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<b>Status</b>	Finished
<b>Started</b>	Monday, 23 September 2024, 11:13 PM
<b>Completed</b>	Monday, 23 September 2024, 11:48 PM
<b>Duration</b>	34 mins 36 secs

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

```
33 public String toString(){
34     return "manufacturer = " + m + "\n" + "operating_system = " + os + "\n" + "color = " + c + "\n" + "cost = 
35 }
36 }
37 public class Prog{
38     public static void main(String[] args){
39         Mobile mobile=new Mobile("Redmi", "Andriod", "Blue", 34000); System.out.println(mobile);
40     }
41 }
```

	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 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 import java.util.*;
2 class Student{
3     private String name;
4     private int rollNo;
5     public Student(){
6         System.out.println("No-arg constructor is invoked");
7         this.name=null;
8         this.rollNo=0;
9     }
10    public Student(String name) {
11        System.out.println("1 arg constructor is invoked");
12        this.name=name;
13        this.rollNo=0;
14    }
15    public Student(String name, int rollNo) {
16        System.out.println("2 arg constructor is invoked");
17        this.name=name;
18        this.rollNo=rollNo;}
19    public void display(){
20        System.out.println("Name =" +(name!=null?name:"null")+" , Roll no = "+rollNo);
21    }
22 }
23 public class Main{
24     public static void main(String[] args){
25         Student stu1=new Student();
26         Student stu2=new Student("Rajalakshmi");
27         Student stu3=new Student("Lakshmi",101);
28         stu1.display();
29         stu2.display();
30         stu3.display();
31     }

```

32 | }

	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! ✓

## Question 3

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 =  $\pi r^2$**

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

```

	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! ✓

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