#include<iostream>

using namespace std;

void bubble(int[],int);

void binaryS(int[],int,int);

int main()

{

int arr[50],n,elem;

cout<<"Enter the array size\n";

cin>>n;

cout<<"Enter the elements\n";

for(int i=0;i<n;i++)

{

cin>>arr[i];

}

cout<<"Enter the element to be found\n";

cin>>elem;

bubble(arr,n);

binaryS(arr,n,elem);

return 0;

}

void binaryS(int arr[],int n,int elem)

{

int low;

int mid;

int high;

low=0;

high=n-1;

while(low<=high)

{

mid=(low+high)/2;

if(arr[mid]==elem)

{

cout<<"Element found at location "<<mid+1<<endl;

return;

}

else

{

if(arr[mid]>elem)

{

high=mid-1;

}

else

{

low=mid+1;

}

}

}

cout<<"Element is not found in the array\n";

return;

}

void bubble(int arr[],int n)

{

for(int i=0;i<n;i++)

{

for(int j=0;j<n-1-i;j++)

{

if(arr[j]>arr[j+1])

{

int tmp=arr[j];

arr[j]=arr[j+1];

arr[j+1]=tmp;

}

}

}

cout<<"The sorted array is \n"<<endl;

for(int i=0;i<n;i++)

{

cout<<arr[i]<<"\t";

}

cout<<"\n";

return;

}

OUTPUT:

