


73. Set Matrix Zeroes

Description

Given an `m x n` integer matrix `matrix`, if an element is `0`, set its entire row and column to `0`'s.

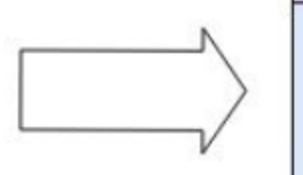
You must do it [in place](#).

Example 1:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 |  | 1 | 0 | 1 |
| 1 | 0 | 1 | | 0 | 0 | 0 |
| 1 | 1 | 1 | | 1 | 0 | 1 |

Input: `matrix = [[1,1,1],[1,0,1],[1,1,1]]`
Output: `[[1,0,1],[0,0,0],[1,0,1]]`

Example 2:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 0 |  | 0 | 0 | 0 | 0 |
| 3 | 4 | 5 | 2 | | 0 | 4 | 5 | 0 |
| 1 | 3 | 1 | 5 | | 0 | 3 | 1 | 0 |

Input: `matrix = [[0,1,2,0],[3,4,5,2],[1,3,1,5]]`
Output: `[[0,0,0,0],[0,4,5,0],[0,3,1,0]]`

Constraints:

- `m == matrix.length`
- `n == matrix[0].length`
- `1 <= m, n <= 200`
- `-231 <= matrix[i][j] <= 231 - 1`

Follow up:

- A straightforward solution using `O(mn)` space is probably a bad idea.
- A simple improvement uses `O(m + n)` space, but still not the best solution.
- Could you devise a constant space solution?

