1028. Recover a Tree From Preorder Traversal

Solved ●

Hard Topics Companies Hint

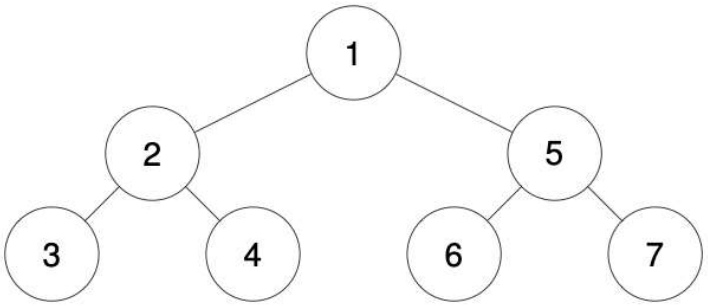
We run a preorder depth-first search (DFS) on the `root` of a binary tree.

At each node in this traversal, we output `D` dashes (where `D` is the depth of this node), then we output the value of this node. If the depth of a node is `D`, the depth of its immediate child is `D + 1`. The depth of the `root` node is `0`.

If a node has only one child, that child is guaranteed to be **the left child**.

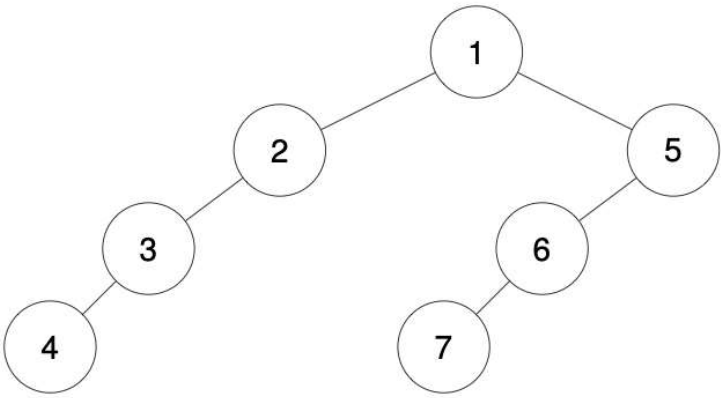
Given the output `traversal` of this traversal, recover the tree and return *its* `root`.

Example 1:



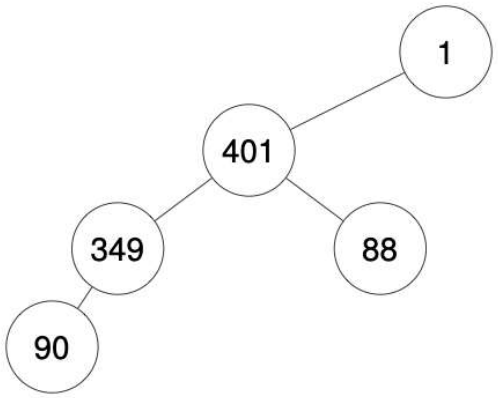
> **Input:** traversal = "1-2--3--4-5--6--7"
> **Output:** [1,2,5,3,4,6,7]

Example 2:



> **Input:** traversal = "1-2--3---4-5--6---7"
> **Output:** [1,2,5,3,null,6,null,4,null,7]

Example 3:



> **Input:** traversal = "1-401--349---90--88"
> **Output:** [1,401,null,349,88,90]

Constraints:

- The number of nodes in the original tree is in the range `[1, 1000]`.
- `1 <= Node.val <= 10^9`

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

Yes No

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Hint 1

Discussion (173)