Problem 2461: Maximum Sum of Distinct Subarrays With Length K

Problem Information

Difficulty: Medium
Acceptance Rate: 42.72%
Paid Only: No
Tags: Array, Hash Table, Sliding Window

Problem Description

You are given an integer array `nums` and an integer `k`. Find the maximum subarray sum of all the subarrays of `nums` that meet the following conditions:

* The length of the subarray is `k`, and * All the elements of the subarray are **distinct**.

Return _the maximum subarray sum of all the subarrays that meet the conditions_ _._ If no subarray meets the conditions, return `0`.

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

Example 1:

Input: nums = [1,5,4,2,9,9,9], k = 3 **Output:** 15 **Explanation:** The subarrays of nums with length 3 are: - [1,5,4] which meets the requirements and has a sum of 10. - [5,4,2] which meets the requirements and has a sum of 11. - [4,2,9] which meets the requirements and has a sum of 15. - [2,9,9] which does not meet the requirements because the element 9 is repeated. - [9,9,9] which does not meet the requirements because the element 9 is repeated. We return 15 because it is the maximum subarray sum of all the subarrays that meet the conditions

Example 2:

Input: nums = [4,4,4], k = 3 **Output:** 0 **Explanation:** The subarrays of nums with length 3 are: - [4,4,4] which does not meet the requirements because the element 4 is repeated. We return 0 because no subarrays meet the conditions.

Constraints:

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

Code Snippets

C++:

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

}
};
```

Java:

```
class Solution {
public long maximumSubarraySum(int[] nums, int k) {

}
}
```

Python3:

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