

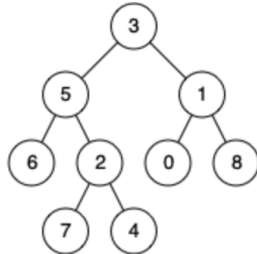
Question #30 (leetcode #236)

Lowest Common Ancestor of a Binary Tree

Difficulty :Medium Category :Tree

Given a binary tree, find the lowest common ancestor (LCA) of two given nodes in the tree. According to the definition of LCA on Wikipedia: "The lowest common ancestor is defined between two nodes p and q as the lowest node in T that has both p and q as descendants (where we allow a node to be a descendant of itself)."

Example 1:

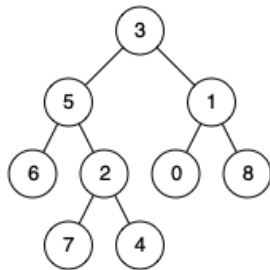


Input: root = [3,5,1,6,2,0,8,null,null,7,4], p = 5, q = 1

Output: 3

Explanation: The LCA of nodes 5 and 1 is 3.

Example 2:



Input: root = [3,5,1,6,2,0,8,null,null,7,4], p = 5, q = 4

Output: 5

Explanation: The LCA of nodes 5 and 4 is 5, since a node can be a descendant of itself according to the LCA definition.

Example 3:

Input: root = [1,2], p = 1, q = 2

Output: 1

Constraints:

The number of nodes in the tree is in the range [2, 105].

-109 <= Node.val <= 109

All Node.val are unique.

p != q

p and q will exist in the tree.

Good luck!

Fatih