**RAJALAKSHMI
ENGINEERING
COLLEGE**

🔔 **CHANDRU G S 2024-CSE** ⌄ **C2**

Started on	Wednesday, 15 October 2025, 8:24 AM
State	Finished
Completed on	Wednesday, 15 October 2025, 9:45 AM
Time taken	1 hour 21 mins
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 | Correct   Mark 1.00 out of 1.00

Problem Statement:

Given a sorted array and a value x, the floor of x is the largest element in array smaller than or equal to x. Write divide and conquer algorithm to find floor of x.

Input Format

First Line Contains Integer n – Size of array

Next n lines Contains n numbers – Elements of an array

Last Line Contains Integer x – Value for x

Output Format

First Line Contains Integer – Floor value for x

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int key;
int binarysearch(int arr[],int l,int m,int r){
    if(arr[m]==key){
        return m;
    }

    else if(key>arr[m] && l<=r){
        l=m+1;
        m=(l+r)/2;
        return binarysearch(arr,l,m,r);
    }
    else if(arr[m]>key && l<=r){
        if (arr[m-1]<key)
        return m;
        r=m-1;
        m=(l+r)/2;
        return binarysearch( arr, l,  m,  r);
    }
    else{
    return -1;
    }

}
int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    scanf("%d",&key);
    int m=binarysearch(arr,0,(n-1)/2,n-1);
    printf("%d",arr[m-1]);
}
```

	Input	Expected	Got	
✔	6 1 2 8 10 12 19 5	2	2	✔
✔	5 10 22 85 108 129 100	85	85	✔
✔	7 3 5 7 9 11 13 15 10	9	9	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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