Pairs ☆

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You will be given an array of integers and a target value. Determine the number of pairs of array elements that have a difference equal to a target value.

For example, given an array of [1, 2, 3, 4] and a target value of 1, we have three values meeting the condition: $2-1=1$, $3-2=1$, and $4-3=1$.

Function Description

Complete the pairs function below. It must return an integer representing the number of element pairs having the required difference.

pairs has the following parameter(s):

- k: an integer, the target difference
- arr: an array of integers

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

Output Format

An integer representing the number of pairs of integers whose difference is k.

Sample Input

```
5 2
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] .

Change Theme

```cpp
// https://www.geeksforgeeks.org/count-pairs-difference-equal-k/
int pairs(int k, vector<int> arr) {
    int n =arr.size();
    int count = 0;
    sort(arr.begin(), arr.end());  // Sort array elements
    int l = 0;
    int r = 0;
    while(r < n)
    {
         if(arr[r] - arr[l] == k)
        {
              count++;
              l++;
              r++;
        }
         else if(arr[r] - arr[l] > k)
              l++;
         else // arr[r] - arr[l] < sum
              r++;
    }
    return count;
}
```

Line: 14 Col: 17

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59% 695/850

Problem Solving ★★★★

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Next Challenge

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5
Test case 6

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Hidden Test Case

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