Started on	Thursday, 12 September 2024, 11:34 AM
State	Finished
Completed on	Thursday, 19 September 2024, 11:31 AM
Time taken	6 days 23 hours
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 of integers say arr[] and a number x. Write a recursive program using divide and conquer strategy to check if there exist two elements in the array whose sum = x. If there exist such two elements then return the numbers, otherwise print as "No".

Note: Write a Divide and Conquer Solution

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 – Sum Value

Output Format

First Line Contains Integer – Element1

Second Line Contains Integer – Element2 (Element 1 and Elements 2 together sums to value "x")

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>

int sum(int arr[], int l, int mid, int r, int k){
    for(int i=l ; i<=mid ; i++){
        for(int j=mid+1 ; j<=r ; j++){
            if(arr[i] + arr[j] == k){
                printf("%d \n%d",arr[i],arr[j]);
                return 1;
            }
        }
    }
    return 0;
}

int div(int arr[], int l, int r, int k){
    int f=0;
    if(l<r){
        int mid = (l+r)/2;
        div(arr, l, mid, k);
        div(arr, mid+1, r, k);
        if(sum(arr, l, mid, r, k)){
            f=1;
        }
    }
    return f;
}

int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0 ; i<n ; i++)
        scanf("%d",&arr[i]);
    int k;
    scanf("%d",&k);
    int left = 0;
    int right = n-1;
    if(!div(arr, left, right, k))
        printf("No");
}
```

	Input	Expected	Got	
✔	4 2 4 8 10 14	4 10	4 10	✔

	Input	Expected	Got	
✔	5 2 4 6 8 10 100	No	No	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ 3-Finding Floor Value

Jump to...

5-Implementation of Quick Sort ►