

LeetCode

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Description

Solution

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Submissions

222. Count Complete Tree Nodes

Medium

3834

289

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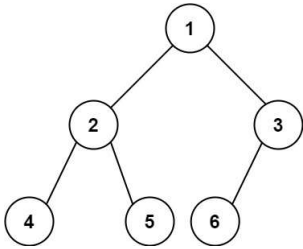
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Given the `root` of a **complete** binary tree, return the number of the nodes in the tree.

According to **Wikipedia**, every level, except possibly the last, is completely filled in a complete binary tree, and all nodes in the last level are as far left as possible. It can have between 2^{h-1} and $2^h - 1$ nodes inclusive at the last level h .

Design an algorithm that runs in less than $O(n)$ time complexity.

Example 1:



```
graph TD; 1((1)) --- 2((2)); 1 --- 3((3)); 2 --- 4((4)); 2 --- 5((5)); 3 --- 6((6))
```

Input: `root = [1,2,3,4,5,6]`
Output: 6

Example 2:

Input: `root = []`
Output: 0

Example 3:

Input: `root = [1]`
Output: 1

Constraints:

- The number of nodes in the tree is in the range $[0, 5 \times 10^4]$.
- $0 \leq \text{Node.val} \leq 5 \times 10^4$.
- The tree is guaranteed to be **complete**.

Accepted 344,213

Submissions 652,143

Seen this question in a real interview before?

Yes

No

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Autocomplete

```
1 /**
2  * Definition for a binary tree node.
3  * public class TreeNode {
4  *     int val;
5  *     TreeNode left;
6  *     TreeNode right;
7  *     TreeNode() {}
8  *     TreeNode(int val) { this.val = val; }
9  *     TreeNode(int val, TreeNode left, TreeNode right) {
10 *         this.val = val;
11 *         this.left = left;
12 *         this.right = right;
13 *     }
14 * }
15 */
16 class Solution {
17     public int countNodes(TreeNode root) {
18     }
19 }
20
```

Run Code

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Problems

Pick One

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Console

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1/1