

## Code for bubble sorting

```
#include <iostream>
```

```
using namespace std;
```

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

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

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

```
            if (arr[i] > arr[j+1]) {
```

```
                swap(arr[i], arr[j+1]);
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

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

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

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

```
    }
```

```
    cout << endl;
```

```
}
```

```
int main () {
```

```
    int n = 5;
```

```
    int arr[] = { 1, 2, 3, 4, 5 }; //
```

```
    bubbleSort (arr, n);
```

```
    printArray (arr, n);
```

```
    return 0;
```

```
}
```



code for InsertionSort:

```
#include <iostream>
using namespace std;
void insertionSort (int arr[], int n) {
    for (int i = 1; i < n; i++) {
        int current = arr[i];
        int prev = i - 1;
        while (prev >= 0 && arr[prev] > current) {
            arr[prev + 1] = arr[prev];
            prev--;
        }
        arr[prev + 1] = currentarr[prev];
    }
}
```

```
void printarray (int arr[], int n) {
    for (int i = 0; i < n; i++) {
        cout << arr[i] << " ";
    }
}
```

```
int main () {
    int n = 10;
    int arr[] = {
```

```
        insertionSort (arr, n);
        printarray (arr, n);
        return 0;
}
```



## code for selection Sort

```
#include <iostream>
using namespace std;
void selectionSort(int arr[], int n) {
    for (int i = 0; i < n; i++) {
        int smallestidx = i;
        for (int j = i + 1; j < n; j++) {
            if (arr[j] < arr[smallestidx]) {
                smallestidx = j;
            }
        }
        swap(arr[i], arr[smallestidx]);
    }
}
```

```
void printarray (int arr[], int n) {
    for (int i = 0; i < n; i++) {
        cout << arr[i] << " ";
    }
    cout << endl;
}
```

```
int main() {
    int n = 5;
    int arr[] = {5, 4, 3, 2, 1};
    selectionSort (arr, n);
    printarray (arr, n);
    return 0;
}
```