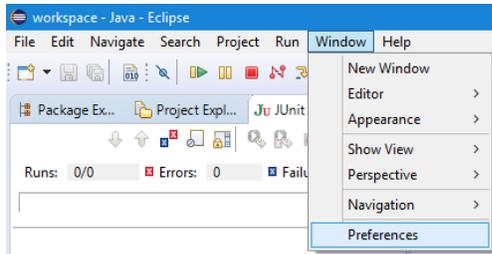


Building Projects in JDK 1.7 (Java 7) using Eclipse

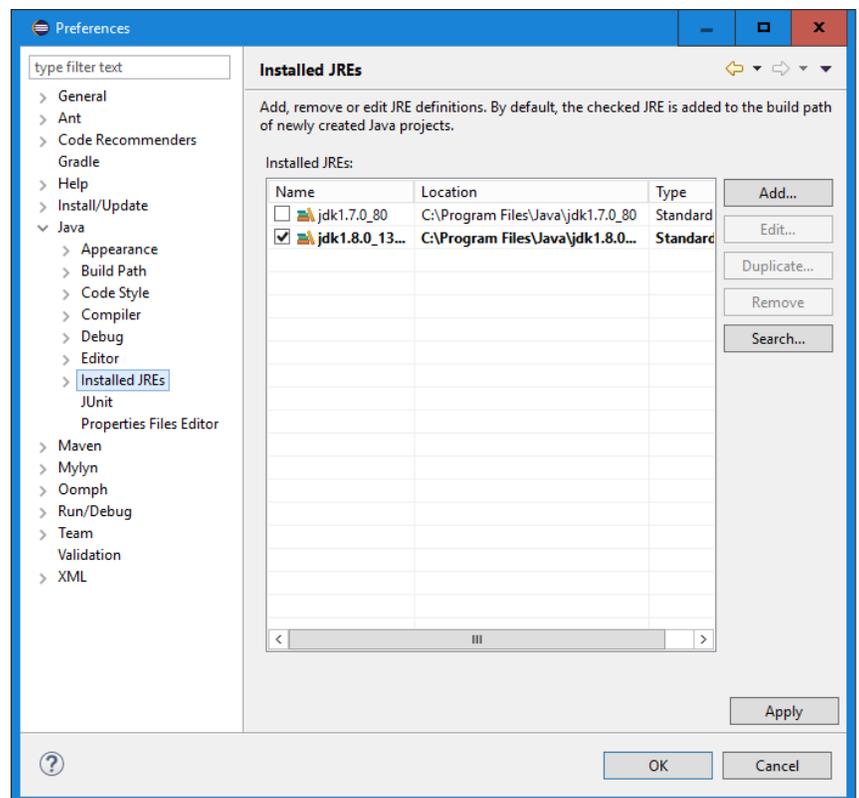
In Eclipse, you can see which version of JDK you have by navigating to Window -> Preferences

(On MAC, Preferences is located under Eclipse, not Window)



Under preferences, you will see which versions of the JDK you currently have installed on your machine. If JDK 1.7 is already installed, simply click the checkbox next to it and press “Apply” to update your JDK.

Following is a section on how to install JDK 1.7 (Java 7) if you do not currently have it installed on your machine.



In order to install JDK 1.7, you'll need to download the version from the Java Archive Page (<http://www.oracle.com/technetwork/java/javase/downloads/java-archive-downloads-javase7-521261.html>).

From here, choose the installation appropriate for your OS and accept the license agreement.

Java SE 7 Archive Downloads

Go to the [Oracle Java Archive](#) page.

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.

WARNING: These older versions of the JRE and JDK are provided to help developers debug issues in older systems. **They are not updated with the latest security patches and are not recommended for use in production.**

For production use Oracle recommends downloading the latest JDK and JRE versions and allowing auto-update.

Only developers and Enterprise administrators should download these releases.

Downloading these releases requires an oracle.com account. If you don't have an oracle.com account you can use the links on the top of this page to learn more about it and register for one for free.

For current Java releases, please consult the [Oracle Software Download](#) page.

For more information on the transition of products from the legacy Sun download system to the Oracle Technology Network, visit the [SDLC Decommission](#) page announcement.

Java SE Development Kit 7u80

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Solaris SPARC 64-bit	18.41 MB	jdk-7u80-solaris-sparcv9.tar.gz
Windows x86	138.35 MB	jdk-7u80-windows-i586.exe
Windows x64	140.09 MB	jdk-7u80-windows-x64.exe

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Java SE Runtime Environment 7u80

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Clicking on any download option will take you to a login screen for Oracle. Oracle now requires that you create an account prior to installing any archived version of Java. Simply create an account and sign in to finish the download.

ORACLE

Sign in

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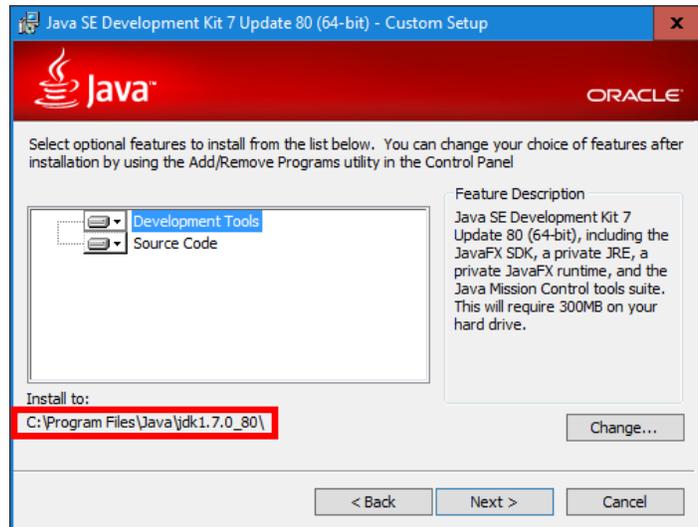
Sign in

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Create Account

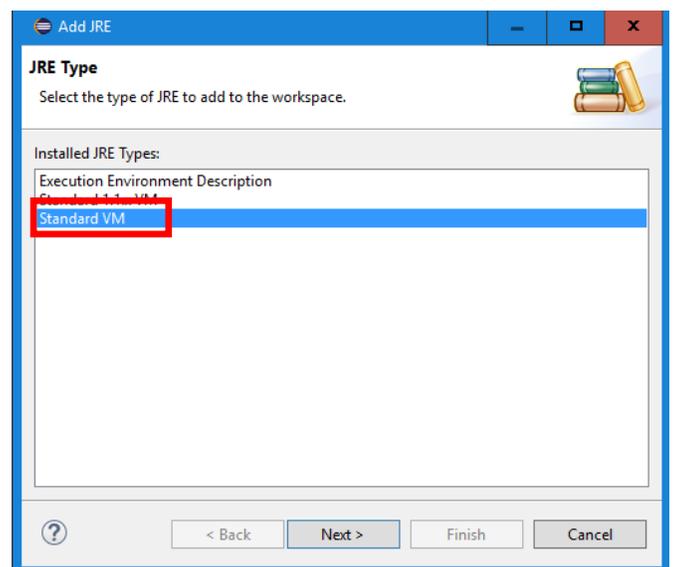
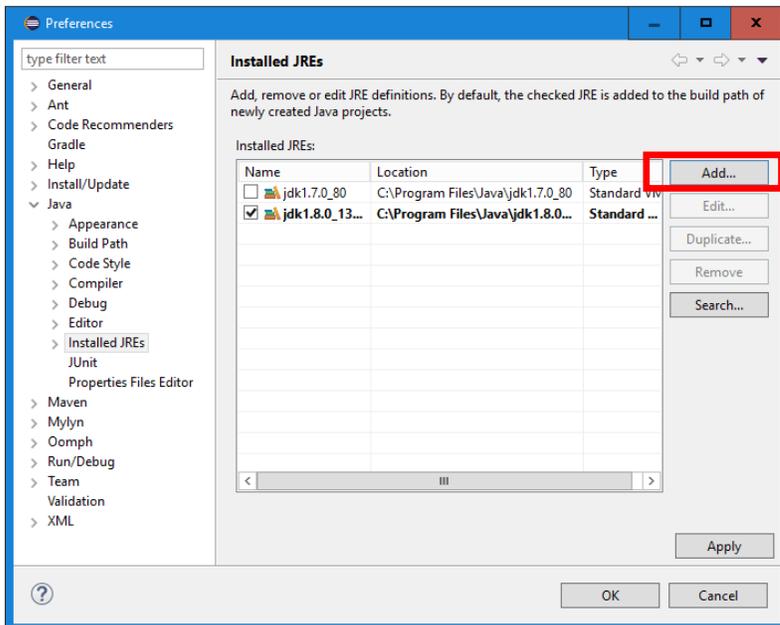
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Save the executable file and run it to start installing JDK 1.7. Keep track of the directory the JDK is installed to as you'll need to navigate to this directory in Eclipse later. Pressing "Next" for all the installation steps and close the installer once it has finished.

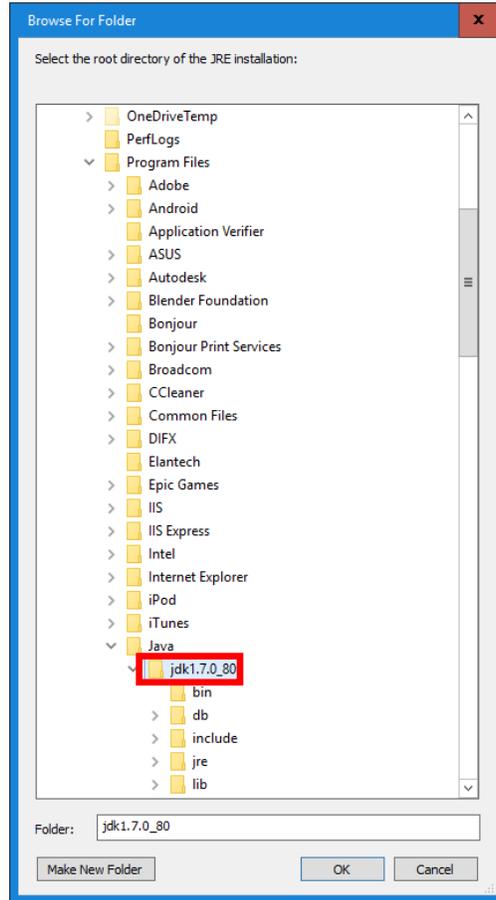
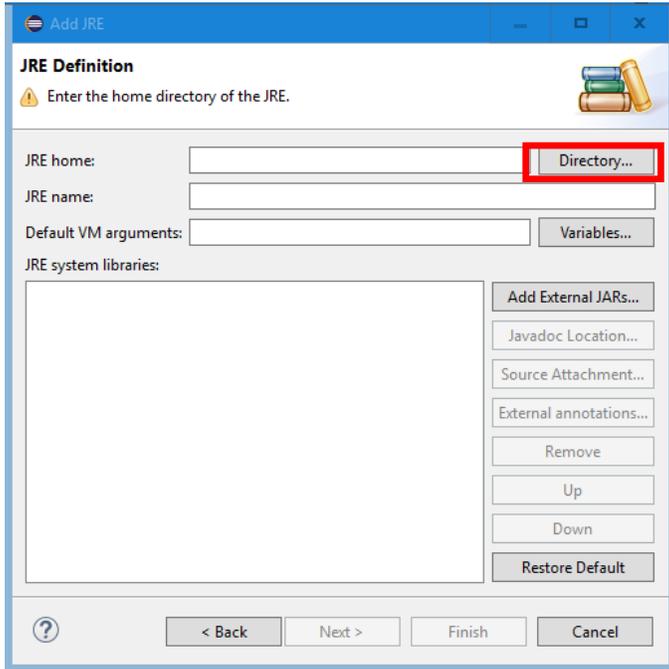


With the new JDK installed, navigate back to the pane in Eclipse where you can select your desired JDK to build your projects (under Preferences window).

To add a new JDK to Eclipse, click the "Add..." button on the right. Choose the "Standard VM" option and press "Next."



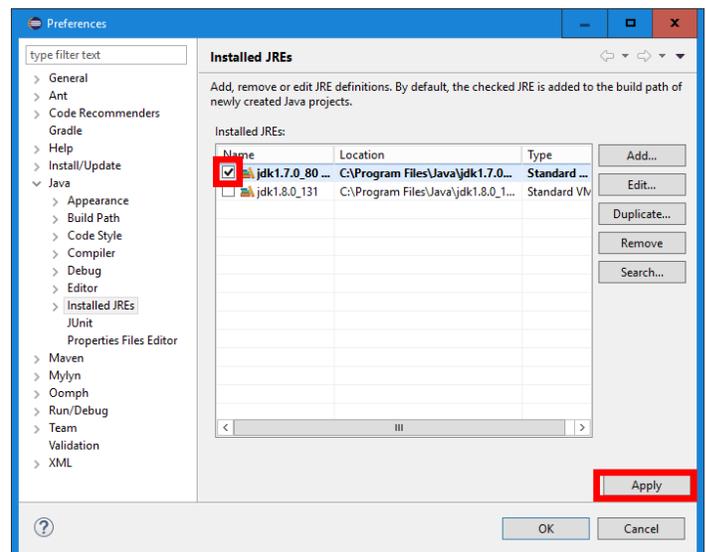
Press the “Directory” button which prompts you to navigate to where you installed the JDK 1.7 on your computer. Select the broadest directory “java1.7.0_80” and press “Ok.”



The pane should populate with libraries now with the JDK successfully selected. Click “Finish” to finalize adding the JDK to Eclipse.

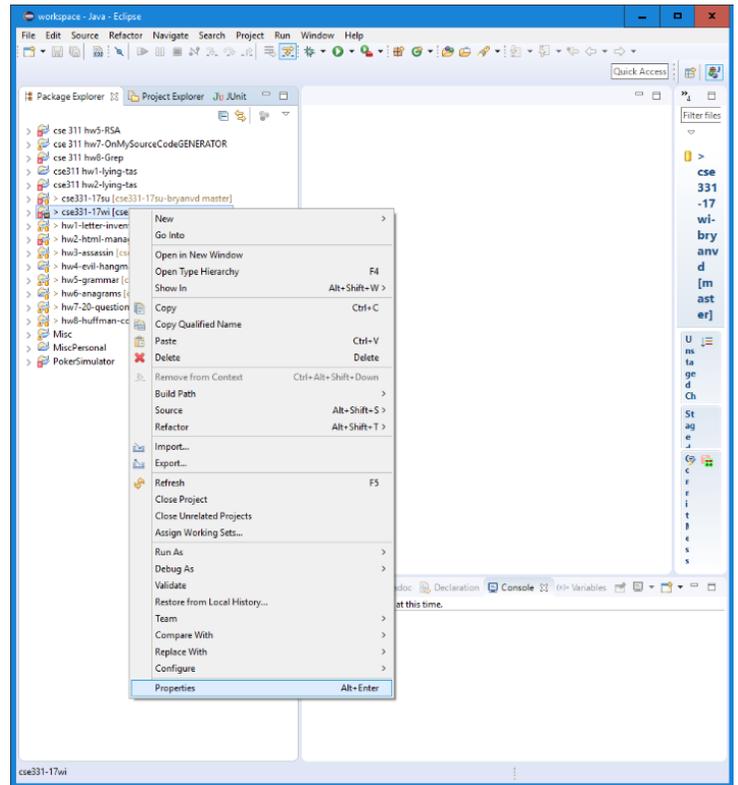
Click the checkbox next to the newly installed JDK to make it the new JDK used for building your projects and hit “Apply.”

Note that updating the JDK on Eclipse may cause your JUnit tests to no longer run correctly (and produce errors when attempting to run them). To restore your JDK back to 1.8, simply go to this Preferences tab, click the checkbox next to JDK 1.8, and Apply the new settings.



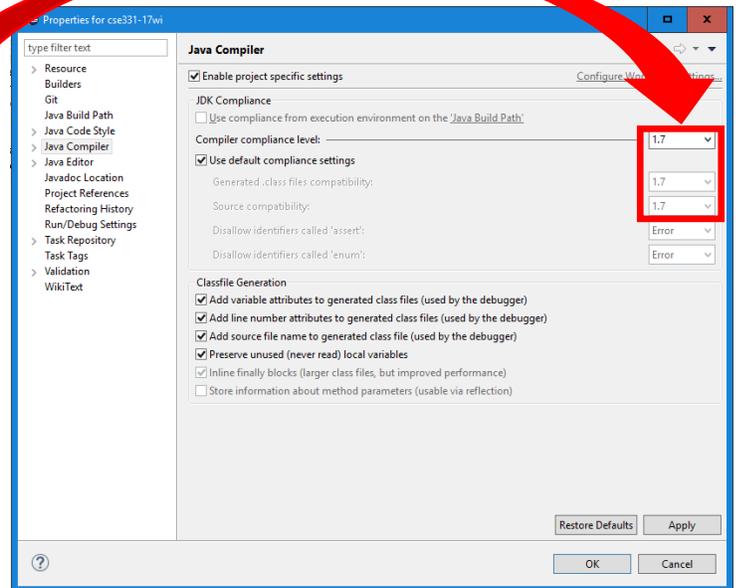
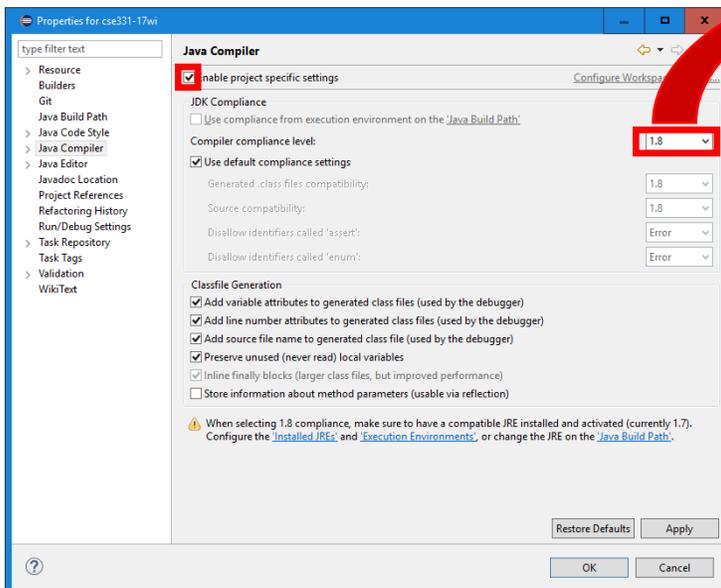
In order to build your Jar in Java 1.7 (Java 7), you'll have to change the project-specific compiler for your cse331 project.

To do this, right click your "cse331" folder and choose "Properties."



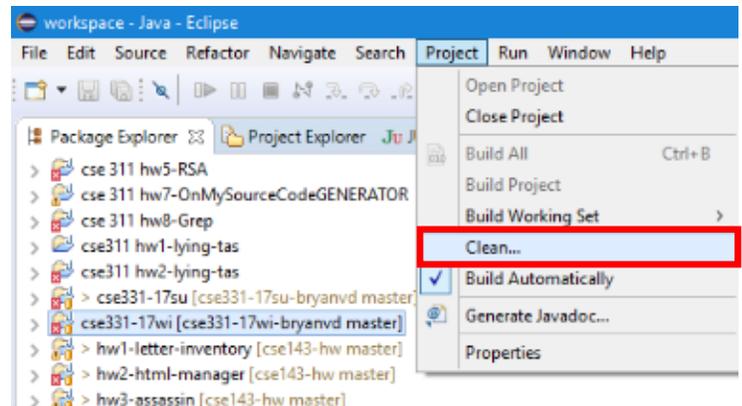
In the pane that appears, click on "Java Compiler" (not the drop-down menu, simply click on "Java Compiler") and click the checkbox to "Enable project specific settings." Then, under the "Compiler Compliance Level" change this from 1.8 to 1.7.

Note that all the settings beneath "Compiler Compliance Level" should also update to be 1.7 now. If not, change these settings manually to make sure they are all JDK 1.7 rather than 1.8.

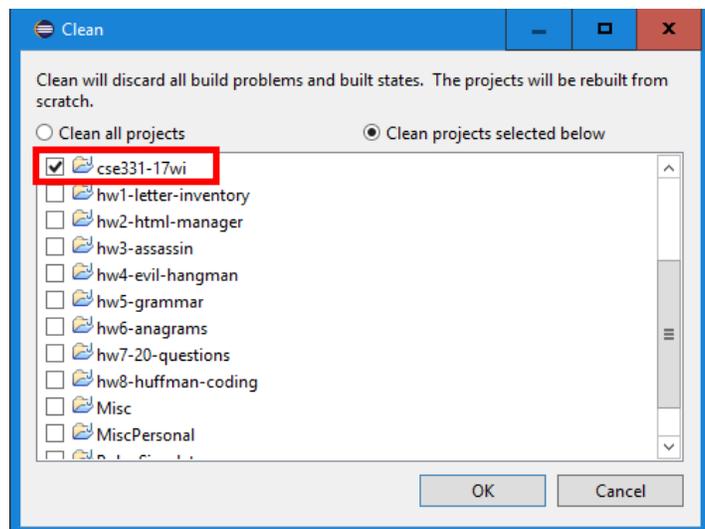


Click “Apply” to save the settings and continue.

To perform a “Clean” build of your project in the new JDK and compiler compliance, at the top of Eclipse click on “Project” then “Clean...”



In the pane that opens, make sure the checkbox adjacent to your “cse331” project is selected then press “Ok” to continue.

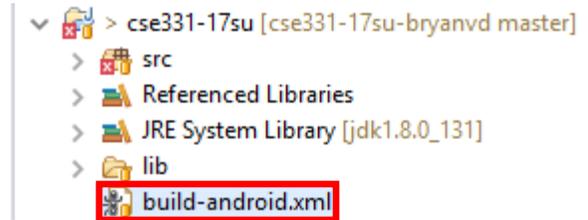


Your project should now be entirely rebuilt using JDK 1.7 (Java 7). You’re now ready to create the Jar for all your projects!

Perform a Git Pull on your repository to download the latest files including the “build-android.xml” file to create a Jar for this assignment.

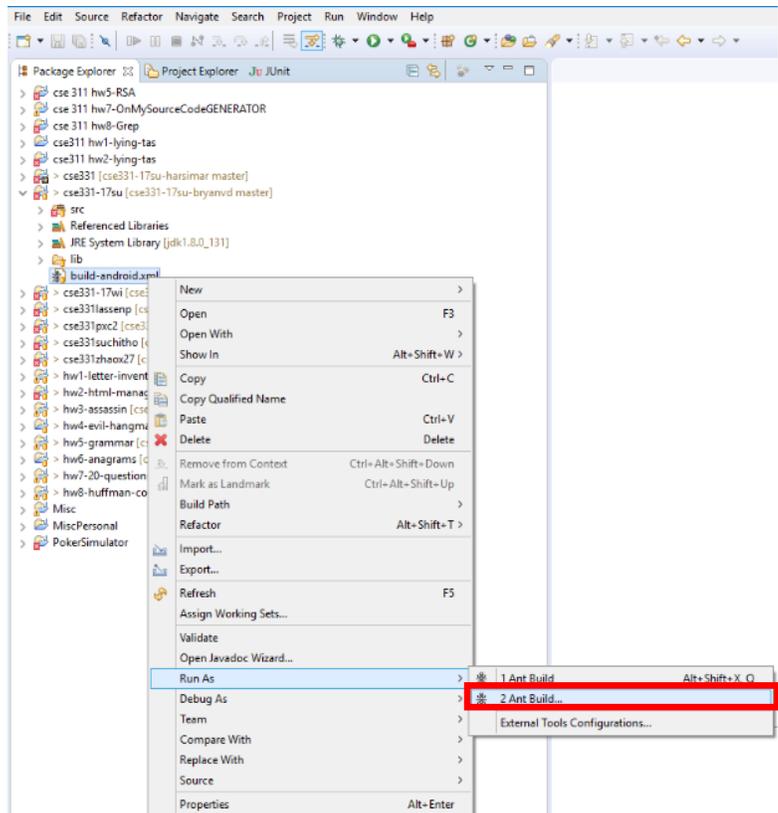
To build your homework projects as a Jar, the “build-android.xml” file will need to be inside your “cse331” directory, just outside your “src” directory. It should be in this location by default when pulling the homework assignment to your repository.

Inside Eclipse, open your “cse331” folder and find the “build-android.xml” file. You may have to right click your “cse331” directory and “Refresh” to make it appear.



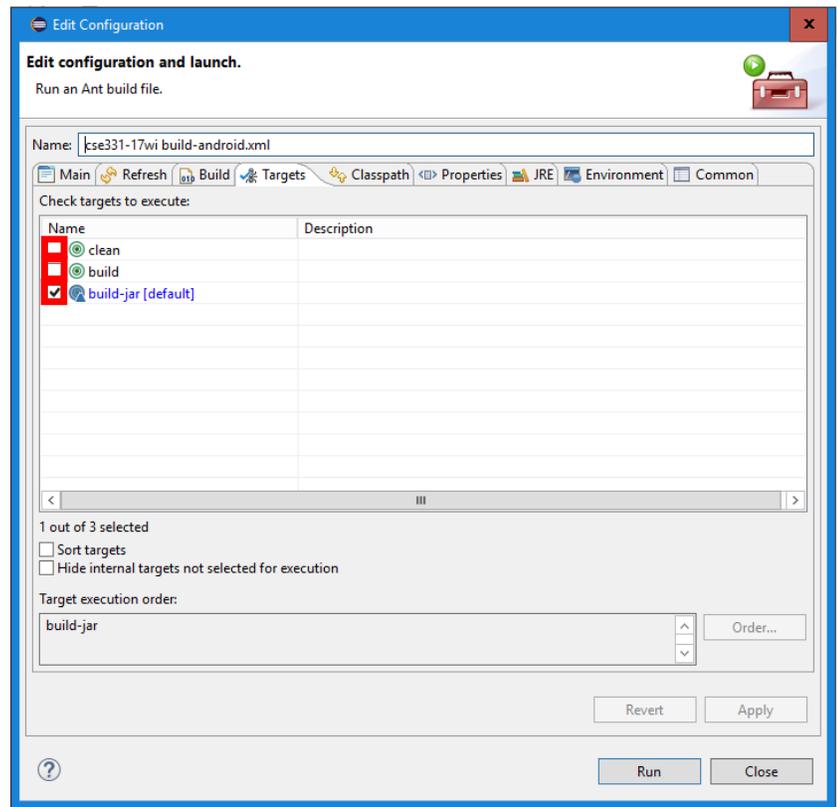
Right click the “build-android.xml” file and navigate to Run As -> Ant Build...

Be sure to choose the selection with the ellipses “Ant Build...” because you’ll want to change some of the build settings before we run the file!



In the pane that opens, uncheck the “clean” and “build” options and ensure that the “build-jar” option is checked. Eclipse builds your projects automatically so attempting to run the Ant Build with the default build selected will actually result in an IOException being thrown.

Hit “Apply” to save the changes then hit “Run” to start the build.



The Jar should now be made in your “cse331” folder inside your Eclipse project. Navigate to your “cse331” folder of your Eclipse project in your system file explorer.

You should see the newly created Jar file, “cse331-hws,” inside this folder.

