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Status	Finished
Started	Monday, 30 September 2024, 5:58 PM
Completed	Monday, 30 September 2024, 6:57 PM
Duration	58 mins 42 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

```

1 import java.io.*;
2 import java.util.*;
3
4 class Circle
5 {
6     private double radius;
7     public Circle(double radius){
8         // set the instance variable radius
9         this.radius = radius;
10
11     }
12     public void setRadius(double radius){
13         this.radius = radius;
14
15     }
16
17     public double getRadius()    {
18         return radius;
19
20     }
21
22     public double calculateArea() { // complete the below statement
23         return Math.PI*radius*radius;
24
25     }
26     public double calculateCircumference()    {
27         // complete the statement
28         return Math.PI * 2 * radius;
29     }
30 }
31 class prog{
32     public static void main(String[] args) {
33         double r;
34         Scanner sc= new Scanner(System.in);
35         r=sc.nextDouble();
36         Circle c= new Circle(r);
37         System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
38         // invoke the calculateCircumference method
39         System.out.println("Circumference = "+String.format("%.2f",c.calculateCircumference()));
40
41
42     }
43 }
44

```

	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 import java.util.*;
2 public class Mobile{
3     private String Manufacturer;
4     private String operating_system;
5     public String color;
6     private int cost;
7     Mobile(String manu, String os,String c,int co){
8         this.Manufacturer = manu;
9         this.operating_system = os;
10        this.color = c;
11        this.cost = co;
12    }
13    public void setManufacturer(String manu){
14        this.Manufacturer = manu;
15    }
16    public String getManufacturer(){
17        return Manufacturer;
18    }
19    public void setOperating_system(String os){
20        this.operating_system = os;
21    }
22    public String getOperating_system(){
23        return operating_system;
24    }
25    // public void setColor(String c){
26    //     this.color = c;
27    // }
28    // public String getColor(){
29    //     return color;
30    // }
31    public void setCost(int co){
32        this.cost = co;
33    }
34    public int getCost(){
35        return cost;
36    }
37    public String toString(){
38        return "manufacturer = "+ Manufacturer + "\n" + "operating_system = "+operating_system + "\n" + "color = "
39    }
40    public static void main(String []args){
41        Mobile m = new Mobile("Redmi"."Andriod"."Blue".34000):
```

	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 %)

```

1 public class Student{
2     public String name;
3     public int roll;
4     Student(){
5         System.out.println("No-arg constructor is invoked");
6     }
7
8     void print(){
9         System.out.println("Name =null , Roll no = 0");
10    }
11    Student(String name){
12        System.out.println("1 arg constructor is invoked");
13        this.name= name;
14    }
15    void print(String name){
16        System.out.println("Name =" + name + " , Roll no = 0");
17    }
18    Student(String name,int roll){
19        System.out.println("2 arg constructor is invoked");
20        this.name = name;
21        this.roll = roll;
22    }
23    void print(String name,int roll){
24        System.out.println("Name =" + name + " , Roll no = "+roll );
25    }
26 }
27 public static void main(String []args){
28     Student s1 = new Student();
29     Student s2 = new Student("Rajalakshmi");
30     Student s3 = new Student("Lakshmi",101);
31     s1.print();
32     s2.print("Rajalakshmi");
33     s3.print("Lakshmi",101);
34 }
35
36
37 }
```

Test	Expected	Got
------	----------	-----

	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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