DIVIDE AND CONQUER

PROBLEM 4:

4-TWO ELEMENTS SUM TO X

AIM:

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".

CODE:

```c
#include<stdio.h>

void findpair(int arr[], int left, int right, int x){

if(left>=right){

    printf("No\n");

    return;

    }

    int sum = arr[left] + arr[right];

    if(sum ==x){

        printf("%d\n",arr[left]);

        printf("%d\n",arr[right]);

        return;

    }

    else if(sum< x){
```

```c
            findpair(arr,left+1,right,x);

    }

    else{

        findpair(arr,left,right-1,x);

    }

}

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);

    findpair(arr,0,n-1,x);

    return 0;

}
```

INPUT OUTPUT:

	Input	Expected	Got	
✔	4 2 4 8 10 14	4 10	4 10	✔