

Homework 4

- Finish Lab from class
- Read Chapter 3.1 – 3.3
- Watch youtube video: <https://www.youtube.com/watch?v=ivCCJiln97M>

[To get credit, you must show charts on your work]

1. What is the output of the following sequence of loops?

```
for (int i = 1; i <= 5; i++) {  
    for (int j = 1; j <= 7; j++) {  
        System.out.print((i * j) + " ");  
    }  
    System.out.println();  
}
```

2. What is the output of the following sequence of loops?

```
for (int i = 1; i <= 5; i++) {  
    for (int j = 1; j <= 5 - i; j++) {  
        System.out.print(" ");  
    }  
  
    for (int j = 1; j <= 2 * i - 1; j++) {  
        System.out.print("*");  
    }  
  
    System.out.println();  
}
```

3. What is the output of the following sequence of loops?

```
for (int i = 1; i <= 3; i++) {  
    for (int j = 1; j <= 4; j++) {  
        for (int k = 1; k <= 5; k++) {  
            System.out.print("**");  
        }  
        System.out.print("!");  
    }  
    System.out.println();  
}
```

4. What is the output of the following sequence of loops? Notice that the code is the same as that in the previous exercise, except that the placement of the braces has changed.

```
for (int i = 1; i <= 3; i++) {  
    for (int j = 1; j <= 4; j++) {  
        for (int k = 1; k <= 5; k++) {  
            System.out.print("**");  
        }  
    }  
    System.out.print("!");  
    System.out.println();  
}
```

5. What is the output of the following sequence of loops? Notice that the code is the same as that in the previous exercise, except that the placement of the braces has changed.

```
for (int i = 1; i <= 3; i++) {  
    for (int j = 1; j <= 4; j++) {  
        for (int k = 1; k <= 5; k++) {  
            System.out.print("*");  
            System.out.print("!");  
        }  
        System.out.println();  
    }  
}
```

6. Write a method called printDesign that produces the following output. Use nested for loops to capture the structure of the figure.

```
-----1-----  
----333----  
---5555---  
--7777777--  
-999999999-
```