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Q) 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. Write the program on either paper or compiler but do not execute.

CODE:

```
package triangleanglefind;

import java.util.Scanner;

public class TriangleType {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter the first angle of the triangle:");
        int angle1 = scanner.nextInt();

        System.out.println("Enter the second angle of the triangle:");
        int angle2 = scanner.nextInt();

        int angle3 = 180 - (angle1 + angle2);

        if (angle1 == 90 || angle2 == 90 || angle3 == 90) {
            System.out.println("The triangle is a right-angled triangle.");
        } else if (angle1 < 90 && angle2 < 90 && angle3 < 90) {
            System.out.println("The triangle is an acute-angled triangle.");
        } else {
            System.out.println("The triangle is an obtuse-angled triangle.");
        }
    }
}
```

Test Cases:

TC_ID	Test Case Description	Input Data	Expected Outcome	Actual Outcome	Status
TC-01	Input Validation	0°, 60°	Invalid Input (angle1 is less than or equal to 0)	Invalid Input	Passed
TC-02	Input Validation	45, -3	Invalid Input (angle2 is less than or equal to 0)	Invalid Input	Passed
TC-03	Input Validation	100, 90	Invalid Input (angle3 is less than or equal to 0)	Invalid Input	Passed
TC-04	Equilateral Triangle	60, 60	Equilateral Triangle (all angles are equal)	Equilateral Triangle	Passed
TC-05	Right-Angled Triangle	50, 40	Right Triangle (one angle is 90)	Right Triangle	Passed
TC-06	Scalene Triangle	30, 60	Scalene Triangle (all angles are different)	Scalene Triangle	Passed
TC-07	Isosceles Triangle	70, 70	Isosceles Triangle (two angles are equal)	Isosceles Triangle	Passed