

[Dashboard](#) / [My courses](#) / [CS23333-OOPUI-2023](#) / [Lab-04-Classes and Objects](#) / [Lab-04-Logic Building](#)

Status	Finished
Started	Monday, 7 October 2024, 9:19 PM
Completed	Monday, 7 October 2024, 10:34 PM
Duration	1 hour 14 mins

Question 1

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.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    public void setRadius(double radius){
11        // set the radius
12        this.radius=radius;
13    }
14    }
15    public double getRadius()    {
16        // return the radius
17        return radius;
18    }
19    }
20    public double calculateArea() { // complete the below statement
21        return Math.PI*radius*radius;
22    }
23    }
24    public double calculateCircumference()    {
25        // complete the statement
26        return 2*Math.PI*radius;
27    }
28    }
29    class prog{
30        public static void main(String[] args) {
31            int r;
32            Scanner sc= new Scanner(System.in);
33            r=sc.nextInt();
34            Circle c= new Circle(r);
35            System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
36            // invoke the calculatecircumference method
37            System.out.println("Circumference = "+String.format("%.2f" , c.calculateCircumference()));
38        }
39        sc.close();
40    }
41 }
42
43
44

```

	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 2

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

	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 3

Incorrect

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 public class mobile{  
2     private String man;  
3     private String os;  
4     public String clr;  
5     private int cost;  
6     public mobile(String man,String os,String clr,int cost){  
7         this.man=man;  
8         this.os=os;  
9         this.clr=clr;  
10        this.cost=cost;  
11    }  
12    public String toString(){  
13        return"manufacturer="+man+"\n"+"operating_system =" +os+"\n"+"color="+clr+"\n"+"cost="+cost;  
14    }  
15    public static void main(String[]args){  
16        mobile mobile=new  
17            mobile("Redmi", "Andriod", "Blue", 34000);  
18        System.out.println(mobile);  
19    }  
20 }  
21 }
```

Syntax Error(s)

```
mobile.java:13: error: illegal character: '\'  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: not a statement  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: ';' expected  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: illegal character: '\'  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: not a statement  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: ';' expected  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: illegal character: '\'  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: not a statement  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: ';' expected  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:13: error: unclosed string literal  
    return"manufacturer="+man+"\""+\"operating_system\""+\"os\""+\"color\""+\"clr\""+\"cost\""+cost;  
        ^  
mobile.java:21: error: class, interface, enum, or record expected  
}  
^  
11 errors
```

[◀ Lab-04-MCQ](#)[Number of Primes in a specified range ►](#)