

# 1020. Number of Enclaves

Given:  $m \times n$  binary matrix-grid

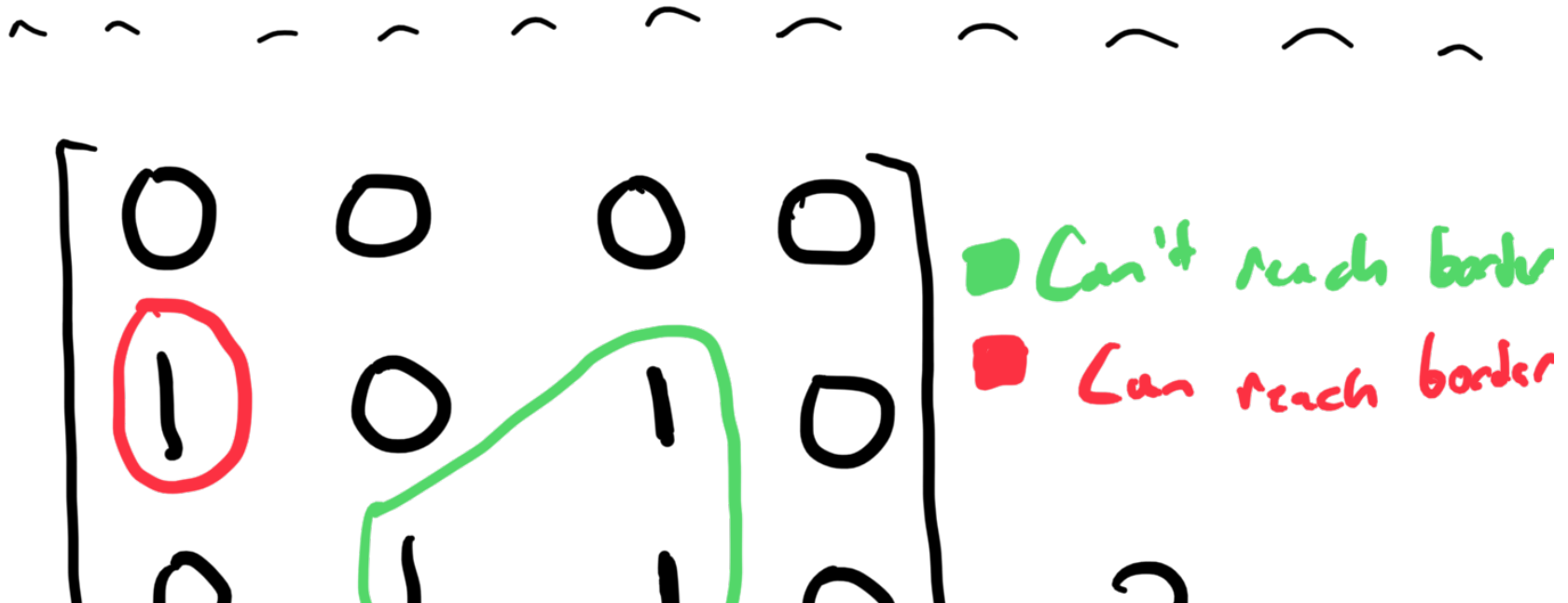
0 = water

1 = land

MOVE: walking from 1 land cell to another 4 directionally connected cell

Return: # of land cells

where we can never walk off the grid from in any # of moves



$$\begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix} = 3$$

Solution: destroy all border-connected islands, count remaining 1 cells.

#destroy islands connected to top/bottom

For col = 0 to col = n-1

destroy(row = 0, col = col)

destroy(row = n-1, col = col)

#destroy islands connected to left/right

For row = 0 to row = m-1

destroy(row = row, col = 0)

destroy(row = row, col = n-1)

#destroy dfs

destroy(row, col)

if OOB or grid[row][col]  
is water: return

$grid[row][col] = 0$

destroy (neighbors ...)

answer = 0

For each row, col:

if  $grid[row][col] == 1$ :  
    answer += 1

return answer

Time:  $O(M \times N)$

Space:  $O(M \times N)$