RAJALAKSHMI ENGINEERING COLLEGE

Started on	Thursday, 23 October 2025, 6:42 PM
State	Finished
Completed on	Thursday, 23 October 2025, 6:45 PM
Time taken	2 mins 49 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 left, int right, int x, int* a, int* b) {
    if (left >= right)
        return 0;

    int sum = arr[left] + arr[right];
    if (sum == x) {
        *a = arr[left];
        *b = arr[right];
        return 1;
    } else if (sum < x) {
        return findPair(arr, left + 1, right, x, a, b);
    } else {
        return findPair(arr, left, right - 1, x, a, b);
    }
}

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);

    int a, b;
    if (findPair(arr, 0, n - 1, x, &a, &b)) {
        printf("%d\n%d\n", a, b);
    } else {
        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.

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