Status	Finished
Started	Sunday, 6 October 2024, 9:52 PM
Completed	Sunday, 6 October 2024, 10:42 PM
Duration	50 mins 3 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 = $2\pi r$

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

```
import java.util.Scanner;
class Circle
{
    private double radius;
    public Circle(double radius){
        this.radius=radius;


    }
    public void setRadius(double radius){
        this.radius=radius;


    }
    public double getRadius()    {

       return radius;

    }
    public double calculateArea()  { // complete the below statement
         return Math.PI*radius*radius;

    }
    public double calculateCircumference()    {
        // complete the statement
       return 2*Math.PI*radius;
    }
}
class prog{
    public static void main(String[] args)  {
        Scanner sc= new Scanner(System.in);
        double r=sc.nextDouble();
        Circle c= new Circle(r);
        System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
        System.out.println("Circumference = "+String.format("%.2f",c.calculateCircumference()));
        // invoke the calculatecircumference method


    }
}

```

	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 %)

```
import java.util.*;
public class Moblie{
    private String manufacture;
    private String Operating_system;
    public String color;
    private int cost;

public Moblie(String manufacture,String Operating_system,String color,int cost){
    this.manufacture = manufacture;
    this.Operating_system = Operating_system;
    this.color=color;
    this.cost= cost;
}
public void setManufacture(String manufacture){
    this.manufacture = manufacture;
}
public String getManufacture(){
    return manufacture;
}
public void setOperating_system(String Operating_system){
    this.Operating_system=Operating_system;
}
public String getOperating_system(){
    return Operating_system;
}
public void setColor(String color){
    this.color=color;
}
public String getColor(){
    return color;
}
public void setColor(int cost){
    this.cost=cost;
}
public int getCost(){
    return cost;
}
public String toString(){
    return "manufacturer = "+manufacture +"\n"+"operating_system = "+Operating_system+"\n"+"color = "+color+"\n"+
```

```
}
public static void main(String[] args){
    Moblie moblie = new Moblie("Redmi","Andriod","Blue",34000);
    System.out.println(moblie.toString());
}
}
```

	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 %)

```
import java.util.*;
public class Student{
    private String name;
    private int rollno;
    public Student(){
        this.name = null;
        this.rollno =0;
        System.out.println("No-arg constructor is invoked");
    }
    public Student(String name){
        this.name = name;
        this.rollno= 0;
        System.out.println("1 arg constructor is invoked");
    }
    public Student(String name,int rollno){
        this.name = name;
        this.rollno= rollno;
        System.out.println("2 arg constructor is invoked");
    }
    public void display(){
        System.out.println("Name ="+this.name+" , Roll no = "+this.rollno);
    }
    public static void main(String[] args){
        Student student1 = new Student();
        Student student2 = new Student("Rajalakshmi");
        Student student3 = new Student("Lakshmi",101);

    student1.display();
    student2.display();
    student3.display();
    }
}
```

	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! ✓

◄ Lab-04-MCQ

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