

```
1: #include<stdio.h>
2: #define COMPARE(x,y) (((x)<(y))?-1:((x)==(y))?0:1)
3: int binarysearch (int arr[],int l,int h,int key)
4: {
5:     if(l<=h){
6:         int mid=(l+h)/2;
7:         switch(COMPARE(arr[mid],key)){
8:             case -1:return binarysearch (arr,mid+1,h,key);
9:             case 0:return mid;
10:            case 1:return binarysearch (arr,l,mid-1,key);
11:        }
12:    }
13:    return -1;
14: }
15: int main(){
16:     int arr[]={11,13,18,19,20};
17:     int key=20;
18:
19:     int n=sizeof (arr)/ sizeof (arr[0]);
20:     printf("Value of n= %d",n);
21:     int index = binarysearch (arr,0,n-1,key);
22:     if (index ==-1){
23:         printf("\n Element is not present in array");
24:     }
25:     else{
26:         printf("\n Element is present at index %d",index);
27:     }
28:     return 0;
29: }
```