# <u>Dashboard</u> / <u>My courses</u> / <u>CS23331-DAA-2023-CSE</u> / <u>Divide and Conquer</u> / <u>3-Finding Floor Value</u>

Started on	Tuesday, 1 October 2024, 2:38 PM
State	Finished
Completed on	Tuesday, 8 October 2024, 2:18 PM
Time taken	6 days 23 hours
Marks	1.00/1.00
Grade	<b>10.00</b> out of 10.00 ( <b>100</b> %)

```
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

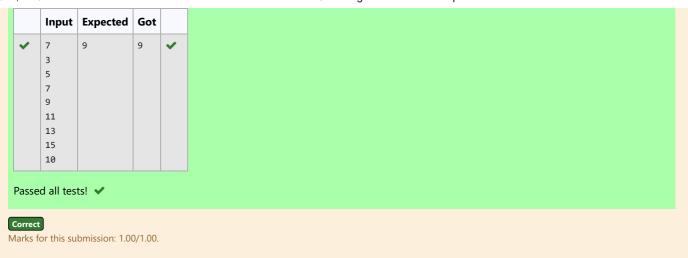
#### **Output Format**

First Line Contains Integer – Floor value for x

## Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
    int divide(int arr[],int i,int j,int x){
 3 ₹
 4
         if(i>j) return -1;
 5
 6
         int mid=(i+j)/2;
         if(x>=arr[mid]&&(mid==j||x<arr[mid+1]))return mid+1;</pre>
 8
         else if(x<arr[mid])return divide(arr,i,mid-1,x);</pre>
 9
         else return divide(arr,mid+1,j,x);
10
    }
11
12 v int main(){
13
14
         int a;
         scanf("%d",&a);
15
16
         int arr[a];
         for(int i=0;i<a;i++) scanf("%d",&arr[i]);
int c;scanf("%d",&c);
int d=divide(arr,0,a-1,c);</pre>
17
18
19
20
         printf("%d\n",arr[d-1]);
21
22
23
24
25
26
```

	input	Expected	Got	
~	6	2	2	~
	1			
	2			
	8			
	10			
	12			
	19			
	5			
~	5	85	85	~
	10			
	22			
	85			
	108			
	129			
	100			



# 2-Majority Element

Jump to... \$

4-Two Elements sum to x ►