

Status	Finished
Started	Sunday, 6 October 2024, 8:58 PM
Completed	Sunday, 6 October 2024, 9:09 PM
Duration	45 mins 4 secs

Question 1

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

	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 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

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

	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 3

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	<pre>manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000</pre>

Answer: (penalty regime: 0 %)

```
2 import java.lang.Math;
3 class Mobile{
4     private String MF;
5     private String OS;
6     public String color;
7     private int cost;
8     public Mobile(String MF,String OS,String color,int cost){
9         this.MF=MF;
10        this.OS=OS;
11        this.color=color;
12        this.cost=cost;
13    }
14    public void setMF(String MF){
15        this.MF=MF;
16    }
17    public String getMF(){
18        return MF;
19    }
20    public void setOS(String OS){
21        this.OS=OS;
22    }
23    public String getOS(){
24        return OS;
25    }
26    public void setcolor(String color){
27        this.color=color;
28    }
29    public String getcolor(){
30        return color;
31    }
32    public void setcost(int cost){
33        this.cost=cost;
34    }
35    public int getcost(){
36        return cost;
37    }
38    public String toString(){
39        return "manufacturer = "+MF+"\n"+
40            "operating_system = "+OS+"\n"+
41            "color = "+color+"\n"+
```

```

42 |         "cost = "+cost;
43 |     }
44 | }
45 | public class moblietest{
46 |     public static void main(String arg[]){
47 |         Mobile M=new Mobile("Redmi","Andriod","Blue",34000);
48 |         System.out.println(M);
49 |     }
50 | }
51 |
52 |
53 |

```

	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! ✓

◀ Lab-04-MCQ

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