529. Minesweeper

Let's play the minesweeper game (Wikipedia, online game)!

You are given an m x n char matrix board representing the game board where:

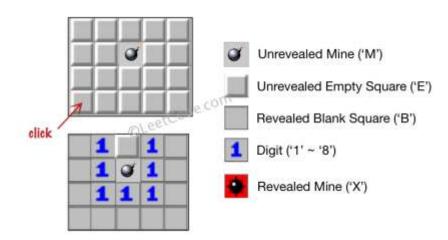
- 'M' represents an unrevealed mine,
- 'E' represents an unrevealed empty square,
- 'B' represents a revealed blank square that has no adjacent mines (i.e., above, below, left, right, and all 4 diagonals),
- digit ('1' to '8') represents how many mines are adjacent to this revealed square, and
- 'X' represents a revealed mine.

You are also given an integer array click where click = [clickr, clickc] represents the next click position among all the unrevealed squares ('M' or 'E').

Return the board after revealing this position according to the following rules:

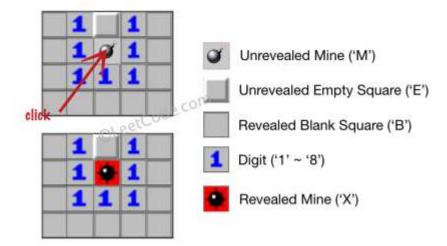
- 1. If a mine 'M' is revealed, then the game is over. You should change it to 'X'.
- 2. If an empty square 'E' with no adjacent mines is revealed, then change it to a revealed blank 'B' and all of its adjacent unrevealed squares should be revealed recursively.
- 3. If an empty square 'E' with at least one adjacent mine is revealed, then change it to a digit ('1' to '8') representing the number of adjacent mines.
- 4. Return the board when no more squares will be revealed.

Example 1:



Output: [["B","1","E","1","B"],["B","1","M","1","B"],["B","1","1","1","B"],["B","B","B","B","B","B","B"]]

Example 2:



Input: board = [[B'', 1'', E'', 1'', B''], [B'', 1'', M'', 1'', B''], [B'', 1'', 1'', 1'', B''], [B'', B'', B'', B'', B'', B''], click = [1,2]

Output: [["B","1","E","1","B"],["B","1","X","1","B"],["B","1","1","1","1","B"],["B","B","B","B","B","B"]]

Constraints:

- m == board.length
- n == board[i].length
- 1 <= m, n <= 50
- board[i][i] is either 'M', 'E', 'B', or a digit from '1' to '8'.
- click.length == 2
- 0 <= clickr < m
- 0 <= clickc < n
- board[clickr][clickc] is either 'M' or 'E'.