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| Test Name: | **Mock Test** |
| Taken On: | 8 Jun 2025 01:06:30 IST |
| Time Taken: | 19 min 41 sec/ 25 min |
| Invited by: | Ankush |
| Invited on: | 8 Jun 2025 01:06:22 IST |
| Skills Score: | |
| Tags Score: | Algorithms 75/75<br>Core CS 75/75<br>Medium 75/75<br>Search 75/75<br>problem-solving 75/75 |

**100%**

**75/75**

scored in **Mock Test** in 19 min 41 sec on 8 Jun 2025 01:06:30 IST

**Recruiter/Team Comments:**

*No Comments.*

| | Question Description | Time Taken | Score | Status |
|---|---|---|---|---|
| Q1 | **Pairs** > **Coding** | 19 min 34 sec | 75/ 75 | ✓ |

**QUESTION 1**

Correct Answer

Score 75

## Pairs > Coding

Search | Algorithms | Medium | problem-solving | Core CS

QUESTION DESCRIPTION

Given an array of integers and a target value, determine the number of pairs of array elements that have a difference equal to the target value.

**Example**

$k = 1$

$arr = [1, 2, 3, 4]$

There are three values that differ by $k = 1$: $2 - 1 = 1$, $3 - 2 = 1$, and $4 - 3 = 1$. Return $3$.

**Function Description**

Complete the *pairs* function below.

pairs has the following parameter(s):

- *int k:* an integer, the target difference
- *int arr[n]:* an array of integers

**Returns**

- *int:* the number of pairs that satisfy the criterion

**Input Format**

The first line contains two space-separated integers $n$ and $k$, the size of $arr$ and the target value.
The second line contains $n$ space-separated integers of the array $arr$.

**Constraints**

- $2 \leq n \leq 10^5$
- $0 < k < 10^9$
- $0 < arr[i] < 2^{31} - 1$
- each integer $arr[i]$ will be unique

**Sample Input**

```
STDIN       Function
-----       --------
5 2         arr[] size n = 5, k =2
1 5 3 4 2   arr = [1, 5, 3, 4, 2]
```

**Sample Output**

```
3
```

**Explanation**

There are 3 pairs of integers in the set with a difference of 2: [5,3], [4,2] and [3,1]. .

**CANDIDATE ANSWER**

Language used: **Java 8**

```
1
2  class Result {
3
4      /*
5       * Complete the 'pairs' function below.
6       *
7       * The function is expected to return an INTEGER.
8       * The function accepts following parameters:
9       *  1. INTEGER k
10      *  2. INTEGER_ARRAY arr
11      */
12
13     public static int pairs(int k, List<Integer> arr) {
14         //reverse two sum
15         int count = 0;
16         Map<Integer,Integer> sums=new HashMap<>();
17         for(int el:arr){
18             if(sums.get(el)!=null){
19                 count+=sums.get(el);
20             }
21             if(sums.get(el+k)!=null)sums.put(el+k, sums.get(el+k)+1);
22             else sums.put(el+k, 1);
23             if(sums.get(el-k)!=null)sums.put(el-k, sums.get(el-k)+1);
24             else sums.put(el-k, 1);
25         }
26         return count;
27     }
28
29 }
```

```
30
```

| TESTCASE | DIFFICULTY | TYPE | STATUS | SCORE | TIME TAKEN | MEMORY USED |
|---|---|---|---|---|---|---|
| Testcase 1 | Easy | Hidden case | Success | 5 | 0.1077 sec | 31.8 KB |
| Testcase 2 | Easy | Hidden case | Success | 5 | 0.1276 sec | 31.4 KB |
| Testcase 3 | Easy | Hidden case | Success | 5 | 0.1046 sec | 31.6 KB |
| Testcase 4 | Easy | Hidden case | Success | 5 | 0.1224 sec | 31.8 KB |
| Testcase 5 | Easy | Hidden case | Success | 5 | 0.1216 sec | 32 KB |
| Testcase 6 | Easy | Hidden case | Success | 5 | 0.1319 sec | 34 KB |
| Testcase 7 | Easy | Hidden case | Success | 5 | 0.1509 sec | 34 KB |
| Testcase 8 | Easy | Hidden case | Success | 5 | 0.1244 sec | 33.1 KB |
| Testcase 9 | Easy | Hidden case | Success | 5 | 0.1458 sec | 33.9 KB |
| Testcase 10 | Easy | Hidden case | Success | 5 | 0.149 sec | 35.9 KB |
| Testcase 11 | Easy | Hidden case | Success | 5 | 0.2843 sec | 64.2 KB |
| Testcase 12 | Easy | Hidden case | Success | 5 | 0.2584 sec | 63.9 KB |
| Testcase 13 | Easy | Hidden case | Success | 5 | 0.2502 sec | 63.9 KB |
| Testcase 14 | Easy | Hidden case | Success | 5 | 0.2887 sec | 64.3 KB |
| Testcase 15 | Easy | Hidden case | Success | 5 | 0.2488 sec | 64 KB |
| Testcase 16 | Easy | Sample case | Success | 0 | 0.1122 sec | 31.6 KB |
| Testcase 17 | Easy | Sample case | Success | 0 | 0.1252 sec | 31.4 KB |
| Testcase 18 | Easy | Sample case | Success | 0 | 0.0933 sec | 31.9 KB |

No Comments