2641. Cousins in Binary Tree II

Description

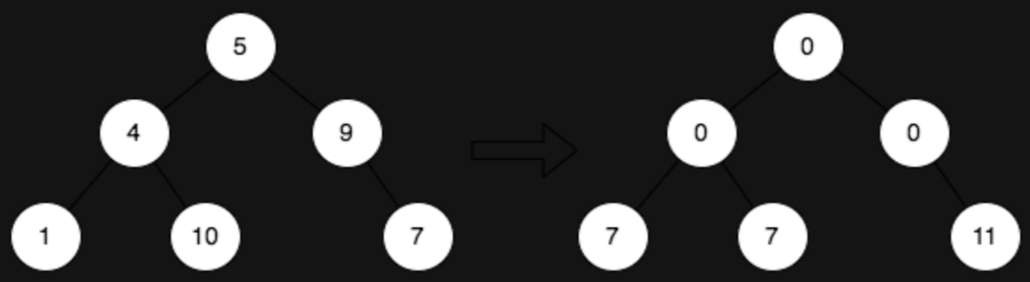
Given the `root` of a binary tree, replace the value of each node in the tree with the **sum of all its cousins' values**.

Two nodes of a binary tree are **cousins** if they have the same depth with different parents.

Return *the* `root` *of the modified tree*.

Note that the depth of a node is the number of edges in the path from the root node to it.

Example 1:




```
Input: root = [5,4,9,1,10,null,7]
Output: [0,0,0,7,7,null,11]
Explanation: The diagram above shows the initial binary tree and the binary tree after changing the value of each node.
- Node with value 5 does not have any cousins so its sum is 0.
- Node with value 4 does not have any cousins so its sum is 0.
- Node with value 9 does not have any cousins so its sum is 0.
- Node with value 1 has a cousin with value 7 so its sum is 7.
- Node with value 10 has a cousin with value 7 so its sum is 7.
- Node with value 7 has cousins with values 1 and 10 so its sum is 11.
```

Example 2:


```
Input: root = [3,1,2]
Output: [0,0,0]
Explanation: The diagram above shows the initial binary tree and the binary tree after changing the value of each node.
- Node with value 3 does not have any cousins so its sum is 0.
- Node with value 1 does not have any cousins so its sum is 0.
- Node with value 2 does not have any cousins so its sum is 0.
```

Constraints:

- The number of nodes in the tree is in the range `[1, 10^5]`.
- `1 <= Node.val <= 10^4`