RAJALAKSHMI ENGINEERING COLLEGE

CHANDRU G S 2024-CSE

C2

Started on	Wednesday, 22 October 2025, 6:16 PM
State	Finished
Completed on	Sunday, 16 November 2025, 8:13 PM
Time taken	25 days 1 hour
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 findindex(int arr[],int l,int m,int r,int key){
    if(l<=r){
    if((arr[m]<=key && arr[m+1]>=key) || l==r)
    {
        return m;
    }

    else if(arr[m]>key){
        r=m-1;
        m=(l+r)/2;
        return(findindex(arr,l,m,r,key));
    }
     else if(arr[m]<key){
        l=m+1;
        m=(l+r)/2;
        return(findindex(arr,l,m,r,key));
    }
    else
    return -1;

    }

    return -2;
}
int main(){
    int n,key;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
     scanf("%d",&key);
    int m=findindex(arr,0,(n-1)/2,n-1,key);
    //printf("%d",m);
    int f=0;
    for(int i=m;i>=0;i--){
        for(int j=0;j<=i;j++){
            if(arr[i]+arr[j]==key){
                printf("%d\n%d",arr[j],arr[i]);
                f=1;
                break;
            }
        }
    }
    if (f==0)
    printf("No");
}
```

	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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