Problem Set 1

1. (Wedge of Stars)
Write a program that writes a wedge of stars. Each line has one fewer star than the previous line. The first line should contain 7 stars. Try completing this in as few lines of code as possible.

Sample Output:

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

```
for (int x=0; x<7; x++) {
        for (int y=0; y<x; y++) {
                System.out.print("*");
        }
        System.out.println();
}
```

Save your program name as ***yourFirstName***_StarWedge.java

2. (Making Change)
Write a program that prompts the user for a positive integer value between 1 and 1000, inclusively. The value entered represents a number of *pennies*. After the user has entered the number of cents, the program should then state how many of each denomination of coin are needed to make up that amount of cents. The user should not be allowed to enter an invalid entry, as illustrated below. Additionally, the program should *repeat* until the user enters *0* as input.

Sample Program Output (user input shown in ***bold italics***):

Enter a number between 1 and 1000:
87
87 cents in coins is:
3 quarters
1 dime
0 nickels and
2 pennies

Enter a number between 1 and 1000:
1001
Sorry, that's not a valid input.

Enter a number between 1 and 1000:
118
118 cents in coins is:
4 quarters
1 dime
1 nickel and
3 pennies

Enter a number between 1 and 1000:
0
Thanks for coming out!

Save your program name as ***yourFirstName***_change

```
Scanner input = new Scanner (System.in);
System.out.println("Enter a number between 1 and 1000:");
int number = input.nextInt();
int quarters; int dimes; int nickels; int pennies; int count;
if (number>1) {
        quarters = number/25;
        count = number-(25*quarters);
        dimes = count/10;
        count = count-(10*dimes);
```

```
            nickels = count/5;
            count = count-(5*nickels);
            pennies = count/1;
            count = count-pennies;
            System.out.println(number + " of coints is:");
            System.out.println(quarters + " quarters");
            System.out.println(dimes + " dime");
            System.out.println(nickels + " nickels and ");
            System.out.println(pennies + " pennies");
}
else if (number==0) {
            System.out.println("Thanks for coming out!");
}
else {
            System.out.println("Invalid entry");
}
```