CS23331-Design and Analysis of Algorithms-2023 Batch-CSE

Quiz navigation

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Finish review

Started on	Friday, 18 October 2024, 1:44 PM
State	Finished
Completed on	Friday, 18 October 2024, 1:45 PM
Time taken	1 min 4 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

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 binarysearch(int arr[],int l,int h,int tar)
{
    int m;
    while(l<=h)
    {
        m=(l+h)/2;
        if(arr[m]==tar) return 1;
        else if(arr[m]<tar) l=m+1;
        else h=m-1;
    }
    return 0;
}

void twosum(int arr[],int n,int k)
{
    for(int i=0;i<n;i++)
    {
        int tar=k-arr[i];
        int ans=binarysearch(arr,0,n,tar);
        if(ans==1)
        {
            printf("%d\n%d",arr[i],tar);
            return;
        }
    }
    printf("No");
}

int main()
{
    int n,k;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&arr[i]);
    }
    scanf("%d",&k);
    twosum(arr,n,k);
}
```

	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.

Finish review

⇥ 3-Finding Floor Value

Jump to...

5-Implementation of Quick Sort ⇤