Started on	Tuesday, 8 October 2024, 1:41 PM
State	Finished
Completed on	Tuesday, 8 October 2024, 1:46 PM
Time taken	4 mins 32 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 %)

```c
#include <stdio.h>
int floorSearch(int arr[], int n, int x)
{
    if (x >= arr[n - 1])
        return n - 1;
    if (x < arr[0])
        return -1;
    for (int i = 1; i < n; i++)
        if (arr[i] > x)
            return (i - 1);

    return -1;
}
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);
    int index = floorSearch(arr, n - 1, x);
    if (index == -1)
        printf("Floor of %d doesn't exist in array ", x);
    else
        printf("%d",  arr[index]);
    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

Jump to...

4-Two Elements sum to x ►