

130. Surrounded Regions

You are given an $m \times n$ matrix board containing letters 'X' and 'O', capture regions that are surrounded:

- **Connect:** A cell is connected to adjacent cells horizontally or vertically.
- **Region:** To form a region connect every 'O' cell.
- **Surround:** The region is surrounded with 'X' cells if you can connect the region with 'X' cells and none of the region cells are on the edge of the board.

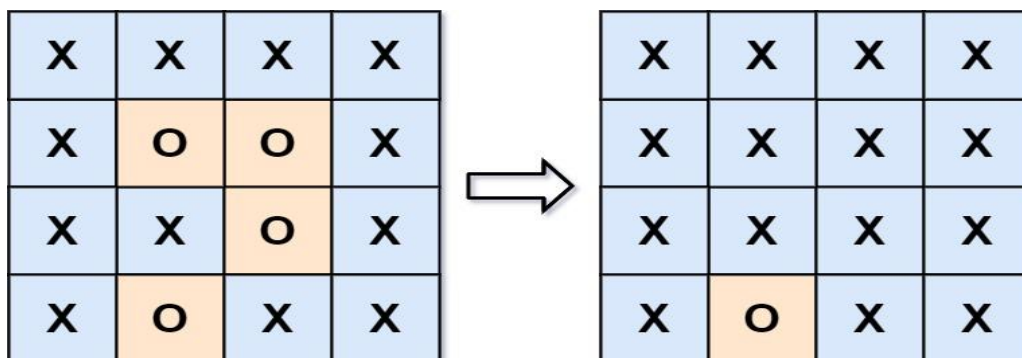
A surrounded region is captured by replacing all 'O's with 'X's in the input matrix board.

Example 1:

Input: board = `[["X","X","X","X"],["X","O","O","X"],["X","X","O","X"],["X","O","X","X"]]`

Output: `[["X","X","X","X"],["X","X","X","X"],["X","X","X","X"],["X","O","X","X"]]`

Explanation:



In the above diagram, the bottom region is not captured because it is on the edge of the board and cannot be surrounded.

Example 2:

Input: board = [["X"]]

Output: [["X"]]

Constraints:

- $m == \text{board.length}$
- $n == \text{board}[i].\text{length}$
- $1 \leq m, n \leq 200$
- $\text{board}[i][j]$ is 'X' or 'O'.