# <u>Dashboard</u> / <u>My courses</u> / <u>CS23331-DAA-2023-CSE</u> / <u>Divide and Conquer</u> / <u>3-Finding Floor Value</u>

Started on	Friday, 4 October 2024, 1:49 PM
State	Finished
Completed on	Friday, 4 October 2024, 1:53 PM
Time taken	3 mins 38 secs
Marks	1.00/1.00
Grade	<b>10.00</b> out of 10.00 ( <b>100</b> %)

```
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

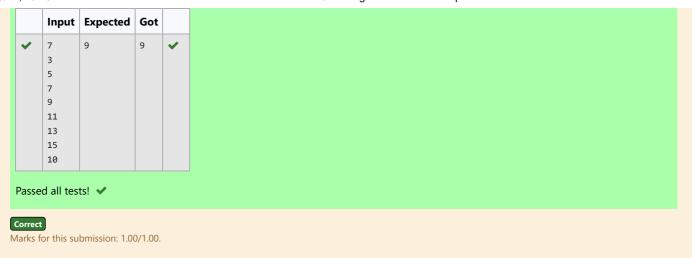
## **Output Format**

First Line Contains Integer – Floor value for x

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
 2 v int findFloor(int arr[], int n, int x) {
        int low = 0, high = n - 1;
 3
        int result = -1;
 5 1
        while (low <= high) {</pre>
            int mid = low + (high - low) / 2;
 6
            if (arr[mid] == x) {
 7
                return arr[mid];
 8
9
             } else if (arr[mid] < x) {</pre>
                result = arr[mid];
10
                 low = mid + 1;
11
12
            } else {
                high = mid - 1;
13
14
15
16
        return result;
17
18
   int main() {
        int n, x;
scanf("%d", &n);
19
20
        int arr[n];
21
        for (int i = 0; i < n; i++) {
22
            scanf("%d", &arr[i]);
23
24
25
        scanf("%d", &x);
26
        int floor = findFloor(arr, n, x);
        printf("%d\n", floor);
27
28
        return 0;
29
    }
30
```

	Input	Expected	Got	
<b>~</b>	6 1 2 8 10 12 19 5	2	2	<b>~</b>
~	5 10 22 85 108 129 100	85	85	<b>~</b>



# 2-Majority Element

Jump to... \$

4-Two Elements sum to x ►