main.c

```c
/*LINEAR SEARCH*/

#include <stdio.h>
#include <stdlib.h>
int main()
{
    int array[100],sk,i,n,k;
    for(k=0;k<100;k++)
    array[k]=rand()%100+1;
    printf("Enter the number of elements in array;\n");
    scanf("%d",&n);
    printf("Elements of the array:\n");
    for(k=0;k<n;k++)
    printf("%d \n",array[k]);
    printf("enter search key :");
    scanf("%d",&sk);
    for(i=0;i<=n;i++)
    {
        if(array[i]==sk)
        {
            printf("The location of Search Key = %d is %d\n",sk,i+1);
            break;
        }
        else if (i==n)
            printf("%d not found\n",sk);
    }
    return 0;
}
```

main.c

```c
/*LINEAR SEARCH*/

#include <stdio.h>
#include <stdlib.h>
int main()
{
    int array[100],sk,i,n,k;
    for(k=0;k<100;k++)
    array[k]=rand()%100+1;
    printf("Enter the number of elements in array;\n");
```

input

```
Enter the number of elements in array;
5
Elements of the array:
84
87
78
16
94
enter search key :16
The location of Search Key = 16 is 4


...Program finished with exit code 0
Press ENTER to exit console.
```

main.c

```c
/*BINARY SEARCH*/

#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int main()
{
    int  first, k, n, last, middle, search, array[100];
    for(k=0;k<100;k++)
        array[k]=rand()%100+1;
    printf("Enter the number of elements in array \n");
    scanf("%d", &n);
    printf("Elements of the array:\n");
    for(k=0;k<n;k++)
        printf("%d \n",array[k]);
   printf("Enter the value to find:\n");
   scanf("%d", &search);
   first = 1;
   last = n;
   do
    {
        middle = (first + last) / 2;
        if (search < array[middle])
        {
            last = middle - 1;
        }
        else if (search> array[middle])
        {
            first = middle + 1;
        }
    }
    while (search != array[middle] && first <= last);
    if (search == array[middle])
    {
        printf("SEARCH SUCCESSFUL \n");
        printf("location of key is %d", middle + 1);
    }
    else
```

main.c

```c
    for(k=0;k<100;k++)
        array[k]=rand()%100+1;
    printf("Enter the number of elements in array \n");
    scanf("%d", &n);
    printf("Elements of the array:\n");
    for(k=0;k<n;k++)
        printf("%d \n",array[k]);
   printf("Enter the value to find:\n");
   scanf("%d", &search);
   first = 1;
   last = n;
   do
    {
        middle = (first + last) / 2;
        if (search < array[middle])
        {
            last = middle - 1;
        }
        else if (search> array[middle])
        {
            first = middle + 1;
        }
    }
    while (search != array[middle] && first <= last);
    if (search == array[middle])
    {
        printf("SEARCH SUCCESSFUL \n");
        printf("location of key is %d", middle + 1);
    }
    else
    {
        printf("SEARCH FAILED \n");
    }
    return 0;
}
```

main.c

```c
/*BINARY SEARCH*/

#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int main()
{
    int  first, k, n, last, middle, search, array[100];
    for(k=0;k<100;k++)
        array[k]=rand()%100+1;
    printf("Enter the number of elements in array \n");
    scanf("%d", &n);
    printf("Elements of the array:\n");
    for(k=0;k<n;k++)
        printf("%d \n",array[k]);
```

input

```
Enter the number of elements in array
6
Elements of the array:
84
87
78
16
94
36
Enter the value to find:
16
SEARCH SUCCESSFUL
location of key is 4

...Program finished with exit code 0
Press ENTER to exit console.
```