Status	Finished
Started	Saturday, 12 April 2025, 12:16 PM
Completed	Saturday, 12 April 2025, 12:18 PM
Duration	1 min 22 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 main() {
    int n, x;
    scanf("%d", &n);

    int arr[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    scanf("%d", &x);

    int low = 0, high = n - 1;
    int floor_value = -1;

    while (low <= high) {
        int mid = low + (high - low) / 2;

        if (arr[mid] == x) {
            floor_value = arr[mid];
            break;
        }
        else if (arr[mid] < x) {
            floor_value = arr[mid];
            low = mid + 1;
        }
        else {
            high = mid - 1;
        }
    }

    printf("%d\n", floor_value);

    return 0;
}
```

	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 ►