



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 6

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Branch: CSE

Semester: 6

Subject Name: AP LAB-II

UID: 22BCS12696

Section/Group: 603-B

Date of Performance: 07/03/2025

Subject Code: 22CSP-351

1. Aim:

- a. To find and implement the maximum depth of Binary Tree.
- b. To develop an algorithm for Binary Tree Inorder traversal.

2. Objective:

- To implement and analyze maximum depth of Binary Tree.
- To develop an algorithm for Binary Tree Inorder traversal.

3. Implementation/Code:

a. class Solution {

public:

```
int maxDepth(TreeNode* root) {  
    if (!root) return 0;  
    int leftDepth = maxDepth(root->left);  
    int rightDepth = maxDepth(root->right);  
    return 1 + max(leftDepth, rightDepth);  
}
```

};

b. class Solution {

public:

```
vector<int> inorderTraversal(TreeNode* root) {  
    vector<int> ans;  
    in(root, ans);  
    return ans;  
}
```

```
void in(TreeNode* root, vector<int>& ans)
```

```
{
```

```
    if(root==NULL)
```



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```
    return;  
    in(root->left,ans);  
    ans.push_back(root->val);  
    in(root->right,ans);  
}  
};
```

4. Output:

☒ Testcase | [Test Result](#)

Accepted Runtime: 0 ms

• Case 1

• Case 2

Input

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

Output

3

Expected

3

☒ Testcase | [Test Result](#)

Accepted Runtime: 0 ms

• Case 1

• Case 2

• Case 3

• Case 4

Input

root =
[1,null,2,3]

Output

[1,3,2]

Expected

[1,3,2]

5. Learning Outcome:

- Understand string manipulation techniques in C++.
- Implement efficient algorithms for detecting cyclic rotations.
- Apply mathematical approaches to solve missing number problems.
- Utilize standard library functions like accumulate and find.
- Enhance problem-solving skills through algorithm design and analysis.