3054. Binary Tree Nodes

Description

Table: `Tree`

```
+-------------+------+
\| Column Name \| Type \|
+-------------+------+
\| N           \| int  \|
\| P           \| int  \|
+-------------+------+
N is the column of unique values for this table.
Each row includes N and P, where N represents the value of a node in Binary Tree, and P is the parent of N.
```

Write a solution to find the node type of the Binary Tree. Output one of the following for each node:

- **Root**: if the node is the root node.
- **Leaf**: if the node is the leaf node.
- **Inner**: if the node is neither root nor leaf node.

Return *the result table ordered by node value in* ***ascending order*** .

The result format is in the following example.

Example 1:

```
 Input:
Tree table:
+---+------+
\| N \| P    \|
+---+------+
\| 1 \| 2    \|
\| 3 \| 2    \|
\| 6 \| 8    \|
\| 9 \| 8    \|
\| 2 \| 5    \|
\| 8 \| 5    \|
\| 5 \| null \|
+---+------+
 Output:
+---+-------+
\| N \| Type  \|
+---+-------+
\| 1 \| Leaf  \|
\| 2 \| Inner \|
\| 3 \| Leaf  \|
\| 5 \| Root  \|
\| 6 \| Leaf  \|
\| 8 \| Inner \|
\| 9 \| Leaf  \|
+---+-------+
 Explanation:
- Node 5 is the root node since it has no parent node.
- Nodes 1, 3, 6, and 8 are leaf nodes because they don't have any child nodes.
- Nodes 2, 4, and 7 are inner nodes as they serve as parents to some of the nodes in the structure.
```