First Positive

Question: Given an unsorted integer array, find the first missing positive integer.

```
For example:
Given [1,2,0] return 3,
and [3,4,-1,1] return 2.
```

Solutions:

```
class Solution:
  #@param A, a list of integers
  #@return an integer
  #@a very subtle solution
  def firstMissingPositive(A):
    n=len(A)
    for i in range(n):
       if A[i] <= 0: A[i] = n+2
    for i in range(n):
       if abs(A[i])<=n:
         curr=abs(A[i])-1
         A[curr]=-abs(A[curr])
    for i in range(n):
       if A[i]>0: return i+1
     return n+1
Solution.firstMissingPositive([3,4,-1,1])
```