325. Maximum Size Subarray Sum Equals k Premium

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Given an integer array `nums` and an integer `k`, return *the maximum length of a subarray that sums to* `k`. If there is not one, return `0` instead.

Example 1:

> **Input:** nums = [1,-1,5,-2,3], k = 3
> **Output:** 4
> **Explanation:** The subarray [1, -1, 5, -2] sums to 3 and is the longest.

Example 2:

> **Input:** nums = [-2,-1,2,1], k = 1
> **Output:** 2
> **Explanation:** The subarray [-1, 2] sums to 1 and is the longest.

Constraints:

- $1 <= nums.length <= 2 * 10^5$
- $-10^4 <= nums[i] <= 10^4$
- $-10^9 <= k <= 10^9$

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

Yes No

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Topics

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Hint 1

Compute the prefix sum array where psum[i] is the sum of all the elements from *0* to *i*.

Hint 2

At each index *i*, the sum of the prefix is psum[i], so we are searching for the index x where psum[x] = psum[i] - k. The subarray [x + 1, i] will be of sum k.

Hint 3

Use a hashmap to get the index x efficiently or to determine that it does not exist.

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