

Longest Consecutive Sequence

Given an unsorted array of integers `nums`, return *the length of the longest consecutive elements sequence*.

You must write an algorithm that runs in $O(n)$ time.

Example 1:

Input: `nums = [100,4,200,1,3,2]`

Output: 4

Explanation: The longest consecutive elements sequence is [1, 2, 3, 4]. Therefore its length is 4.

Example 2:

Input: `nums = [0,3,7,2,5,8,4,6,0,1]`

Output: 9

Constraints:

- $0 \leq \text{nums.length} \leq 10^5$
- $-10^9 \leq \text{nums}[i] \leq 10^9$