Homework 1 – Compile and Coding standards

Due next week after class 2a, 11:59pm

Introduction:

The goal of this first assignment is to get you to setup and use the tools to create a simple Java program. Since we have not covered enough of the language syntax in lecture to write a full program, I will provide you will a **program** that contains some simple errors.

Assignment:

1. Get the **Hypot.java** program running as is, entering the two lengths of the triangle on the command line. For example: **java Hypot 7 12**
2. Add and change comments to match those of the coding standards for this course.
3. Get these changes working and save the file. You will submit this source code (Hypot.java) and the byte code file (Hypot.class) along with the following files.

Save a copy of this file as **Hypot1.java**, then do the step 4 and 5.

4. Change the program so it accepts the input using the **Scanner** class.
5. Once that is working, see the "Submitting your work" on the next page.

Program:

```
// This program will compute the hypotenuse of a right triangle
// using the Pythagorean theorem:
//           (a*a) + (b*b) = (c*c)
// where a, b are the two shorter sides of the triangle and c is
// the longest side.
//
// When you run the program, pass the lengths of the two shorter
// sides of the triangle in as parameters on the command line.
// For example:
//          java Hypot 7 12
//
// This code does contain a few errors that will be
// detected by the compiler.

public class Hypot {
   public static void main(String [] args) {
      double hypotenuse;
      double d1;
      double d2


      //// Following replaced for using Scanner in Hypot1.java
```

```
        // verify that two arguments were entered on the command line.
        if (args.length != 2) {
           System.out.println("You need to enter two args.");
           System.exit(1);
        }

        // assuming the two string values entered are really numbers,
        // try to convert them to doubles.
        try {
              d1 = Double.parseDouble(args[0])
              d2 = new Double.parseDouble(args[1]);
        } // Non numbers entered, catch the error and gracefully exit.
        catch(NumberFormatException nfe) {
              System.out.println("Arguments need to be numbers.");
              System.exit(2);
        }

        //// Above replaced for using Scanner in Hypot1.java

        // calculate the hypotenuse length
        hypotenuse = Math.sqrt(((a*a)+(b*b));
        System.out.print("The hypotenuse of a right triangle with sides of ");
        System.out.println(a + " and " + b);
        System.out.println(" is " + hypotenuse);
    }
}
```

Submitting Your Work:

Homework 1 to be submitted to MyCourses,
The course dropbox contains a folder titled "Homework 1".
Zip the following four files into one .zip file: (only zip format is accepted)

- The source code (your .java files) **Hypot.java** and **Hypot1.java**
- The compiled file (your .class files) **Hypot.class** and **Hypot1.class**

Rename the zip file name with your name. (Example: Smith.zip)

Grading

To receive a grade, it must compile with no errors.
The grading is assigned as follows:

- 25% Successfully submitting the program via MyCourses on time.
- 50% Successful correction of errors, compilation, execution, and documentation into file: **Hypot.java**
- 25% Successful conversion to use the Scanner class, with any comment changes: **Hypot1.java**