

Program:

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

```
using namespace std;
```

```
void traverse(int arr[], int n){
```

```
    for(int i=0; i<n; i++){
```

```
        cout<<arr[i]<<" ";
```

```
    }cout<<endl;
```

```
}
```

```
void insertionSort(int arr[], int n){
```

```
    for(int i=1; i<n; i++){
```

```
        traverse(arr, n);
```

```
        int j = i;
```

```
        while(j){
```

```
            if(arr[j] < arr[j-1]){
```

```
                swap(arr[j], arr[j-1]);
```

```
            }else{
```

```
                break;
```

```
            }
```

```
            j--;
```

```
        }
```

```
    }
```

```
}
```

```
void selectionSort(int arr[], int n){
```

```
    for(int i=0; i<n-1; i++){
```

```
        traverse(arr, n);
```

```
        int mini = INT_MAX;
```

```
        int minInd = i;
```

```
        for(int j = i; j<n; j++){
```

```
            if(arr[j] < mini){
```

```
                mini = arr[j];
```

```

        minInd = j;
    }
}
swap(arr[i], arr[minInd]);
}
}
int main()
{
    int n1;
    cin >> n1;
    int arr1[n1];
    for(int i=0; i<n1; i++){
        cin >> arr1[i];
    }
    insertionSort(arr1, n1);
    traverse(arr1, n1);
    int n2;
    cin >> n2;
    int arr2[n2];
    for(int i=0; i<n2; i++){
        cin >> arr2[i];
    }
    // int arr2[]={5, 4, 3, 2, 1}; int n2=5;
    selectionSort(arr2, n2);
    traverse(arr2, n2);

    return 0;
}

```

Output:

```
5
6 4 2 1 7
6 4 2 1 7
4 6 2 1 7
2 4 6 1 7
1 2 4 6 7
1 2 4 6 7
4
7 6 5 4
7 6 5 4
4 6 5 7
4 5 6 7
4 5 6 7
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```