5532. Even Odd Tree

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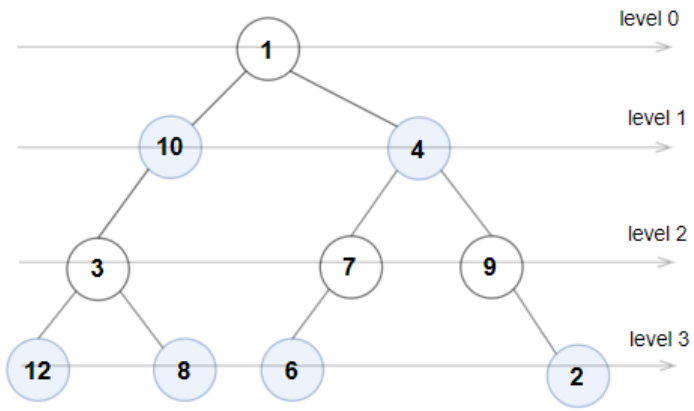
A binary tree is named **Even-Odd** if it meets the following conditions:

- The root of the binary tree is at level index `0`, its children are at level index `1`, their children are at level index `2`, etc.
- For every **even-indexed** level, all nodes at the level have **odd** integer values in **strictly increasing** order (from left to right).
- For every **odd-indexed** level, all nodes at the level have **even** integer values in **strictly decreasing** order (from left to right).

Given the `root` of a binary tree, *return* `true` *if the binary tree is* ***Even-Odd****, otherwise return* `false`.

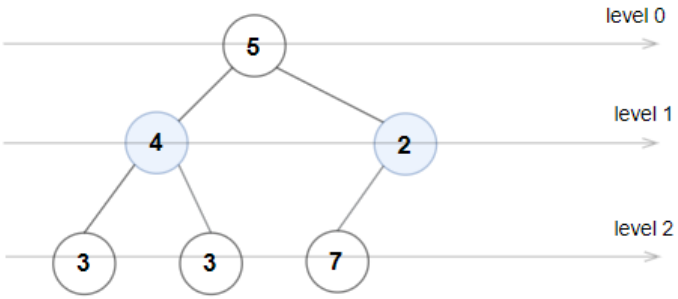
User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:



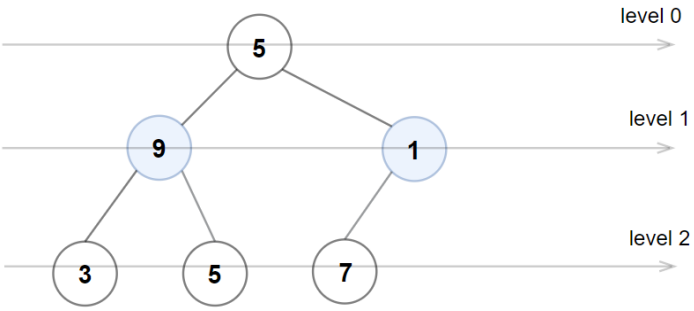

```
Input: root = [1,10,4,3,null,7,9,12,8,6,null,null,2]
Output: true
Explanation: The node values on each level are:
Level 0: [1]
Level 1: [10,4]
Level 2: [3,7,9]
Level 3: [12,8,6,2]
Since levels 0 and 2 are all odd and increasing, and levels 1 and 3 are all even and decre
```

Example 2:




```
Input: root = [5,4,2,3,3,7]
Output: false
Explanation: The node values on each level are:
Level 0: [5]
Level 1: [4,2]
Level 2: [3,3,7]
Node values in the level 2 must be in strictly increasing order, so the tree is not Even-O
```

Example 3:




```
Input: root = [5,9,1,3,5,7]
Output: false
Explanation: Node values in the level 1 should be even integers.
```

Example 4:

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

Example 5:

```
Input: root = [11,8,6,1,3,9,11,30,20,18,16,12,10,4,2,17]
Output: true
```

Constraints:

- The number of nodes in the tree is in the range `[1, 10^5]`.
- `1 <= Node.val <= 10^6`

JavaScript

```
/**
 * Definition for a binary tree node.
 * function TreeNode(val, left, right) {
 *     this.val = (val===undefined ? 0 : val)
 *     this.left = (left===undefined ? null : left)
 *     this.right = (right===undefined ? null : right)
 * }
 */
/**
 * @param {TreeNode} root
 * @return {boolean}
 */
var isEvenOddTree = function(root) {

};
```

Custom Testcase | Use Example Testcases

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