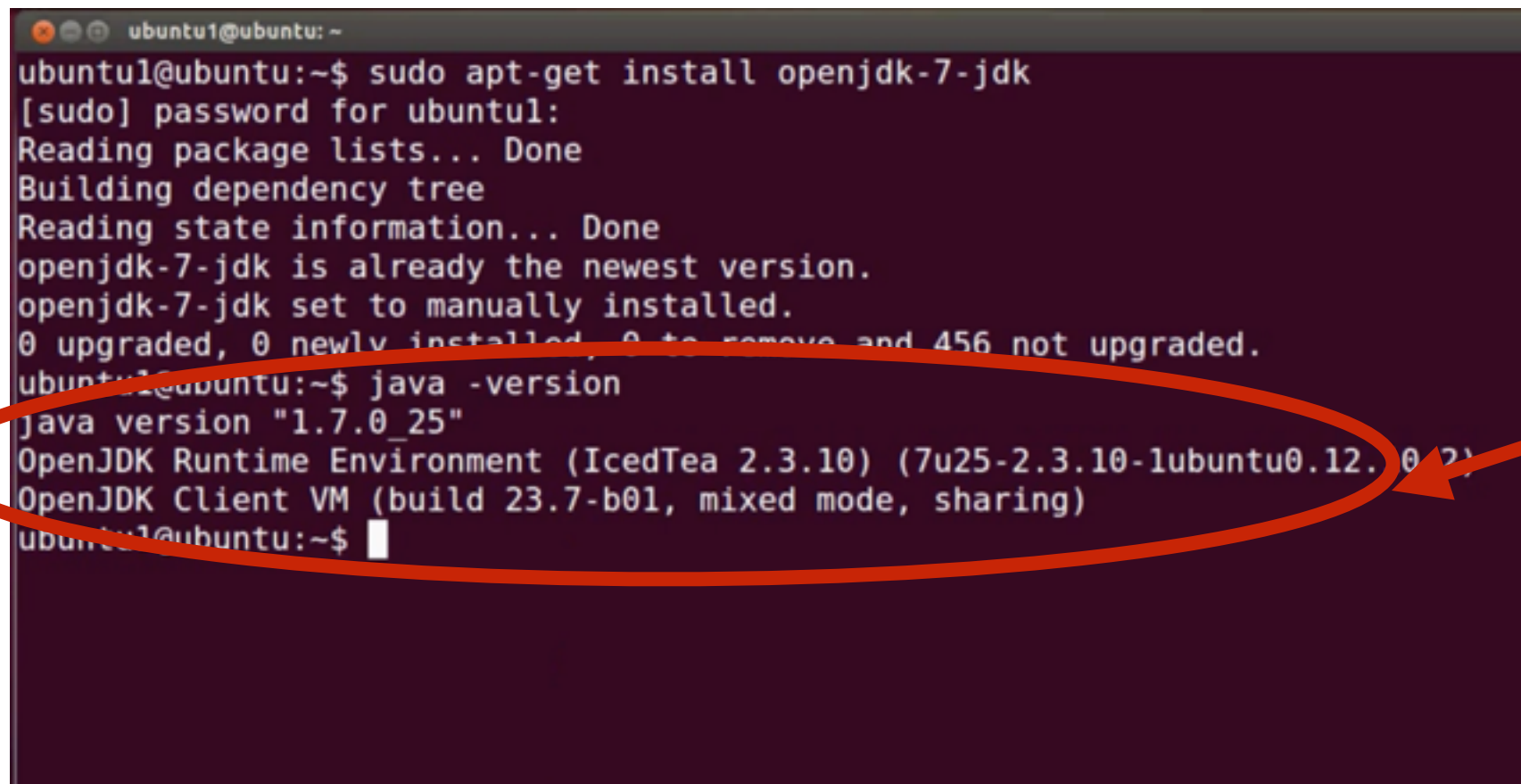


```
ubuntu1@ubuntu: ~  
ubuntu1@ubuntu:~$ sudo apt-get install openjdk-7-jdk  
[sudo] password for ubuntu1:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
openjdk-7-jdk is already the newest version.  
openjdk-7-jdk set to manually installed.  
0 upgraded, 0 newly installed, 0 to remove and 456 not upgraded.  
ubuntu1@ubuntu:~$
```

Java JDK Installation: Linux Machines

- If it is your first time installing the Java JDK, you may be asked if you will allow the data to be stored in your system.
- Just type “y” and press “Enter”
- To check if the Java JDK is installed, type

`java -version`

A terminal window on an Ubuntu machine. The user runs 'sudo apt-get install openjdk-7-jdk'. The terminal shows the package is already the newest version. Then the user runs 'java -version'. The output shows 'java version "1.7.0_25"', 'OpenJDK Runtime Environment (IcedTea 2.3.10) (7u25-2.3.10-1ubuntu0.12.0~2)', and 'OpenJDK Client VM (build 23.7-b01, mixed mode, sharing)'. A red oval highlights the output of the 'java -version' command, and a red arrow points from a text box to this oval.

```
ubuntu1@ubuntu: ~  
ubuntu1@ubuntu:~$ sudo apt-get install openjdk-7-jdk  
[sudo] password for ubuntu1:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
openjdk-7-jdk is already the newest version.  
openjdk-7-jdk set to manually installed.  
0 upgraded, 0 newly installed, 0 to remove and 456 not upgraded.  
ubuntu1@ubuntu:~$ java -version  
java version "1.7.0_25"  
OpenJDK Runtime Environment (IcedTea 2.3.10) (7u25-2.3.10-1ubuntu0.12.0~2)  
OpenJDK Client VM (build 23.7-b01, mixed mode, sharing)  
ubuntu1@ubuntu:~$
```

- Make sure this information is correct

Java JDK Installation: Linux Machines

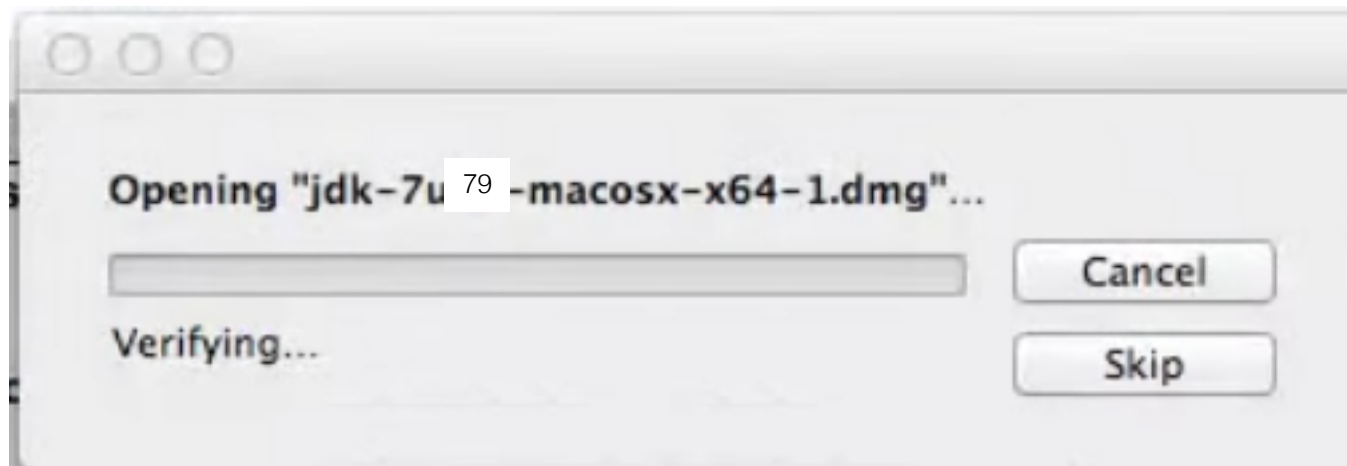
- For video instructions, follow the following link
- Video Link: https://www.youtube.com/watch?v=yBDNVwHw_CU

Java JDK Installation

Windows and Mac Machines

- Go to Downloads folder on your computer and look for the java executable
- On Windows the file will have a .exe extension
- On Mac the file will have a .dmg extension
- Double click on the file

Java JDK Installation Mac Machines



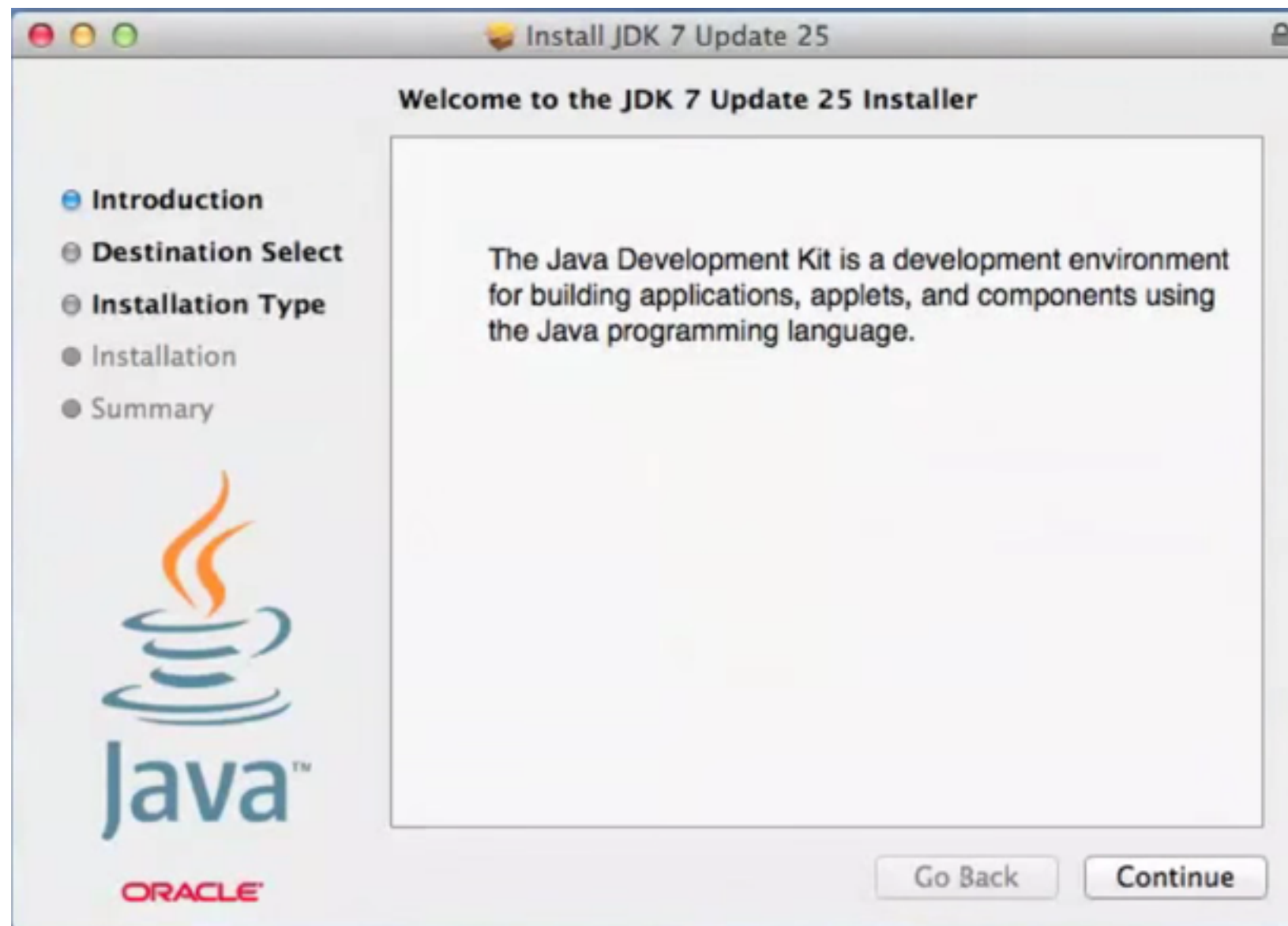
- This screen should pop up



- When finished, The Java Development Kit screen will show up
- Double Click the box icon to install

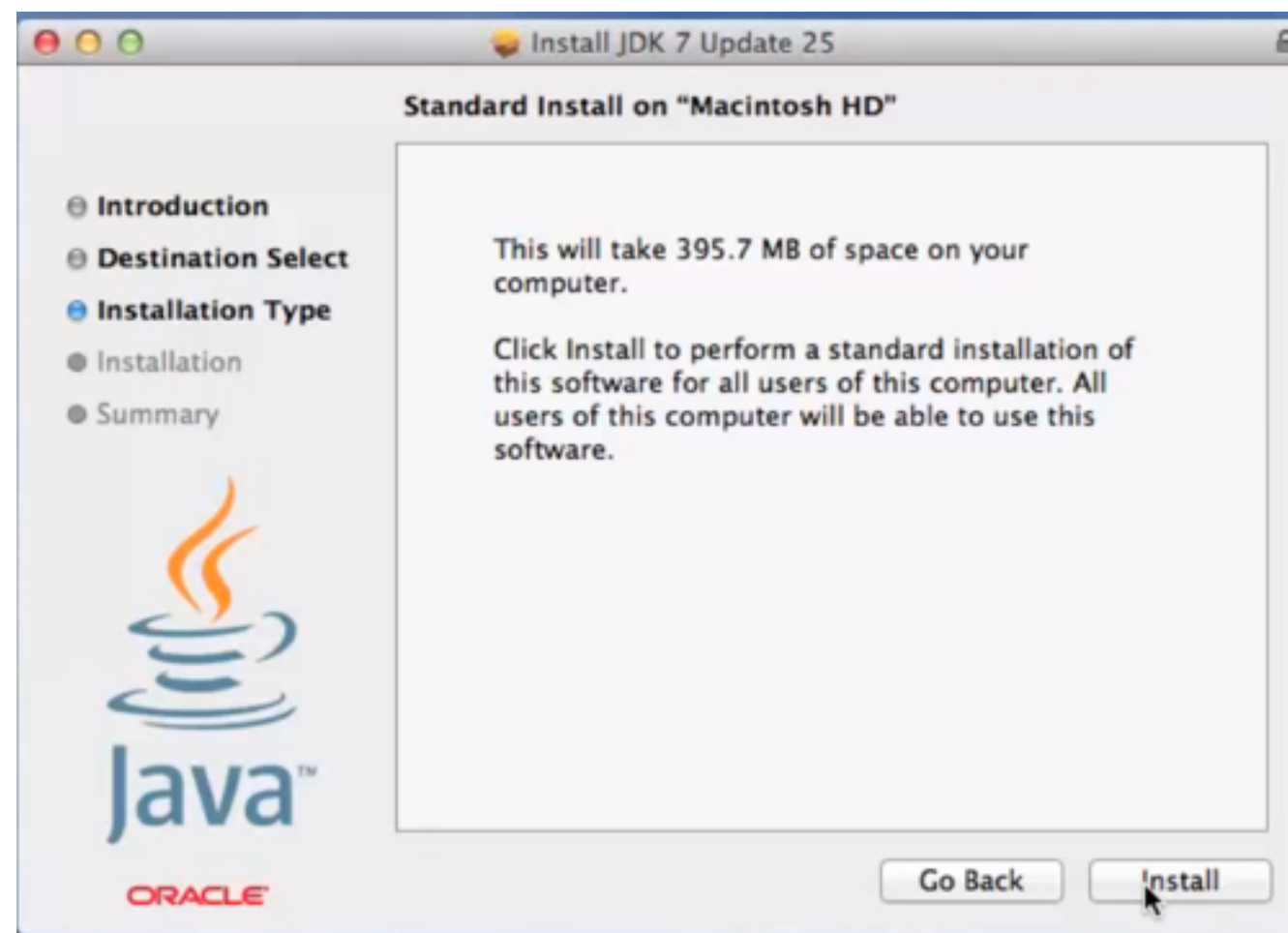
Java JDK Installation Mac Machines

- The installation screen will show up
- Press “Continue”



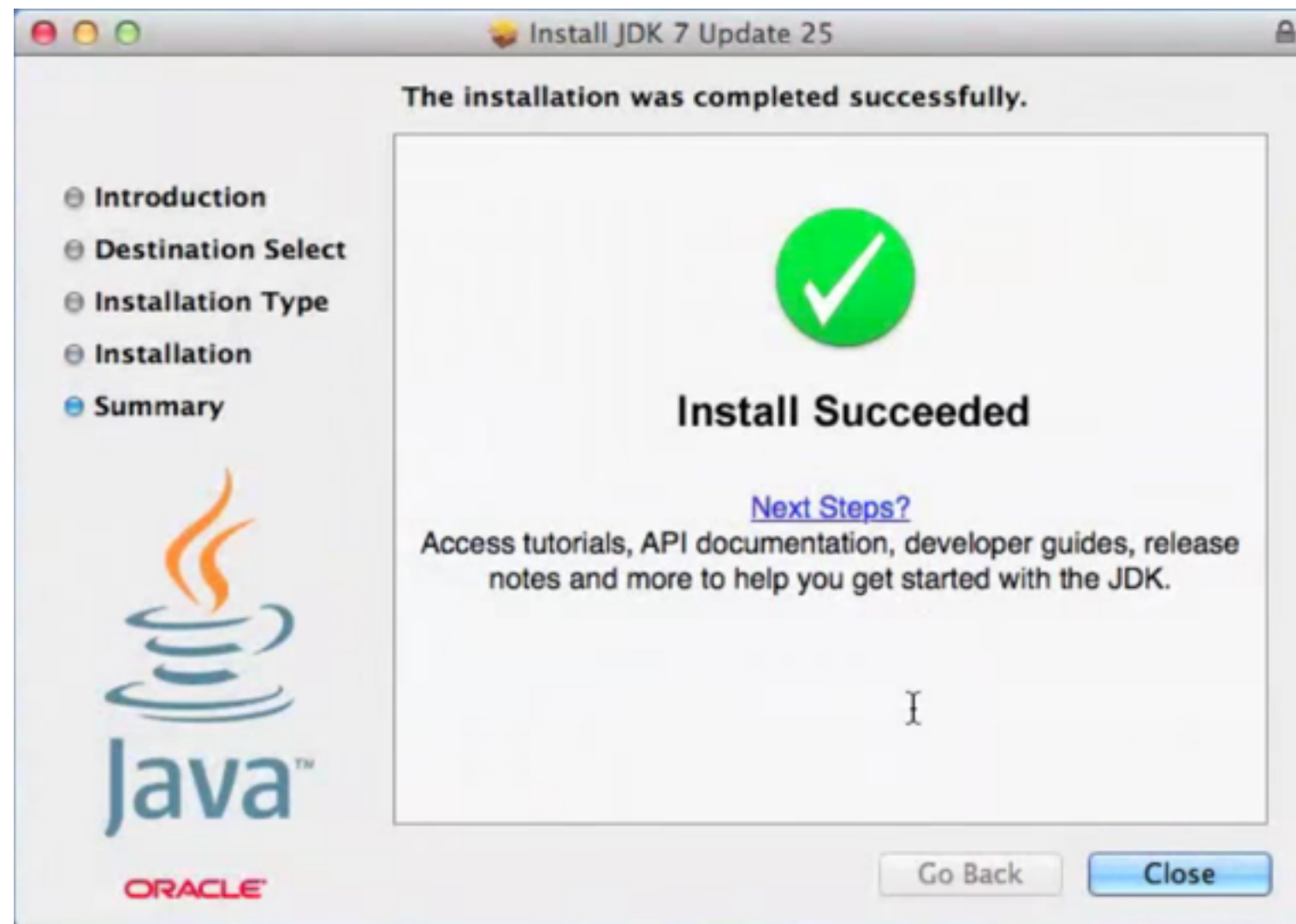
Java JDK Installation Mac Machines

- Press “Install”



Java JDK Installation Mac Machines

- Once you get to this screen, Press “Close”

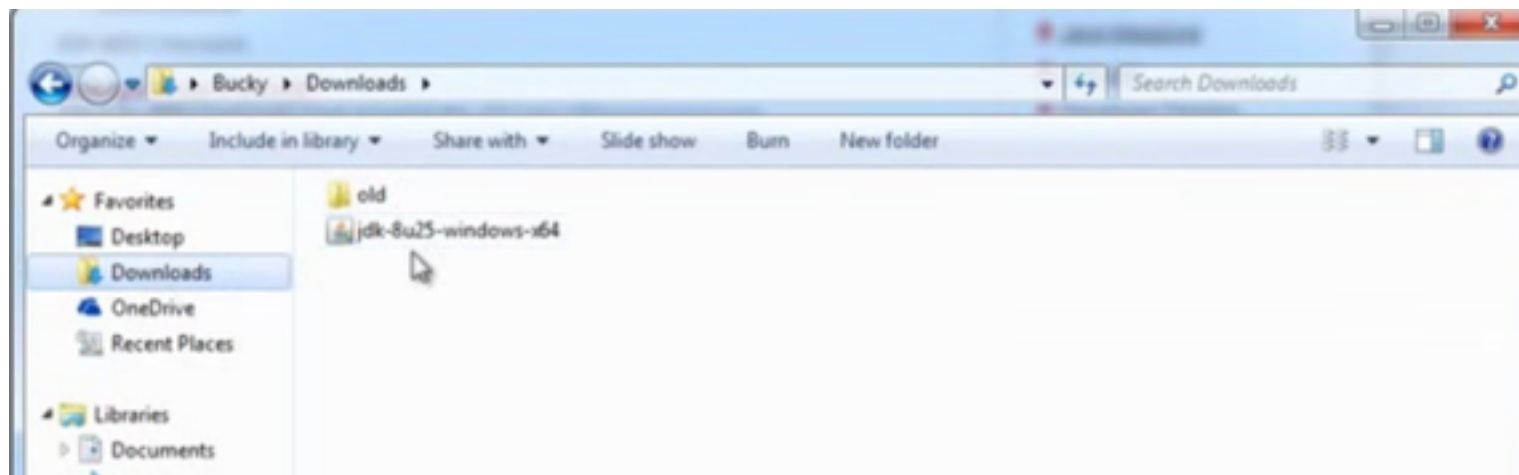


Java JDK Installation Mac Machines

- For video instructions, follow the following link
- Video Link: <https://www.youtube.com/watch?v=5Go7D6rIWxU>

Java JDK Installation Windows Machines

- double click on the .exe file

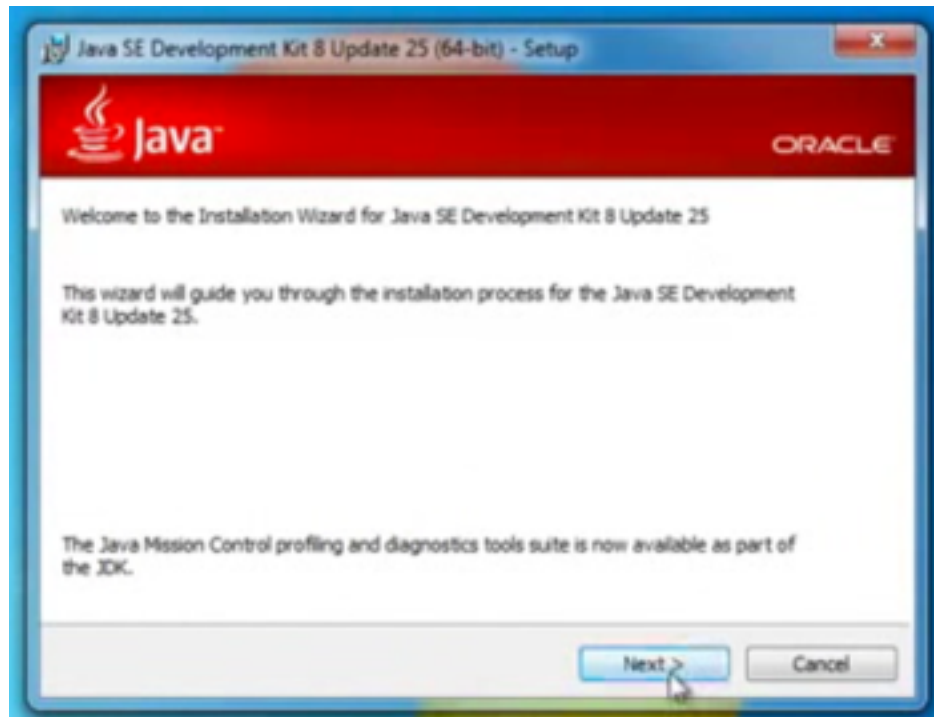


Java JDK Installation Windows Machines

- If you see this pop- up, Press the “Yes” button



Java JDK Installation Windows Machines



- Click “Next”



- Click “Next”

Java JDK Installation Windows Machines



- Wait of few moments for Java to finish installing
- When it is done, press the “Finish” button

Now that the JDK is installed,
lets install Android Studio

Installing Android Studio

- To Download Android Studio choose the link that is compatible with your system, and press the Download button once on the site.
- Mac: <http://developer.android.com/sdk/index.html>
- Windows: <http://developer.android.com/sdk/index.html>
- Linux: <http://askubuntu.com/questions/318246/complete-installation-guide-for-android-sdk-adt-bundle-on-ubuntu> —> Follow steps here

- If you have any questions, please contact me
kay.igwe@gmail.com