Conway's Game of Life

- Simply known as 'Life'
- Devised by the British Mathermatician John Horton Conway
- Its a 'zero player' game, it only needs the inital state

The **Game of Life** is an two dimensional orthongonal grid of 'cells'

- Each cell has two states
  - Dead
  - Alive

Every cell interacts with its eight neighbours, which are the cells that are

- horizontally
- vertically
- diagonally adjacent.

At each step in time, the following transitions occur,

- Any live cell with fewer than two live neighbors dies, as if by under population.

- Any live cell with two or three live neighbors lives on to the next generation.

- Any live cell with more than three live neighbors dies, as if by overpopulation.

- Any dead cell with exactly three live neighbors becomes a live cell, as if by reproduction.