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Status	Finished
Started	Saturday, 5 October 2024, 12:09 PM
Completed	Saturday, 5 October 2024, 12:22 PM
Duration	13 mins 37 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 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.print("2 arg constructor is invoked\n");
17        this.name=name;
18        this.rollno=rollno;
19    }
20    public void display(){
21        System.out.println("Name =" +(name!=null?name:"null")+" , Roll no = "+rollno);
22    }
23 }
24 public class main{
25     public static void main(String[] args){
26         student stu1=new student();
27         student stu2=new student("Rajalakshmi");
28         student stu3=new student("Lakshmi",101);
29         stu1.display();
30         stu2.display();
31         stu3.display();

```

```

32     }
33 }
34

```

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

```

	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	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,String os,String c,int cost){
13        this.m=m;
14        this.os=os;
15        this.c=c;
16        this.cost=cost;
17    }
18    public void setmanufacturer(String m){
19        this.m=m;
20    }
21    public void setoperatingsystem(String os){
22        this.os=os;
23    }
24    public void setcolor(String color){
25        this.c=c;
26    }
27    public void setcost(int cost){
28        this.cost=cost;
29    }
30    public String getmanufacturer(){
31        return m;
32    }
```

```

33 public String getoperatingsystem(){
34     return os;
35 }
36 public String getcolor(){
37     return c;
38 }
39 @Override
40 public String toString(){
41     return "manufacturer = " + m + "\n" + "operating_system = " + os + "\n" + "color = " + c + "\n" + "cost = ";
42 }
43 }
44 public class prog{
45     public static void main(String[] args){
46         mobile mob=new mobile("Redmi", "Andriod", "Blue", 34000);
47         System.out.println(mob);
48     }
49 }

```

	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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