



SIVA S 2024-CSE ▾

S2

Started on Wednesday, 8 October 2025, 3:53 PM

State Finished

Completed on Wednesday, 8 October 2025, 3:54 PM

Time taken 45 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 %)

```
1 #include <stdio.h>
2
3 int findPair(int arr[], int left, int right, int x, int *a, int *b) {
4     if (left >= right)
5         return 0;
6
7     int sum = arr[left] + arr[right];
8
9     if (sum == x) {
10         *a = arr[left];
11         *b = arr[right];
12         return 1;
13     } else if (sum < x) {
14         return findPair(arr, left + 1, right, x, a, b);
15     } else {
16         return findPair(arr, left, right - 1, x, a, b);
17     }
18 }
19
20 int main() {
21     int n;
22     scanf("%d", &n);
23     int arr[n];
24
25     for (int i = 0; i < n; i++)
26         scanf("%d", &arr[i]);
27
28     int x;
29     scanf("%d", &x);
30
31     int a, b;
32     if (findPair(arr, 0, n - 1, x, &a, &b)) {
33         printf("%d\n%d\n", a, b);
34     } else {
35         printf("No\n");
36     }
37
38     return 0;
39 }
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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