CS23331-DAA-2024-CSE / 4-Two Elements sum to x

4-Two Elements sum to x

Started on	Saturday, 20 September 2025, 9:04 PM
State	Finished
Completed on	Saturday, 20 September 2025, 9:21 PM
Time taken	16 mins 56 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 | Correct   Mark 1.00 out of 1.00   ⚑ Flag question

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 dac(int arr[],int low, int high, int x, int *a, int *b){
    if(high<low)
        return 0;

    int sum=arr[low]+arr[high];

    if(sum==x){
        *a=arr[low];
        *b=arr[high];
        return 1;
    }
    else if(sum<x){
        return dac(arr,low+1,high,x,a,b);
    }
    else{
        return dac(arr,low,high-1,x,a,b);
    }
}

int main()
{
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    int x,a,b;
    scanf("%d",&x);
    if(dac(arr,0,n-1,x,&a,&b)){
        printf("%d\n%d",a,b);
    }
    else{
        printf("No");
    }
}
```

	Input	Expected	Got	
✔	4 2 4 8 10 14	4 10	4 10	✔
✔	5 2 4 6 8 10 100	No	No	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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Passed all tests! ✔

Correct

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