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Started on	Thursday, 12 September 2024, 10:59 AM
State	Finished
Completed on	Thursday, 12 September 2024, 11:39 AM
Time taken	39 mins 17 secs
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 %)

```

1  #include<stdio.h>
2
3  int Floor(int arr[],int x,int low,int high){
4  while(low<high){
5      int mid=(low+high)/2;
6      if(arr[mid-1]<x && arr[mid]>x)
7          return arr[mid-1];
8      else if(arr[mid]<x && arr[mid+1]>x)
9          return arr[mid];
10     else if(arr[mid]>x)
11         high=mid-1;
12     else if(arr[mid]<x)
13         low=mid+1;
14 }
15 return -1;
16 }
17 int main(){
18     int n,x,arr[100],low=0,high;
19     scanf("%d",&n);
20     high=n-1;
21     for(int i=0;i<n;i++)
22         scanf("%d",&arr[i]);
23     scanf("%d",&x);
24     printf("%d",Floor(arr,x,low,high));
25 }
```

	Input	Expected	Got	
✓	6 1 2 8 10 12 19 5	2	2	✓
✓	5 10 22 85 108 129 100	85	85	✓

	Input	Expected	Got	
✓	7	9	9	✓
	3			
	5			
	7			
	9			
	11			
	13			
	15			
	10			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ 2-Majority Element

Jump to...

4-Two Elements sum to x ▶