

2504. Find All Good Indices

Difficulty : Medium

<https://leetcode.com/problems/find-all-good-indices>

You are given a **0-indexed** integer array `nums` of size `n` and a positive integer `k`.

We call an index `i` in the range $k \leq i < n - k$ **good** if the following conditions are satisfied:

- The `k` elements that are just **before** the index `i` are in **non-increasing** order.
- The `k` elements that are just **after** the index `i` are in **non-decreasing** order.

Return an array of all good indices sorted in **increasing** order.

Example 1:

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

Output: `[2,3]`

Explanation: There are two good indices in the array:

- Index 2. The subarray `[2,1]` is in non-increasing order, and the subarray `[1,3]` is in non-decreasing order.
- Index 3. The subarray `[1,1]` is in non-increasing order, and the subarray `[3,4]` is in non-decreasing order.

Note that the index 4 is not good because `[4,1]` is not non-decreasing.

Example 2:

Input: `nums = [2,1,1,2]`, `k = 2`

Output: `[]`

Explanation: There are no good indices in this array.

Constraints:

- $n == \text{nums.length}$
- $3 \leq n \leq 10^5$
- $1 \leq \text{nums}[i] \leq 10^6$
- $1 \leq k \leq n / 2$