Problem 3471: Find the Largest Almost Missing Integer

Problem Information

Difficulty: Easy
Acceptance Rate: 36.94%
Paid Only: No
Tags: Array, Hash Table

Problem Description

You are given an integer array `nums` and an integer `k`.

An integer `x` is **almost missing** from `nums` if `x` appears in _exactly_ one subarray of size `k` within `nums`.

Return the **largest** **almost missing** integer from `nums`. If no such integer exists, return `-1`.

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

Example 1:

Input: nums = [3,9,2,1,7], k = 3

Output: 7

Explanation:

* 1 appears in 2 subarrays of size 3: `[9, 2, 1]` and `[2, 1, 7]`. * 2 appears in 3 subarrays of size 3: `[3, 9, 2]`, `[9, 2, 1]`, `[2, 1, 7]`. * 3 appears in 1 subarray of size 3: `[3, 9, 2]`. * 7 appears in 1 subarray of size 3: `[2, 1, 7]`. * 9 appears in 2 subarrays of size 3: `[3, 9, 2]`, and `[9, 2, 1]`.

We return 7 since it is the largest integer that appears in exactly one subarray of size `k`.

Example 2:

Input: nums = [3,9,7,2,1,7], k = 4

Output: 3

Explanation:

* 1 appears in 2 subarrays of size 4: `[9, 7, 2, 1]`, `[7, 2, 1, 7]`. * 2 appears in 3 subarrays of size 4: `[3, 9, 7, 2]`, `[9, 7, 2, 1]`, `[7, 2, 1, 7]`. * 3 appears in 1 subarray of size 4: `[3, 9, 7, 2]`. * 7 appears in 3 subarrays of size 4: `[3, 9, 7, 2]`, `[9, 7, 2, 1]`, `[7, 2, 1, 7]`. * 9 appears in 2 subarrays of size 4: `[3, 9, 7, 2]`, `[9, 7, 2, 1]`.

We return 3 since it is the largest and only integer that appears in exactly one subarray of size `k`.

Example 3:

Input: nums = [0,0], k = 1

Output: -1

Explanation:

There is no integer that appears in only one subarray of size 1.

Constraints:

* `1 <= nums.length <= 50` * `0 <= nums[i] <= 50` * `1 <= k <= nums.length`

Code Snippets

C++:

```cpp
class Solution {
public:
    int largestInteger(vector<int>& nums, int k) {
```

```
    }
};
```

Java:

```java
class Solution {
public int largestInteger(int[] nums, int k) {


}
}
```

Python3:

```python
class Solution:
def largestInteger(self, nums: List[int], k: int) -> int:
```