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Started on	Tuesday, 19 November 2024, 1:41 AM
State	Finished
Completed on	Tuesday, 19 November 2024, 10:33 PM
Time taken	20 hours 51 mins
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 main()
3  {
4      int n;
5      scanf("%d", &n);
6
7      int arr[n];
8      for (int i = 0; i < n; i++)
9      {
10         scanf("%d", &arr[i]);
11     }
12
13     int k;
14     scanf("%d", &k);
15     int i = 0, j = 0;
16     while (j < n)
17     {
18
19         if (i != j && arr[j] - arr[i] == k)
20         {
21             printf("1\n");
22             return 0;
23         }
24         if (arr[j]-arr[i] < k)
25         {
26             j++;
27         }
28         else
29         {
30             i++;
31             if (i == j)
32             {
33                 i++;

```

```
34     }
35     }
36 }
37
38     printf("0\n");
39 }
40 }
```

	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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