2132. Stamping the Grid

Description

You are given an m x n binary matrix grid where each cell is either 0 (empty) or 1 (occupied).

You are then given stamps of size stampHeight x stampWidth. We want to fit the stamps such that they follow the given restrictions and requirements:

- 1. Cover all the empty cells.
- 2. Do not cover any of the occupied cells.
- 3. We can put as **many** stamps as we want.
- 4. Stamps can overlap with each other.
- 5. Stamps are not allowed to be rotated.
- 6. Stamps must stay completely inside the grid.

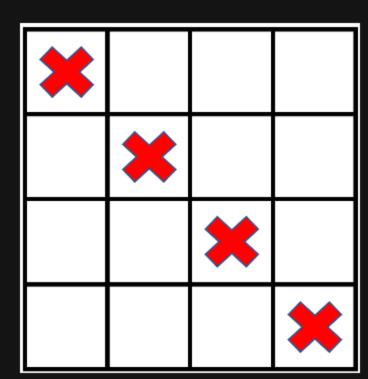
Return true if it is possible to fit the stamps while following the given restrictions and requirements. Otherwise, return false.

Example 1:

*	1	1	1
*	1 2	1 2	1 2
*	1 2	1 2	1 2
*	1 2	1 2	1 2
*	2	2	2

Input: grid = [[1,0,0,0],[1,0,0,0],[1,0,0,0],[1,0,0,0],[1,0,0,0]], stampHeight = 4, stampWidth = 3
Output: true
Explanation: We have two overlapping stamps (labeled 1 and 2 in the image) that are able to cover all the empty cells.

Example 2:



Input: grid = [[1,0,0,0],[0,1,0,0],[0,0,1,0],[0,0,0,1]], stampHeight = 2, stampWidth = 2
Output: false
Explanation: There is no way to fit the stamps onto all the empty cells without the stamps going outside the grid.

Constraints:

- m == grid.length
- n == grid[r].length
- 1 <= m, n <= 10^{5}
- $1 <= m * n <= 2 * 10^5$
- grid[r][c] is either 0 or 1.
- 1 <= stampHeight, stampWidth <= 10^{5}