

2519. Count the Number of K-Big Indices Premium

Hard Topics Companies Hint

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

We call an index `i` **k-big** if the following conditions are satisfied:

- There exist at least `k` different indices `idx1` such that `idx1 < i` and `nums[idx1] < nums[i]`.
- There exist at least `k` different indices `idx2` such that `idx2 > i` and `nums[idx2] < nums[i]`.

Return *the number of k-big indices*.

Example 1:

Input: `nums = [2,3,6,5,2,3]`, `k = 2`
Output: `2`
Explanation: There are only two 2-big indices in `nums`:
- `i = 2` —> There are two valid `idx1`: 0 and 1. There are three valid `idx2`: 2, 3, and 4.
- `i = 3` —> There are two valid `idx1`: 0 and 1. There are two valid `idx2`: 3 and 4.

Example 2:

Input: `nums = [1,1,1]`, `k = 3`
Output: `0`
Explanation: There are no 3-big indices in `nums`.

Constraints:

- `1 <= nums.length <= 105`
- `1 <= nums[i]`, `k <= nums.length`

Seen this question in a real interview before? 1/5

Yes No

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Hint 1

The intended solution uses Fenwick Tree.

Hint 2

Let’s describe the solution for counting the number of elements smaller than `nums[i]` in the range `[0, i - 1]`, and counting in the range `[i + 1, nums.length - 1]` can be done similarly by simply reversing the array.

Hint 3

Iterate from left to right and maintain the Fenwick Tree. Save the value of the query(`nums[i]`) and update `nums[i] + 1` by 1.

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