

Zero Array Transformation II

You are given an integer array `nums` of length `n` and a 2D array `queries` where `queries[i] = [li, ri, vali]`.

Each `queries[i]` represents the following action on `nums`:

- Decrement the value at each index in the range `[li, ri]` in `nums` by **at most** `vali`.
- The amount by which each value is decremented can be chosen **independently** for each index.

A **Zero Array** is an array with all its elements equal to 0.

Return the **minimum** possible **non-negative** value of `k`, such that after processing the first `k` queries in **sequence**, `nums` becomes a **Zero Array**. If no such `k` exists, return -1.

Example 1:

Input: `nums = [2,0,2]`, `queries = [[0,2,1],[0,2,1],[1,1,3]]`

Output: 2

Explanation:

- **For `i = 0` (`l = 0, r = 2, val = 1`):**
 - Decrement values at indices `[0, 1, 2]` by `[1, 0, 1]` respectively.
 - The array will become `[1, 0, 1]`.
- **For `i = 1` (`l = 0, r = 2, val = 1`):**
 - Decrement values at indices `[0, 1, 2]` by `[1, 0, 1]` respectively.
 - The array will become `[0, 0, 0]`, which is a Zero Array. Therefore, the minimum value of `k` is 2.

Example 2:

Input: `nums = [4,3,2,1]`, `queries = [[1,3,2],[0,2,1]]`

Output: -1

Explanation:

- **For `i = 0` (`l = 1, r = 3, val = 2`):**
 - Decrement values at indices `[1, 2, 3]` by `[2, 2, 1]` respectively.
 - The array will become `[4, 1, 0, 0]`.
- **For `i = 1` (`l = 0, r = 2, val = 1`):**
 - Decrement values at indices `[0, 1, 2]` by `[1, 1, 0]` respectively.
 - The array will become `[3, 0, 0, 0]`, which is not a Zero Array.

Constraints:

- $1 \leq \text{nums.length} \leq 10^5$
- $0 \leq \text{nums}[i] \leq 5 * 10^5$
- $1 \leq \text{queries.length} \leq 10^5$
- $\text{queries}[i].\text{length} == 3$
- $0 \leq l_i \leq r_i < \text{nums.length}$
- $1 \leq \text{val}_i \leq 5$