# CS23331-Design and Analysis of Algorithms-2023 Batch-CS



Quiz navigation

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| | |
|---|---|
| **Status** | Finished |
| **Started** | Tuesday, 22 April 2025, 3:34 PM |
| **Completed** | Tuesday, 22 April 2025, 3:38 PM |
| **Duration** | 3 mins 58 secs |
| **Marks** | 1.00/1.00 |
| **Grade** | **4.00** out of 4.00 (**100**%) |

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

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<br>1 3 5<br>4 | 1 |

**Answer:** (penalty regime: 0 %)

```
#include <stdio.h>
int main() {
    int n, k, flag = 0;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }
    scanf("%d", &k);
    for (int i = 0; i < n; i++) {
        for (int j = i + 1; j < n; j++) {
            if (arr[j] - arr[i] == k) {
                flag = 1;
                break;
            }
        }
    }
    printf("%d", flag);
    return 0;
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 3<br>1 3 5<br>4 | 1 | 1 | |
| | 10<br>1 4 6 8 12 14 15 20 21 25<br>1 | 1 | 1 | |
| | 10<br>1 2 3 5 11 14 16 24 28 29<br>0 | 0 | 0 | |
| | 10<br>0 2 3 7 13 14 15 20 24 25<br>10 | 1 | 1 | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Finish review

◄ 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 ►