Lowest Common Ancestor of Two Given Nodes [LeetCode](https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-tree/description/)

Given a binary tree, find the lowest common ancestor (LCA) of two given nodes in the tree.

“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:

5

/ \

3 7

/ \ \

11 1 6

/ \ / \

9 12 13 15

The First TargetNode = 1, Second TargetNode = 13

Output: The Lowest Common Ancestor: 5

**Approach 1: Function to find the lowest common ancestor (LCA) of two nodes in a binary tree.**

* If the root is null, return null (base case).
* If the current root is either **p** or **q**, it is the LCA.
* Recursively find the LCA in the left and right subtrees.
* If both left and right subtrees return non-null values, the current root is the LCA.
* If either left or right result is non-null, return the non-null value.
* **Time Complexity:** **O(N), where N is the number of nodes in the tree (each node is visited once).**
* **Space Complexity: O(H), where H is the height of the tree (recursion stack space).**