

608. Tree Node

Description

Table: Tree

Column Name	Type
id	int
p_id	int

id is the column with unique values 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:

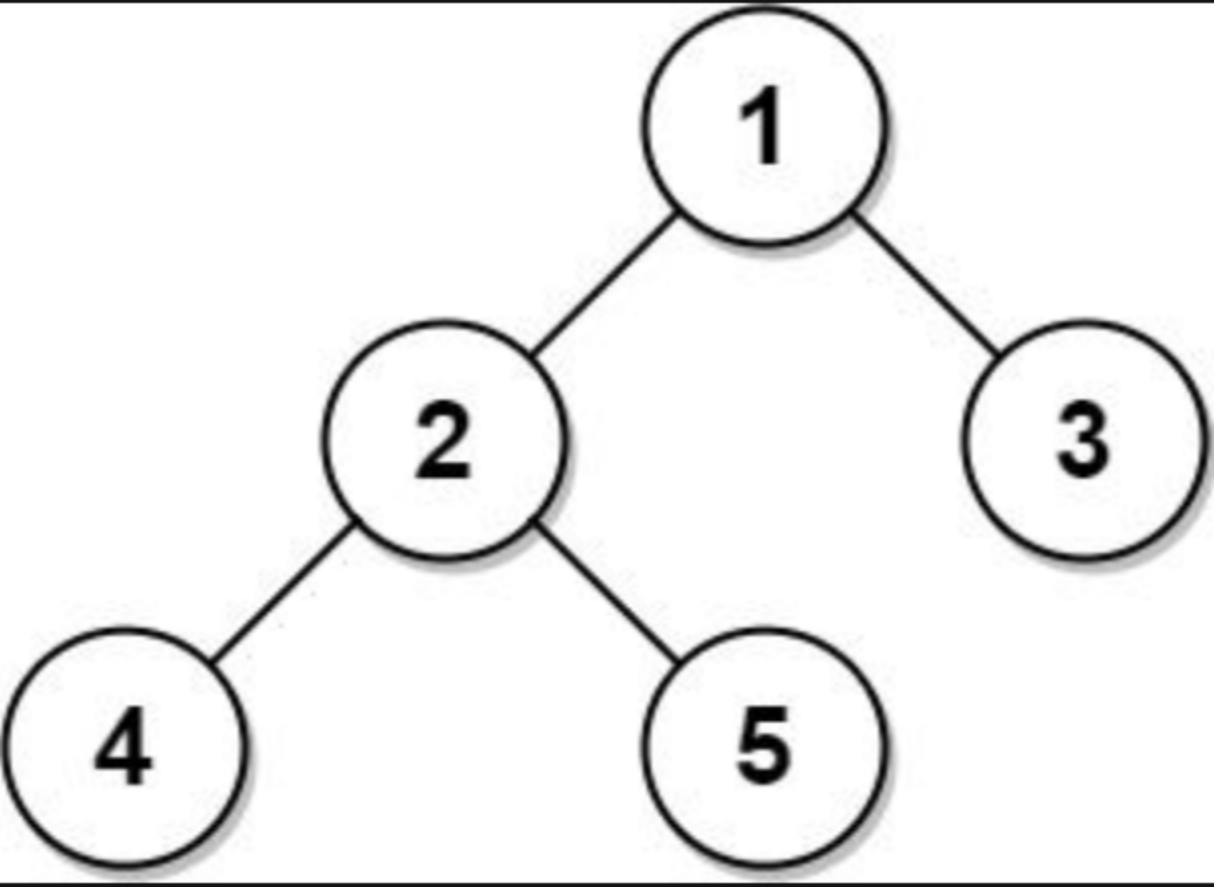
- **"Leaf"** : if the node is a leaf node.
- **"Root"** : if the node is the root of the tree.
- **"Inner"** : If the node is neither a leaf node nor a root node.

Write a solution to report the type of each node in the tree.

Return the result table in **any order** .

The result format is in the following example.

[Example 1:](#)



Input:
Tree table:

id	p_id
1	null
2	1
3	1
4	2
5	2

Output:

id	type
1	Root
2	Inner
3	Leaf
4	Leaf
5	Leaf

Explanation:
Node 1 is the root node because its parent node is null and it has child nodes 2 and 3.
Node 2 is an inner node because it has parent node 1 and child node 4 and 5.
Nodes 3, 4, and 5 are leaf nodes because they have parent nodes and they do not have child nodes.

[Example 2:](#)



Input:
Tree table:

id	p_id
1	null

Output:

id	type
1	Root

Explanation: If there is only one node on the tree, you only need to output its root attributes.

