CS23333-Object Oriented Programming Using Java-2023

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Status	Finished
Started	Sunday, 29 September 2024, 2:41 PM
Completed	Sunday, 29 September 2024, 3:14 PM
Duration	32 mins 28 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.io.*;
public class Student{
    String name =null ;
    int rollno = 0;

    public Student(){
        System.out.println("No-arg constructor is invoked");
    }

    public Student(String name,int rollno){
        this.name = name;
        this.rollno = rollno;
        System.out.println("2 arg constructor is invoked");
    }

    public Student(String name){
        this.name = name;
        System.out.println("1 arg constructor is invoked");
    }
    public static void main(String[] args){
        Student s1 = new Student();
        Student s2 = new Student("Rajalakshmi");
        Student s3 = new Student("Lakshmi",101);
        System.out.println("Name =" +s1.name+" , Roll no = " + s1.rollno);
        System.out.println("Name =" +s2.name+" , Roll no = " + s2.rollno);
        System.out.println("Name =" +s3.name+" , Roll no = " + s3.rollno);
    }
}
```

	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 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 %)

```
public class Mobile{
    String mf;
    String os;
    String color;
    int cost;

    public Mobile(String mf , String os, String color, int cost){
        this.mf = mf;
        this.os = os;
        this.color = color;
        this.cost = cost;
    }
    public void setmf(String mf){
        this.mf = mf;
    }
    public void setos(String os){
        this.os = os;
    }
    public void setcost( int cost){
        this.cost = cost;
    }
    public String getmf(){
        return mf;
    }
    public String getos(){
        return os;
    }
    public String getcolor(){
        return color;
    }
    public int getcost(){
        return cost;
    }
    public static void main(String args[]){
        Mobile product = new Mobile("Redmi","Andriod","Blue",34000);
        System.out.println("manufacturer = "+ product.getmf());
        System.out.println("operating_system = "+ product.getos());
        System.out.println("color = "+ product.getcolor());
        System.out.println("cost = "+ product.getcost());
    }
}
```

	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 **3**

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


    }
    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 Math.PI*2*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! ✓

Finish review