| S.No: 1 | Exp. Name: ***Write a Program to Search an element using Linear Search and Recursion*** | Date:2025-03-14 |
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**Aim:**

Write a program to search the given element from a list of elements with linear search technique using **recursion**.

**Note:** Write the functions **read1()** and **linearSearch()** in Program911a.c

**Source Code:**

Program911.c

```
#include <stdio.h>
#include "Program911a.c"
void main() {
   int a[20], n, pos, key;
   printf("Enter n value : ");
   scanf("%d", &n);
   read1(a, n);
   printf("Enter a key element : ");
   scanf("%d", &key);
   pos = linearSearch(a, 0, n - 1, key);
   if (pos == -1) {
      printf("The key element %d is not found\n", key);
   } else {
      printf("The key element %d is found at position : %d\n", key, pos);
   }
}
```

Program911a.c

```
// Write your code here...
void read1(int a[],int n){
   printf("Enter %d elements : ",n);
   for(int i=0;i<n;i++){
      scanf("%d",&a[i]);
   }
}
int linearSearch(int a[],int i, int m, int key){
   for(i=0;i<m;i++){
      if(a[i]==key){
         return i;
         break;
      }
   }
   return -1;
}
```





Execution Results - All test cases have succeeded!

Test Case - 1

| User Output |
| --- |
| Enter n value : 4 |
| Enter 4 elements : 10 20 15 12 |
| Enter a key element : 15 |
| The key element 15 is found at position : 2 |

| Test Case - 2 |
| --- |
| User Output |
| Enter n value : 6 |
| Enter 6 elements : 2 6 4 1 3 7 |
| Enter a key element : 5 |
| The key element 5 is not found |