Vidyavardhini's College of Engineering and Technology
Department of Artificial Intelligence & Data Science

AY: 2024-25

Class:	SE	Semester:	III
Course Code:		Course Name:	Object oriented Prorgraming JAVA.

Name of Student:	Atharva. V. Bose
Roll No. :	07.
Assignment No.:	02
Title of Assignment:	
Date of Submission:	
Date of Correction:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Completeness	5	
Demonstrated Knowledge	3	
Legibility	2	
Total	10	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Completeness	5	3-4	1-2
Demonstrated Knowledge Legibility	3	2	1
Legibility	2	1	0

Checked by

Name of Faculty   :

Signature   :

Date   :

Assignment no.2

Write a Java class named Triangle that includes method to:
1) Accept the base and triangle height of the triangle.
2) Calculate the area of the triangle.
3) Display the calculated area.

Ans 1)

```java
class Triangle {
    private double base;
    private double height;

    public void accept Dimensions() {
        Scanner scanner = new
        Scanner (system.in);
        System.out.print("Enter the height of the triangle:");
        base = scanner.nextDouble();

        System.out.print("Enter the height of triangle:");
        height = scanner.nextDouble();
    }

    Public double calculate Area() {
        double area = calculate Area();
        System.out.println("The area of the triangle is:"+
                            area);
    }

    public class TriangleArea {
    public static void main(String[] args) {

        Triangle triangle = new Triangle();
        triangle.accept Dimensions();
        } triangle.display Area();
    }
}
```

2) Create a class Retriangle with a default constructor that set the length and width to 1, and a parameterized constructor that accepts length and width as parameters. Implement methods to calculate and display the area.

Ans

```
import java.util. Scanner;
public class Rectangle.
{
  this. length =1
  this.width=1;
}
  public Rectangle (double length, double
                              width) {
    this. length = length;
    this.width = width;
}
  public void setLength (double length){
     this. length = length;
}
  public void set width (double width){
    this.width = width;
}
  Public void display Area() {
    double area = calculate Area ();
    System.out.println ("The area of the
    rectangle is: "+area);
}
  public static void main (string [] args){
```

```
Rectangle defaultRectangle = new Rectangle ();
    defaultRectangle. displayArea ();
Rectangle customRectangle = new Rectangle (5,10);
    customRectangle. displayArea ();
&
Custom Rectangle. set Length (7);
Custom Rectangle. set width (12);
custom Rectangle. display Area ();
    }
}
```

Q3) Create a class Student that has constructor for initializing student details such as name roll number, and marks. Overloaded the constructor to allow creation of student with just name and roll no. Implement a method to display to the students details.

→
```
public class Student {
    private string name;
    private int rollNumber;
    private double marks;
    public student(string name, int rollNumber,
                        double marks){
    this.name = name;
    this.rollnumber = rollNumber;
    this.marks = marks;
    }
        public student (string name, int rollNumber){
        this.name = name;
```

```java
this.rollNumber = rollNumber;
this.marks = 0.0;
public void display Details (){
System.out.println ("Name:" + name);
System.out.println ("Roll Number:" + rollNumber);
System.out.println ("marks:" + marks);
}

    public static void main(String [] args){
    Student student 1 = new
Student ("Alice", 101, 88.5);
    Student 1. displayDetails ();
Student student 2 = new student ("Bob",102);
    student 2. display details ();
    }
}
```