**Cellular automata**

Consider a 2D grid, where each grid element is either true or false.

Cellular automata is the process of taking a config of the grid with some simple rules and allowing the grid to evolve with time.

John Conway’s game of life

Every element in the grid evolves using the four rules:

1. Any live cell with fewer than 2 neighbours dies (under population)
2. Any live cell with 2 or 3 neighbours lives.
3. Any cell with more than 3 neighbours dies (over population)
4. Any dead cell with 3 neighbours lives (reproduction).