Started on	Friday, 4 October 2024, 1:49 PM
State	Finished
Completed on	Friday, 4 October 2024, 1:49 PM
Time taken	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 %)

```c
#include<stdio.h>
void sort(int arr[],int temp[],int low,int high)
{
    for(int i=low; i<=high;i++)
    {
        arr[i]=temp[i-low];
    }
}

void merge(int arr[],int low,int mid,int high)
{
    int temp[high+1];
    int p=low,q=mid+1,s=0;
    while(p<=mid && q<=high)
    {
        if(arr[p]<arr[q])
        {
            temp[s]=arr[p];
            p++;
        }
        else
        {
            temp[s]=arr[q];
            q++;
        }
        s++;
    }
    while(p<=mid)
    {
        temp[s]=arr[p];
        s++;
        p++;
    }
    while(q<=high)
    {
        temp[s]=arr[q];
        s++;
        q++;
    }
    sort(arr,temp,low,high);
}

void mergesort(int arr[],int low,int high)
{
    if(low < high)
    {
        int mid=(low+high)/2;
        mergesort(arr,low,mid);
        mergesort(arr,mid+1,high);
        merge(arr,low,mid,high);
    }
}
```

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