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 floorValue(int* arr,int left,int right,int x){
    if(left > right){
        return -1;
    }
    int mid = (int)(left+right)/2;
    if(arr[mid]==x) return arr[mid];
    else if(arr[mid]>x){
        return floorValue(arr,left,mid-1,x);
    }
    else{
        int value = floorValue(arr,mid+1,right,x);
        return value==-1? arr[mid]:value;
    }
}

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));
    return 0;
}
```

	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 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

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