

```
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:     while(l<=h){
6:         int mid=(l+h)/2;
7:         switch(COMPARE(arr[mid],key)){
8:             case -1:l=mid+1;
9:                 break;
10:            case 0:return mid;
11:                 break;
12:            case 1:h=mid-1;
13:                 break;
14:         }
15:     }
16:     return -1;
17: }
18: int main(){
19:     int arr[]={11,13,18,19,20};
20:     int key=20;
21:     int n =sizeof(arr)/ sizeof(arr[0]);
22:     printf("value of n= %d",n);
23:
24:     int index= binarysearch (arr,0,n-1,key);
25:     if (index == -1){
26:         printf("\n Element is not present in array");
27:     }
28:     else{
29:         printf("\n Element is present at index %d", index);
30:     }
31:     return 0;
32: }
```