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//Created By Ritwik Chandra Pandey on 8th Nov 2021
//Binary Search


#include<stdio.h>
void main() {
	int a[20], i, j, n, key, flag = 0, low, high, mid, temp;
	printf("Enter value of n : ");
	scanf("%d", &n);

   for(i=0;i<n;i++){
	printf("Enter element for a[%d] : ",i);
	scanf("%d",&a[i]);
   }
	printf("Enter key element : ");
	scanf("%d", &key);


	for(i=0;i<n-1;i++){
		for(j=0;j<n-i-1;j++){
			if(a[j]>a[j+1]){

			temp=a[j];
			a[j] = a[j+1];
			a[j+1] = temp;
			}
		}
	}
	printf("After sorting the elements in the array are\n");

	for(i=0;i<n;i++){
		printf("Value of a[%d] = %d\n",i,a[i]);
	}
	low = 0;
	high = n-1;


	while(low<=high){
		mid = (low+high)/2;
		if(key==a[mid]){
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                        flag=1;
                        break;
                }else if(key>a[mid]){
                        low = mid+1;
                }else{
                        high = mid-1;
                }
        }
        if (flag==1) {
                printf("The key element %d is found at the position %d\n",key,mid);
        } else {
                printf("The Key element %d is not found in the array\n",key);
        }
}
```