Status	Finished
Started	Monday, 30 September 2024, 8:07 PM
Completed	Monday, 30 September 2024, 8:25 PM
Duration	18 mins 20 secs

Question **1**

Correct

Marked out of 5.00

Create a class called "Circle" with a radius attribute. You can access and modify this attribute using getter and setter methods. Calculate the area and circumference of the circle.

Area of Circle = πr^2

Circumference = 2πr

Input:

2

Output:

Area = 12.57
Circumference = 12.57

For example:

Test	Input	Result
1	4	Area = 50.27 Circumference = 25.13

Answer: (penalty regime: 0 %)

Reset answer

```java
1  import java.io.*;
2  import java.util.Scanner;
3  class Circle
4  {
5      private double radius;
6      public Circle(double radius){
7          // set the instance variable radius
8          setRadius(radius);
9
10     }
11     public void setRadius(double radius){
12         // set the radius
13         this.radius = radius;
14
15     }
16     public double getRadius()    {
17         // return the radius
18         return radius;
19
20     }
21     public double calculateArea()  { // complete the below statement
22         return Math.PI * radius *radius;
23
24     }
25     public double calculateCircumference()    {
26         // complete the statement
27         return  2* Math.PI * radius;
28     }
29  }
30  public class prog{
31      public static void main(String[] args)  {
32          Scanner sc = new Scanner(System.in);
33          int r=sc.nextInt();
34          Circle c= new Circle(r);
35          System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
36          // invoke the calculatecircumference method
37          System.out.println("Circumference = " + String.format("%.2f", c.calculateCi
38
39          sc.close();
40
41      }
```

	Test	Input	Expected	Got	
✓	1	4	Area = 50.27 Circumference = 25.13	Area = 50.27 Circumference = 25.13	✓
✓	2	6	Area = 113.10 Circumference = 37.70	Area = 113.10 Circumference = 37.70	✓
✓	3	2	Area = 12.57 Circumference = 12.57	Area = 12.57 Circumference = 12.57	✓

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

Create a Class Mobile with the attributes listed below,

private String manufacturer;
private String operating_system;
public String color;
private int cost;

Define a Parameterized constructor to initialize the above instance variables.

Define getter and setter methods for the attributes above.

for example : setter method for manufacturer is

void setManufacturer(String manufacturer){

this.manufacturer= manufacturer;

}

String getManufacturer(){

 return manufacturer;}

Display the object details by overriding the toString() method.

For example:

Test	Result
1	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000

Answer: (penalty regime: 0 %)

```
 1  class Mobile {
 2      private String manufacturer;
 3      private String operating_system;
 4      public String color;
 5      private int cost;
 6      public Mobile(String manufacturer, String operating_system, String color, int c
 7          this.manufacturer = manufacturer;
 8          this.operating_system = operating_system;
 9          this.color = color;
10          this.cost = cost;
11      }
12      public void setManufacturer(String manufacturer) {
13          this.manufacturer = manufacturer;
14      }
15      public String getManufacturer() {
16          return manufacturer;
17      }
18      public void setOperatingSystem(String operating_system) {
19          this.operating_system = operating_system;
20      }
21      public String getOperatingSystem() {
22          return operating_system;
23      }
24      public void setColor(String color) {
25          this.color = color;
26      }
27      public String getColor() {
28          return color;
29      }
30      public void setCost(int cost) {
31          this.cost = cost;
32      }
33      public int getCost() {
```

	Test	Expected	Got	
✓	1	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000	✓

Passed all tests! ✓

Question **3**

Correct

Marked out of 5.00

Create a class Student with two private attributes, name and roll number. Create three objects by invoking different constructors available in the class Student.

Student()

Student(String name)

Student(String name, int rollno)

Input:

No input

Output:

No-arg constructor is invoked
1 arg constructor is invoked
2 arg constructor is invoked
Name =null , Roll no = 0
Name =Rajalakshmi , Roll no = 0
Name =Lakshmi , Roll no = 101

For example:

Test	Result
1	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101

Answer: (penalty regime: 0 %)

```java
class Student {
    // Private attributes
    private String name;
    private int rollNo;

    // No-argument constructor
    public Student() {
        System.out.println("No-arg constructor is invoked");
        this.name = null;
        this.rollNo = 0;
    }

    // Constructor with one argument
    public Student(String name) {
        System.out.println("1 arg constructor is invoked");
        this.name = name;
        this.rollNo = 0; // Default roll number
    }

    // Constructor with two arguments
    public Student(String name, int rollNo) {
        System.out.println("2 arg constructor is invoked");
        this.name = name;
        this.rollNo = rollNo;
    }

    // Method to display student details
    public void display() {
        System.out.println("Name ="+ name + " , Roll no = " + rollNo);
    }
}

```

	Test	Expected	Got	
✓	1	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101	✓

Passed all tests! ✓

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