```c
/* Online C Compiler and Editor */
//Linear Search using recursive function in
    c language
#include <stdio.h>
int l_search(int a[],int x,int n)
{  if(n<0)
    return -1;
    else if(a[n]==x)
    return n;
    else
   return l_search(a,x,n+1);
}
int main() {
    // Write C code here
   int a[10],x,n,item,i;
   printf("Total elements:");
   scanf("%d",&n);
   printf("Enter array element:");
   for(i=0;i<n;i++)
   scanf("%d",&a[i]);
   printf("Enter element to be search:");
   scanf("%d",&x);
   item=l_search(a,x,0);
   if(item==-1)
   printf("Element not present");
   else
   printf("Present at %d",item+1);
    return 0;
}
```

```
Total elements:6
Enter array element:12 23 34 45 56 68
Enter element to be search:12
Present at 1
```

```c
//Linear Search using recursive function in
    c language
#include <stdio.h>
int l_search(int a[],int x,int n)
{  if(n<0)
     return -1;
    else if(a[n]==x)
    return n;
    else
   return l_search(a,x,n-1);
}
int main() {
    // Write C code here
   int a[10],x,n,item,i;
   printf("Total elements:");
   scanf("%d",&n);
   printf("Enter array element:");
   for(i=0;i<n;i++)
   scanf("%d",&a[i]);
   printf("Enter element to be search:");
   scanf("%d",&x);
   item=l_search(a,x,n-1);
   if(item==-1)
   printf("Element not present");
   else
   printf("Present at %d",item+1);
    return 0;
}
```

```
Total elements:5
Enter array element:12 23 34 45 56
Enter element to be search:89
Element not present
```

```c
//BINARY SEARCH USING RECURSIVE FUNCTION
#include <stdio.h>
int b_search(int a[10],int x,int high,int
    low)
{int mid;
  mid=(low+high)/2;
  if (a[mid]==x)
   return mid;
  else if (a[mid]<x)
   return b_search(a,x,mid+1,high);
  else
   return b_search (a,x,mid-1,low);
}
int main() {
    int n,i,a[10],x,median,l=0,c;
    do
    {
    printf("\nTotal no. of elements:");
    scanf("%d",&n);
    printf("Enter array:");
    for(i=0;i<n;i++)
      scanf("%d",&a[i]);
    printf("Enter searching element:");
    scanf("%d",&x);
    median=b_search (a,x,n-1,l);
    printf("Element present at %d",median+1
        );
    printf("\n\nEnter '1' for continue else
        '0':");
    scanf("%d",&c);
    }while(c==1);

  return 0;
}
```

```
Total no. of elements:5
Enter array:12 23 34 45 56
Enter searching element:34
Element present at 3

Enter '1' for continue else '0':1
Total no. of elements:6
Enter array:12 22 34 45 56 68
Enter searching element:68
Element present at 6

Enter '1' for continue else '0':1
Total no. of elements:3
Enter array:89 90 99
Enter searching element:89
Element present at 1

Enter '1' for continue else '0':0
```

```c
#include <stdio.h>
int b_search(int a[10],int x,int high,int low)
{int mid;
  mid=(low+high)/2;
  if (a[mid]==x)
   return mid;
  else if (a[mid]<x)
   return b_search(a,x,mid+1,high);
  else
   return b_search (a,x,mid-1,low);
}
int main() {
    int n,i,a[10],x,median,l=0,c;
    do
    {
    printf("\nTotal no. of elements:");
    scanf("%d",&n);
    printf("Enter array:");
    for(i=0;i<n;i++)
      scanf("%d",&a[i]);
    printf("Enter searching element:");
    scanf("%d",&x);
    median=b_search (a,x,n-1,l);
    printf("Element present at %d",median+1);
    printf("\n\nEnter '1' for continue else '0'
        :");
    scanf("%d",&c);
    }while(c==1);

  return 0;
}
```

```
Total no. of elements:5
Enter array:12 23 34 45 56
Enter searching element:56
Element present at 5

Enter '1' for continue else '0':1
Total no. of elements: 6

Enter array:12 23 34 45 56 68
Enter searching element:23
Element present at 2

Enter '1' for continue else '0':1
Total no. of elements:4
Enter array:12 23 34 45
Enter searching element:23
Element present at 2

Enter '1' for continue else '0':1
Total no. of elements:5
Enter array:12 67 89 90 99
Enter searching element:89
Element present at 3

Enter '1' for continue else '0':0
```