22-4-21

Q-> Selection and Bubble Sort

```
#include <stdio.h>
#include <stdlib.h>
void swap(int *x, int *y){
    int temp;
    temp = (*x);
    (*x) = (*y);
    (*y) = temp;
}
void bubble(int a[], int n){
    int i=0, j=0;
    int swapped;
    while(i != n-1){
        swapped = 0;
        for(j=0; j<n-i-1; j++){
            if(a[j] > a[j+1]){
                swap(&a[j], &a[j+1]);
                swapped = 1;
            }
        } i++;
        if(swapped == 0){ return; }
    }
}
void selection(int a[], int n){
    int i, j, min;
```

```
for (i = 0; i < n-1; i++) {
    min = i;
    for (j = i+1; j < n; j++) {
        if (a[j] < a[min]) {
            min = j;
        }
    } swap (&a[min], &a[i]);
}
}
void display (int a[], int n) {
    int i;
    for (i = 0; i < n; i++) {
        printf ("%d", a[i]);
    }
}
int main() {
    int a[10], i, choice, n;
    for (;;) {
        printf ("Size of array");
        scanf ("%d", &n);
        printf ("Enter array");
        for (i = 0; i < n; i++) {
            scanf ("%d", &a[i]);
        }
        printf ("1 Bubble 2. Selection");
```

```
scanf("%d", &choice);
switch (choice) {
    case 1: printf("Bubble sort");
            bubble(a, n);
            display(a, n);
            break;
    case 2: selection(a, n);
            display(a, n);
            break;
    default: exit(0);
  }
} return 0;
}
```