

3404. Minimum Number of Operations to Satisfy Conditions

Difficulty : Medium

<https://leetcode.com/problems/minimum-number-of-operations-to-satisfy-conditions>

You are given a 2D matrix `grid` of size $m \times n$. In one **operation**, you can change the value of **any** cell to **any** non-negative number. You need to perform some **operations** such that each cell `grid[i][j]` is:

- Equal to the cell below it, i.e. `grid[i][j] == grid[i + 1][j]` (if it exists).
- Different from the cell to its right, i.e. `grid[i][j] != grid[i][j + 1]` (if it exists).

Return the **minimum** number of operations needed.

Example 1:

Input: `grid = [[1,0,2],[1,0,2]]`

Output: 0

Explanation:

1	0	2
1	0	2

All the cells in the matrix already satisfy the properties.

Example 2:

Input: `grid = [[1,1,1],[0,0,0]]`

Output: 3

Explanation:

1	1	1
0	0	0

The matrix becomes `[[1,0,1],[1,0,1]]` which satisfies the properties, by doing these 3 operations:

- Change `grid[1][0]` to 1.
- Change `grid[0][1]` to 0.
- Change `grid[1][2]` to 1.

Example 3:

Input: `grid = [[1],[2],[3]]`

Output: 2

Explanation:

1
2
3

There is a single column. We can change the value to 1 in each cell using 2 operations.

Constraints:

- $1 \leq n, m \leq 1000$
- $0 \leq \text{grid}[i][j] \leq 9$