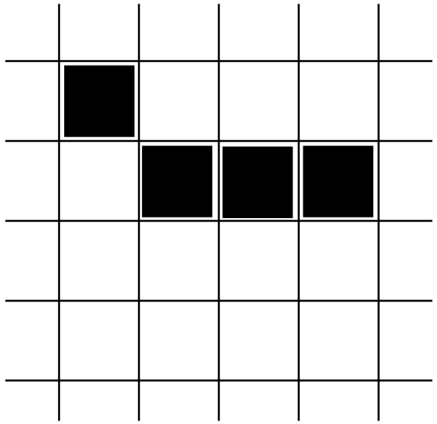
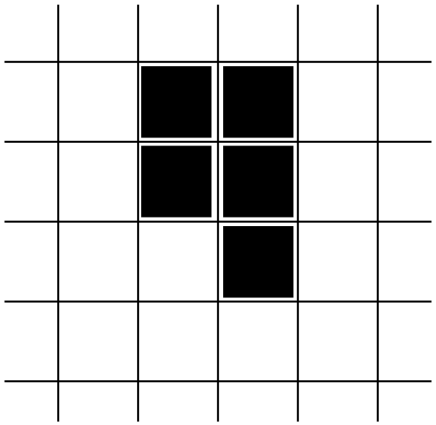
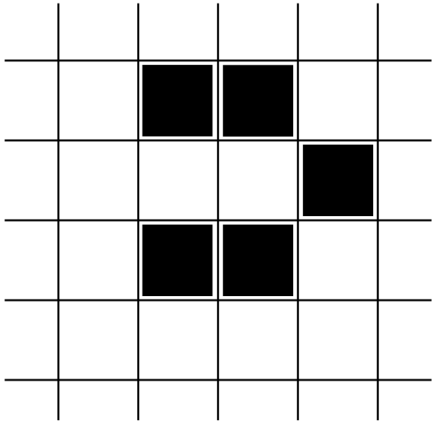
Starting state



Generation 1



Generation 2



Generation ...

...

Conways Game of Life

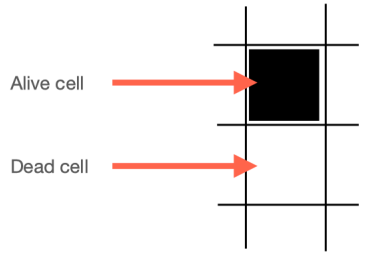
The Game of Life, also known simply as Life, is a cellular automaton devised by the British mathematician John Horton Conway in 1970. It is a zero-player game, meaning that its evolution is determined by its initial state, requiring no further input. One interacts with the Game of Life by creating an initial configuration and observing how it evolves.

Source: https://en.wikipedia.org/wiki/Conway%27s_Game_of_Life

Rules

In each generation of the game, the rules below are applied to the entire grid in a single instance (as shown in the images above).

1. If a cell has less than two neighbours, it's dead in the next generation.
2. If a living cell has two or three neighbours, it stays alive in the next generation.
3. If a living cell has more than three living neighbours, it's dead in the next generation *(as if by over population).*
4. If a dead cell has exactly three living neighbours, it comes to life in the next generation.



4 Rules of Simple Design

The perfect (simple) code should:

- Pass all tests
- Reveal intention
- Contain no duplication
- Have fewest elements possible.

Most other software design rules (like KISS, DRY, SOLID, TDD) can be derived from those 4 simple ones.

Test Driven Development (TDD)