

## Worksheet -3

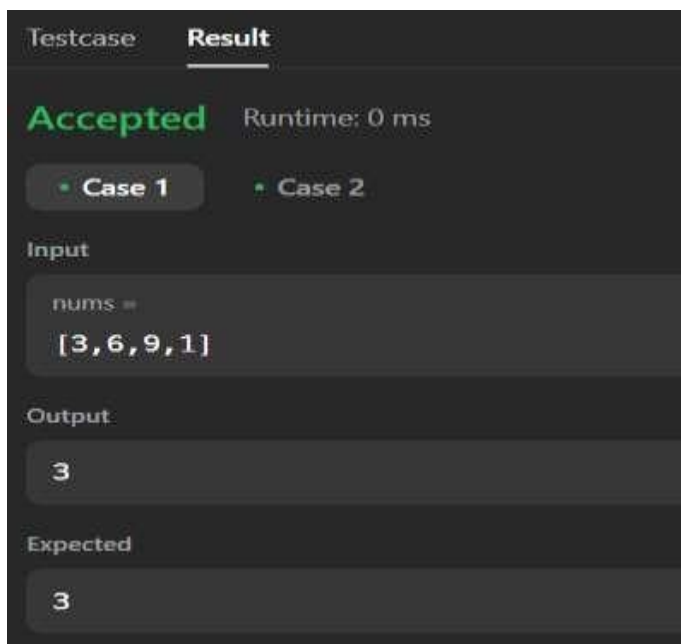
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### Que-1: Maximum Gap

#### Code:

```
class Solution {  
public:  
    int maximumGap(vector<int>& nums) {  
        sort(nums.begin(), nums.end());  
        int ans=0;  
        for(int i=0;i<nums.size()-1;i++){  
            if(ans<(nums[i+1]-nums[i])){  
                ans=nums[i+1]-nums[i];  
            }  
        }  
        return ans;  
    }  
};
```

#### Output:



The screenshot shows a coding platform interface with a dark theme. At the top, there are two tabs: 'Testcase' and 'Result', with 'Result' being the active tab. Below the tabs, the word 'Accepted' is displayed in green, followed by 'Runtime: 0 ms'. There are two buttons labeled 'Case 1' and 'Case 2', with 'Case 1' being selected. Under the 'Input' section, the text 'nums =' is followed by the array '[3,6,9,1]'. Under the 'Output' section, the number '3' is displayed. Under the 'Expected' section, the number '3' is displayed.

**Que-2: Sort Colors****Code:**

```
class Solution {
public:
    void sortColors(vector<int>& nums) {
        int start=0;
        int end=nums.size()-1;
        int i=0;
        while(i<=end){
            if(nums[i]==0){
                int temp=nums[i];
                nums[i]=nums[start];
                nums[start]=temp;
                start++;
                i++;
            }
            else if(nums[i]==2){
                int temp=nums[i];
                nums[i]=nums[end];
                nums[end]=temp;
                end--;
            }
            else{i++;}
        }
    }
};
```

**Output:**

**Accepted** Runtime: 0 ms

• Case 1 • Case 2

Input

nums =  
[2, 0, 2, 1, 1, 0]

Output

[0, 0, 1, 1, 2, 2]

Expected

[0, 0, 1, 1, 2, 2]

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**Que-3: [Chef and Lockout Draws](#)****Code:**

```
#include <iostream>
using namespace std;

int main() {
    int t;
    cin>>t;
    while(t--){
        int a,b,c;
        cin>>a;
        cin>>b;
        cin>>c;
        if(a>b and a>c){
            if(a==b+c){
                cout<<"YES"<<endl;
            }
            else{
                cout<<"NO"<<endl;
            }
        }
        else if(b>a and b>c){
            if(b==a+c){
                cout<<"YES"<<endl;
            }
            else{
                cout<<"NO"<<endl;
            }
        }
        else{
            if(c==a+b){
                cout<<"YES"<<endl;
            }
            else{
                cout<<"NO"<<endl;
            }
        }
    }
}
```

```
}  
}  
}
```

**Output:**

```
Input  
  
3  
2 5 2  
4 2 2  
3 5 5  
  
Output  
  
NO  
YES  
NO
```

**Que-4: [Turbo Sort](#)****Code:**

```
#include <bits/stdc++.h>  
  
using namespace std;  
  
int main() {  
    // your code goes here  
    int t;  
    cin>>t;  
    vector <int> a(t);  
    for(int i = 0; i< t ; i++){  
        cin>>a[i];  
    }  
    sort(a.begin(),a.end());  
    for(int x : a)  
        cout<<x<<endl;  
    return 0;
```

}

### Output:

```
Input
5
5
3
6
7
1

Output
1
3
5
6
7
```

### Que-5: [Reorder Data in Log Files](#)

#### Code:

```
class Solution {
public:
    vector<string> reorderLogFiles(vector<string>& logs) {
        auto it = stable_partition(logs.begin(), logs.end(), [](const string& str) {
            return isalpha(str[str.find(' ') + 1]);
        });

        sort(logs.begin(), it, [](const string& str1, const string& str2) {
            auto substr1 = string(str1.begin() + str1.find(' '), str1.end());
            auto substr2 = string(str2.begin() + str2.find(' '), str2.end());
            return (substr1 == substr2) ? str1 < str2 : substr1 < substr2;
        });

        return logs;
    }
};
```

```
}  
};
```

## Output:

**Accepted** Runtime: 0 ms

• Case 1 • Case 2

Input

```
logs =  
["dig1 8 1 5 1","let1 art can","dig2 3 6","let2 own kit dig","let3 art zero"]
```

Output

```
["let1 art can","let3 art zero","let2 own kit dig","dig1 8 1 5 1","dig2 3 6"]
```

Expected

```
["let1 art can","let3 art zero","let2 own kit dig","dig1 8 1 5 1","dig2 3 6"]
```