



LinearSearch.c



Saved



```
1 #include<stdio.h>
2 void main()
3 {
4     int search,c,n;
5     srand(time(0));
6     printf("Enter number of elements in array:");
7     scanf("%d",&n);
8     int array[n];
9     for(c=0;c<n;c++)
10         array[c]=rand()%100;
11     printf("The List is,\n");
12     for(c=0;c<n;c++)
13         printf("%d\n",array[c]);
14     printf("Enter a number to be searched:");
15     scanf("%d",&search);
16     for(c=0;c<n;c++)
17     {
18         if (array[c]==search)
19         {
20             printf("%d is present at location %d.\n", search, c+1);
21             break;
22         }
23     }
24     if(c==n){
25         printf("%d not Found in the List.\n", search);
26     }
27 }
```

× Terminal



```
Enter number of elements in array:5
The List is,
25
39
65
94
58
Enter a number to be searched:65
65 is present at location 3.
```

× Terminal



Enter number of elements in array:10

The List is,

88

97

6

78

5

25

42

39

43

87

Enter a number to be searched:1

1 not Found in the List.



BinarySearch.c

Saved



```
1 #include<stdio.h>
2 void main()
3 {
4     int c, first, last, middle, n, search, a;
5     srand(time(0));
6     printf("Enter number of elements:");
7     scanf("%d", &n);
8     int array[n];
9     for(c=0;c<n;c++)
10         array[c]=rand()%100;
11     printf("The List is,\n");
12     for(c=0;c<n;c++)
13         printf("%d\n",array[c]);
14     for (int i = 0; i < n; ++i)
15     {
16         for (int j = i + 1; j < n; ++j)
17         {
18             if (array[i] > array[j])
19             {
20                 a = array[i];
21                 array[i] = array[j];
22                 array[j] = a;
23             }
24         }
25     }
26     printf("The sorted list is,\n");
27     for(c=0;c<n;c++)
28         printf("%d\n",array[c]);
29     printf("\nEnter element to be searched:");
30     scanf("%d", &search);
31     first = 0;
32     last = n-1;
33     middle = (first+last)/2;
34     while(first<=last){
35         if(array[middle]<search)
36             first = middle+1;
37         else if(array[middle] == search) {
38             printf("%d found at location %d.\n", search, middle+1);
39             break;
40         }
41         else
42             last = middle-1;
43         middle = (first + last)/2;
44     }
45     if(first>last)
46         printf("Not found!\n%d isn't present in the list.\n", search);
47 }
```

× Terminal



Enter number of elements:5

The List is,

8

41

59

78

67

The sorted list is,

8

41

59

67

78

× Terminal



Enter number of elements:6

The List is,

35

78

12

19

29

62

The sorted list is,

12

19

29

35

62

78

Enter element to be searched:90

Not found!

90 isn't present in the list.