979. Distribute Coins in Binary Tree

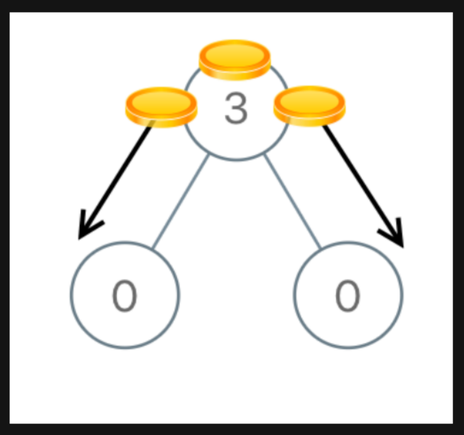
Description

You are given the `root` of a binary tree with `n` nodes where each `node` in the tree has `node.val` coins. There are `n` coins in total throughout the whole tree.

In one move, we may choose two adjacent nodes and move one coin from one node to another. A move may be from parent to child, or from child to parent.

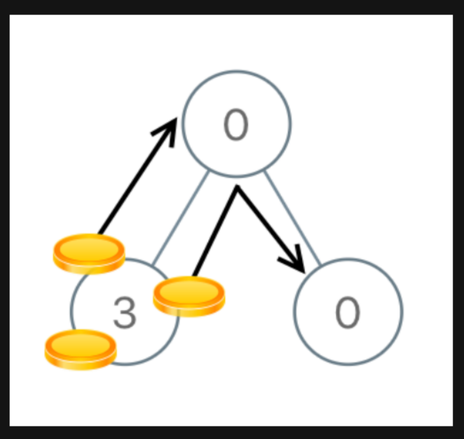
Return *the* ***minimum*** *number of moves required to make every node have* ***exactly*** *one coin*.

Example 1:




```
Input: root = [3,0,0]
Output: 2
Explanation: From the root of the tree, we move one coin to its left child, and one coin to its right child.
```

Example 2:




```
Input: root = [0,3,0]
Output: 3
Explanation: From the left child of the root, we move two coins to the root [taking two moves]. Then, we move one coin from the root of the tree to the right child.
```

Constraints:

- The number of nodes in the tree is `n`.
- `1 <= n <= 100`
- `0 <= Node.val <= n`
- The sum of all `Node.val` is `n`.