CS23333-Object Oriented Programming Using Java-2023

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Status	Finished
Started	Sunday, 29 September 2024, 6:50 PM
Completed	Sunday, 29 September 2024, 7:50 PM
Duration	59 mins 14 secs

Question **1**

Correct

Marked out of 5.00

Flag question

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 %)

```
import java.util.*;
public class Student{
    private String name;
    private int rollno;

    public Student(){
        System.out.println("No-arg constructor is invoked");
        this.name=null;
        this.rollno=0;
    }
    public Student(String name){
        System.out.println("1 arg constructor is invoked");
        this.name=name;
        this.rollno=0;
    }
    public Student(String name,int rollno){
        System.out.println("2 arg constructor is invoked");
        this.name=name;
        this.rollno=rollno;
    }
    public void display(){
        System.out.println("Name ="+ name +" , Roll no = " + rollno);
    }
    public static void main(String[] args){
        Student s1=new Student();
        Student s2=new Student("Rajalakshmi");
        Student s3=new Student("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

Flag question

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

```
import java.io.*;
import java.util.*;
class Circle
{
    private double radius;
    public Circle(double radius){
        // set the instance variable radius
       this.radius=radius;

    }
    public void setRadius(double radius){
        // set the radius
       this.radius=radius;

    }
    public double getRadius()    {
        // return the radius
       return radius;

    }
    public double calculateArea()  { // complete the below statement
       return Math.PI*radius*radius;

    }
    public double calculateCircumference()    {
        // complete the statement
       return 2 * Math.PI*radius;
    }
}
class prog{
    public static void main(String[] args)  {
        int r;
        Scanner sc= new Scanner(System.in);
        r=sc.nextInt();
        Circle c= new Circle(r);
        System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
        // invoke the calculatecircumference method
        System.out.println("Circumference = "+String.format("%.2f", c.calculateCircumference()));

    }
}

```

	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

Flag question

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 %)

```
import java.util.*;
public class Mobile{
    private String manufacturer;
    private String operating_system;
    public String color;
    private int cost;

public Mobile(String manufacturer,String operating_system,String color,int cost)
{
    this.manufacturer=manufacturer;
    this.operating_system=operating_system;
    this.color=color;
    this.cost=cost;
}
public void setmanufacturer(){
    this.manufacturer=manufacturer;
}
public String getmanufacturer(){
    return manufacturer;
}
public void setoperating_system(){
    this.operating_system=operating_system;
}
public String getoperating_system(){
    return operating_system;
}
public void setcolor(){
    this.color=color;
}
public String getcolor(){
    return color;
}
public void setcost(){
    this.cost=cost;
}
public int getcost(){
    return cost;
}
public String toString(){
    return "manufacturer = "+manufacturer+"\n"+"operating_system = "+operating_system+"\n"+"color =
}
public static void main(String[] args){
    Mobile mobile=new Mobile("Redmi","Andriod","Blue",34000);
    System.out.println(mobile);
}
}
```

	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!

Finish review