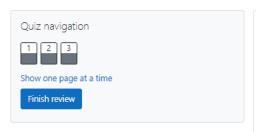
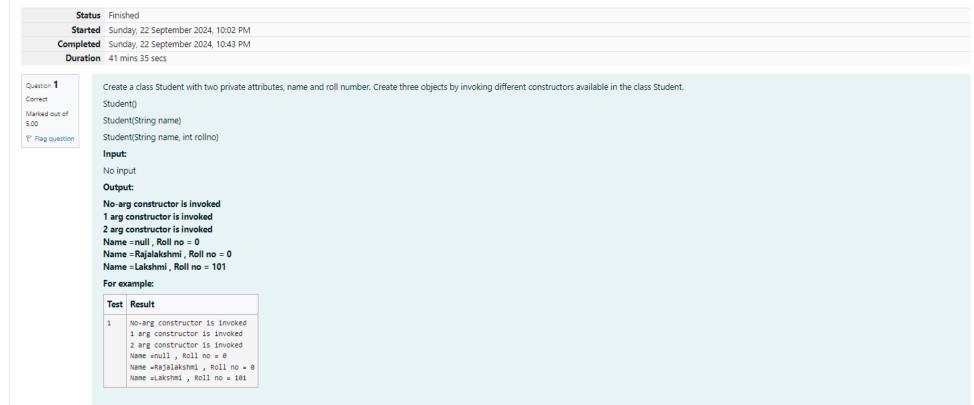
JAVA-OOPS ISHWARI RAJMOHAN 230701118 CSE B

WEEK 4

CS23333-Object Oriented Programming Using Java-2023





```
Answer: (penalty regime: 0 %)
```

```
1 - public class Student {
       private String name;
       private int rollNo;
       public Student() {
           this.name = null;
 6
          this.rollNo = 0;
        System.out.println("No-arg constructor is invoked");
8
9 ,
      public Student(String name) {
10
         this.name = name;
11
           this.rollNo = 0;
12
           System.out.println("1 arg constructor is invoked");
13
     public Student(String name, int rollNo) {
14
15
           this.name = name;
16
           this.rollNo = rollNo;
17
        System.out.println("2 arg constructor is invoked");
18
19 ,
       public void displayInfo() {
           System.out.println("Name =" + name + " , Roll no = " + rollNo);
20
21
       public static void main(String[] args) {
22 •
23
           Student student1 = new Student();
24
           Student student2 = new Student("Rajalakshmi");
           Student student3 = new Student("Lakshmi", 101);
25
26
           student1.displayInfo();
27
           student2.displayInfo();
28
           student3.displayInfo();
29
30 }
```

	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	~

Passed all tests! <

Question 2

Marked out of

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

```
1 - import java.io.*;
2 import java.util.Scanner;
3 class Circle
4 v {
5
       private double radius;
6 +
       public Circle(double radius){
7
           // set the instance variable radius
8
          this.radius=radius;
9
10
11
        public void setRadius(double radius){
12
           // set the radius
          this.radius=radius;
13
14
15
        public double getRadius() {
16
17
           // return the radius
18
          return radius;
19
20
        public double calculateArea() { // complete the below statement
21
22
          return Math.PI*radius*radius;
23
24
25
       public double calculateCircumference() {
26
           // complete the statement
27
          return 2*Math.PI*radius;
28
29 }
```

```
30 v class prog{
31 -
        public static void main(String[] args) {
32
           int r;
           Scanner sc = new Scanner(System.in);
33
           r=sc.nextInt();
34
           Circle c= new Circle(r);
35
36
           System.out.println("Area = "+String.format("%.2f", c.calculateArea()));
           System.out.println("Circumference = "+String.format("%.2f",c.calculateCircumference()));
37
38
            // invoke the calculatecircumference method
39
40
41
42 }
```

	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
```

F 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(){
```

Display the object details by overriding the toString() method. For example:

return manufacturer;}

Test	Result
1	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000

Answer: (penalty regime: 0 %)

```
1 - public class Mobile {
       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 void setManufacturer(String manufacturer) {
13
       this.manufacturer = manufacturer;
14
15
16
       public String getManufacturer() {
17
           return manufacturer;
18
19
       public void setOperatingSystem(String operating_system) {
20
           this.operating_system = operating_system;
21
22
23 v
       public String getOperatingSystem() {
```

```
23 v
       public String getOperatingSystem() {
24
       return operating_system;
25
26 +
       public void setColor(String color) {
27
       this.color = color;
28
29 +
       public String getColor() {
30
      return color;
31
32 v
       public void setCost(int cost) {
33
      this.cost = cost;
34
35
36 ₹
      public int getCost() {
37
       return cost;
38
39
      @Override
40 +
      public String toString() {
41
      return "manufacturer = " + manufacturer + '\n' +"operating_system = " + operating_system + '\n' +"color = " + color + '\n' +"cost = " + cost;
42
43
44
      // Main method for testing
45 v
      public static void main(String[] args) {
46
        Mobile mobile = new Mobile("Redmi", "Andriod", "Blue", 34000);
47
       System.out.println(mobile);
48
49 }
```

	Test	Test Expected Got		
~	1	<pre>manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000</pre>	<pre>manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000</pre>	~

Passed all tests! <