Dashboard / My courses / CS23331-DAA-2023-CSE / Divide and Conquer / 4-Two Elements sum to x

Started on	Friday, 20 September 2024, 1:50 PM
State	Finished
Completed on	Friday, 20 September 2024, 1:51 PM
Time taken	35 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 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 findPair(int arr[], int low, int high, int x) {
    int left = low;
    int right = high;

    while (left < right) {
        int sum = arr[left] + arr[right];
        if (sum == x) {
            printf("%d\n", arr[left]);
            printf("%d\n", arr[right]);
            return 1;
        } else if (sum < x) {
            left++;
        } else {
            right--;
        }
    }
    return 0;
}

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);

    if (!findPair(arr, 0, n - 1, x)) {
        printf("No\n");
    }

    return 0;
}

```

	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.

◀ 3-Finding Floor Value

Jump to...

5-Implementation of Quick Sort ▶