```c
1   #include<stdio.h>
2   #include<stdlib.h>
3   void main() {
4       system("clear");
5       int x,k,min,mid,max,n,i,j,t,y=1,z=1;
6       puts("Enter the size of the array:");
7       scanf("%d",&n);
8       int a[n];
9       printf("Enter %d elements",n);
10      for (i=0;i<n;i++){
11          scanf("%d",&a[i]);
12      }
13      puts("Sorted array is");
14      for(i=0;i<n-1;i++){
15          for(j=i;j<n;j++){
16              if(a[i]>a[j]){
17                  t=a[i];
18                  a[i]=a[j];
19                  a[j]=t;
20                  }
21              }
22          }
23      for (i=0;i<n;i++){
24          printf("%d , ",a[i]);
25      }
26      puts("Enter the key to search");
27      scanf("%d",&k);
28      puts("\nLINEAR SEARCH\n");
29      for(i=0;i<n;i++){
30          if(a[i]==k){
31              printf("\nKey %d found at position %d",k,i+1);
32              y=0; }
33      }
34      if(y)
35          printf("\nKey not found");
36      puts("\nBINARY SEARCH\n");
37      max=n;
38      min=0;
39      while(min<=max){
40          mid=(min+max)/2;
41          if(k==a[mid]){
42              printf("\nKey %d found at position %d\n",k,mid+1);
43              z=0;break;
44          }
45          else if(k>a[mid])
46              min=mid+1;
47          else if(k<a[mid])
48              max=mid-1;
49      }
50      if(z)
51          printf("\nKey not found\n");
52
53
54  }
```