

1852. Distinct Numbers in Each Subarray Premium

Medium Topics Companies Hint

Given an integer array `nums` and an integer `k`, you are asked to construct the array `ans` of size `n-k+1` where `ans[i]` is the number of **distinct** numbers in the subarray `nums[i:i+k-1] = [nums[i], nums[i+1], ..., nums[i+k-1]]`.
Return *the array* `ans`.

Example 1:

Input: `nums = [1,2,3,2,2,1,3], k = 3`
Output: `[3,2,2,2,3]`
Explanation: The number of distinct elements in each subarray goes as follows:
- `nums[0:2] = [1,2,3]` so `ans[0] = 3`
- `nums[1:3] = [2,3,2]` so `ans[1] = 2`
- `nums[2:4] = [3,2,2]` so `ans[2] = 2`
- `nums[3:5] = [2,2,1]` so `ans[3] = 2`
- `nums[4:6] = [2,1,3]` so `ans[4] = 3`

Example 2:

Input: `nums = [1,1,1,1,2,3,4], k = 4`
Output: `[1,2,3,4]`
Explanation: The number of distinct elements in each subarray goes as follows:
- `nums[0:3] = [1,1,1,1]` so `ans[0] = 1`
- `nums[1:4] = [1,1,1,2]` so `ans[1] = 2`
- `nums[2:5] = [1,1,2,3]` so `ans[2] = 3`
- `nums[3:6] = [1,2,3,4]` so `ans[3] = 4`

Constraints:

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

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

Yes No

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Topics

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Hint 1

Keep a frequency map of the elements in each window.

Hint 2

When the frequency of the element is 0, remove it from the map.

Hint 3

The answer to each window is the size of the map.

Discussion (1)