//linear search

#include<stdio.h>

int main(){

int a[10],k;

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

    printf("enter the element at %d ",i+1);

    scanf("%d",&a[i]);

}

printf("enter the number you want to search ");

scanf("%d",&k);

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

    if(a[i]==k){

        printf("%d position \n",i+1);

    }

}

    return 0;

}

OUTPUT->

enter the element at 1 21

enter the element at 2 36

enter the element at 3 1

enter the element at 4 98

enter the element at 5 78

enter the element at 6 56

enter the element at 7 39

enter the element at 8 25

enter the element at 9 43

enter the element at 10 65

enter the number you want to search 78

5 position

A->2

//binary search

#include <stdio.h>

int main() {

    int a[10];

    for(int i=0;i<10;i++){

    printf("enter element %d :",i+1);

    scanf("%d",&a[i]);

}   int n = sizeof(a) / sizeof(a[0]);

    int t;

    printf("Enter the element to search: ");

    scanf("%d", &t);

    int l = 0, h = n - 1;

    int f = 0;

    while (l <= h) {

        int m = l + (h - l) / 2;

        if (a[m] == t) {

            f = 1;

            printf("Element %d at index %d\n",f, m);

            break;

        }

        else if (a[m] < t)

            l = m + 1;

        else

            h = m - 1;

    }

    if (!f)

        printf("Element not present in the array\n");

    return 0;

}

OUTPUT->

enter the element at 1 21

enter the element at 2 36

enter the element at 3 1

enter the element at 4 98

enter the element at 5 78

enter the element at 6 56

enter the element at 7 39

enter the element at 8 25

enter the element at 9 43

enter the element at 10 65

enter the number you want to search 78

5 position