# Computer Science 60-212 - Fall 2017

## Lab 1 Activities

Activity 1.

Write an algorithm to settle the following question: A bank account starts out with $10,000. Interest is compounded monthly at 6% per year (0.5% per month). Every month, $500 is withdrawn to meet college expenses. After how many years is the account depleted?

Activity 2.

Type in the following program. Then, using the Jave API Documentation on Internet, try to complete the first line of the code. Then try to run the program and fix any compile-time errors you find in it. After the successful run, modify it to print "Hello, *name*!", displaying the name that the user typed in.

```
import javax.swing. ...;

public Class DialogViewer
      Public static main(String[] args) {
            String name = JOptionPane.showInputDialog(
                              "What is your name?")
            System.Out.println(Name);
      }
}
```

Activity 3.

Write a Java program that prints out the first names of six of your friends in two columns. Remember to first store their names in separate variables. Start each line by the line number starting from 1, which is stored in a variable and change it whenever needed.

Activity 4.

Suppose you have a random sequence of black, red and white marbles and want to rearrange it such that the marbles in each color are grouped together, with the order black, red and then white. Write an algorithm using pseudocode to solve this problem. Do your best to optimize your initial solution.

Activity 5.

What are the outputs of the following code snippet:

```
String s = "Hello";
System.out.println(s.toUpperCase());
String t = s;
System.out.println(t);
```