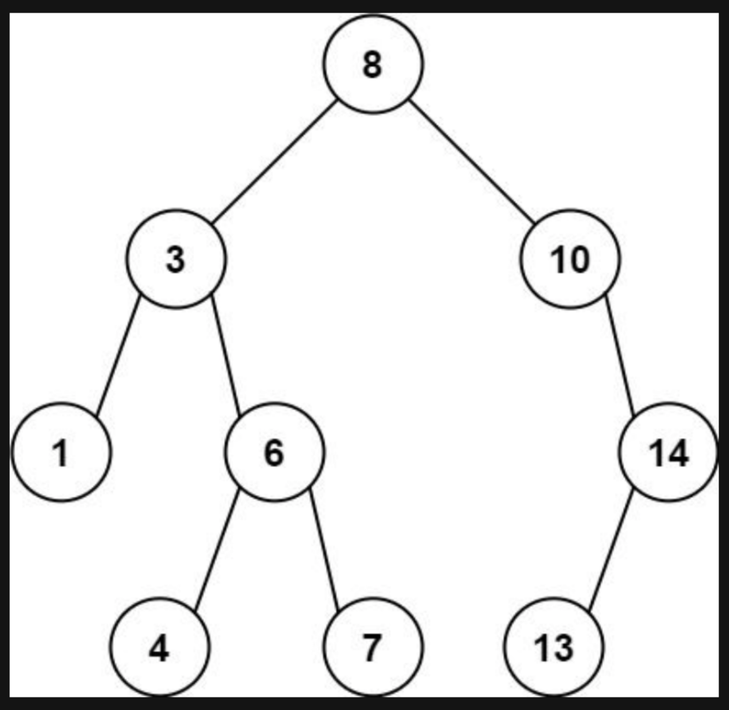
1026. Maximum Difference Between Node and Ancestor

Description

Given the `root` of a binary tree, find the maximum value `v` for which there exist **different** nodes `a` and `b` where `v = |a.val - b.val|` and `a` is an ancestor of `b`.

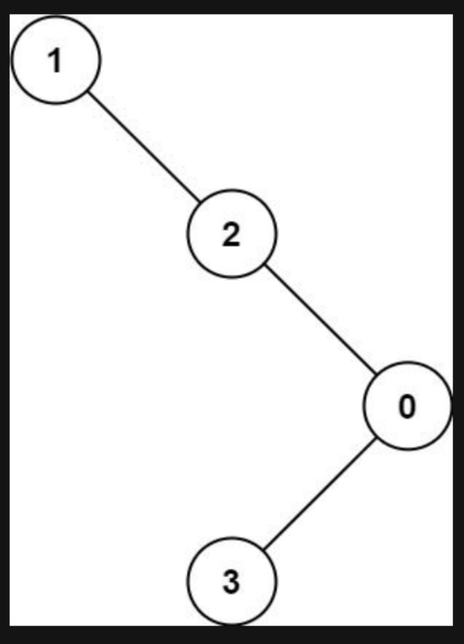
A node `a` is an ancestor of `b` if either: any child of `a` is equal to `b` or any child of `a` is an ancestor of `b`.

Example 1:




```
Input: root = [8,3,10,1,6,null,14,null,null,4,7,13]
Output: 7
Explanation: We have various ancestor-node differences, some of which are given below :
|8 - 3| = 5
|3 - 7| = 4
|8 - 1| = 7
|10 - 13| = 3
Among all possible differences, the maximum value of 7 is obtained by |8 - 1| = 7.
```

Example 2:




```
Input: root = [1,null,2,null,0,3]
Output: 3
```

Constraints:

- The number of nodes in the tree is in the range `[2, 5000]`.
- `0 <= Node.val <= 10 5`