1.Bubble sort

```
#include <stdio.h>

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[j] > arr[j+1]) {
            // Swap arr[j] and arr[j+1]
            Int temp = arr[j];
            Arr[j] = arr[j+1];
            Arr[j+1] = temp;
         }
      }
   }
}

Void printArray(int arr[], int size) {
   For (int I = 0; I < size; i++)
      Printf("%d ", arr[i]);
   Printf("\n");
}

Int main() {
   Int n;

   // Input array size
```

```
    Printf(“Enter the number of elements: “);
    Scanf(“%d”, &n);

    Int arr[n];

    // Input array elements
    Printf(“Enter the elements: “);
    For (int I = 0; I < n; i++) {
        Scanf(“%d”, &arr[i]);
    }

    // Sorting the array
    bubbleSort(arr, n);

    // Output the sorted array
    Printf(“Sorted array: “);
    printArray(arr, n);

    return 0;
}
```

Input

Enter the number of elements: 5

Enter the elements: 64 34 25 12 22

Output

Sorted array: 12 22 25 34 64

2.selection sort

```
#include <stdio.h>

Void selectionSort(int arr[], int n) {
   For (int I = 0; I < n-1; i++) {
      Int minIndex = I;
      For (int j = i+1; j < n; j++) {
         If (arr[j] < arr[minIndex]) {
            minIndex = j;
         }
      }
      // Swap the found minimum element with the first element
      Int temp = arr[minIndex];
      Arr[minIndex] = arr[i];
      Arr[i] = temp;
   }
}

Void printArray(int arr[], int size) {
   For (int I = 0; I < size; i++)
      Printf("%d ", arr[i]);
   Printf("\n");
}

Int main() {
   Int n;
```

```
    // Input array size
    Printf(“Enter the number of elements: “);
    Scanf(“%d”, &n);

    Int arr[n];

    // Input array elements
    Printf(“Enter the elements: “);
    For (int I = 0; I < n; i++) {
        Scanf(“%d”, &arr[i]);
    }

    // Sorting the array
    selectionSort(arr, n);

    // Output the sorted array
    Printf(“Sorted array: “);
    printArray(arr, n);

    return 0;
}
```

Input

Enter the number of elements: 5

Enter the elements: 64 25 12 22 11

Output

Sorted array: 11 12 22 25 64