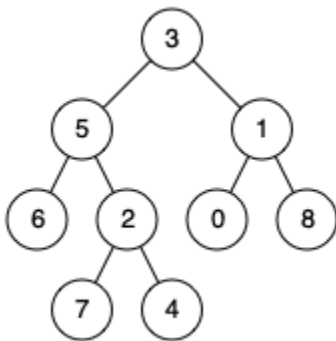


## **236. Lowest Common Ancestor of a Binary Tree**

- 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:**

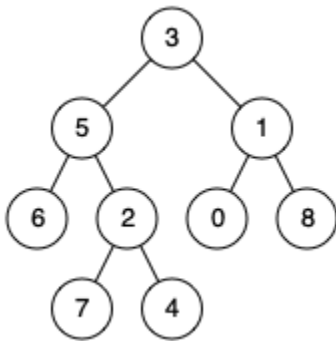


**Input:** root = [3,5,1,6,2,0,8,null,null,7,4], p = 5, q = 1

**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  $[2, 10^5]$ .
- $-10^9 \leq \text{Node.val} \leq 10^9$
- All  $\text{Node.val}$  are unique.
- $p \neq q$
- $p$  and  $q$  will exist in the tree.