5953. Sum of Subarray Ranges

My Submissions (/contest/weekly-contest-271/problems/sum-of-subarray-ranges/submissions/) Back to Contest (/contest/weekly-contest-271/)

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

You are given an integer array `nums`. The **range** of a subarray of `nums` is the difference between the largest and smallest element in the subarray.

Return *the **sum of all** subarray ranges of* `nums`.

A subarray is a contiguous **non-empty** sequence of elements within an array.

Example 1:

```
Input: nums = [1,2,3]
Output: 4
Explanation: The 6 subarrays of nums are the following:
[1], range = largest - smallest = 1 - 1 = 0
[2], range = 2 - 2 = 0
[3], range = 3 - 3 = 0
[1,2], range = 2 - 1 = 1
[2,3], range = 3 - 2 = 1
[1,2,3], range = 3 - 1 = 2
So the sum of all ranges is 0 + 0 + 0 + 1 + 1 + 2 = 4.
```

Example 2:

```
Input: nums = [1,3,3]
Output: 4
Explanation: The 6 subarrays of nums are the following:
[1], range = largest - smallest = 1 - 1 = 0
[3], range = 3 - 3 = 0
[3], range = 3 - 3 = 0
[1,3], range = 3 - 1 = 2
[3,3], range = 3 - 3 = 0
[1,3,3], range = 3 - 1 = 2
So the sum of all ranges is 0 + 0 + 0 + 2 + 0 + 2 = 4.
```

Example 3:

```
Input: nums = [4,-2,-3,4,1]
Output: 59
Explanation: The sum of all subarray ranges of nums is 59.
```

Constraints:

- `1 <= nums.length <= 1000`
- -10^{9} <= nums[i] <= 10^{9}

Java

```
class Solution {
    public long subArrayRanges(int[] nums) {

    }
}
```