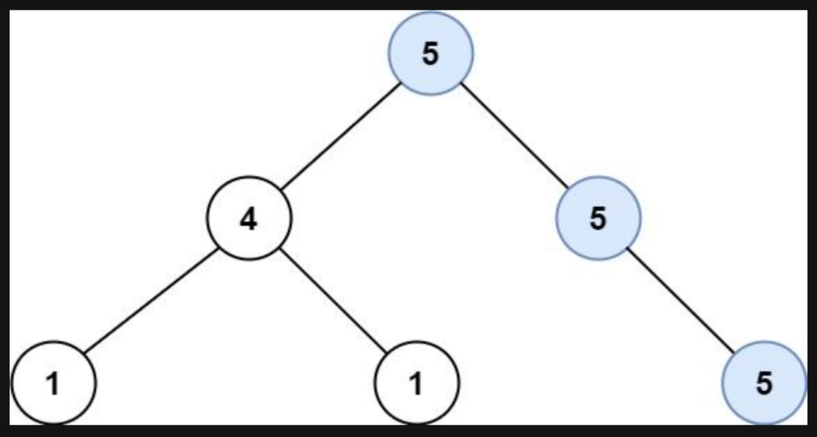
687. Longest Univalue Path

Description

Given the `root` of a binary tree, return *the length of the longest path, where each node in the path has the same value*. This path may or may not pass through the root.

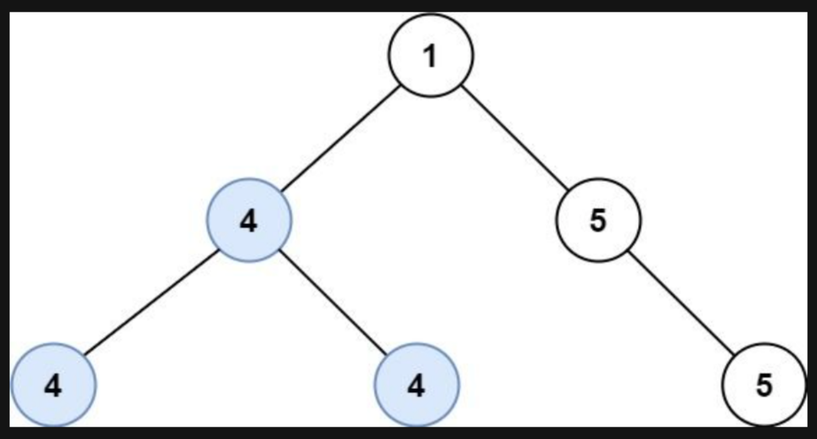
The length of the path between two nodes is represented by the number of edges between them.

Example 1:




```
Input: root = [5,4,5,1,1,null,5]
Output: 2
Explanation: The shown image shows that the longest path of the same value (i.e. 5).
```

Example 2:




```
Input: root = [1,4,5,4,4,null,5]
Output: 2
Explanation: The shown image shows that the longest path of the same value (i.e. 4).
```

Constraints:

- The number of nodes in the tree is in the range `[0, 10^4]`.
- `-1000 <= Node.val <= 1000`
- The depth of the tree will not exceed `1000`.