549. Binary Tree Longest Consecutive Sequence II

Description

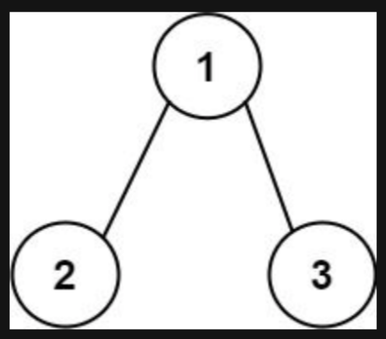
Given the `root` of a binary tree, return *the length of the longest consecutive path in the tree*.

A consecutive path is a path where the values of the consecutive nodes in the path differ by one. This path can be either increasing or decreasing.

- For example, `[1,2,3,4]` and `[4,3,2,1]` are both considered valid, but the path `[1,2,4,3]` is not valid.

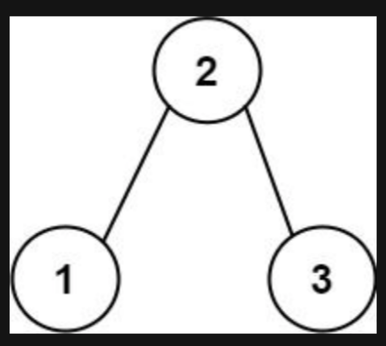
On the other hand, the path can be in the child-Parent-child order, where not necessarily be parent-child order.

Example 1:




```
Input: root = [1,2,3]
Output: 2
Explanation: The longest consecutive path is [1, 2] or [2, 1].
```

Example 2:




```
Input: root = [2,1,3]
Output: 3
Explanation: The longest consecutive path is [1, 2, 3] or [3, 2, 1].
```

Constraints:

- The number of nodes in the tree is in the range $[1, 3 * 10^4]$.
- $-3 * 10^4 <= Node.val <= 3 * 10^4$