

2641. Cousins in Binary Tree II

Hint

Medium

257

2

Companies

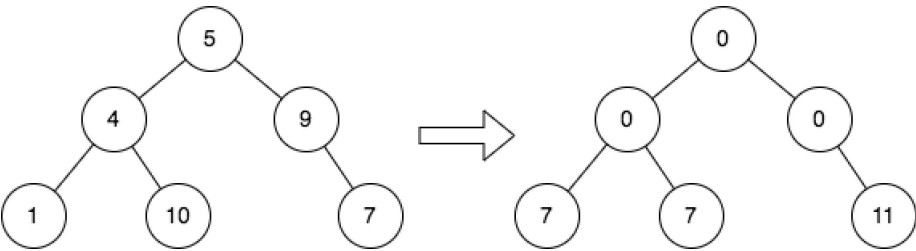
Given the `root` of a binary tree, replace the value of each node in the tree with the **sum of all its cousins' values**.

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.

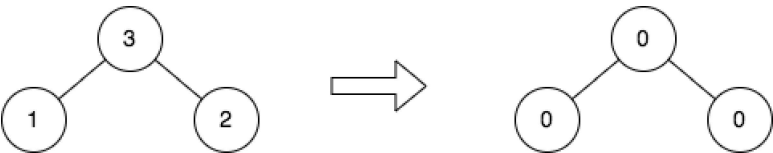
Example 1:



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, 105]`.
- `1 <= Node.val <= 104`

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Yes No

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