Duplicate Zeros

# Question

Given a fixed length array arr of integers, duplicate each occurrence of zero, shifting the remaining elements to the right.

Note that elements beyond the length of the original array are not written.

Do the above modifications to the input array in place, do not return anything from your function.

**Example 1:**

Input: [1,0,2,3,0,4,5,0]

Output: null

Explanation: After calling your function, the input array is modified to: [1,0,0,2,3,0,0,4]

**Example 2:**

Input: [1,2,3]

Output: null

Explanation: After calling your function, the input array is modified to: [1,2,3]

# Pseudo Code

Calculate the Number of Zeros in the main array

Create a new array whose size is that of same input array + the number of zeros in it

Initialize the variable j to 0

Use first for loop

newArr[j] <- arr[i]

If zero is encountered in arr[i]

newArr[j+1] <- 0

Increment the value of j by one

Increment the value of j by one(after exiting if)

Copy the first x elements from the new array to the input array

(x is the size of the input array)

# Source Code

## V 1.0

1. void duplicateZeros(int\* arr, int arrSize){
2. int zeroCounter = 0; //No Pun Intended
3. for(int i=0 ; i<arrSize ; i++) {
5. if(arr[i] == 0) {
6. zeroCounter++;
7. }
8. }
10. int newArr[zeroCounter + arrSize + 1], j = 0;
11. for(int i=0 ; i<arrSize ; i++) {
13. newArr[j] = arr[i];
14. if(arr[i] == 0) {
15. newArr[j + 1] = 0;
16. j++;
17. }
18. j++;
19. }
21. for(int i=0 ; i<arrSize ; i++) {
22. arr[i] = newArr[i];
23. }
24. }