

# 1849. Maximum Absolute Sum of Any Subarray

## Difficulty : Medium

<https://leetcode.com/problems/maximum-absolute-sum-of-any-subarray>

You are given an integer array `nums`. The **absolute sum** of a subarray  $[\text{nums}_1, \text{nums}_{1+1}, \dots, \text{nums}_{i-1}, \text{nums}_i]$  is  $\text{abs}(\text{nums}_1 + \text{nums}_{1+1} + \dots + \text{nums}_{i-1} + \text{nums}_i)$ .

Return the **maximum** absolute sum of any **(possibly empty)** subarray of `nums`.

Note that  $\text{abs}(x)$  is defined as follows:

- If  $x$  is a negative integer, then  $\text{abs}(x) = -x$ .
- If  $x$  is a non-negative integer, then  $\text{abs}(x) = x$ .

### Example 1:

**Input:** `nums = [1,-3,2,3,-4]`

**Output:** 5

**Explanation:** The subarray `[2,3]` has absolute sum =  $\text{abs}(2+3) = \text{abs}(5) = 5$ .

### Example 2:

**Input:** `nums = [2,-5,1,-4,3,-2]`

**Output:** 8

**Explanation:** The subarray `[-5,1,-4]` has absolute sum =  $\text{abs}(-5+1-4) = \text{abs}(-8) = 8$ .

### Constraints:

- $1 \leq \text{nums.length} \leq 10^5$
- $-10^4 \leq \text{nums}[i] \leq 10^4$