Given a *m* x *n* matrix, if an element is 0, set its entire row and column to 0. Do it [**in-place**](https://en.wikipedia.org/wiki/In-place_algorithm).

**Example 1:**

**Input:**

[

  [1,1,1],

  [1,0,1],

  [1,1,1]

]

**Output:**

[

  [1,0,1],

  [0,0,0],

  [1,0,1]

]

**Example 2:**

**Input:**

[

  [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]

]

**Follow up:**

* A straight forward 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?