Experiment 6

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Semester: 6 Date of Performance: 06/03/25

Subject Name: AP LAB-II Subject Code: 22ITH-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)

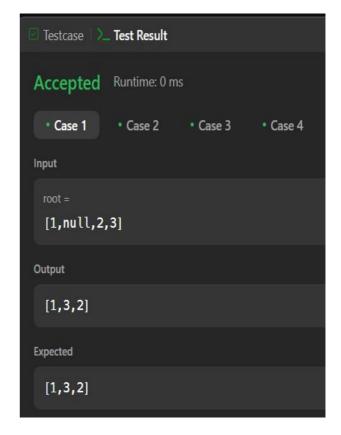
{



```
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.