RAJALAKSHMI ENGINEERING COLLEGE

VISAANTH M 2024-IT

V2

Started on	Wednesday, 17 September 2025, 2:36 PM
State	Finished
Completed on	Wednesday, 17 September 2025, 2:39 PM
Time taken	3 mins 12 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 *a, int *b)
{
    if (low >= high) return 0;
    int sum = arr[low] + arr[high];
    if (sum == x)
    {
        *a = arr[low];
        *b = arr[high];
        return 1;
    }
    if (sum < x) return findPair(arr, low + 1, high, x, a, b);
    else return findPair(arr, low, high - 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	✔

	Input	Expected	Got	
✔	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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