

1.

Problem List

Run

Submit

Description

Accepted

Editorial

Solutions

Submissions

104. Maximum Depth of Binary Tree

Easy Topics Companies

Given the `root` of a binary tree, return its *maximum depth*.

A binary tree's **maximum depth** is the number of nodes along the longest path from the root node down to the farthest leaf node.

Example 1:

```

graph TD
    3((3)) --> 9((9))
    3 --> 20((20))
    20 --> 15((15))
    20 --> 7((7))
  
```

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

13.4K 159 278 Online

Code

```

C++
1 int val;
2 * TreeNode *left;
3 * TreeNode *right;
4 * TreeNode() : val(0), left(nullptr), right(nullptr) {}
5 * TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
6 * TreeNode(int x, TreeNode *left, TreeNode *right) : val(x), left(left),
7 * right(right) {}
8 * };
9
10
11
12 class Solution {
13 public:
14     int maxDepth(TreeNode* root) {
15         if (!root) return 0;
16         return 1 + max(maxDepth(root->left), maxDepth(root->right));
17     }
18 };
          
```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

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

Output

2.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

98. Validate Binary Search Tree

Medium Topics Companies

Given the `root` of a binary tree, determine if it is a *valid binary search tree (BST)*.

A **valid BST** is defined as follows:

- The left *subtree* of a node contains only nodes with keys **less than** the node's key.
- The right subtree of a node contains only nodes with keys **greater than** the node's key.
- Both the left and right subtrees must also be binary search trees.

Example 1:

```

graph TD
    2((2)) --> 1((1))
    2 --> 3((3))
  
```

Input: `root = [2,1,3]`
Output: `true`

17.4K 228 177 Online

Code

```

C++
1 class Solution {
2 public:
3     bool isValidBST(TreeNode* root) {
4         return valid(root, LONG_MIN, LONG_MAX);
5     }
6
7 private:
8     bool valid(TreeNode* node, long minimum, long maximum) {
9         if (!node) return true;
10        if ((node->val > minimum && node->val < maximum)) return false;
11        return valid(node->left, minimum, node->val) && valid(node->right,
12        node->val, maximum);
13    }
14 };
          
```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

`root = [2,1,3]`

Output

3.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

101. Symmetric Tree

Easy Topics Companies

Given the `root` of a binary tree, check whether it is a *mirror of itself* (i.e., symmetric around its center).

Example 1:

```

graph TD
    1((1)) --> 2L((2))
    1 --> 2R((2))
    2L --> 3((3))
    2L --> 4L((4))
    2R --> 4R((4))
    2R --> 3R((3))
  
```

Input: `root = [1,2,2,3,4,4,3]`
Output: `true`

Example 2:

15.9K 197 148 Online

Code

```

C++
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
          
```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

`root = [1,2,2,3,4,4,3]`

Output

4.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

103. Binary Tree Zigzag Level Order Traversal

Medium Topics Companies

Given the `root` of a binary tree, return the *zigzag level order traversal* of its nodes' values. (i.e., from left to right, then right to left for the next level and alternate between).

Example 1:

```

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

```

11.3K 136 91 Online

Code

```

C++
1 1: (root)
2     return ans;
3
4     zigzagLevelOrderHelper(root, temp, ans);
5
6     int counter = 0;
7     for (auto& it : ans) {
8         if (counter % 2 == 1) {
9             reverse(it.begin(), it.end());
10        }
11        counter++;
12    }
13    return ans;
14 }

```

Testcase

Test Result

Accepted Runtime: 3 ms

Case 1 Case 2 Case 3

Input

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

Output

5.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

Code

```

C++
1 public:
2     TreeNode* lowestCommonAncestor(TreeNode* root, TreeNode* p, TreeNode* q) {
3         if (root == nullptr || root == p || root == q) {
4             return root;
5         }
6
7         TreeNode* left = lowestCommonAncestor(root->left, p, q);
8         TreeNode* right = lowestCommonAncestor(root->right, p, q);
9
10        if (left != nullptr && right != nullptr) {
11            return root;
12        }
13
14        return left != nullptr ? left : right;
15    }
16 };

```

Testcase

Test Result

6.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

Code

```

C++
1 vector<int> inorderTraversal(TreeNode* root) {
2     vector<int> res;
3     inorder(root, res);
4     return res;
5 }
6
7 private:
8     void inorder(TreeNode* node, vector<int>& res) {
9         if (!node) {
10            return;
11        }
12        inorder(node->left, res);
13        res.push_back(node->val);
14        inorder(node->right, res);
15    }
16 };

```

Testcase

Test Result

7.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

102. Binary Tree Level Order Traversal

Medium Topics Companies Hint

Given the `root` of a binary tree, return the *level order traversal* of its nodes' values. (i.e., from left to right, level by level).

Example 1:

```

graph TD
    3((3)) --> 9((9))
    3 --> 20((20))
    9 --> 15((15))
    20 --> 7((7))
  
```

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

Example 2:

16K 123 179 Online

Code

```

C++
1  vector<int> ans;
2  while(!q.empty()){
3      int sz=q.size();
4      vector<int> v;
5      for(int i=0;i<sz;i++){
6          TreeNode* node=q.front();
7          q.pop();
8          if(node->left!=NULL)q.push(node->left);
9          if(node->right!=NULL)q.push(node->right);
10         v.push_back(node->val);
11     }
12     ans.push_back(v);
13 }
14 return ans;
15 }
16

```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 **Case 2** **Case 3**

Input

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

Output

8.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

230. Kth Smallest Element in a BST

Medium Topics Companies Hint

Given the `root` of a binary search tree, and an integer `k`, return the *kth* smallest value (*1-indexed*) of all the values of the nodes in the tree.

Example 1:

```

graph TD
    3((3)) --> 1((1))
    3 --> 4((4))
    1 --> 2((2))
  
```

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

11.9K 122 124 Online

Code

```

C++
1  if(!root) return NULL;
2
3  TreeNode* curr=root;
4  int count=0;
5  int value=0;
6  while(curr!=NULL){
7      if(count==k){
8          return value;
9      }
10     if(curr->left!=NULL){
11         value=curr->val;
12         count++;
13         curr=curr->left;
14     }else{
15         TreeNode* leftnode=curr->left;
16         while(leftnode->right!=NULL){
17             leftnode=leftnode->right;
18         }
19         value=leftnode->val;
20         count++;
21         curr=leftnode;
22     }
23 }
24

```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 **Case 2**

Input

`root = [3,1,4,null,2]`

Output

9.

Problem List

Run

Submit

Description

Editorial

Solutions

Submissions

116. Populating Next Right Pointers in Each Node

Medium Topics Companies

You are given a **perfect binary tree** where all leaves are on the same level, and every parent has two children. The binary tree has the following definition:

```

struct Node {
    int val;
    Node *left;
    Node *right;
    Node *next;
};
  
```

Populate each next pointer to point to its next right node. If there is no next right node, the next pointer should be set to `NULL`.

Initially, all next pointers are set to `NULL`.

Example 1:

```

graph TD
    1((1)) --> 2((2))
    1 --> 3((3))
    2 --> 4((4))
    2 --> 5((5))
    3 --> 6((6))
    3 --> 7((7))
    4 --> 5
    5 --> 6
    6 --> 7
    7 --> NULL
  
```

10K 73 61 Online

Code

```

C++
1  class Solution {
2  public:
3      Node* connect(Node* root) {
4          if(!root) return nullptr;
5          Node* leftMost = root;
6
7          while (leftMost->left) {
8              Node* currNode = leftMost;
9
10             while (currNode) {
11                 currNode->left->next = currNode->right;
12                 if (currNode->next) {
13                     currNode->right->next = currNode->next->left;
14                 }
15                 currNode = currNode->next;
16             }
17         }
18     }
19 };
20

```

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 **Case 2**

Input

`root = [1,2,3,4,5,6,7]`

Output

10.

Problem List

Run

Submit

88

0

Premium

Description

Editorial

Solutions

Submissions

404. Sum of Left Leaves

Easy Topics Companies

Given the `root` of a binary tree, return the sum of all left leaves.

A **leaf** is a node with no children. A **left leaf** is a leaf that is the left child of another node.

Example 1:

```
graph TD; 3((3)) --> 9((9)); 3 --> 20((20)); 20 --> 15((15)); 20 --> 7((7));
```

Input: `root = [3,9,20,null,null,15,7]`
Output: 24

5.6K 92 25 Online

Code

C++

Auto

```
6 * TreeNode *right;
7 * TreeNode() : val(0), left(nullptr), right(nullptr) {}
8 * TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
9 * TreeNode(int x, TreeNode *left, TreeNode *right) : val(x), left(left),
right(right) {}
10 * };
11 */
12 class Solution {
13 public:
14     int sumOfLeftLeaves(TreeNode* root, bool isleft = false) {
15         if (!root) return 0;
16         if (!root->left && !root->right) return isleft ? root->val : 0;
17         return sumOfLeftLeaves(root->left, true) + sumOfLeftLeaves(root->right,
false);
18     }
19 };
```

Saved Lin 19, Col 3

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

root = [3,9,20,null,null,15,7]

Output