1123. Lowest Common Ancestor of Deepest Leaves

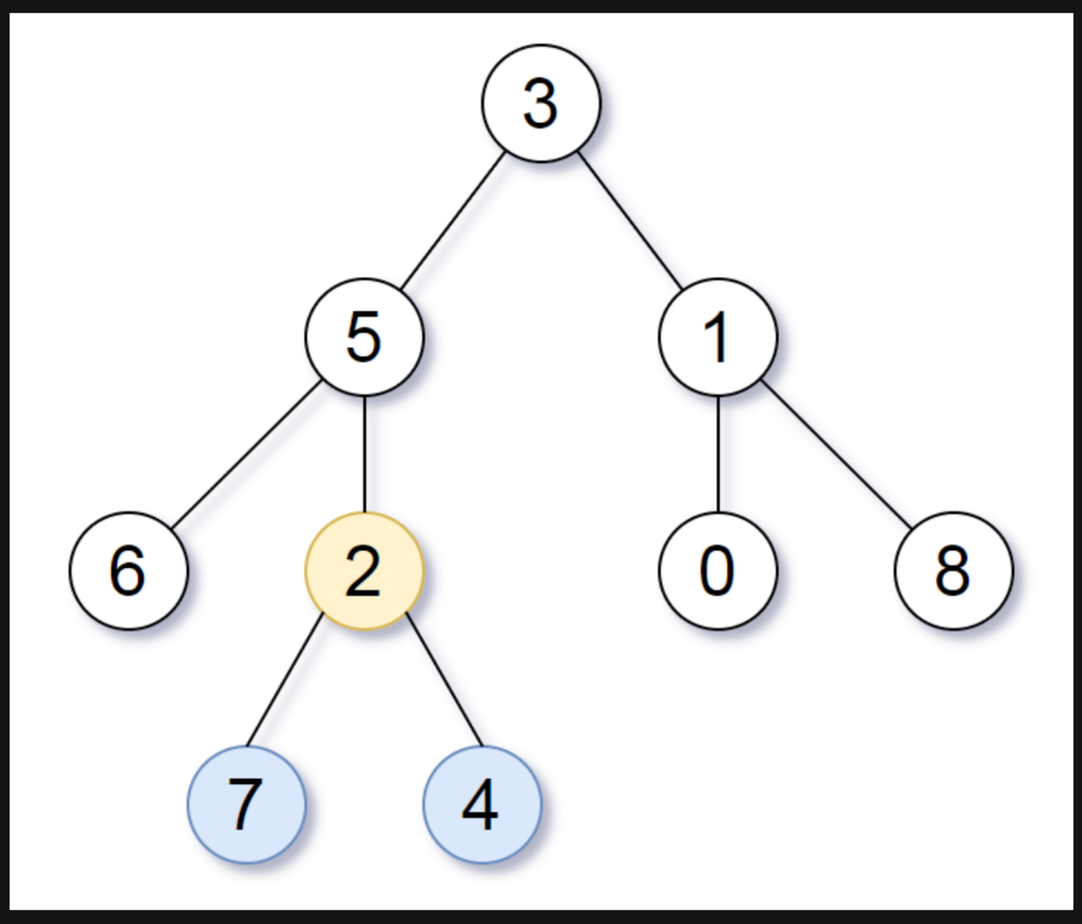
Description

Given the `root` of a binary tree, return *the lowest common ancestor of its deepest leaves*.

Recall that:

- The node of a binary tree is a leaf if and only if it has no children
- The depth of the root of the tree is `0`. if the depth of a node is `d`, the depth of each of its children is `d + 1`.
- The lowest common ancestor of a set `S` of nodes, is the node `A` with the largest depth such that every node in `S` is in the subtree with root `A`.

Example 1:




```
Input: root = [3,5,1,6,2,0,8,null,null,7,4]
Output: [2,7,4]
Explanation: We return the node with value 2, colored in yellow in the diagram.
The nodes coloured in blue are the deepest leaf-nodes of the tree.
Note that nodes 6, 0, and 8 are also leaf nodes, but the depth of them is 2, but the depth of nodes 7 and 4 is 3.
```

Example 2:

```
Input: root = [1]
Output: [1]
Explanation: The root is the deepest node in the tree, and it's the lca of itself.
```

Example 3:

```
Input: root = [0,1,3,null,2]
Output: [2]
Explanation: The deepest leaf node in the tree is 2, the lca of one node is itself.
```

Constraints:

- The number of nodes in the tree will be in the range `[1, 1000]`.
- `0 <= Node.val <= 1000`
- The values of the nodes in the tree are **unique**.

Note: This question is the same as 865: https://leetcode.com/problems/smallest-subtree-with-all-the-deepest-nodes/