# 2415. Reverse Odd Levels of Binary Tree                                    Solved ●

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Given the `root` of a **perfect** binary tree, reverse the node values at each **odd** level of the tree.

- For example, suppose the node values at level 3 are `[2,1,3,4,7,11,29,18]`, then it should become `[18,29,11,7,4,3,1,2]`.

Return *the root of the reversed tree*.

A binary tree is **perfect** if all parent nodes have two children and all leaves are on the same level.

The **level** of a node is the number of edges along the path between it and the root node.

**Example 1:**
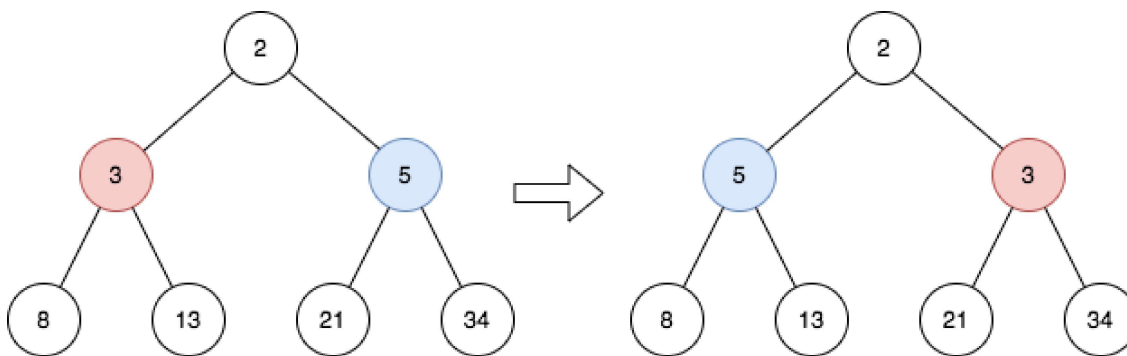


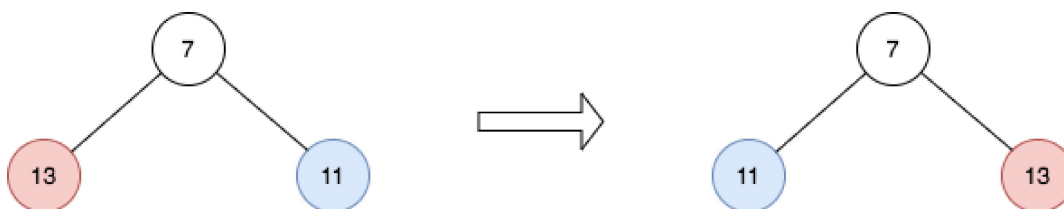**Input:** root = [2,3,5,8,13,21,34]
**Output:** [2,5,3,8,13,21,34]
**Explanation:**
The tree has only one odd level.
The nodes at level 1 are 3, 5 respectively, which are reversed and become 5, 3.

**Example 2:**



**Input:** root = [7,13,11]
**Output:** [7,11,13]
**Explanation:**
The nodes at level 1 are 13, 11, which are reversed and become 11, 13.

**Example 3:**

**Input:** root = [0,1,2,0,0,0,0,1,1,1,1,2,2,2,2]
**Output:** [0,2,1,0,0,0,0,2,2,2,2,1,1,1,1]
**Explanation:**
The odd levels have non-zero values.
The nodes at level 1 were 1, 2, and are 2, 1 after the reversal.
The nodes at level 3 were 1, 1, 1, 1, 2, 2, 2, 2, and are 2, 2, 2, 2, 1, 1, 1, 1 after the reversal.

**Constraints:**

- The number of nodes in the tree is in the range $[1, 2^{14}]$.

- $0 <= Node.val <= 10^5$

- root is a **perfect** binary tree.

Seen this question in a real interview before?    1/5

Yes        No

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