Started on	Wednesday, 13 November 2024, 3:52 PM
State	Finished
Completed on	Wednesday, 13 November 2024, 3:54 PM
Time taken	1 min 48 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 %)

```c
1  #include <stdio.h>
2
3  int has_pair_with_difference(int arr[], int n, int k) {
4      int i = 0, j = 1;
5      while (j < n) {
6          if (i != j && arr[j] - arr[i] == k)
7              return 1;
8          else if (arr[j] - arr[i] < k)
9              j++;
10         else
11             i++;
12     }
13     return 0;
14 }
15
16 int main() {
17     int n, k;
18     scanf("%d", &n);
19     int arr[n];
20     for (int i = 0; i < n; i++)
21         scanf("%d", &arr[i]);
22     scanf("%d", &k);
23     printf("%d\n", has_pair_with_difference(arr, n, k));
24     return 0;
25 }
```

	Input	Expected	Got	
✔	3 1 3 5 4	1	1	✔
✔	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✔

	Input	Expected	Got	
✔	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.

◄ 4-Print Intersection of 2 sorted arrays-O(m+n)Time Complexity,O(1) Space Complexity

Jump to...

6-Pair with Difference -O(n) Time Complexity,O(1) Space Complexity ►