Getting Started with IntelliJ:

IntelliJ is an Integrated Development Environment (IDE) from JetBrains for programming in a number of languages. It is available in two levels- the FREE download “Community” version and the you have to pay for it “Ultimate Version”. The major difference is that the free Community version comes with the interface tie-ins for Java and JavaFX and Android projects. The Ultimate version comes with the interfaces for many more programming languages.

Downloads for IntelliJ can be found at:

<https://www.jetbrains.com/idea/>

For people who had previously used Eclipse as their IDE there is a quick migration tool link at:

<https://www.jetbrains.com/idea/documentation/migration_faq.html>

***The purpose of IntelliJ***:

For IS147 using IntelliJ for programming is like using a hammer to put in a thumb tack. But once you get used to it, IntelliJ is very useful for IS247 and then is almost mandatory for programming Android devices as we do in IS413. (The previous toolset was Eclipse+an Android plug-in but since 2015 Android changed platforms to Android Studio- which is a simplified IntelliJ+Android SDK).

To do Java programming all you need is the Java Standard Development Kit- JDK- and a very simple text editor. (Word is not a simple editor as it wants to embed hidden codes in java files and thus prevent them from compiling and running.) You can write the code in the text editor and save the file with a .java extension. Then you use the javac compiler program (javac myprogram.java) from the JDK to check for errors and then when it works javac creates the myprogram.class file which then can be run. (java myprogram).

While all of that can be done in a command line environment; most people would rather use their nice modern Mac or Windows or Linux interface to do their programming. As such it is nice to have an Integrated Development Environment in which to do the editing, error checking, and program running. An excellent IDE for first students is jGRASP which has a simple to use interface.

Another option is the incredibly feature rich IntelliJ. The downside to IntelliJ is that it has a more complicated file structure and it can autocorrect spelling and offer suggestions as to what to use- not particularly good features for a new programmer. The upside though is that in order to program more complicated Java programs and create Android apps- IntelliJ is particularly suited to the task.

In the lab IntelliJ is already available and linked to Android and Java. See below.

To use it at home you first must install the Java JDK (not the Java JRE) and then you can add Intellij.

BUT- even better is to first download the latest JDK-

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

THEN download and install the latest Android (Stand- Alone) Software Development Kit (SDK) - NOT Android Studio

<http://developer.android.com/sdk/index.html#Other>

and THEN download and install the IntelliJ IDEA programming environment.

<https://www.jetbrains.com/idea/>

KEEP track of where all of the installed programs are stored on your computer. When you go to start your first Java or Android project you may need to manually tell IntelliJ where you are keeping the JDK and SDK files it should use.

**Storing files in the lab:**

First thing is to create a place to store files.

The default for storing files in the lab is the D:\TEMP folder.

You do NOT want to put things in D\TEMP as it is a Temporary holding site and other people may have the ability to access it. and it gets wiped clean periodically.

A better choice is to store all of your work on a USB memory stick that you can use on any computer- even your home one. Just never lose it or forget it.

Another possibility is to use your lab assigned storage location using Google BOX. Or if you tend to be the kind of person who thinks having a backup plan is a good idea. You can store everything on the lab storage and make copies to a USB drive.

Storing Files- Are you a lumper or a splitter?

Splitters like to have everything arranged neatly- they spend extra time to order things into their “proper” places. Socks in the sock drawer; whites on the right, blacks on the left, tans in between. Splitters like to put their computer files into categorized folders with subfolders. So that when they are looking for a particular exercise they can go to a place like their F:\ USB drive and look in their IS413 folder and then in their Unit 1 subfolder and see their Lab 1 projects. Retrieval is easy when you know where things are kept.

Lumpers don’t want to waste their time putting things in order. They would rather hope that if they need something later the intelligent search engine will find it for them. This strategy is hopeless for socks; it may work with computers. If you are a lumper you need no further help from me- just dump all of your files into either your USB drive or your lab drive and good luck.

If you are using a USB memory stick then put it into the computer: go to the Folder Icon on the Windows Taskbar- Click on Computer and then on the USB Drive listing for your Removable Disk (?:). Then create your new folders.

ONE MORE OPTION: Every student also had a Google Box for portable storage. Once you save your work to a USB drive or a network folder you can also drag it to your Google BOX in order to access it from the web later.

***Starting IntelliJ in an IS Lab***

In Windows: Go to the Windows Start button click it once, then click once on “All Programs” and then click once on the JetBrains folder which will open and you can click once on “IntelliJ Community Edition”. Starting IntelliJ takes a loooooong time. Once it does start you can use it to Create a new project or open a previous one. Starting a new project takes a loooooong time. Eventually you will get a New Project Screen where you can pick a new Java, JavaFX or Android Project. In IS147 very few programs had multiple files so a file was a project. Here though the term project assumes a bunch of related files including Source files (src) and finished compiled files (bin) as well as other Library files and Support files.

Storing Files:

IntelliJ comes with a nifty File Navigator it will allow you to choose where to save and create files. Remeber doing so in the D:/Temp directory may have some problems with retrieval if you change machines or when the Temp directory gets wiped clean.

Alternatively if you are using a USB drive for everything then it will look like:

F:\IS413\Assignment1

Fall 2016 Update for the new Community version install in lab:

You may need to configure the Android environment on the lab machine you are using. To do so:

From the IntelliJ start menu. Go to Configure-Project Defaults- Project Structure

You need to pick a project JDK and then the project’s SDK. For the Java JDK pick NEW- and then locate the Java folder and the 1.8 JDK folder and click it and enter then come back and pick the Android SDK finder and add the NO SDK and from the C; drive- Program Files (x86) -Android- Android SDK- Once that is set up you will have a choice of API’s- use the latest available API 22.

Start an Empty Activity program- you may need to adjust the Apptheme to Holo light.

Also it defaults to relative layout- which is better than a LinearLayout.

For now though go to <https://www.jetbrains.com/idea/help/guided-tour-around-intellij-idea-user-interface.html>

and learn about the IntelliJ interface and then go through the Tool Windows tutorial

<https://www.jetbrains.com/idea/help/intellij-idea-tool-windows.html>

and then create your first programming project using IntelliJ by following along with the instructions at:

<https://www.jetbrains.com/idea/help/creating-and-running-your-first-java-application.html>