Started on	Wednesday, 20 November 2024, 8:37 PM
State	Finished
Completed on	Wednesday, 20 November 2024, 8:38 PM
Time taken	1 min 8 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 %)

```
1  #include <stdio.h>
2
3  int findPair(int A[], int n, int k) {
4      int i = 0, j = 1;
5
6      while (j < n) {
7          int diff = A[j] - A[i];
8
9          if (diff == k) {
10             return 1;
11         }
12         if (diff < k) {
13             j++;
14         } else {
15             i++;
16             if (i == j) {
17                 j++;
18             }
19         }
20     }
21     return 0;
22 }
23
24 int main() {
25     int n;
26     scanf("%d", &n);
27
28     int A[n];
29     for (int i = 0; i < n; i++) {
30         scanf("%d", &A[i]);
31     }
32
33     int k;
34     scanf("%d", &k);
```

```
35
36        int result = findPair(A, n, k);
37        printf("%d\n", result);
38
39        return 0;
40 }
41
```

	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.

◄ 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 ►