

## **Lab Task :4**

Create a program in java to implement Logic to find third angle of a triangle. After that check the triangle type with respect to the angle

### **CODE:**

```
import java.util.Scanner;

public class TriangleAnalyzer {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the first angle (in degrees): ");
        double angle1 = scanner.nextDouble();

        System.out.print("Enter the second angle (in degrees): ");
        double angle2 = scanner.nextDouble();

        if (angle1 <= 0 || angle2 <= 0 || angle1 + angle2 >= 180) {
            System.out.println("Invalid input: Angles must be positive and their sum must be less than 180 degrees.");
            return;    }

        double angle3 = 180 - angle1 - angle2;

        System.out.println("The third angle is: " + angle3 + " degrees");

        if (angle1 == angle2 && angle2 == angle3) {
            System.out.println("Triangle type: Equilateral (all angles are equal)");
        } else if (angle1 == angle2 || angle2 == angle3 || angle1 == angle3) {
            System.out.println("Triangle type: Isosceles (two angles are equal)");
        } else {
            System.out.println("Triangle type: Scalene (all angles are different)");    }
    }
}
```