314. Binary Tree Vertical Order Traversal

Solved

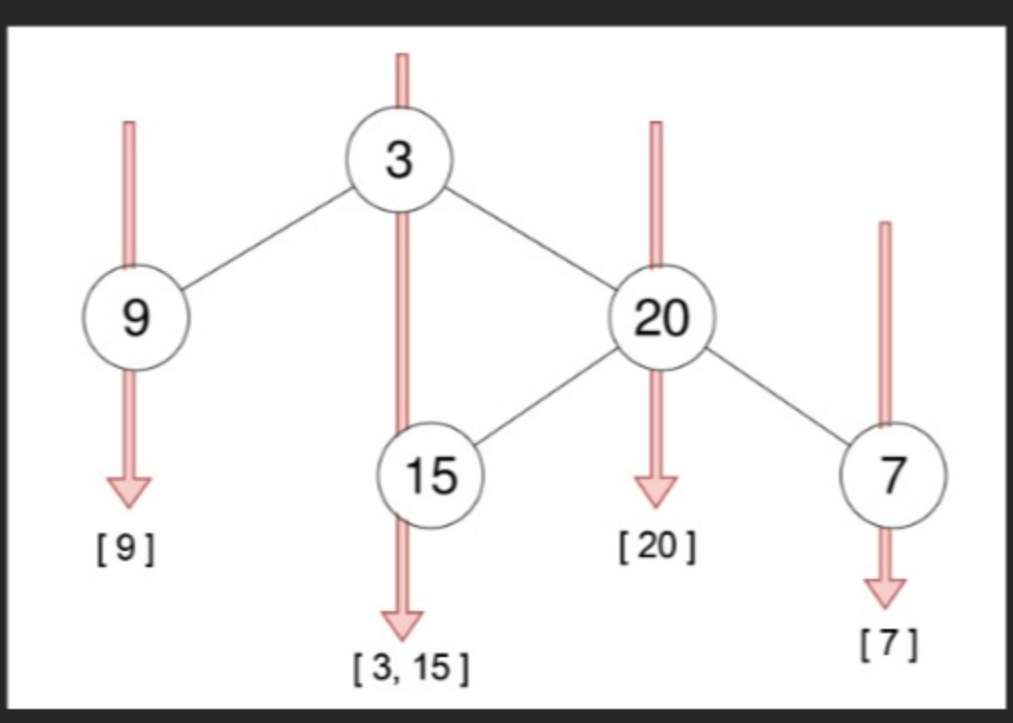
Premium

Medium | Topics | Companies | Hint

Given the `root` of a binary tree, return ***the vertical order traversal*** *of its nodes' values.* (i.e., from top to bottom, column by column).

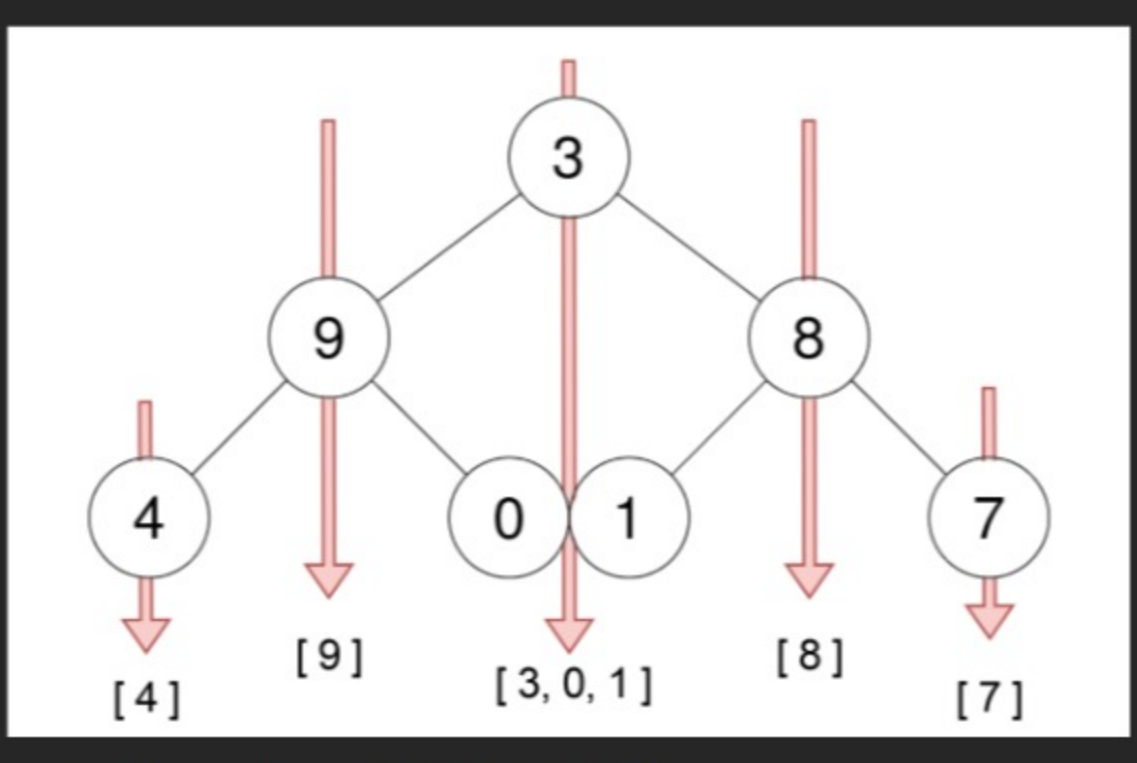
If two nodes are in the same row and column, the order should be from **left to right**.

Example 1:



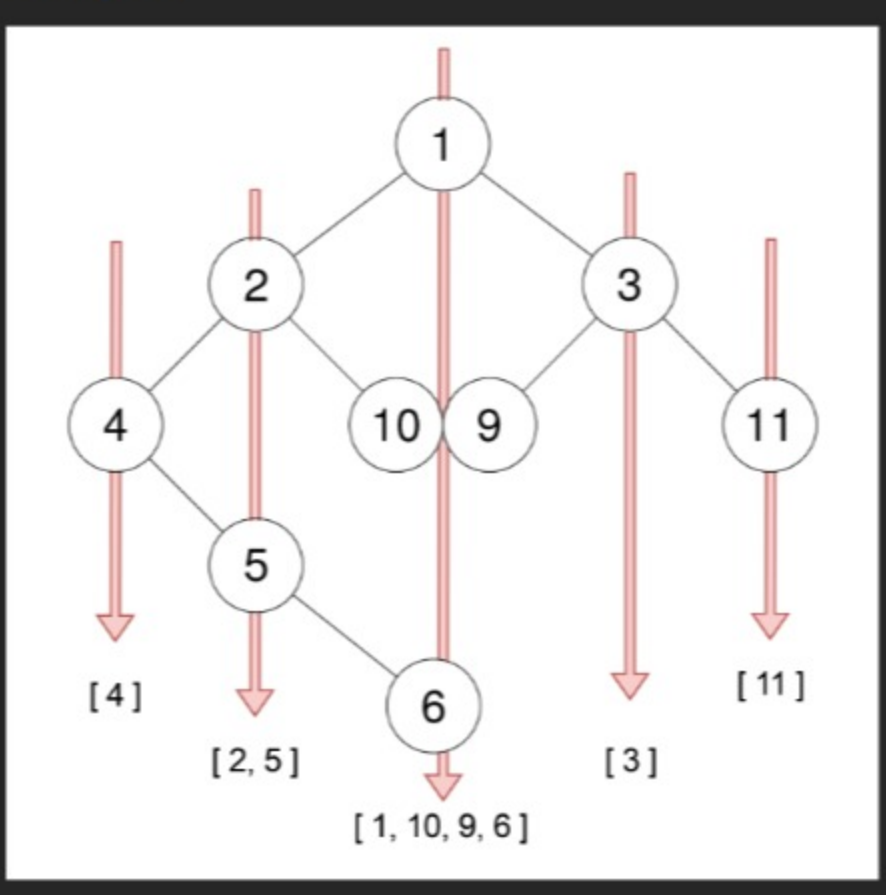

```
Input: root = [3,9,20,null,null,15,7]
Output: [[9],[3,15],[20],[7]]
```

Example 2:




```
Input: root = [3,9,8,4,0,1,7]
Output: [[4],[9],[3,0,1],[8],[7]]
```

Example 3:




```
Input: root =
[1,2,3,4,10,9,11,null,5,null,null,null,null,null,null,null,6]
Output: [[4],[2,5],[1,10,9,6],[3],[11]]
```

Constraints:

- The number of nodes in the tree is in the range `[0, 100]`.
- `-100 <= Node.val <= 100`

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

Yes No

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Topics

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Companies

0 - 3 months

Meta 63 | Bloomberg 3 | Microsoft 2

0 - 6 months

Google 3 | Snap 2

6 months ago

Amazon 12 | TikTok 4 | Apple 3

Hint 1

Do BFS from the root. Let the root be at column 0. In the BFS, keep in the queue the node and its column.

Hint 2

When you traverse a node, store its value in the column index. For example, the root's value should be stored at index 0.

Hint 3

If the node has a left node, it column should be col - 1. Similarly, if the node has a right node, its column should be col + 1.

Hint 4

At the end, check the minimum and maximum col and output their values.

Similar Questions

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Discussion (43)