# **Experiment 6**

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Section/Group:22BET\_IOT-702/A **Branch: IT** 

Date of Performance: 28/02/25 Semester: 6 **Subject Code: 22ITP-351** 

**Subject Name: AP LAB-II** 

#### 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:

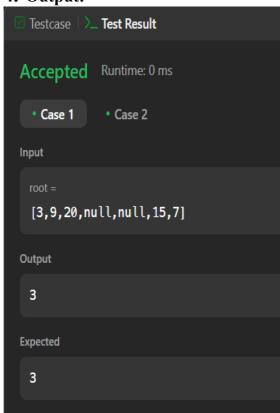
To implement and analyze maximum depth of Binary Tree. To develop an algorithm for Binary Tree Inorder traversal.

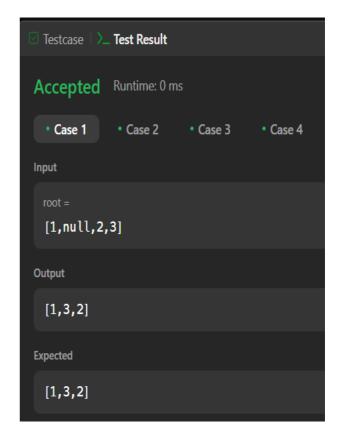
### 3. Implementation/Code:

```
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)
```

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

## 4. Output:





# 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.