

## APCS Lab 1: Println, Static Methods & Decomposition Lab Assignment

From the Supplemental Labs from: [Building Java Programs](http://www.buildingjavaprograms.com/), for Chapter 1 by Stuart Reges and Marty Stepp (http://www.buildingjavaprograms.com/)

### System.out.println

1. What is the output from the following Java program?

```
public class Letter {
    public static void main(String[] args) {
        System.out.println("Dear \"DoubleSlash\" magazine,");
        System.out.println("\tYour publication confuses me. Is it a");
        System.out.println("\\\\ slash or a /// slash that I should use?");
        System.out.println("\nSincerely,");
        System.out.println("Susan \"Suzy\" Smith");
    }
}
```

2. Write a complete Java program that produces the following output:

What is the difference between  
a ' and a "? Or between a " and a \"?

One is what we see when we're typing our program.  
The other is what appears on the "console."

### Static Methods

3. What is the output of the following Java program?

```
public class Confusing {
    public static void method1() {
        System.out.println("I am method 1.");
    }

    public static void method2() {
        method1();
        System.out.println("I am method 2.");
    }

    public static void method3() {
        method2();
        System.out.println("I am method 3.");
        method1();
    }

    public static void main(String[] args) {
        method1();
        method3();
        method2();
        method3();
    }
}
```

4. Write a complete Java program that produces the following as its output. Use static methods to capture the structure and eliminate redundancy from the output. There should be no println statements in your main method.

Create a static method for each of the three main figures to capture the program's structure, and also create static methods for the repeated portions of each figure, to capture the program's redundancy. You do not have to write any comments on your program, but you may wish to do so for practice.

```
*****
*****
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 * *
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 * *
```

**jGrasp:** Once you are finished with this, please take some time to read the jGrasp tutorial to get familiar with the program's various features & commands. It can be found at <http://www.garfieldcs.com/ap-computer-science-a/2012-ap-cs/jgrasp-tutorial/> and also under our Classes Hierarchy in the Navigation Block on the upper right corner of the website.

**Done already?** Here, have a puzzle:

I like my eggs cooked for exactly 15 minutes or I get very grumpy in the morning. You have to cook me an egg with only two timepieces: an 11 minute hourglass and a 7 minute hourglass.