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Started on	Tuesday, 5 November 2024, 2:28 PM
State	Finished
Completed on	Tuesday, 5 November 2024, 2:35 PM
Time taken	7 mins 4 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 $A[j] - A[i] = k$, $i \neq j$.

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

```

	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](#)

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