# 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

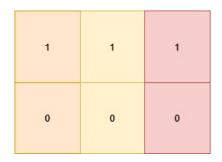
All the cells in the matrix already satisfy the properties.

#### Example 2:

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

Output: 3

#### **Explanation:**



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:**

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

## **Constraints:**

- 1 <= n, m <= 1000
- 0 <= grid[i][j] <= 9