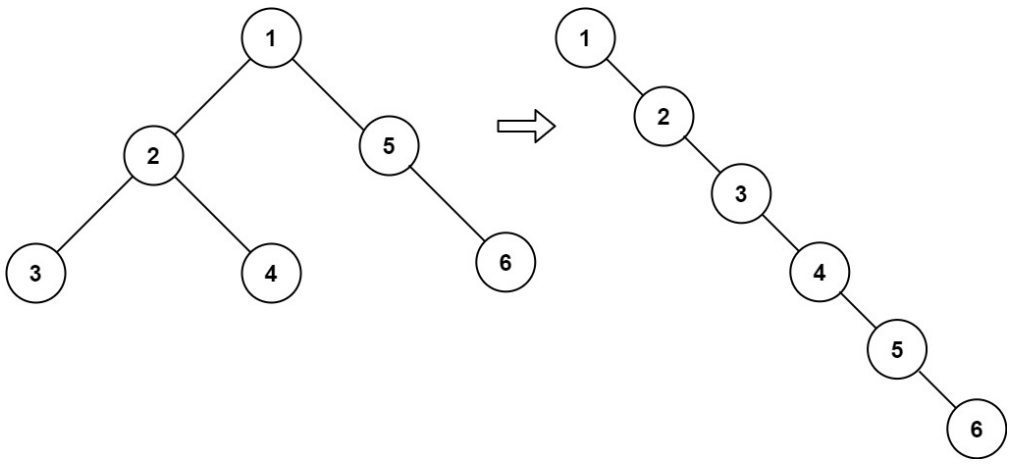
114. Flatten Binary Tree to Linked List

Medium 8208 482 Add to List Share

Given the `root` of a binary tree, flatten the tree into a "linked list":

- The "linked list" should use the same `TreeNode` class where the `right` child pointer points to the next node in the list and the `left` child pointer is always `null`.
- The "linked list" should be in the same order as a **pre-order traversal** of the binary tree.

Example 1:




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

Example 2:

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

Example 3:

```
Input: root = [0]
Output: [0]
```

Constraints:

- The number of nodes in the tree is in the range `[0, 2000]`.
- `-100 <= Node.val <= 100`

Follow up: Can you flatten the tree in-place (with `O(1)` extra space)?

Accepted 659,575 Submissions 1,108,295

Seen this question in a real interview before? Yes No

Companies

Related Topics

Similar Questions

Show Hint 1

```cpp
/**
 * Definition for a binary tree node.
 * struct TreeNode {
 *     int val;
 *     TreeNode *left;
 *     TreeNode *right;
 *     TreeNode() : val(0), left(nullptr), right(nullptr) {}
 *     TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
 *     TreeNode(int x, TreeNode *left, TreeNode *right) : val(x), left(left), right(right) {}
 * };
 */
class Solution {
public:
    void flatten(TreeNode* root) {

 if(root == NULL)

 return;

 if(root->left != NULL){

 TreeNode* temp = root->right;

 root->right = root->left;

 root->left = NULL;

 TreeNode* curr = root->right;

 while(curr->right != NULL)
```

Te... Run Cod... De...

Accepted Runtime: 0 ms

Your input [1,2,5

Output Di

Expected [1,nul