

Given a **non-empty** array of integers `nums` , every element appears *twice* except for one. Find that single one.

**Follow up:** Could you implement a solution with a linear runtime complexity and without using extra memory?

**Example 1:**

**Input:** `nums = [2,2,1]`

**Output:** `1`

**Example 2:**

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

**Output:** `4`

**Example 3:**

**Input:** `nums = [1]`

**Output:** `1`

**Constraints:**

- $1 \leq \text{nums.length} \leq 3 * 10^4$
- $-3 * 10^4 \leq \text{nums}[i] \leq 3 * 10^4$
- Each element in the array appears twice except for one element which appears only once.