

First Missing Positive

Hard

Given an unsorted integer array, find the smallest missing positive integer.

Example 1:

Input: [1,2,0]

Output: 3

Example 2:

Input: [3,4,-1,1]

Output: 2

Example 3:

Input: [7,8,9,11,12]

Output: 1

Note:

Your algorithm should run in $O(n)$ time and uses constant extra space.