

**Started on** Monday, 3 November 2025, 9:31 PM

**State** Finished

**Completed on** Monday, 3 November 2025, 9:36 PM

**Time taken** 4 mins 53 secs

**Marks** 1.00/1.00

**Grade** **10.00** out of 10.00 (**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      |
| 1 3 5 |        |
| 4     |        |
|       |        |

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

```
1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     int arr[n];
7     for(int i=0;i<n;i++){
8         scanf("%d",&arr[i]);
9     }
10    int x;
11    scanf("%d",&x);
12    int i=0,j=0;
13    int found=0;
14    while(i<n && j<n)
15    {
16        if(i!=j && (arr[j]-arr[i]==x))
17        {
18            found=1;
19            break;
20        }
21        else if(arr[j]-arr[i]<x)
22        {
23            j++;
24        }
25        else
26        {
27            i++;
28        }
29    }
30    printf("%d",found);
31 }
```

|   | <b>Input</b>                          | <b>Expected</b> | <b>Got</b> |   |
|---|---------------------------------------|-----------------|------------|---|
| ✓ | 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.