RAJALAKSHMI ENGINEERING COLLEGE

MONIKA R 2024-CSE

M2

Started on	Wednesday, 8 October 2025, 3:26 PM
State	Finished
Completed on	Wednesday, 8 October 2025, 3:46 PM
Time taken	20 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 != 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
#include <stdio.h>

int find_pair_with_difference(int arr[], int n, int k) {
    int i = 0, j = 1;
    while (i < n && j < n) {
        if (i != j) {
            int diff = arr[j] - arr[i];
            if (diff == k) {
                return 1;
            } else if (diff < k) {
                j++;
            } else {
                i++;
            }
        } else {
            j++;
        }
    }
    return 0;
}

int main() {
    int n;
    scanf("%d", &n);

    int arr[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    int k;
    scanf("%d", &k);

    int result = find_pair_with_difference(arr, n, k);
    printf("%d\n", result);

    return 0;
}
```

	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.

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