Problem 974: Subarray Sums Divisible by K

Problem Information

Difficulty: Medium
Acceptance Rate: 55.80%
Paid Only: No
Tags: Array, Hash Table, Prefix Sum

Problem Description

Given an integer array `nums` and an integer `k`, return _the number of non-empty**subarrays** that have a sum divisible by _`k`.

A **subarray** is a **contiguous** part of an array.

Example 1:

Input: nums = [4,5,0,-2,-3,1], k = 5 **Output:** 7 **Explanation:** There are 7 subarrays with a sum divisible by k = 5: [4, 5, 0, -2, -3, 1], [5], [5, 0], [5, 0, -2, -3], [0], [0, -2, -3], [-2, -3]

Example 2:

Input: nums = [5], k = 9 **Output:** 0

Constraints:

* `1 <= nums.length <= 3 * 104` * `-104 <= nums[i] <= 104` * `2 <= k <= 104`

Code Snippets

C++:

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

```
}
};
```

Java:

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

}
}
```

Python3:

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