**Bubble sort with ponter function**

#include <stdio.h>

#include<conio.h>

void sort(int ar[]);

void main(void) {

int arr[] = { 1,4,8,6,10,11,54,14,74,90,110 };

void(\*fn\_ptr) (int[]);

fn\_ptr = sort;

printf("Not Sorted : ");

for (int n = 0; n < 11; n++)

printf("%d ", arr[n]);

fn\_ptr(arr);

printf("\nSorted : ");

for (int n = 0; n < 11; n++)

printf("%d ", arr[n]);

\_getch();

}

void sort(int ar[]){

int temp;

for (int i = 0; i < 11; i++) {

for (int n = 0; n < 10; n++) {

if (ar[n] > ar[n + 1]) {

temp = ar[n];

ar[n] = ar[n + 1];

ar[n + 1] = temp;

}

}

}

}

**Linear Search:**

void main(void) {

int arr[] = { 1,4,8,6,10,11,54,14,74,90,110 };

int x,i;

printf("Enter a value");

scanf\_s("%d", &x);

for (i= 10; i >=0; i--)

{

if (arr[i] == x) {

printf("Value found %d at Index = %d", x, i + 1);

break;

}}

if (i==-1) {

printf("No value found", i);

}

\_getch();}

**Binary Search:**

#include <stdio.h>

#include<conio.h>

void sort(int ar[]);

void binarysearch(int arr[], int target);

void main(void) {

int arr[] = { 1,4,8,6,10,11,54,14,74,90,110 };

int x;

printf("Enter a value");

scanf\_s("%d", &x);

sort(arr);

binarysearch(arr, x);

\_getch();

}

void sort(int ar[]){

int temp;

for (int i = 0; i < 11; i++) {

for (int n = 0; n < 10; n++) {

if (ar[n] > ar[n + 1]) {

temp = ar[n];

ar[n] = ar[n + 1];

ar[n + 1] = temp;

}

}

}

}

void binarysearch(int arr[], int target) {

int start, end, middle;

start = 0;

end = 10;

while (start<=end) {

middle = (start + end) / 2;

if (arr[middle] == target)

{

printf("Value found %d at Index = %d", target, middle + 1);

break;

}

else if (arr[middle] < target)

{

start = middle+1;

}

else if (arr[middle]>target)

{

end = middle-1;

}

}

if (start > end) {

printf("No value found");}}