Assignment #2 Code

By Eric Dockery

Problem #1

```java
import java.util.*;
public class problemone {
    public static void main(String[] args){
        // Great the user and inform them of the program purpose
        System.out.println("Welcome to the username generator program!");

        System.out.println("For the generator we will need some information from you");
        // Initialize scanners and get information from user
        Scanner first = new Scanner(System.in);
        Scanner last = new Scanner(System.in);
        System.out.print("Enter your first name:");
        String First_Name = first.next();
        System.out.print("Enter your last name:");
        String Last_Name= last.next();
        // generate the random number for the user name
        Random rand = new Random();
        int usernamerandom = rand.nextInt(90)+10;
        // now use string mutations to get the username
        System.out.println("Your User Name is: "+First_Name.substring(0,1)+
Last_Name.substring(0,5)+usernamerandom);

        first.close();
        last.close();

    }
}
```

Problem #2

```java
import java.util.*;

public class problemtwo {
    public static void main(String[] args){
        // Great the user and explain the program
        System.out.println("Welcome to the Heron's area calculator");
        // generate scanners and prompt the user for the length
        Scanner length = new Scanner(System.in);
        System.out.print("Please enter the first side length: ");
        int a = length.nextInt();
        System.out.print("Please enter the second side length: ");
        int b = length.nextInt();
        System.out.print("Please enter the last side length: ");
        int c = length.nextInt();
        // take these sides and formulate the perimeter and area using the
function given
        int s = a+b+c;
```

```java
            double  areasquared =(s*(s-a)*(s-b)*(s-c));
            double area =Math.sqrt(areasquared);
            //display the area to the user
            System.out.printf("The area is %.2f", area);
            length.close();

        }
}


Problem #3

import java.util.*;
public class ProblemThree {
        public static void main (String[] args){
                // Great the user and inform them of the program features
                System.out.println("Welcome to the angle function calculator!!");
                System.out.println("Today I will generate a random number between 20 and
40");
                System.out.println("Then I will show you the sine, cosine, and tangent
values for that number.(in radians)");
                // Generate random number and display it to the user
                Random Rand = new Random();
                int angle = Rand.nextInt(21) +20;
                System.out.println("This is the random number for this run "+ angle);
                // Calculate the sine cosine and tanget of that value
                double cosine_angle = Math.cos(angle);
                double sine_angle= Math.sin(angle);
                double tangent_angle =Math.tan(angle);
                // display the values to the user
                System.out.println("This is the sine of the angle "+ sine_angle);
                System.out.println("This is the Cosine of the angle "+ cosine_angle);
                System.out.println("This is the Tangent of the angle " + tangent_angle);

        }
}
```