

Building Java Programs

Chapter 1 Lab Handout

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.

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

* * * * *
* * * * *
  *  *
    *
  *  *
* * * * *
* * * * *

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

Chapter 1 Lab Handout Solutions

1.
Dear "DoubleSlash" magazine,
 Your publication confuses me. Is it a
 \\ slash or a //// slash that I should use?

Sincerely,
Susan "Suzy" Smith
2.

```
public class PrintMessage {  
    public static void main(String[] args) {  
        System.out.println("What is the difference between");  
        System.out.println("a ' and a \"? Or between a \" and a \\\"?");  
        System.out.println();  
        System.out.println("One is what we see when we're typing our program.");  
        System.out.println("The other is what appears on the \"console.\"");  
    }  
}
```
3.
I am method 1.
I am method 1.
I am method 2.
I am method 3.
I am method 1.
I am method 1.
I am method 2.
I am method 1.
I am method 2.
I am method 3.
I am method 1.
4.

```
public class ManyStars {  
    public static void main(String[] args) {  
        printFigure1();  
        System.out.println();  
        printFigure2();  
        System.out.println();  
        printFigure3();  
    }  
  
    public static void printFigure1() {  
        printHorizontalBar();  
        printX();  
    }  
  
    public static void printFigure2() {  
        printFigure1();  
        printHorizontalBar();  
    }  
  
    public static void printFigure3() {  
        System.out.println("  *");  
        System.out.println("  *");  
        System.out.println("  *");  
        printFigure1();  
    }  
  
    public static void printHorizontalBar() {  
        System.out.println("*****");  
        System.out.println("*****");  
    }  
  
    public static void printX() {  
        System.out.println(" * *");  
        System.out.println("  *");  
        System.out.println(" * *");  
    }  
}
```