Tree Node

Question:

https://leetcode.com/problems/tree-node/

TREE	
Column	**Type**
id	int
p_id	int

id is the primary key column for this table.

Each row of this table contains information about the id of a node and the id of its parent node in a tree.

The given structure is always a valid tree.

Each node in the tree can be one of three types:

"Leaf": if the node is a leaf node.

"Root": if the node is the root of the tree.

"Inner": If the node is neither a leaf node nor a root node.

Write an SQL query to report the type of each node in the tree.

Return the result table ordered by id in ascending order.

Query 1(Accepted)

It was a simple **IF-ELIF-ELSE CASE** and to implement that in **SQL**, we use **CASE WHEN**.

```
SELECT
    id,
    CASE
        WHEN (p_id IS NULL) THEN 'Root'
        WHEN (id IN (SELECT p_id FROM Tree)) THEN 'Inner'
    ELSE 'Leaf'
    END AS type
FROM Tree
```

The problem with using NOT IN is that NULL values don't satisfy the condition so you always end in the ELSE block of CASE WHEN .

To overcome this problem , I just used IN as it automatically handles NULL.

NOTE :

So as a short note, always remember to separately handle NULL with NOT IN condition or just rewriting the query using IN.

PS: This was the best solution even in the discussion forum.