Started on	Tuesday, 5 November 2024, 2:18 PM
State	Finished
Completed on	Tuesday, 5 November 2024, 2:37 PM
Time taken	19 mins 21 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that A[j] - A[i] = k, i != j.

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as 5 - 1 = 4

So Return 1.

For example:

Input	Result
3 1 3 5 4	1

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
#include<stdbool.h>
int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    int k;
    bool r = false;
    scanf("%d",&k);

    int i=0,j=n-1;
    while (i < j) {
        int sum = arr[i] + arr[j];
        if(arr[i]==k || arr[j]==k){
            r = true;
            break;
        }
        if (sum == k) {
            r = true;
            break;
        } else if (sum < k) {
            i++;
        } else {
            j--;
        }
    }
    if(r){
        printf("1") ;
    }
    else{
```

```
34          printf("0");
35      }
36  }
```

	Input	Expected	Got	
✔	3 1 3 5 4	1	1	✔
✔	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✔
✔	10 1 2 3 5 11 14 16 24 28 29 0	0	0	✔
✔	10 0 2 3 7 13 14 15 20 24 25 10	1	1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ 5-Pair with Difference-O(n^2)Time Complexity,O(1) Space Complexity

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