Move Zeros

# Question

Given an array nums, write a function to move all 0's to the end of it while maintaining the relative order of the non-zero elements.

**Example:**

Input: [0,1,0,3,12]

Output: [1,3,12,0,0]

Note:

You must do this in-place without making a copy of the array.

Minimize the total number of operations.

# Pseudo Code (v 1.0)

Deal with the Edge Cases

Run the Outer For Loop

If 0 is encountered

Run the Inner for Loop

Swap the 0 with the first non zero element encountered

Break from the loop

# Pseudo Code (v 2.0)

Declare and Initialize two variables p1 and p2 to 0

Run the First For Loop with p1 to size

If nums[p1] != 0

nums[p2] <- nums[p1]

p2++

Run the Second For Loop with p2 to size

nums[p2] = 0

# Source Code

## v 1.0 (Language C)

1. void moveZeroes(int\* nums, int numsSize){
3. if(numsSize < 2) {
4. return;
5. }
7. int tempVariable;
8. for(int i=0 ; i<numsSize ; i++) {
9. if (nums[i] == 0) {
10. for(int j=(i + 1) ; j<numsSize ; j++) {
11. if(nums[j] != 0) {
12. tempVariable = nums[i];
13. nums[i] = nums[j];
14. nums[j] = tempVariable;
15. break;
16. }
17. }
18. }
19. }
20. }

## 

## v 2.0 (Language C)

1. void moveZeroes(int\* nums, int numsSize){
3. if(numsSize < 2)
4. return;
6. int pointerOne = 0, pointerTwo = 0;
7. for(pointerOne ; pointerOne < numsSize ; pointerOne++) {
9. if(nums[pointerOne] != 0)
10. nums[pointerTwo++] = nums[pointerOne];
11. }
13. for(pointerTwo ; pointerTwo < numsSize ; pointerTwo++) {
14. nums[pointerTwo] = 0;
15. }
16. }