2583. Kth Largest Sum in a Binary Tree

My Submissions (/contest/weekly-contest-335/problems/kth-largest-sum-in-a-binary-tree/submissions/) Back to Contest (/contest/weekly-contest-335/)

You are given the $\ \ \text{root}$ of a binary tree and a positive integer $\ k$.

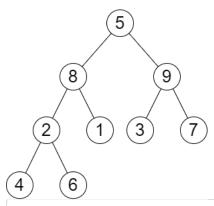
The level sum in the tree is the sum of the values of the nodes that are on the same level.

Return the kth largest level sum in the tree (not necessarily distinct). If there are fewer than k levels in the tree, return -1.

Note that two nodes are on the same level if they have the same distance from the root.

User Accepted:	8142
User Tried:	9104
Total Accepted:	8310
Total Submissions:	19339
Difficulty:	Medium

Example 1:



Input: root = [5,8,9,2,1,3,7,4,6], k = 2

Output: 13

Explanation: The level sums are the following:

- Level 1: 5.

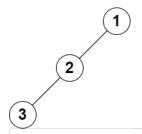
- Level 2: 8 + 9 = 17.

- Level 3: 2 + 1 + 3 + 7 = 13.

- Level 4: 4 + 6 = 10.

The 2nd largest level sum is 13.

Example 2:



Input: root = [1,2,null,3], k = 1

Output: 3

Explanation: The largest level sum is 3.

Constraints:

- ullet The number of nodes in the tree is $\, n \, . \,$
- 2 <= n <= 10⁵
- 1 <= Node.val <= 10⁶
- 1 <= k <= n

Discuss (https://leetcode.com/problems/kth-largest-sum-in-a-binary-tree/discuss)



1 const sm = (a) => a.reduce(((x, y) => x + y), 0);

United States (/region)

```
3/11/23, 4:47 AM
                                                             Kth Largest Sum in a Binary Tree - LeetCode Contest
   2
      const kthLargestLevelSum = (root, k) => {
   3 ▼
           let d = levelOrder_BFS(root), res = d.map(a \Rightarrow sm(a)).sort((x, y) \Rightarrow y - x)[k - 1];
   5
           return res ? res : -1;
   6
      };
   7
   8
      const levelOrder_BFS = (root) => {
           let data = [];
  9
  10
           getAllLevels(root, 0, data);
  11
           return data;
  12
      };
  13
 14 ▼
      const getAllLevels = (root, level, data) => {
 15
           if (!root) return;
           if (level >= data.length) data.push([]);
  16
  17
           data[level].push(root.val);
  18
           getAllLevels(root.left, level + 1, data);
           getAllLevels(root.right, level + 1, data);
 19
  20
      };
☐ Custom Testcase
                       Use Example Testcases
                                                                                                                             Run
                                                                                                                                       △ Submit
Submission Result: Accepted (/submissions/detail/913145726/) 2
                                                                              More Details > (/submissions/detail/913145726/)
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```

https://leetcode.com/contest/weekly-contest-335/problems/kth-largest-sum-in-a-binary-tree/