

[Dashbo...](#) / [My cour...](#) / [CS23331-DAA-2023-...](#) / [Competitive Program...](#) / [5-Pair with Difference- \$O\(n^2\)\$ Time Complexity, \$O\(1\)\$ Space Com...](#)

Started on	Tuesday, 5 November 2024, 2:08 PM
State	Finished
Completed on	Tuesday, 5 November 2024, 2:16 PM
Time taken	7 mins 54 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 has_pair_with_difference(int A[], int n, int k) {
3      for (int i = 0; i < n; i++) {
4          for (int j = i + 1; j < n; j++) {
5              if (A[j] - A[i] == k) {
6                  return 1;
7              }
8          }
9      }
10     return 0;
11 }
12 int main() {
13     int n;
14     scanf("%d", &n);
15     int A[n];
16     for (int i = 0; i < n; i++) {
17         scanf("%d", &A[i]);
18     }
19     int k;
20     scanf("%d", &k);
21     int result = has_pair_with_difference(A, n, k);
22     printf("%d\n", result);
23     return 0;
24 }
```

	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 ▶](#)