

Homework #2

(Java Programming for Beginners - OnLine)

2.1 Here is a listing of a program, which demonstrates calculating area of a circle whose radius is 2.

```
public class FirstJavaHello {
    public static void main(String[] args) {
        int            radius = 2;
        double          area;
        final double    pi = 3.142;

        area= pi * radius * radius;

        System.out.print("The area is: ");
        System.out.println(area);
    }
}
```

Modify the above program and use only one print statement instead of one print and one println statements to show the same output (“*The area is: xxxx.xx*”).

2.2 Following code uses scanner to get the radius from user during run time, calculates area and displays it. You have to import Scanner class from java.util (import java.util.Scanner;) package

```
Scanner readInput = new Scanner(System.in);

//extra line feed
System.out.println();
System.out.print("Enter the radius: ");
radius = readInput.nextInt();

area= pi * radius * radius;

System.out.print("The area is: ");
System.out.println(area);
```

Modify the above program instead of hard-coding the value of PI in the program, get the value of PI from the user as well.

2.3 Following code demonstrate that radius could be a byte type. It also displays how to get a character input from user, and clean the input buffer with any remaining characters or end of line marker.

```
//extra line feed
System.out.println();
System.out.print("Enter the radius: ");
byte newRadius = readInput.nextByte();

area= pi * newRadius * newRadius;
```

```

System.out.print("The area is: ");
System.out.println(area);

//extra line feed
System.out.println();
System.out.print("What is your first name?: ");
char yourInitial = readInput.next().charAt(0);

System.out.println("Hello Mr. " + yourInitial + ".");

//the input buffer will still have enter character '\n'
// so that needs to be cleaned.
//You can do that by using .nextLine() method.
readInput.nextLine();

```

Following code demonstrate use of printf(), and format specifiers

```

//extra line feed
System.out.println();
System.out.printf("5185 is fun course.\n\n");

System.out.printf("First Name \tLast Name\tCity\n");
System.out.printf("----- \t-----\t---\n");
System.out.printf("Bill \tClinton \tHarlem\n");

System.out.printf("\n");

//extra line feed
System.out.println();
System.out.printf("How do you print double quotes?\n");
System.out.printf("Who said\"Test Scores Can Be Used ....\"\n");

```

Modify the above demo code so that you are not hard coding the name, and city (Bill Clinton, Harlem etc) but, get the values from user.

- a) Add a column for zip code as well
- b) Declare four variables (decide on data type):
First Name, Last Name, City, and Zip
- c) Ask user for the values for these variables and display them instead of using the hardcoded name like Bill Clinton Harlem

A typical example output may look like this:

```
What is your first name?: Bineet
```

```
Hello Mr. B.
```

```
5185 is fun course.
```

First Name	Last Name	City
-----	-----	---
Bill	Clinton	Harlem

```
How do you print double quotes?
```

```
Who said"Test Scores Can Be Used ...."
```

```
Please enter your first name: Bineet
```

```
Please enter your last name: Sharma
```

```
Please enter your city: Pleasanton
```

```
Please enter your zip code: 94566
```

First Name	Last Name	City	Zip Code
-----	-----	---	----
Bineet	Sharma	Pleasanton	94566