



## EXPERIMENT- 6

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**Subject Name:** Advance Programming Lab-II

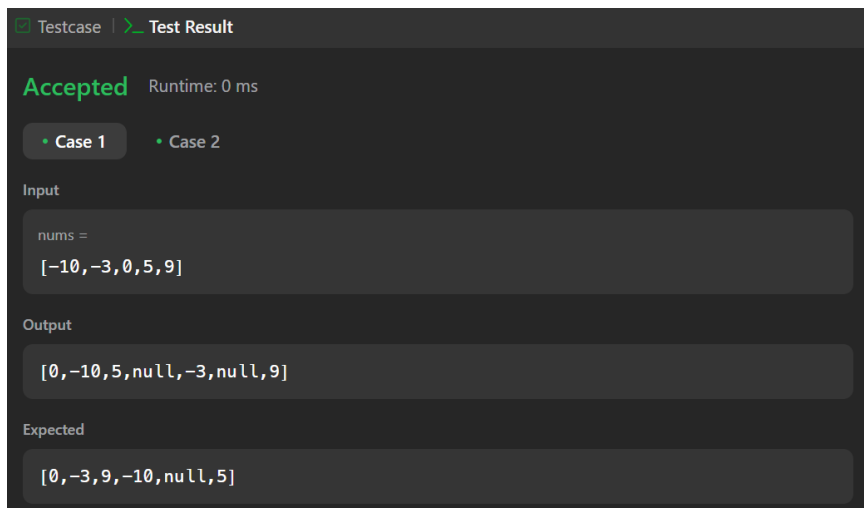
**Subject Code:** 22CSP-351

### **Problem-1 [Convert Sorted Array to Binary Search Tree]**

#### **1. Implementation/Code:**

```
class Solution {
public:
    TreeNode* sortedArrayToBST(vector<int>& nums) {
        return helper(nums, 0, nums.size() - 1);}
private:
    TreeNode* helper(vector<int>& nums, int left, int right) {
        if (left > right)
            return nullptr;
        int mid = left + (right - left) / 2;
        TreeNode* root = new TreeNode(nums[mid]);
        root->left = helper(nums, left, mid - 1);
        root->right = helper(nums, mid + 1, right);
        return root;
    }
};
```

#### **2. Output:**




## Problem-2 [Maximum Depth of Binary Tree]

### 1. Implementation/Code:

```
class Solution {  
public:  
    int maxDepth(TreeNode* root) {  
        if (root == nullptr)  
            return 0;  
        int lh = maxDepth(root->left);  
        int rh = maxDepth(root->right);  
        return 1 + max(lh, rh);  
    }  
};
```

### 2. Output:



The screenshot shows a code execution interface with a dark theme. At the top, there are tabs for 'Testcase' and 'Test Result', with 'Test Result' being the active tab. Below the tabs, the status 'Accepted' is displayed in green, followed by 'Runtime: 0 ms'. There are two tabs for test cases: 'Case 1' (selected) and 'Case 2'. Under 'Case 1', the 'Input' section shows 'root =' followed by '[3,9,20,null,null,15,7]'. The 'Output' section shows the value '3'. The 'Expected' section also shows the value '3'.

Testcase | Test Result

Accepted Runtime: 0 ms

• Case 1 • Case 2

Input

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

Output

3

Expected

3