

Move Zeroes:- (in place)

283. Move Zeroes

Easy Topics Companies Hint

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

Note that you must do this in-place without making a copy of the array.

Example 1:

Input: `nums = [0,1,0,3,12]`
Output: `[1,3,12,0,0]`

Example 2:

Input: `nums = [0]`
Output: `[0]`

Constraints:

- $1 \leq \text{nums.length} \leq 10^4$
- $-2^{31} \leq \text{nums}[i] \leq 2^{31} - 1$

Follow up: Could you minimize the total number of operations done?

ex: i/p: `nums = [0, 1, 0, 3, 12]`
o/p: `[1, 3, 12, 0, 0]`

`[0, 1, 0, 3, 12]`
↑↑
j i

if (`a[i]`) {
 `swap(a[i], a[j])`

`j++;`

}

`[0 2`

`[0 3 0 0 0]`
j

class Solution {

public:

void moveZeroes(vector<int> &a) {

 int n = a.size(), j = 0;

 for (int i = 0; i < n; i++) {

 if (`a[i]`) {

`swap(a[i], a[j])`;

`j++;`

 }

 }

 }

};

S.C = $O(1)$

T.C = $O(n)$