SORT

SELECTION SORT:

CODE:

```
#include <stdio.h>
void selectionSort(int arr[], int n) {
    int i, j, minIndex, temp;
    for (i = 0; i < n - 1; i++) {
        minIndex = i;
        for (j = i + 1; j < n; j++) {
            if (arr[j] < arr[minIndex]) {
                minIndex = j;
            }
        }
        if (minIndex != i) {
            temp = arr[i];
            arr[i] = arr[minIndex];
            arr[minIndex] = temp;
        }
    }
}
void printArray(int arr[], int size) {
    int i;
    for (i = 0; i < size; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");
}
int main() {
    int arr[] = {64, 25, 12, 22, 11};
    int n = sizeof(arr) / sizeof(arr[0]);
    printf("Original array: \n");
```

```
    printArray(arr, n);
    selectionSort(arr, n);
    printf("Sorted array: \n");
    printArray(arr, n);
    return 0;
}
```

OUTPUT:

Original array:

64 25 12 22 11

Sorted array:

11 12 22 25 64

BUBBLE SORT:

CODE:

```
#include <stdio.h>
void bubbleSort(int arr[], int n) {
    int i, j, temp;
    int swapped;
    for (i = 0; i < n - 1; i++) {
        swapped = 0;
        for (j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
                swapped = 1;
            }
        }
        if (swapped == 0) {
            break;
        }
    }
```

```
}
void printArray(int arr[], int size) {
    int i;
    for (i = 0; i < size; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");
}
int main() {
    int arr[] = {64, 25, 12, 22, 11};
    int n = sizeof(arr) / sizeof(arr[0]);
    printf("Original array: \n");
    printArray(arr, n);
    bubbleSort(arr, n);
    printf("Sorted array: \n");
    printArray(arr, n);
    return 0;
}
```

OUTPUT:

Original array:

64 25 12 22 11

Sorted array:

11 12 22 25 64