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Status	Finished
Started	Saturday, 21 September 2024, 8:43 PM
Completed	Saturday, 21 September 2024, 9:37 PM
Duration	53 mins 30 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 %)

```java
class prog
{
    private String name;
    private int rno;
    public prog(){
        System.out.println("No-arg constructor is invoked");
        this.name=null;
        this.rno=0;
    }
    public prog(String name){
        System.out.println("1 arg constructor is invoked");
        this.name=name;
        this.rno=0;
    }
    public prog(String name,int rno){
        System.out.println("2 arg constructor is invoked");
        this.name=name;
        this.rno=rno;
    }
    public void display(){
        System.out.println("Name ="+ (name!=null?name:"null")+" , Roll no = "+rno);
    }
    public static void main(String args[]){
        prog s1=new prog();
        prog s2=new prog("Rajalakshmi");
        prog s3=new prog("Lakshmi",101);
        s1.display();
        s2.display();
        s3.display();
    }
}
```

	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

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

```
40          // Invoke the calculateCircumference method
41          System.out.println("Circumference = "+String.format("%.2f",c.calculateCircumference()));
42
43
44      }
45  }
46
```

	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 manufacturer;
3      private String operating_system;
4      public String color;
5      private int cost;
6      public Mobile(String manufacturer,String operating_system,String color,int cost){
7          this.manufacturer=manufacturer;
8          this.operating_system=operating_system;
9          this.color=color;
10         this.cost=cost;
11     }
12     public String getmanu(){
13         return manufacturer;
14     }
15     public String getos(){
16         return operating_system;
17     }
18     public String getcol(){
19         return color;
20     }
21     public int getcost(){
22         return cost;
23     }
24     public void setmanu(String manufacturer){
25         this.manufacturer=manufacturer;
26     }
27     public void setos(String operating_system){
28         this.operating_system=operating_system;
29     }
30     public void setcol(String color){
31         this.color=color;
32     }
```

```
33 ▾        public void setcost(int cost){
34              this.cost=cost;
35          }
36          @Override
37 ▾        public String toString(){
38              return "manufacturer = "+manufacturer+"\n"+"operating_system = "+operating_system+"\n"+"color = "+color+"
39
40          }
41  }
42 ▾ class prog{
43 ▾      public static void main(String args[]){
44              Mobile mobile=new Mobile("Redmi","Andriod","Blue",34000);
45              System.out.println(mobile);
46          }
47  }
```

	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! ✓

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