S.No: 3	Exp. Name: ***Write a C program to search the elements using Linear Search***	Date: 2022-06-07

Aim:

Write a C program to search the elements using Linear Search

Source Code:

Linear.c

```
#include<stdio.h>
void read(int [],int);
void display(int[],int);
void search(int[],int,int);
void main()
{
   int i,j,a[20],n,se,flag;
   char ch;
   printf("Enter number of elements:");
   scanf("%d",&n);
   printf("Enter array elements: ");
   read(a,n);
   printf("The elements of the array are: ");
   display(a,n);
   do
   {
      printf("Enter searching element:");
      scanf("%d",&se);
      search(a,n,se);
      printf("Do you want to search another element?y/n: ");
      scanf("\t%c",&ch);
   }
   while(ch=='y'||ch=='Y');
}
void read(int a[],int n)
{
   int i;
   for(i=0;i<n;i++)
   scanf("%d",&a[i]);
}
void display(int a[],int n)
{
   int i;
   for(i=0;i<n;i++)
   {
      printf("%d ",a[i]);
   }
   printf("\n");
}
void search(int a[],int n,int se)
{
   int i,flag=-1;
   for(i=0;i<n;i++)
   {
      if(a[i]==se)
      {
```

```
            printf("Element found at index %d\n",i);
            flag=i;
            break;
        }
    }
    if(flag==-1)
    printf("Element not found\n");
}
```


Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter number of elements: 5
Enter array elements: 24 78 65 14 85
The elements of the array are: 24 78 65 14 85 55
Enter searching element: 55
Element not found n
Do you want to search another element?y/n: n

Test Case - 2
User Output
Enter number of elements: 4
Enter array elements: 95 75 41 35
The elements of the array are: 95 75 41 35 41
Enter searching element: 41
Element found at index 2 n
Do you want to search another element?y/n: n