* Game of Life.

$$0 \Big\} \rightarrow \text{current state} \quad \Rightarrow \quad \begin{matrix} 0 & 0 \\ 0 & 1 \end{matrix}$$

$$\begin{matrix} 0 & 0 \\ 0 & 1 \end{matrix} \Rightarrow \quad \begin{matrix} 0 & 0 \\ 1 & 0 \end{matrix} \Big\} \text{ dead previously}$$

$$\begin{matrix} 0 & 1 \\ 1 & 1 \end{matrix} \Big\} \text{ live previously}$$

$$\underset{\text{next}}{\uparrow} \quad \underset{\text{previous}}{\uparrow}$$

curr. live $\rightarrow$ ~~next~~ neighbours $\quad 2, 3$ lives $\rightarrow$ next live

" dead $\rightarrow$ " $\quad \quad 3$ lives $\rightarrow$ next live

$O(mn)$
$O(1)$

~~true~~ $\left(\text{live } \& \quad c > 2 \quad \& \quad c \leq 3 \right)$

dead $\& \quad c = 3$

$\Downarrow$

$$\left(\underset{\text{count}}{\text{count}} \mid \text{board}[i][j] \right) = 3$$

follow-up $\rightarrow$ take each pair & add to a set.
Iterate & take count of neighbours live.
(use a Map). ~~take take list~~

regenerate grid using above condition.

We think # of live cells are finite.
even grid is infinite.

(pair. equal, pairlist. contain compare pair
attribute fields.)