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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 |  |