

## First Missing Positive (Leet Code- 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

### Follow up:

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