

Bubble Sort and Selection Sort

```
#include <stdio.h>
```

```
void swap (int *xp, int *yp)
{
    int temp = *xp
    *xp = *yp
    *yp = temp;
}
```

```
void Bubble Sort (int arr[], int n)
{
    int i, j;
    for (i = 0; i < n - 1; i++)
        for (j = 0; j < n - i - 1; j++)
            if (arr[j] > arr[j + 1])
                swap (&arr[j], &arr[j + 1]);
}
```

```
void Selection Sort (int arr[], int n)
{
    int i, j, min_idx;
    for (i = 0; i < n - 1; i++)
    {
```

```
        min_idx = i
        for (j = i + 1; j < n; j++)
            if (arr[j] < arr[min_idx])
                min_idx = j;
    }
```



```
swap(&arr[min_idx], &arr[i])
}
```

```
void printArray(int arr[], int size)
{
    int i;
    for (i = 0; i < size; i++)
        printf ("%d", arr[i]);
    printf ("\n");
}
```

```
int main()
```

```
{
    int n; option
    printf ("Enter the size of the array")
    scanf ("%d", &n)
    int arr[n]
    printf ("Enter element\n")
    scanf ("%d", &a[i])
```

do {

```
    printf ("1: Bubble Sort\n")
    printf ("2: Selection Sort\n")
    printf ("3: exit\n")
    printf ("Enter Your option\n")
    scanf ("%d", &option)
```



```
switch (option)
{
```

```
    case 1:
```

```
        bubbleSort(arr, n);
        printf("Sorted array\n");
        printArray(arr);
        break;
```

```
    case 2:
```

```
        selectionSort(arr, n);
        printf("Sorted array\n");
        printArray(arr);
        break;
```

```
}
```

```
while (option != 3)
```

```
{
```