

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

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