

79_Triangle Judgement Easy - Solution

Source - <https://leetcode.com/problems/triangle-judgement/description/>

Running Notes:

- Condition for 3 line segments to form a triangle
- The **triangle inequality theorem** states that three line segments can form a triangle if and only if the sum of the lengths of any two sides is greater than the length of the third side.

Mathematical Condition

For three line segments with lengths **x, y, and z**, they can form a valid triangle if:

$$\begin{aligned}x + y &> z \\x + z &> y \\y + z &> x\end{aligned}$$

If **any** of these conditions fail, the three segments **do not** form a triangle.

```
-- Write your PostgreSQL query statement below
SELECT x,y,z,
CASE
  WHEN (x+y>z AND x+z>y AND y+z>x) THEN 'Yes'
  ELSE 'No'
END AS triangle
FROM Triangle
```

So here I have used a CASE statement that checks the triangle condition and if it is satisfied then it returns a "Yes" for the triangle formation ELSE a "No"

Written By,
Harshee Pitroda