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Status	Finished
Started	Sunday, 6 October 2024, 7:30 PM
Completed	Sunday, 6 October 2024, 7:54 PM
Duration	23 mins 36 secs

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Question **1**

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  public class mobile{
 2      private String man;
 3      private String os;
 4      public String clr;
 5      private int cost;
 6      public mobile(String man,String os,String clr,int cost){
 7          this.man=man;
 8          this.os=os;
 9          this.clr=clr;
10          this.cost=cost;
11          }
12      public String toString(){
13          return "manufacturer = "+man+"\n"+"operating_system = "+os+"\n"+"color = "+ clr+"\n
14          }
15      public static void main(String[]args){
16          mobile mobile=new mobile("Redmi","Andriod","Blue",34000);
17          System.out.println(mobile);
18          }
19  }
```

	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 **2**

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]

```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          this.radius =radius;
9              }
10     public void setRadius(double radius){
11          // set the radius
12          this.radius=radius;
13
14     }
15     public double getRadius()    {
16          // return the radius
17          return radius;
18
19     }
20     public double calculateArea()  { // complete the below statement
21          return Math.PI*radius*radius;
22
23     }
24     public double calculateCircumference()    {
25          // complete the statement
26          return  2*Math.PI*radius;
27     }
28  }
29  class prog{
30     public static void main(String[] args)  {
31          int r;
32          Scanner sc= new Scanner(System.in);
33          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.calculateCircumference()
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! ✓

	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	✓

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
public class stud{
    private String name;
    private  int roll;
    public stud(){
        System.out.println("No-arg constructor is invoked");
        name=null;
        roll=0;

    }
    public stud(String name){
        System.out.println("1 arg constructor is invoked");
        this.name=name;
        roll=0;

    }
    public stud(String name,int roll){
        System.out.println("2 arg constructor is invoked");
        this.name=name;
        this.roll=roll;

        }

    public static void main (String[]args){
            stud s1=new stud();
            stud s2=new stud("Rajalakshmi");
            stud s3=new stud("Lakshmi",101);
            System.out.println("Name ="+s1.name+" , Roll no = "+s2.roll);
            System.out.println("Name ="+s2.name+" , Roll no = "+s2.roll);
            System.out.println("Name ="+s3.name+" , Roll no = "+s3.roll);
        }
    }
```

	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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