

UNIVERSITY OF MICHIGAN
EECS 282

Assignment 1 – Installing Java Software and Running a Program

Due Date: Monday, January 12th at 11:00 PM

Overview

This assignment consists of two parts. Effectively we are doing things to get started for the course, motivate the problems we will be solving in the class, and making sure that we have the proper software tools installed for the remainder of the course.

Part 1: Installing Java Software and run Java from Command-line

You should install Java software on your laptop or personal computer. Here is what you need. This will take time to download and install the first time around, so you should start it as soon as you can.

1. Sun's Java 5 or Java 6. Go to <http://java.sun.com> and select Downloads -> Java SE. Download the latest Java SE Development Kit (JDK). Select "Download" or "Save", and then double-click the downloaded file to install it. Accept the normal defaults. For Mac OS, you may not need to do this as it already comes with Java pre-installed.
2. Modify the PATH environment variable on your platform so that you can run javac and other java commands from a command window.
On XP and Vista: Start -> Control Panel . Select Classic View if necessary. Select "System". Click Advanced Settings followed by "Environment Variables". Select the PATH variable in "System Variables" and click on Edit. Add "C:\Program Files\Java\jdk1.6.0_11\bin" after a semi-colon (;) to the existing path.
3. To test things out so far, open a Command Window or Terminal Window. Type "javac" and hit Return. You should get something like the following in your window.

```
macair:~ aprakash$ javac
Usage: javac <options> <source files>
where possible options include:
-g                Generate all debugging info
-g:none          Generate no debugging info
-g:{lines,vars,source} Generate only some debugging info
-nowarn         Generate no warnings
-verbose        Output messages about what the compiler is doing
-deprecation    Output source locations where deprecated APIs are used
-classpath <path> Specify where to find user class files
-cp <path>      Specify where to find user class files
-sourcepath <path> Specify where to find input source files
-bootclasspath <path> Override location of bootstrap class files
-extdirs <dirs>  Override location of installed extensions
-endorseddirs <dirs> Override location of endorsed standards path
-d <directory>  Specify where to place generated class files
-encoding <encoding> Specify character encoding used by source files
-source <release> Provide source compatibility with specified release
-target <release> Generate class files for specific VM version
-version        Version information
-help           Print a synopsis of standard options
-X             Print a synopsis of nonstandard options
-J<flag>       Pass <flag> directly to the runtime system
```

4. Create a directory “282” in some standard place (e.g., your Desktop). This is where we will keep our programs.
5. Use Notepad, JEdit, or another editor to create a test Java program. Here is what you should type in:

```
public class MyFirstApp {  
  
    public static void main(String[] args) {  
        System.out.println(“Hello World. I <Your name> rule!”);  
    }  
}
```

This is the almost the shortest Java program one can write. It simply prints out “Hello World. I <YourName> rule!”.

Save the program in a file named “MyFirstApp.java” in your 282 directory. Make sure the filename matches the word after “class” (class name). Java requires that.

6. Go to 282 directory in a command window. Type the following to “compile” the program:
javac MyFirstApp.java

Hopefully, you do not get any errors. If you do, you need to go back to the editor and make sure you typed the program properly.

Next, type
java MyFirstApp

This should print out “Hello World. I <Your Name> rule!”.

Part 2: Download a Java Integrated Development Environment (IDE) and run the program using the IDE.

1. Go to <http://www.jgrasp.org>. Download and install jgrasp. Use the standard defaults.
2. Go to <http://www.eclipse.org>. Download the latest version of Eclipse. The Download icon is in the middle of the window. Eclipse IDE for Java Developers is likely to be sufficient for now. The Java EE version is larger in size but includes support for developing Java enterprise and web-based applications. Install Eclipse. You need to do this after installing Java.

Both JGrasp and Eclipse includes a Java Editor and execution environment. Now try to create a Hello World program using JGrasp and Eclipse. It is a good idea to first create a “Project” (Java Project in case of Eclipse) and then add a file “MyFirstApp.java” to it. Then, edit the file, adding in the same contents.

Type in and run the same program in JGrasp and Eclipse.

Submit a screen snapshot of both Part 1 and Part 2, showing your program code and its output.
For Part 2, it is acceptable to only submit either JGrasp or Eclipse snapshot.

Submit the assignment on ctools.