Worksheet -3

NAME- DEVANSH SINGH **SEC-DWWC 43**

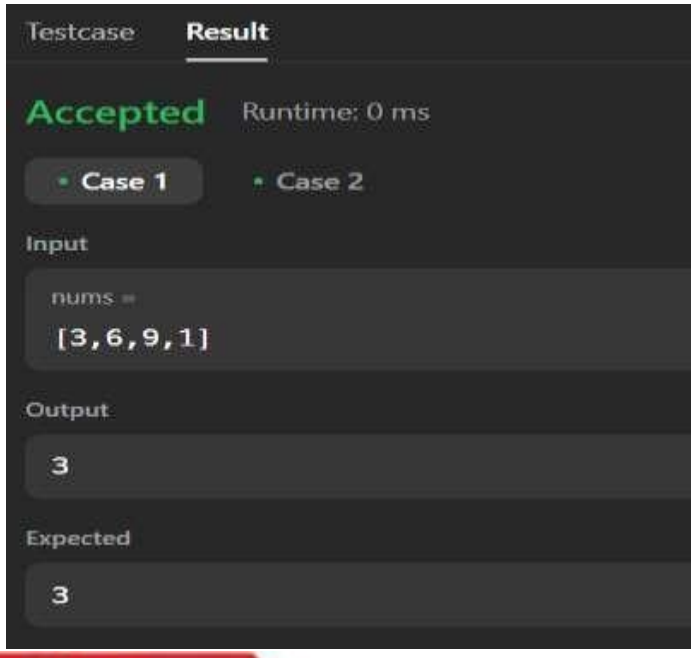
UID:20BCS9102 **Date- 04/01/2023**

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:


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]

Que-3: Chef and Lockout Draws

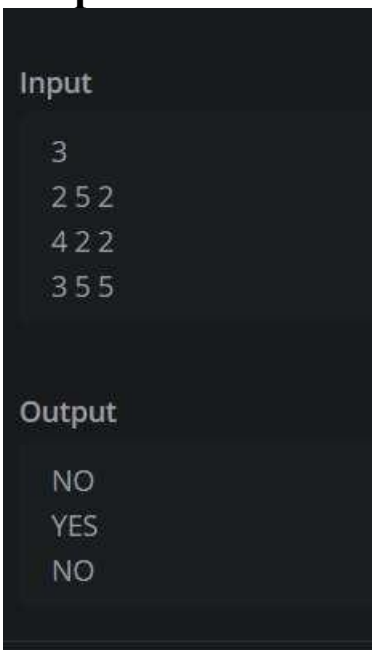
Code:

```
#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<<"YE
                 S"<<endl;
              }
              else{
                 cout<<"NO"<<endl;
```

```
        }
    }
}
```

Output:



Que-4: Turbo Sort

Code:

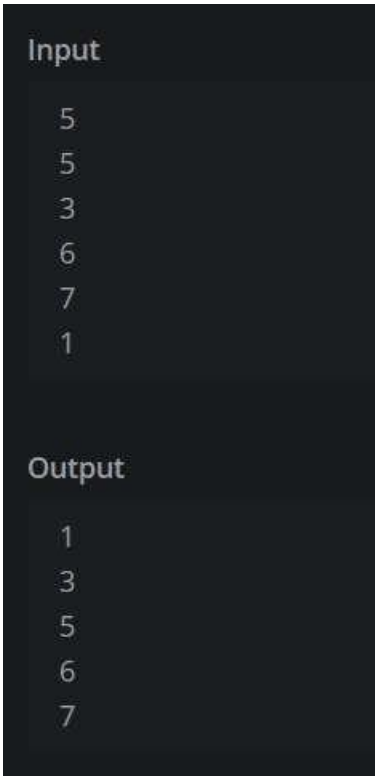
```
#include <bits/stdc++.h>

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:



Que-5: Reorder Data in Log Files

Code:

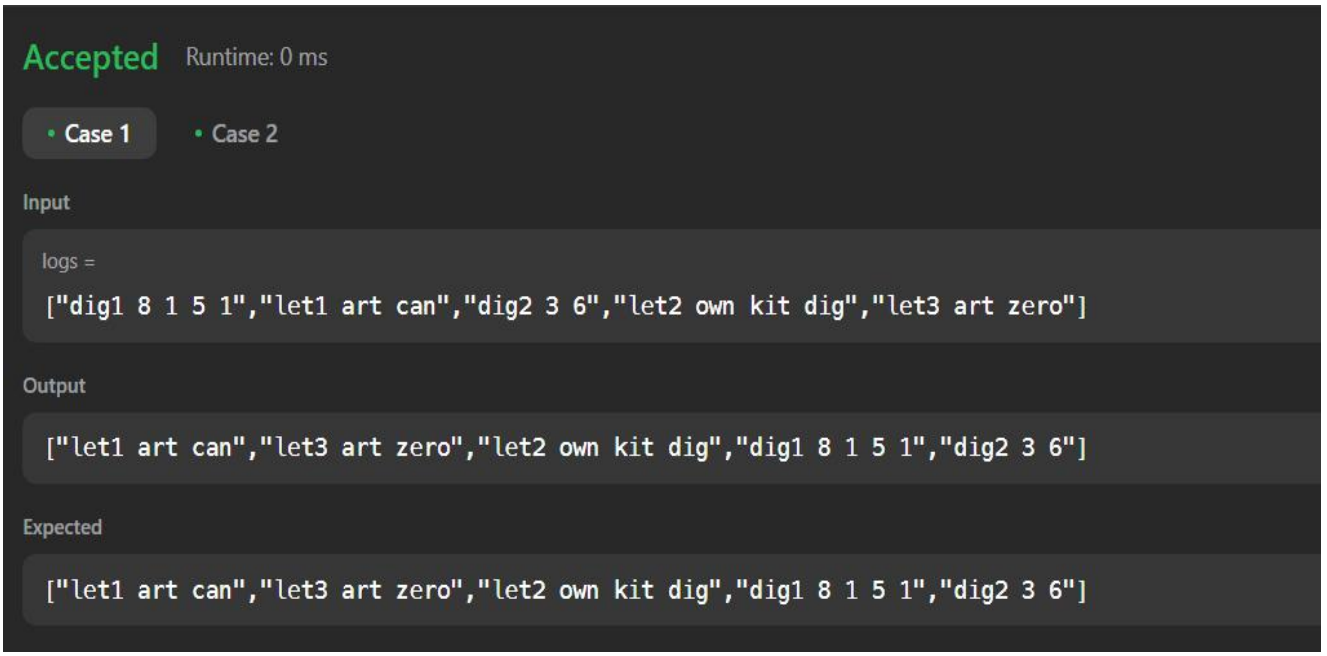
```
class Solution
{public:
    vector<string> reorderLogFiles(vector<string>& logs) {
        auto it = stable_partition(logs.begin(), logs.end(), [](const string& str)
            {return isalpha(str[str.find(' ') + 1]);
        });

        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"]