

209. Minimum Size Subarray Sum

Difficulty

Medium



715



47



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Description



Hints



Solution



Submissions

Given an array of n positive integers and a positive integer s , find the minimal length of a **contiguous** subarray of which the sum $\geq s$. If there isn't one, return 0 instead.

Example:

Input: $s = 7$, $nums = [2,3,1,2,4,3]$

Output: 2

Explanation: the subarray $[4,3]$ has the minimal length under the problem constraint.

Follow up:

If you have figured out the $O(n)$ solution, try coding another solution of which the time complexity is $O(n \log n)$.

```

public class L209 {

    /*
     * 这个其实是动态规划的问题，对每一个数组元素计算从它到之前的之和大于s的最小长度
     * 然后看是不是最小的长度，如果是则替换，如果不是，则往前。
     */
    public int minSubArrayLen(int s, int[] nums) {
        int sum = 0;
        int val = 0;
        if(nums == null || nums.length == 0)
            return sum;

        int i = 0;
        int j = 0;
        while (i <= j && j < nums.length) {
            boolean flag = false;
            val += nums[j];
            while (val >= s) {
                flag = true;
                val -= nums[i];
                i++;
            }

            if((sum == 0 || sum > j - i + 1) && flag) {
                sum = j - i + 2;
            }
            j++;
        }

        return sum;
    }

    public static void main(String [] args) {
        int [] nums = new int [] {2,3,1,2,4,3};
        System.out.println(new L209().minSubArrayLen(7, nums));
    }
}

```