Started on	Thursday, 5 September 2024, 11:16 AM
State	Finished
Completed on	Thursday, 5 September 2024, 11:44 AM
Time taken	28 mins 27 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 %)

```
#include<stdio.h>

int floorValue(int arr[], int low, int high, int x)
{
    if (low>high)
        return 0;
    int mid=low+(high-low)/2;
    if (arr[mid]==x)
        return arr[mid];
    else if (arr[mid]<x) {
        int f=floorValue(arr,mid+1,high,x);
        if(f==0)
            return arr[mid];
        else
            return f;
    }
    else
        return floorValue(arr,low,mid-1,x);
}

int main()
{
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
        scanf("%d",&arr[i]);
    int x;
        scanf("%d",&x);
    printf("%d",floorValue(arr,0,n-1,x));
}
```

	Input	Expected	Got	
✔	6 1 2 8 10 12 19 5	2	2	✔

	Input	Expected	Got	
✔	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.

◄ 2-Majority Element

Jump to...

4-Two Elements sum to x ►