ASSIGNMENT-5

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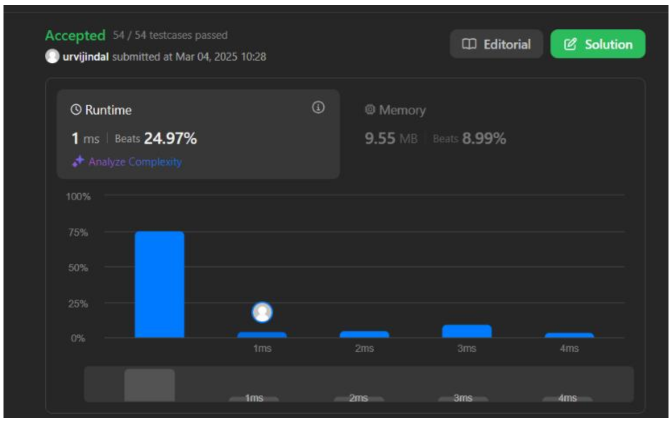
389. Find the difference

```
class Solution {

public:

    char findTheDifference(string s, string t) {

        unordered_map<char,int>mpp;

        for(int i=0;i<t.length();i++){

            mpp[t[i]]++;

        }

        for(int i=0;i<s.length();i++){

            mpp[s[i]]--;

        }

        for(auto it:mpp){

            if(it.second>0){

                return it.first;

            }

        }

        return '0';

    }};
```



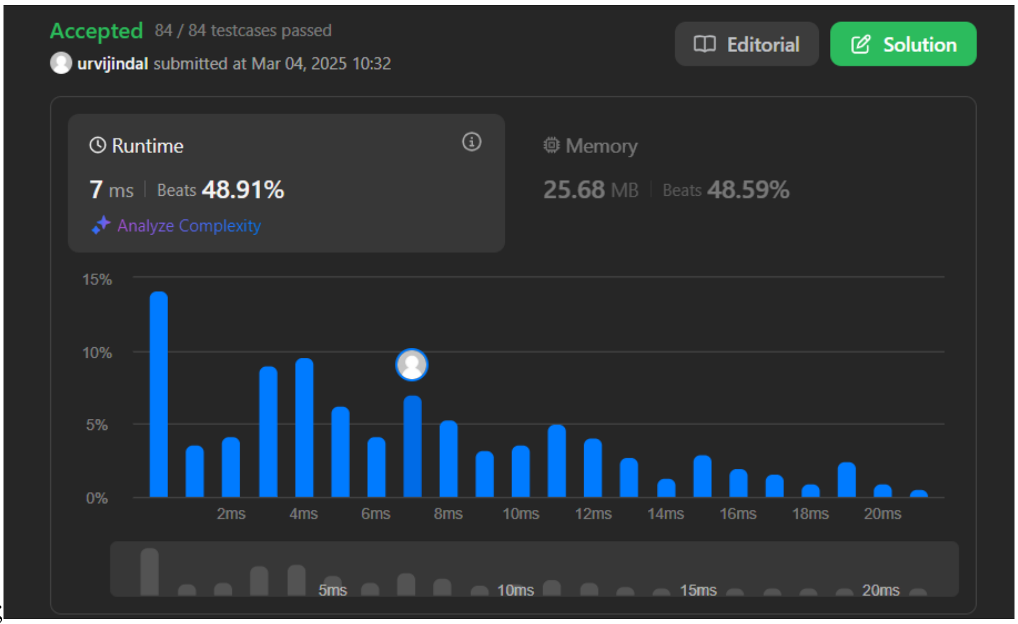
Accepted 54 / 54 testcases passed
urvijindal submitted at Mar 04, 2025 10:28

Runtime
1 ms | Beats 24.97%

Memory
9.55 MB | Beats 8.99%

976.Largest Perimeter Triangle

```
class Solution {
public:
    int largestPerimeter(vector<int>& nums) {
        sort(nums.begin(),nums.end());
        for(int i=nums.size()-1;i>1;i--){
            if(nums[i]<nums[i-1]+nums[i-2]){
                return nums[i]+nums[i-1]+nums[i-2];
            }
        }
        return 0;
    }
```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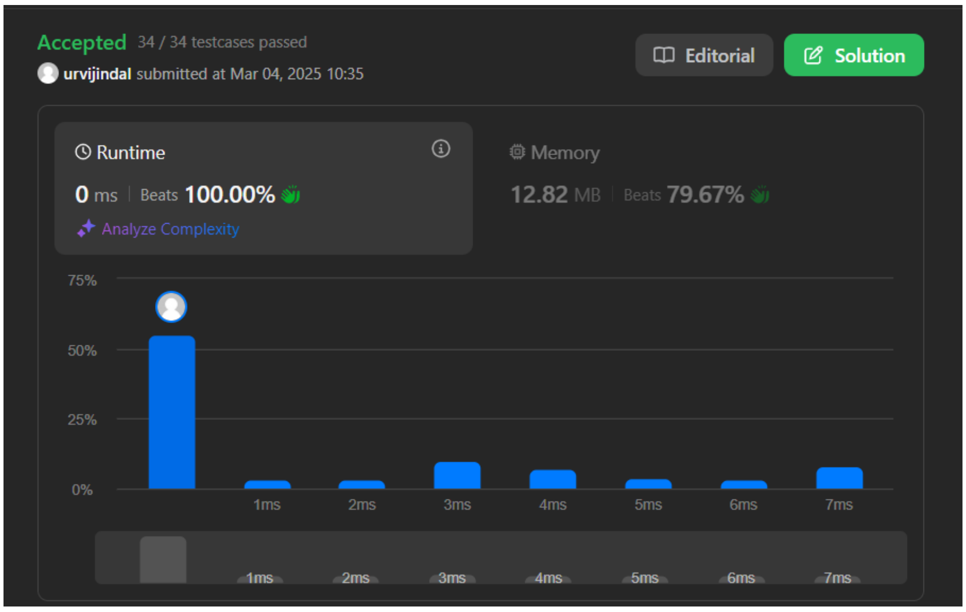
Runtime
7 ms | Beats 48.91%

Memory
25.68 MB | Beats 48.59%

```
};
```

414.Third Maximum Number

```
class Solution {
public:
    int thirdMax(vector<int>& nums) {
        sort(nums.begin(),nums.end());
        int largest,seclargest,thirdlargest;
        largest= nums[0];
        seclargest=nums[0];
        thirdlargest=nums[0];
        for(int i=0;i<nums.size();i++){
            if(nums[i]>largest){
                thirdlargest=seclargest;
                seclargest=largest;
                largest=nums[i];
            }
            else if(nums[i]>seclargest && nums[i]<largest){
                thirdlargest=seclargest;
                seclargest=nums[i];
            }
            else if(nums[i]>thirdlargest && nums[i]<seclargest){
                thirdlargest=nums[i];
            }
        }
        return ((nums.size()<=2 || seclargest==thirdlargest)?largest:thirdlargest);
    }
};
```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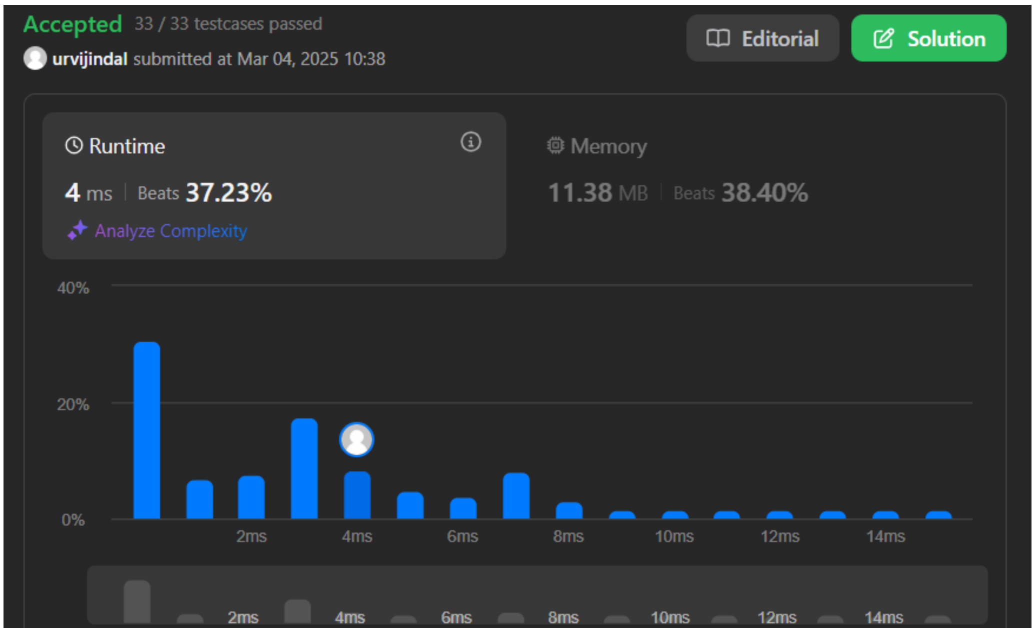
urvijindal submitted at Mar 04, 2025 10:35

451.Sort Characters By Frequency

```
class Solution {
public:
    string frequencySort(string s) {
        auto cmp = [](const pair<char, int>& a, const pair<char, int>& b) {
            return a.second < b.second;
        };
          priority_queue<pair<char, int>, vector<pair<char, int>>, decltype(cmp)> pq(cmp);
        unordered_map<char, int> hm;
        for (char c : s) {
            hm[c]++;
        }
        for (const auto& entry : hm) {
            pq.push(make_pair(entry.first, entry.second));
        }
        string result = "";
        while (!pq.empty()) {
            pair<char, int> p = pq.top();
            pq.pop();
            result.append(p.second, p.first);
        }

        return result;
    }
};
```



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urvijindal submitted at Mar 04, 2025 10:38

Runtime

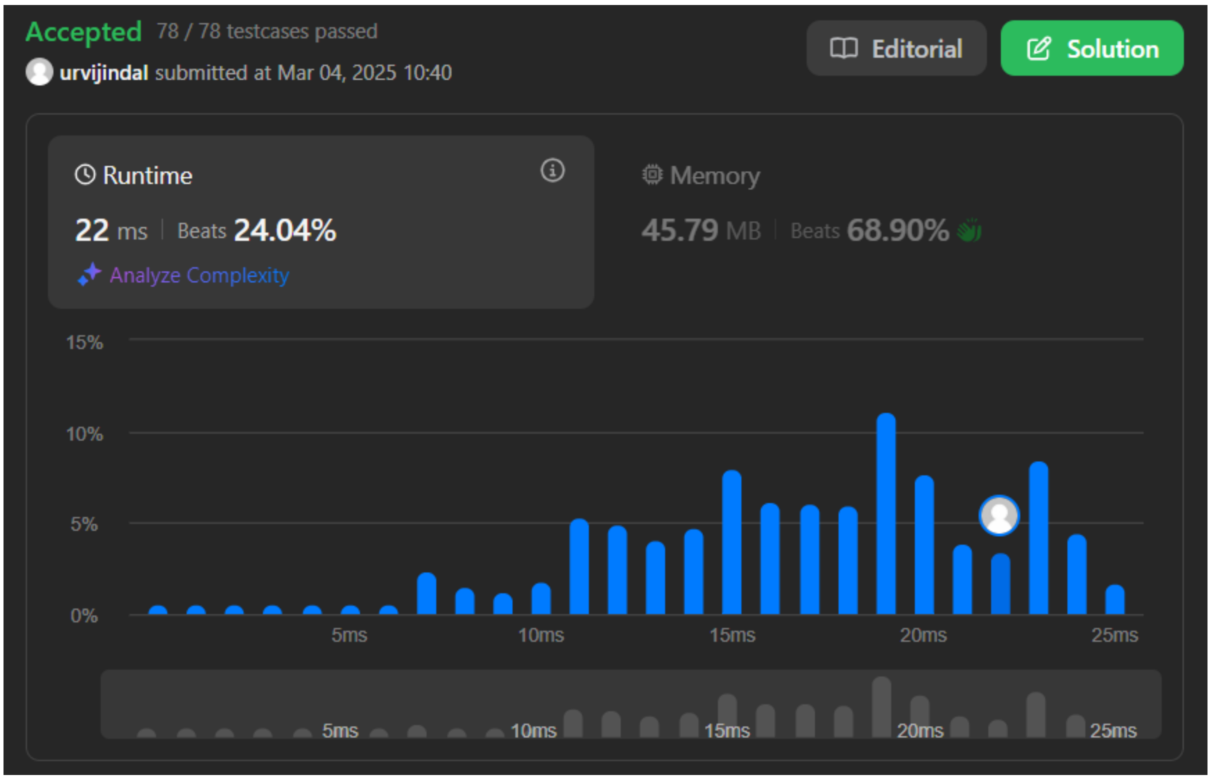
4 ms | Beats 37.23%

Memory

11.38 MB | Beats 38.40%

881.Boats to Save People

```
class Solution {
public:
    int numRescueBoats(vector<int>& people, int limit) {
        // sort vector
        sort(people.begin(),people.end());
        int i = 0, j = people.size() - 1,cnt = 0;
        while(i <= j)
        {
            // lightest person + heaviest person sum <= limit
            // they can go together
            if(people[i] + people[j] <= limit)
            {
                ++i;
                --j;
            }
            // if sum is over the limit,
            // heaviest will go alone.
            else
                --j;
            ++cnt;  // number of boats
        }
        return cnt;
    }
};
```



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Runtime

22 ms | Beats 24.04%

Memory

45.79 MB | Beats 68.90%