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Course Code: SFEN 3005

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import java.util.*;
public class Main {

    public static void main(String[] args) {
        Scanner val = new Scanner(System.in);
        int a, b, c;
        boolean c1, c2, c3;
        boolean istriangle = false;

        do{
            System.out.print("Please enter a value for a: ");
            a = val.nextInt();
            System.out.print("Please enter a value for b: ");
            b = val.nextInt();
            System.out.print("Please enter a value for c: ");
            c = val.nextInt();

            c1 = a>=1 && a <= 10;
            c2 = a>=1 && a <= 10;
            c3 = a>=1 && a <= 10;

            if (!c1){
                System.out.println("The value of a is not in range.");
            }
            if(!c2){
                System.out.println("The value of b is not in range.");
            }
            if(!c3){
                System.out.println("The value of c is not in range.");
            }
        }while (!(c1 && c2 && c3));

        if (a < b+c && b < a+c && c < a+b)
            istriangle = true;
        else
            istriangle = false;

        if (istriangle == true){
            if((a == b) && (b == c)){
                System.out.println("Equilateral triangle");}
            else if ((a != b) && (a != c) && (b != c)){
                System.out.println("Scalene Triangle");}
            else{
                System.out.println("isosceles triangle");}
        }
        else
            System.out.println("not a triangle");
    }
}

```

Case Id	Description	Input Data			Expected Output	Actual Output	Status	Comments
		a	b	c				
1	Enter the min value for a , b and c	1	1	1	Equilateral Triangle	Equilateral Triangle	Pass	
2	Enter the min value for 2 items and min +1 for any one item1	1	1	2	Not a triangle	Not a triangle	Pass	
3	Enter the min value for 2 items and min +1 for any one item1	1	2	1	Not a triangle	Not a triangle	Pass	
4	Enter the min value for 2 items and min +1 for any one item1	2	1	1	Not a triangle	Not a triangle	Pass	
5	Enter the normal value for 2 items and 1 item is min value	4	4	1	Isosceles triangle	Isosceles triangle	Pass	
6	Enter the normal value for 2 items and 1 item is min value	5	1	5	Isosceles triangle	Isosceles triangle	Pass	
7	Enter the normal value for 2 items and 1 item is min value	1	7	7	Isosceles triangle	Isosceles triangle	Pass	
8	Enter the normal Value for a, b and c	8	3	4	Not a triangle	Not a triangle	Pass	
9	Enter the normal value for 2 items and 1 item is max value	3	4	10	Not a triangle	Not a triangle	Pass	
10	Enter the normal value for 2 items and 1 item is max value	3	10	3	Not a triangle	Not a triangle	Pass	
11	Enter the normal value for 2 items and 1 item is max value	10	6	6	Isosceles triangle	Isosceles triangle	Pass	
12	Enter the max value for 2 items and max - 1 for any one item	10	10	9	Isosceles triangle	Isosceles triangle	Pass	
13	Enter the max value for 2 items and max - 1 for any one item	10	9	10	Isosceles triangle	Isosceles triangle	Pass	
14	Enter the max value for 2 items and max - 1 for any one item	9	10	10	Isosceles triangle	Isosceles triangle	Pass	
15	Enter the max value for a, b and c	10	10	10	Equilateral triangle	Equilateral triangle	Pass	