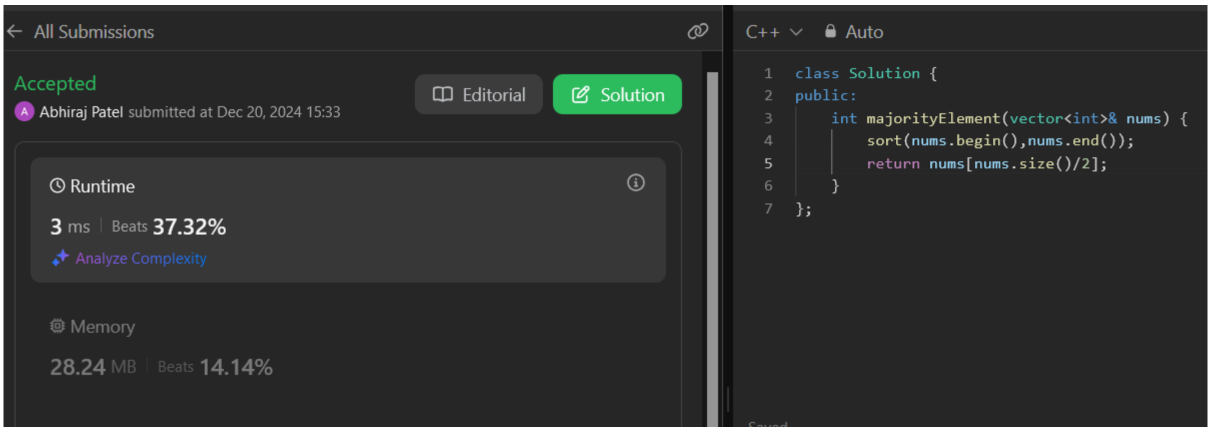
Winter Domain Camp Day-2

Name-Abhiraj Patel UID-22BCS11329 Date-20-12-24

Q 1 : Majority Elements



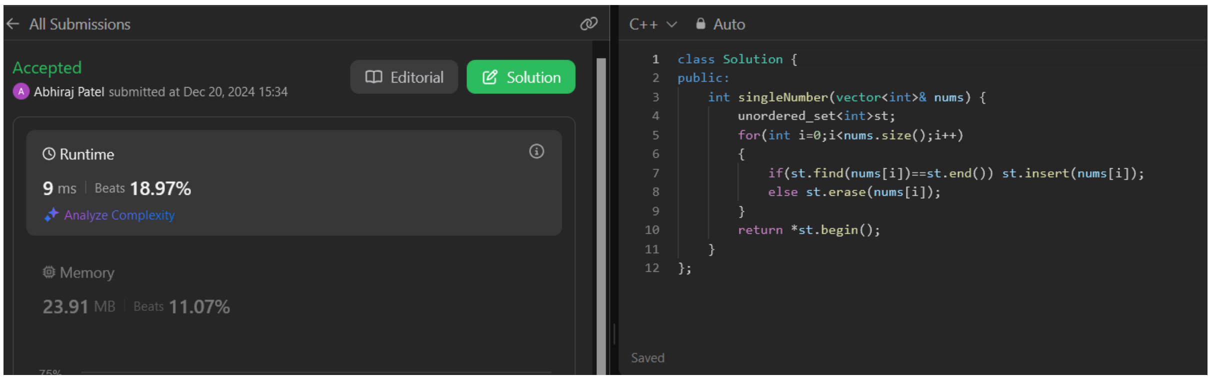
Accepted
Abhiraj Patel submitted at Dec 20, 2024 15:33

Runtime
3 ms | Beats 37.32%

Memory
28.24 MB | Beats 14.14%

```cpp
class Solution {
public:
    int majorityElement(vector<int>& nums) {
        sort(nums.begin(),nums.end());
        return nums[nums.size()/2];
    }
};
```

Question 2. Single Number



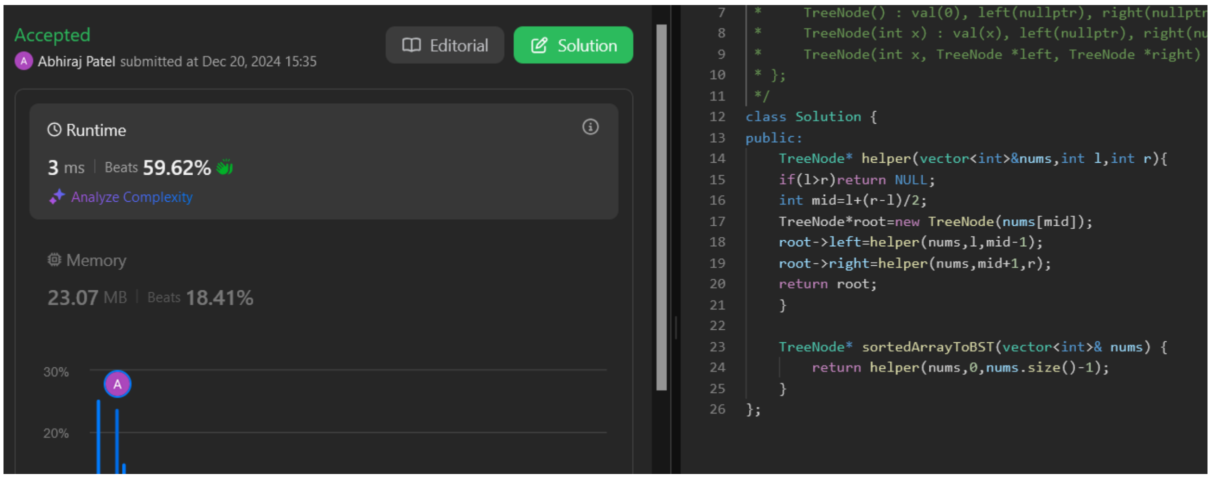
Accepted
Abhiraj Patel submitted at Dec 20, 2024 15:34

Runtime
9 ms | Beats 18.97%

Memory
23.91 MB | Beats 11.07%

```cpp
class Solution {
public:
    int singleNumber(vector<int>& nums) {
        unordered_set<int>st;
        for(int i=0;i<nums.size();i++)
        {
            if(st.find(nums[i])==st.end()) st.insert(nums[i]);
            else st.erase(nums[i]);
        }
        return *st.begin();
    }
};
```

Question 3 Convert Sorted Array to Binary Search Tree



Accepted
Abhiraj Patel submitted at Dec 20, 2024 15:35

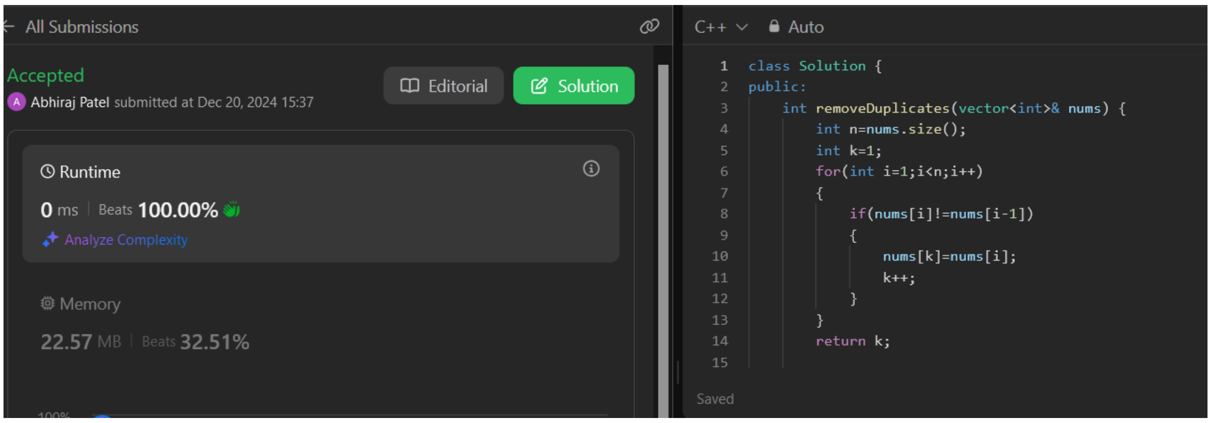
Runtime
3 ms | Beats 59.62%

Memory
23.07 MB | Beats 18.41%

```cpp
 *     TreeNode() : val(0), left(nullptr), right(nullptr
 *     TreeNode(int x) : val(x), left(nullptr), right(nu
 *     TreeNode(int x, TreeNode *left, TreeNode *right)
 * };
 */
class Solution {
public:
    TreeNode* helper(vector<int>&nums,int l,int r){
    if(l>r)return NULL;
    int mid=l+(r-l)/2;
    TreeNode*root=new TreeNode(nums[mid]);
    root->left=helper(nums,l,mid-1);
    root->right=helper(nums,mid+1,r);
    return root;
    }

    TreeNode* sortedArrayToBST(vector<int>& nums) {
        return helper(nums,0,nums.size()-1);
    }
};
```

Question 4. Remove Element



Accepted
Abhiraj Patel submitted at Dec 20, 2024 15:37

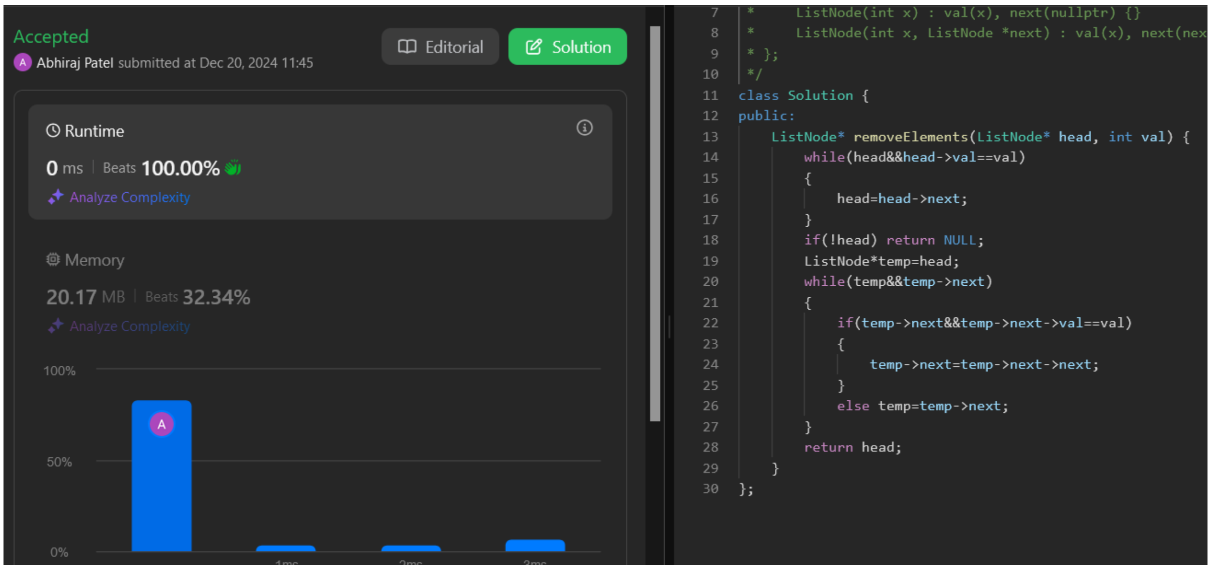
Runtime
0 ms | Beats 100.00%

Memory
22.57 MB | Beats 32.51%

```cpp
class Solution {
public:
    int removeDuplicates(vector<int>& nums) {
        int n=nums.size();
        int k=1;
        for(int i=1;i<n;i++)
        {
            if(nums[i]!=nums[i-1])
            {
                nums[k]=nums[i];
                k++;
            }
        }
        return k;

```

Question 5. Remove Linked List Elements



Accepted
Abhiraj Patel submitted at Dec 20, 2024 11:45

Runtime
0 ms | Beats 100.00%

Memory
20.17 MB | Beats 32.34%

```cpp
 *     ListNode(int x) : val(x), next(nullptr) {}
 *     ListNode(int x, ListNode *next) : val(x), next(nex
 * };
 */
class Solution {
public:
    ListNode* removeElements(ListNode* head, int val) {
        while(head&&head->val==val)
        {
            head=head->next;
        }
        if(!head) return NULL;
        ListNode*temp=head;
        while(temp&&temp->next)
        {
            if(temp->next&&temp->next->val==val)
            {
                temp->next=temp->next->next;
            }
            else temp=temp->next;
        }
        return head;
    }
};
```