Que

930. Binary Subarrays With Sum

Solved

Medium | 🏷 Topics | 🔒 Companies

Given a binary array `nums` and an integer `goal`, return *the number of non-empty **subarrays** with a sum* `goal`.

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

Example 1:

```
Input: nums = [1,0,1,0,1], goal = 2
Output: 4
Explanation: The 4 subarrays are bolded and underlined below:
[1,0,1,0,1]
[1,0,1,0,1]
[1,0,1,0,1]
[1,0,1,0,1]
```

Example 2:

```
Input: nums = [0,0,0,0,0], goal = 0
Output: 15
```

→ 'sum is equal to k' (type 3)
→ only thing is that goal may be (-ve)
 ◦ it goal is -ve, return '0';

Sol

```java
class Solution {
    public int numSubarraysWithSum(int[] nums, int k) {
        return noOfSum(nums,k)-noOfSum(nums,k-1);
    }
    public static int noOfSum(int[] nums ,int k ){
        if (k < 0) return 0;
        int l=0 , r=0 , sum=0 , n=nums.length;
        int cnt=0;
        while(r<n){
            sum+=nums[r];
            while(sum>k){
                sum-=nums[l]; l++;
            }
            cnt+=r-l+1;
            r++;
        }
        return cnt;
    }
}
```

Tc -- O(n)
SC -O(1)