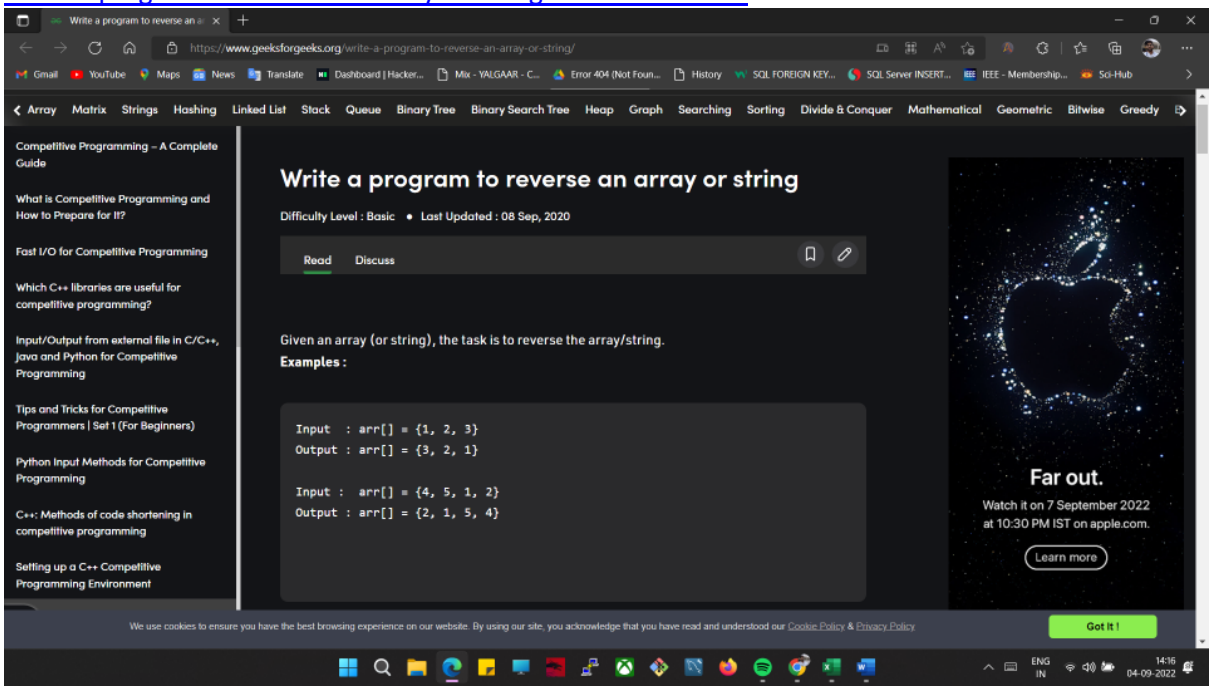
DSA Questions by Love Babbar:-

TOPIC :- ARRAY

1. Reverse the array

[Write a program to reverse an array or string - GeeksforGeeks]

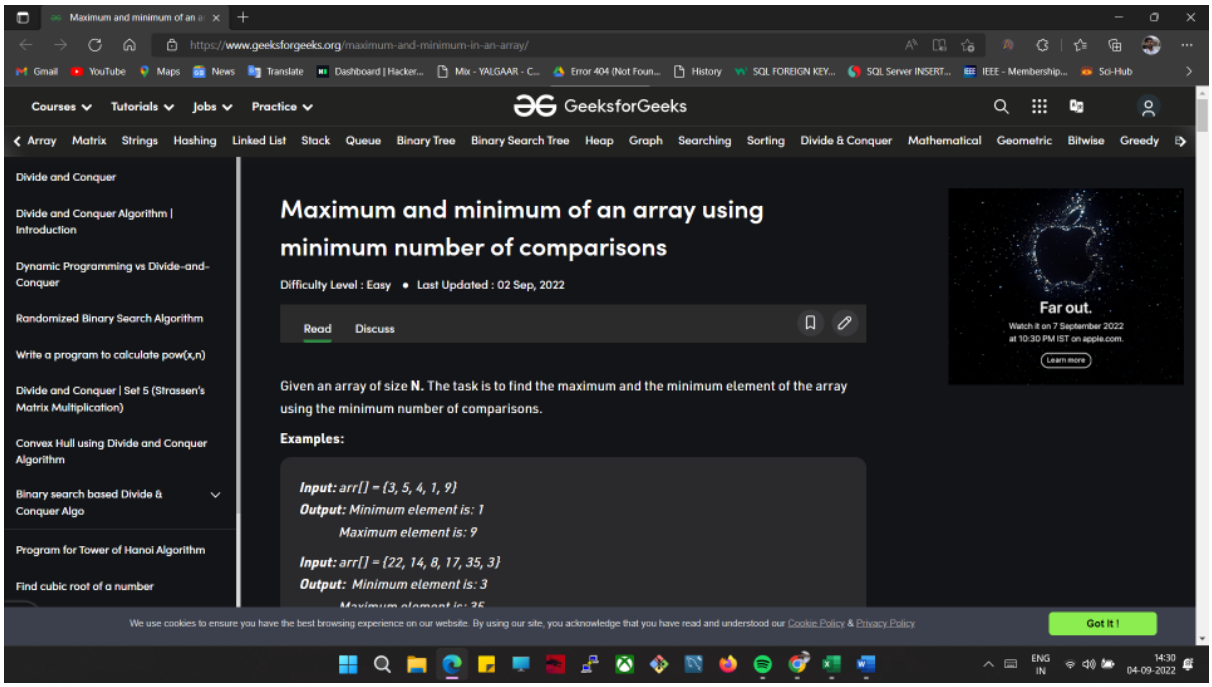


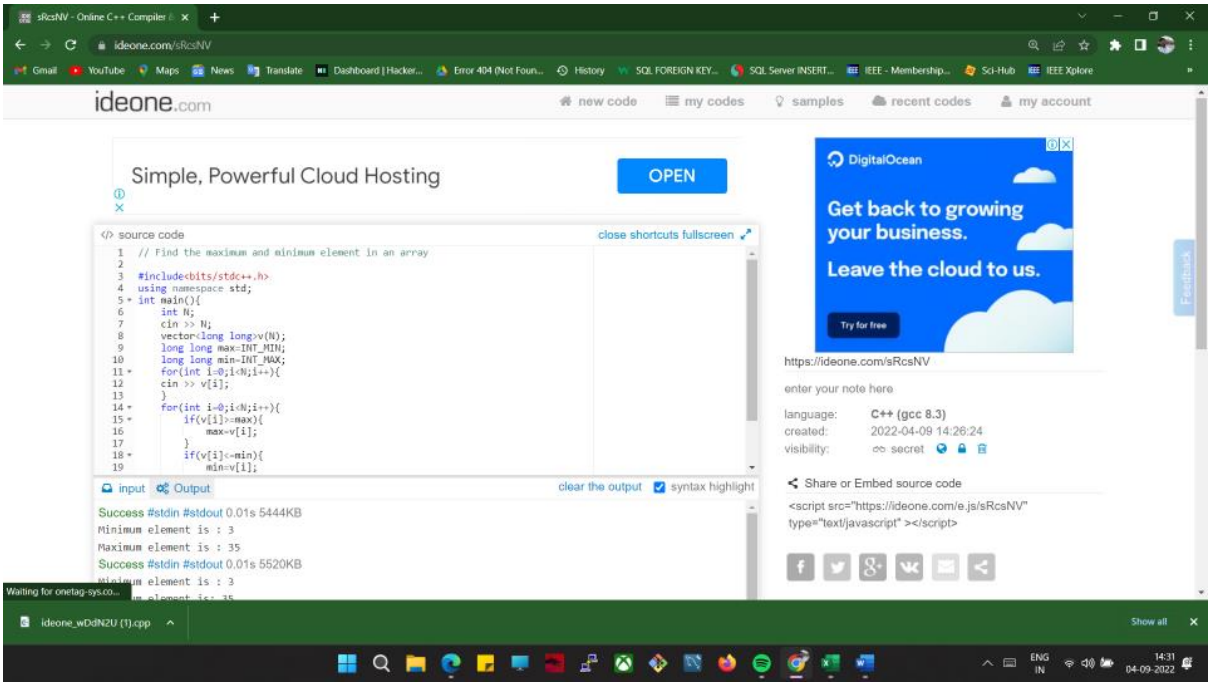
Solution :-

```
#include<bits/stdc++.h>
using namespace std;
int main(){
    int N;
    cin >> N;
    vector<long long>v(N);
    for(int i=0;i<N;i++){
        cin >> v[i];
    }
    for(int i=N-1;i>=0;i--){
```

```
            cout << v[i] << " ";
        }
}
```

2. Find the maximum and minimum element in an array





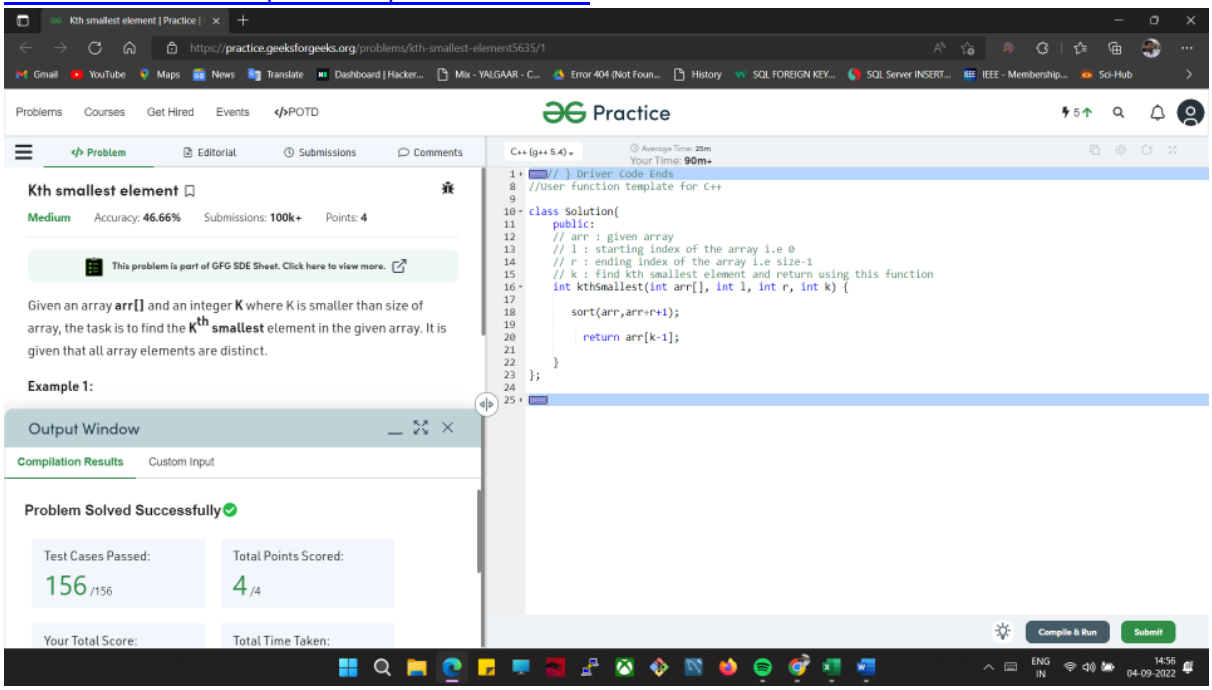
Solution :- // Find the maximum and minimum element in an array

```
#include<bits/stdc++.h>
using namespace std;
int main(){
	int N;
	cin >> N;
	vector<long long>v(N);
	long long max=INT_MIN;
	long long min=INT_MAX;
	for(int i=0;i<N;i++){
	cin >> v[i];
	}
	for(int i=0;i<N;i++){
```

```
            if(v[i]>=max){
                max=v[i];
            }
            if(v[i]<=min){
                min=v[i];
            }
        }
        cout << "Minimum element is : " << min
<<"\n";
        cout << "Maximum element is : " << max;
}
```

3. Find the "Kth" max and min element of an array

[Kth smallest element | Practice | GeeksforGeeks]



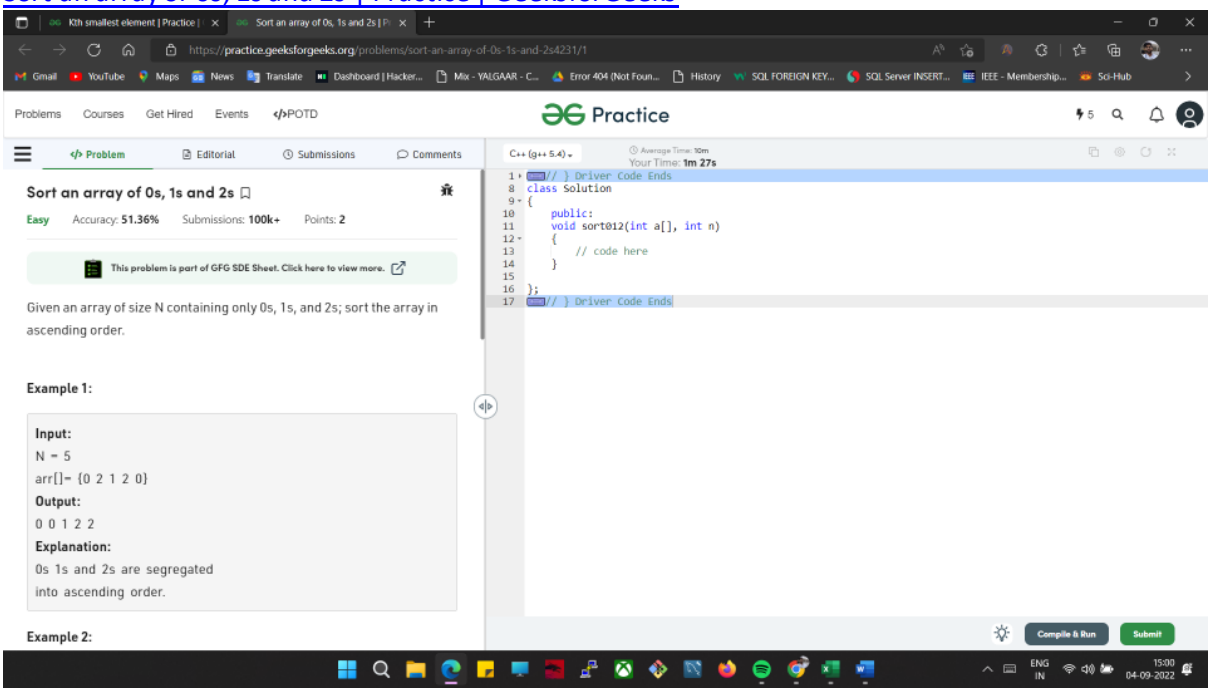
Solution :- class Solution{

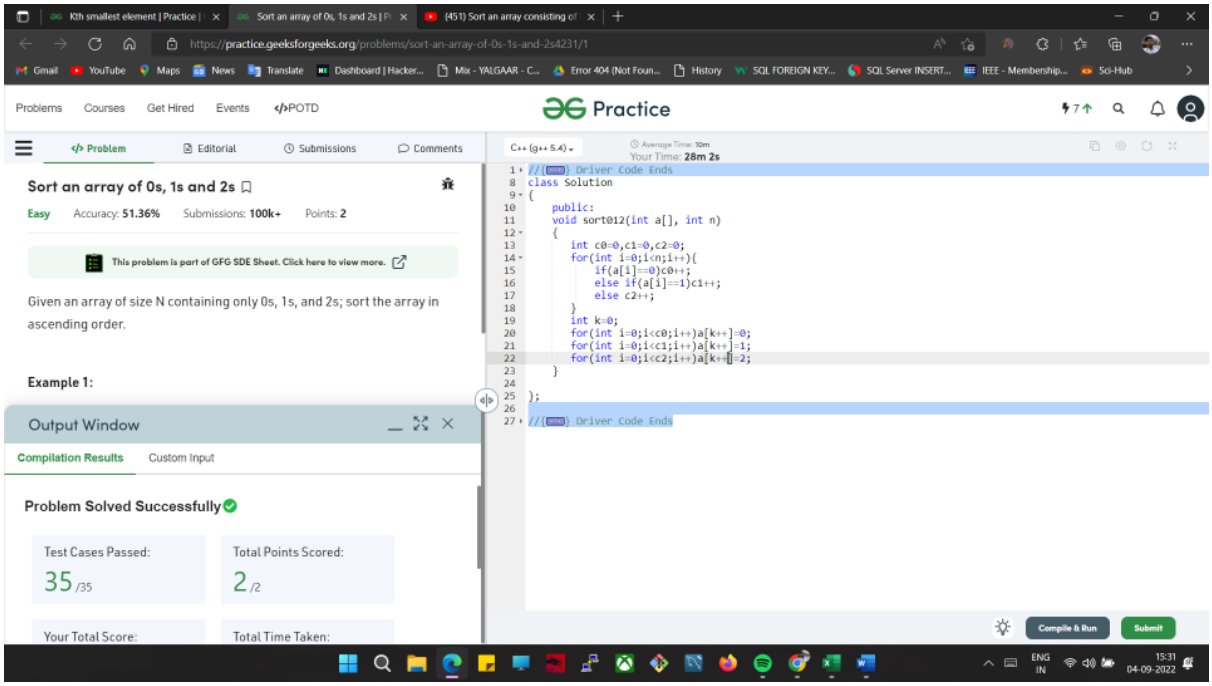
public:

```
    // arr : given array
    // l : starting index of the array i.e 0
    // r : ending index of the array i.e size-1
    // k : find kth smallest element and return using
this function
    int kthSmallest(int arr[], int l, int r, int k) {

      sort(arr,arr+r+1);

       return arr[k-1];

    }
};
```

4. Given an array which consists of only 0, 1 and 2. Sort the array without using any sorting algo

[Sort an array of 0s, 1s and 2s | Practice | GeeksforGeeks]



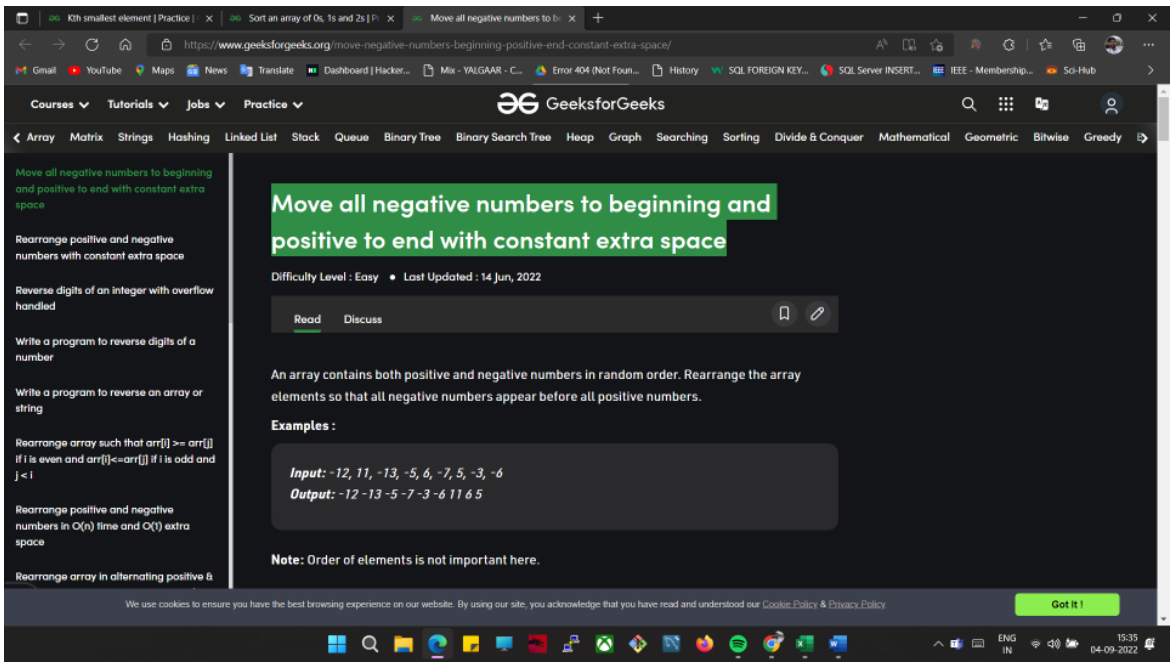


Solution :- {

```
public:
void sort012(int a[], int n)
{
  int c0=0,c1=0,c2=0;
  for(int i=0;i<n;i++){
     if(a[i]==0)c0++;
     else if(a[i]==1)c1++;
     else c2++;
  }
  int k=0;
  for(int i=0;i<c0;i++)a[k++]=0;
  for(int i=0;i<c1;i++)a[k++]=1;
  for(int i=0;i<c2;i++)a[k++]=2;
}
```

};

6. Move all negative numbers to beginning and positive to end with constant extra space



Solution :- //Move all negative numbers to beginning and positive to end with constant extra space

```
#include<bits/stdc++.h>
using namespace std;
int main(){
        int N;
        cin >> N;
        vector<int>v(N);
```

```
	for(int i=0;i<N;i++){
		cin >> v[i];
	}
	vector<int>pos;
	vector<int>neg;
	for(int i=0;i<N;i++){
		if(v[i]<0){
			neg.push_back(v[i]);
		}
		else{
			pos.push_back(v[i]);
		}
	}
	int p=pos.size();
	int n=neg.size();
	vector<int>v3(p+n);
	merge(neg.begin(),neg.end(),pos.begin(),pos.e
nd(),v3.begin());
	for(int i=0;i<p+n;i++){
		cout << v3[i] <<" ";
	}


}
```