Say you have a table **tree** with a column of nodes and a column corresponding parent nodes:

node parent  
1 2  
2 5  
3 5  
4 3  
5 NULL

Write SQL such that we label each node as a “leaf”, “inner” or “Root” node, such that for the nodes above we get:

node label   
1 Leaf  
2 Inner  
3 Inner  
4 Leaf  
5 Root