DAY 29/180

Q1- Use Insertion Sort Algorithm to sort the array of integers in decreasing order.

```cpp
#include<bits/stdc++.h>
using namespace std;

void insertionsort(vector<int>&arr,int n){
    for(int i=1;i<n;i++){
        for(int j=i;j>0;j--){
            if(arr[j]>arr[j-1]){
                swap(arr[j],arr[j-1]);
            }
            else{
                break;
            }
        }
    }
}
int main(){
    int n;
    cin>>n;
    vector<int>arr(n);
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    insertionsort(arr,n);
    for(int i=0;i<n;i++){
        cout<<arr[i]<<" ";
    }
}
```

Q2-Insertion Sort Algorithm to sort the array of integers in increasing order if we start from the last element of the array. Question was explained in the class.

```cpp
#include<bits/stdc++.h>
using namespace std;

void insertionsort(vector<int>&arr,int n){
    for(int i=n-1;i>=1;i--){
        for(int j=i;j<n;j++){
            if(arr[j]<arr[j-1]){
                swap(arr[j],arr[j-1]);
            }
            else{
                break;
            }
        }
    }
}
int main(){
    int n;
    cin>>n;
    vector<int>arr(n);
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    insertionsort(arr,n);
    for(int i=0;i<n;i++){
        cout<<arr[i]<<" ";
    }
}
```