DAY 29/180

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

```
1 * #include<bits/stdc++.h>
    using namespace std;
4 * void insertionsort(vector<int>&arr,int n){
        for(int i=1;i<n;i++){</pre>
             for(int j=i;j>0;j--){
                 if(arr[j]>arr[j-1]){
                     swap(arr[j],arr[j-1]);
                 else{
                     break;
        }
16 • int main(){
        int n;
        cin>>n;
        vector<int>arr(n);
        for(int i=0;i<n;i++){</pre>
             cin>>arr[i];
        insertionsort(arr,n);
        for(int i=0;i<n;i++){</pre>
             cout<<arr[i]<<" ";</pre>
        }
```

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.

```
1 * #include<bits/stdc++.h>
    using namespace std;
4 * void insertionsort(vector<int>&arr,int n){
         for(int i=n-1;i>=1;i--){
             for(int j=i;j<n;j++){</pre>
                  if(arr[j] <arr[j-1]){</pre>
                      swap(arr[j],arr[j-1]);
                  else{
10 •
                      break;
11
12
                  }
13
14
15
16 * int main(){
17
         int n;
18
         cin>>n;
         vector<int>arr(n);
19
         for(int i=0;i<n;i++){</pre>
20 *
             cin>>arr[i];
21
22
         insertionsort(arr,n);
23
24 ▼
         for(int i=0;i<n;i++){</pre>
25
             cout<<arr[i]<<" ";
26
```