

Worksheet – 3

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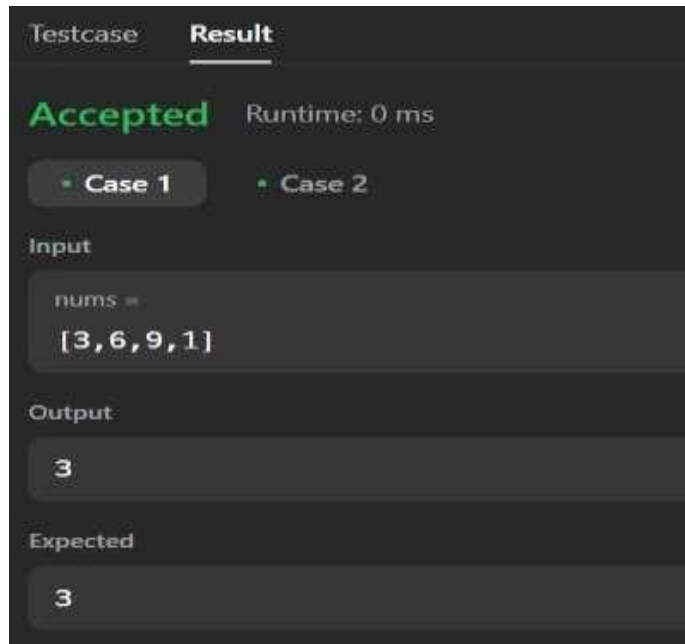
Section: DWWC - 43

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:



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:



The screenshot shows a code execution interface with a dark background. At the top, it says 'Accepted' in green and 'Runtime: 0 ms' in white. Below this, there are two tabs: 'Case 1' and 'Case 2'. Under 'Case 1', the 'Input' section shows 'nums = [2, 0, 2, 1, 1, 0]' and the 'Output' section shows '[0, 0, 1, 1, 2, 2]'. The 'Expected' section also shows '[0, 0, 1, 1, 2, 2]'. The 'Case 2' tab is currently inactive.

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:



The screenshot shows the input and output of the Turbo Sort program. The input consists of 5 numbers: 5, 5, 3, 6, 7. The output shows the sorted array: 1, 3, 5, 6, 7.

```
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"]
```