2482. Difference Between Ones and Zeros in Row and Column

Description

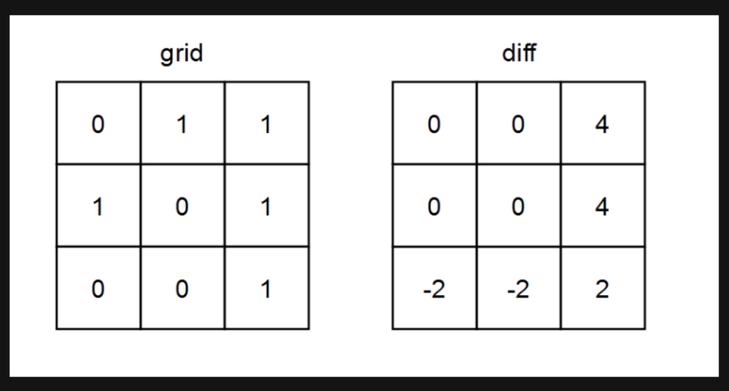
You are given a **0-indexed** `m x n` binary matrix `grid`.

A **0-indexed** `m x n` difference matrix `diff` is created with the following procedure:

- Let the number of ones in the `i th` row be `onesRow i`.
- Let the number of ones in the `j th` column be `onesCol j`.
- Let the number of zeros in the `i th` row be `zerosRow i`.
- Let the number of zeros in the `j th` column be `zerosCol j`.
- `diff[i][j] = onesRow i + onesCol j - zerosRow i - zerosCol j`

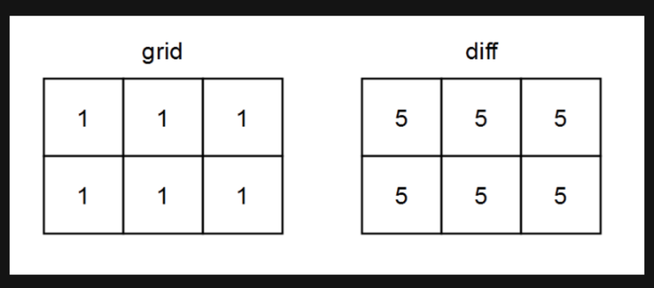
Return *the difference matrix* `diff`.

Example 1:




```
Input: grid = [[0,1,1],[1,0,1],[0,0,1]]
Output: [[0,0,4],[0,0,4],[-2,-2,2]]
Explanation:
- diff[0][0] = onesRow 0 + onesCol 0 - zerosRow 0 - zerosCol 0 = 2 + 1 - 1 - 2 = 0
- diff[0][1] = onesRow 0 + onesCol 1 - zerosRow 0 - zerosCol 1 = 2 + 1 - 1 - 2 = 0
- diff[0][2] = onesRow 0 + onesCol 2 - zerosRow 0 - zerosCol 2 = 2 + 3 - 1 - 0 = 4
- diff[1][0] = onesRow 1 + onesCol 0 - zerosRow 1 - zerosCol 0 = 2 + 1 - 1 - 2 = 0
- diff[1][1] = onesRow 1 + onesCol 1 - zerosRow 1 - zerosCol 1 = 2 + 1 - 1 - 2 = 0
- diff[1][2] = onesRow 1 + onesCol 2 - zerosRow 1 - zerosCol 2 = 2 + 3 - 1 - 0 = 4
- diff[2][0] = onesRow 2 + onesCol 0 - zerosRow 2 - zerosCol 0 = 1 + 1 - 2 - 2 = -2
- diff[2][1] = onesRow 2 + onesCol 1 - zerosRow 2 - zerosCol 1 = 1 + 1 - 2 - 2 = -2
- diff[2][2] = onesRow 2 + onesCol 2 - zerosRow 2 - zerosCol 2 = 1 + 3 - 2 - 0 = 2
```

Example 2:




```
Input: grid = [[1,1,1],[1,1,1]]
Output: [[5,5,5],[5,5,5]]
Explanation:
- diff[0][0] = onesRow 0 + onesCol 0 - zerosRow 0 - zerosCol 0 = 3 + 2 - 0 - 0 = 5
- diff[0][1] = onesRow 0 + onesCol 1 - zerosRow 0 - zerosCol 1 = 3 + 2 - 0 - 0 = 5
- diff[0][2] = onesRow 0 + onesCol 2 - zerosRow 0 - zerosCol 2 = 3 + 2 - 0 - 0 = 5
- diff[1][0] = onesRow 1 + onesCol 0 - zerosRow 1 - zerosCol 0 = 3 + 2 - 0 - 0 = 5
- diff[1][1] = onesRow 1 + onesCol 1 - zerosRow 1 - zerosCol 1 = 3 + 2 - 0 - 0 = 5
- diff[1][2] = onesRow 1 + onesCol 2 - zerosRow 1 - zerosCol 2 = 3 + 2 - 0 - 0 = 5
```

Constraints:

- `m == grid.length`
- `n == grid[i].length`
- `1 <= m, n <= 10 5`
- `1 <= m * n <= 10 5`
- `grid[i][j]` is either `0` or `1`.