

CSC 220 – Lab 3

Objective:

Write complete Java programs.

Java programs:

1. *Boolean and integer variables.* Write a program `Ordered.java` that reads in three integer command line arguments, `x`, `y`, and `z`. Define a `boolean` variable `isSatisfied` whose value is `true` if the `x >= y >= z` or `x <= y <= z`, otherwise `isSatisfied` is `false`. Print out the variable `isSatisfied` using `System.out.println(isSatisfied)`.

```
% java Ordered 10 7 4
true

% java Ordered 49 7 10
false

% java Ordered -10 49 7
false
```

The program structure is listed in the following:

```
public class Ordered {
    public static void main(String[] args) {

        // args[0], args[1] and args[2] are the three values you pass
        // to the program
        // Please note Java treat args[0], args[1], and args[2] as
        // strings, please use Integer.parseInt() to convert them to
        // integers

    }
}
```

2. **Bits.** Write a program `Bits.java` that takes a command-line argument `N` and uses a `while` loop to compute the number of times you need to divide `N` by 2 until it is **strictly** less than 1. **Print out an error message if the integer `N` is negative.**

% java Bits 0	% java Bits 8
0	4
% java Bits 1	% java Bits 16
1	5
% java Bits 2	% java Bits 1000
2	10
% java Bits 4	% java Bits -23
3	Illegal input

Compiling and running Java programs (reminder):

1. Compile your programs using the command `javac filename`
For example: `javac myProgram.java`
If you receive errors during the compilation phase, re-edit the source code file and attempt to correct them.
2. Once a file successfully compiles, execute it using the `java` program.
For example: `java MyProgram`

What to turn in:

1. JAR all your files, including `*.java` and `*.class` files into a file called `Lab3.jar`.
When you're done, upload the JAR file to Canvas, under category `Lab3`.
2. If you do not complete the assignment before the end of the lab, you have until the deadline to complete the assignment and have your Jar file uploaded to Canvas. Canvas time rules! No extensions.

Hints:

Your work should be saved in a directory called `Lab3` that you create in directory `CSC220`.