

linear search using recursion:

```
1  #include<iostream>
2  using namespace std;
3  int recSearch(int arr[], int l,
4               int r, int x)
5  {
6      if (r < l)
7          return -1;
8      if (arr[l] == x)
9          return l;
10     if (arr[r] == x)
11         return r;
12     return recSearch(arr, l + 1,
13                     r - 1, x);
14 }
15
16 int main()
17 {
18     int arr[] = {12, 34, 54, 2, 3}, i;
19     int n = sizeof(arr) / sizeof(arr[0]);
20     int x;
21     cout<<"the array is\n";
22     for(int i=0;i<n;i++)
23         cout<<arr[i]<<endl;
24     cout<<"enter the element to be searched\n";
25     cin>>x;
26     int index = recSearch(arr, 0, n - 1, x);
27     if (index != -1)
28         cout << "Element "
29             << " is present at position "
30             << index;
```

```
26     int index = recSearch(arr, 0, n - 1, x);
27     if (index != -1)
28         cout << "Element "
29             << " is present at position "
30             << index;
31     else
32         cout << "Element" << x
33             << " is not present" ;
34     return 0;
35 }
```

Output:

```
the array is
12
34
54
2
3
enter the element to be searched
54
Element  is present at position 2

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