

73. Set Matrix Zeroes

Total Accepted: **54292** Total Submissions: **167587** Difficulty: **Medium**

Given a $m \times n$ matrix, if an element is 0, set its entire row and column to 0. Do it in place.

The tricky part in this problem is that you can not set zero during the first traversal of the matrix, if you do that you lost the track on all latter zeroes.

Correct way to do this is use an additional container to store all the indices at which the matrix is zero. Then go back to the matrix to set zeroes following the indices.

Code: Complexity: Time $O(m*n)$, Space $(m+n)$

```
5 class Solution(object):
6     def setZeroes(self, matrix):
7
8         if not matrix:
9             return
10
11         flag = []
12         m = len(matrix)
13         n = len(matrix[0])
14
15         if m == 0 or n == 0:
16             return
17
18         for i in range(m):
19             for j in range(n):
20                 if matrix[i][j] == 0:
21                     flag.append((i, j))
22
23         for item in flag:
24             for j in range(n):
25                 matrix[item[0]][j] = 0
26             for i in range(m):
27                 matrix[i][item[1]] = 0
28
29         return
```