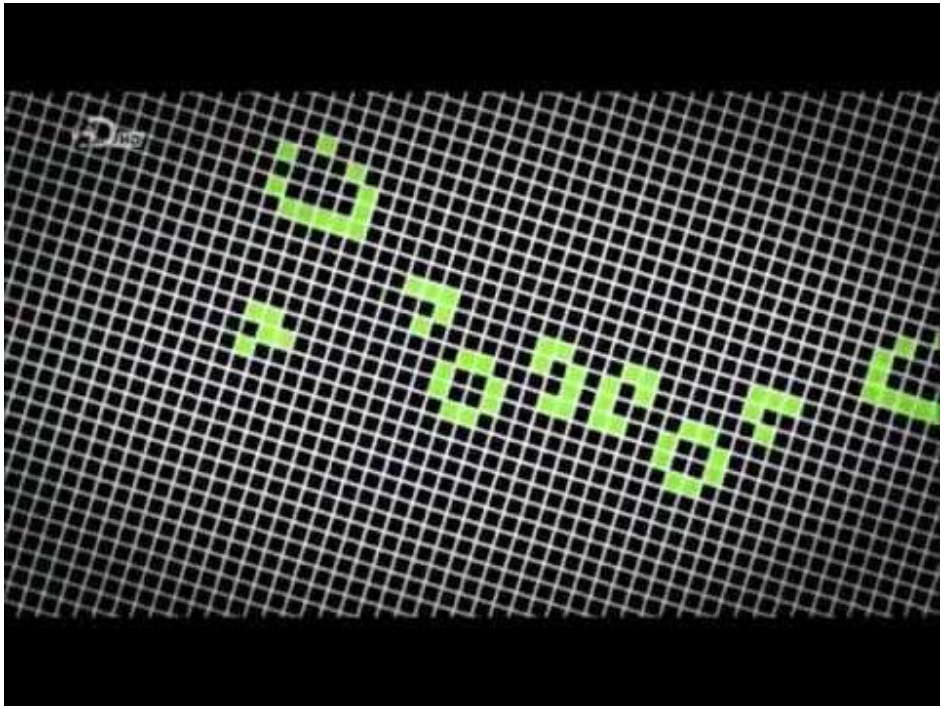
BU CodeBreakers 2017

Python Project: Game of Life

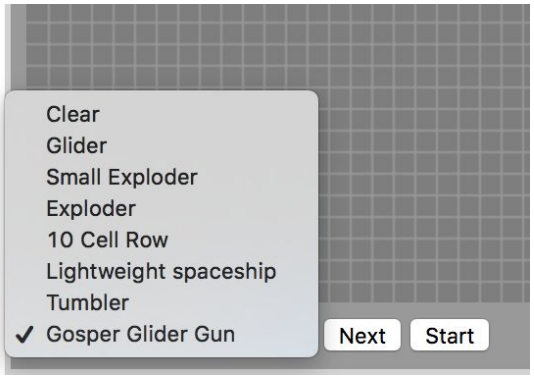
Conway's game of life

Conway’s game of life



Exercise (~10 mins)

1. Go to: https://bitstorm.org/gameoflife/
2. Run different simulations of the game



3. Try your own starting points in the *Clear* mode
4. Can you combine different combinations from before?
5. Can you find any configurations that run forever?

Form a group of 2/3 and discuss how you'd code these game-rules

[~10 mins]

Each group will come up, introduce themselves and present their ideas

Rules review

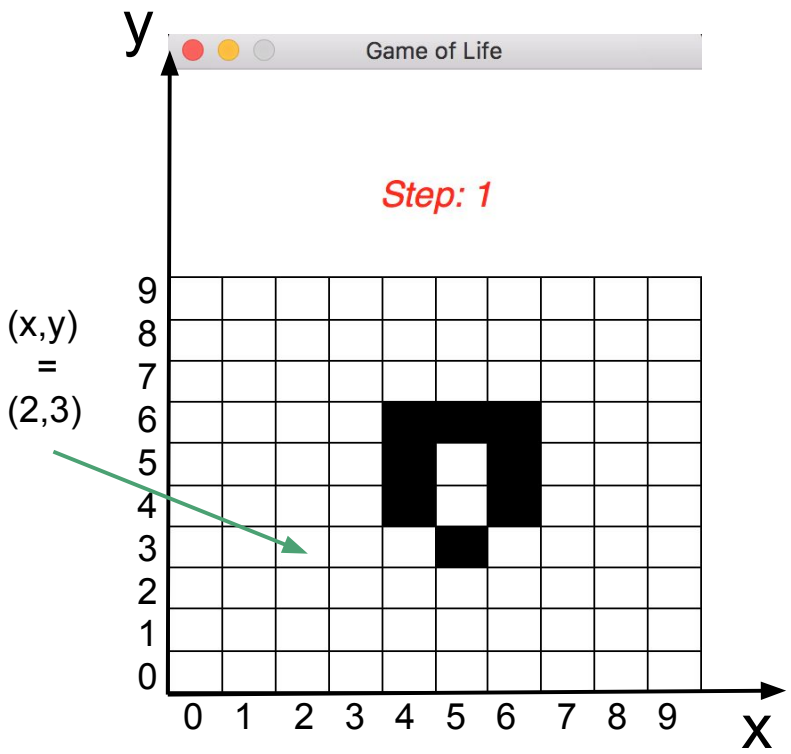
For each cell in the grid,

- What are the two states it can exist in?
  - alive & dead
- What happens if the cell has less than 2 alive neighbors?
  - It dies due to isolation! :(
- What happens if an ‘alive’ cell has 2-3 neighbors?
  - It stays alive! :)
- What happens if a ‘dead’ cell has 3 neighbors?
  - It becomes alive! :D
- What happens if the cell has more than 3 neighbors?
  - It dies due to overpopulation! :(

Code Description

graphics.py + play.py

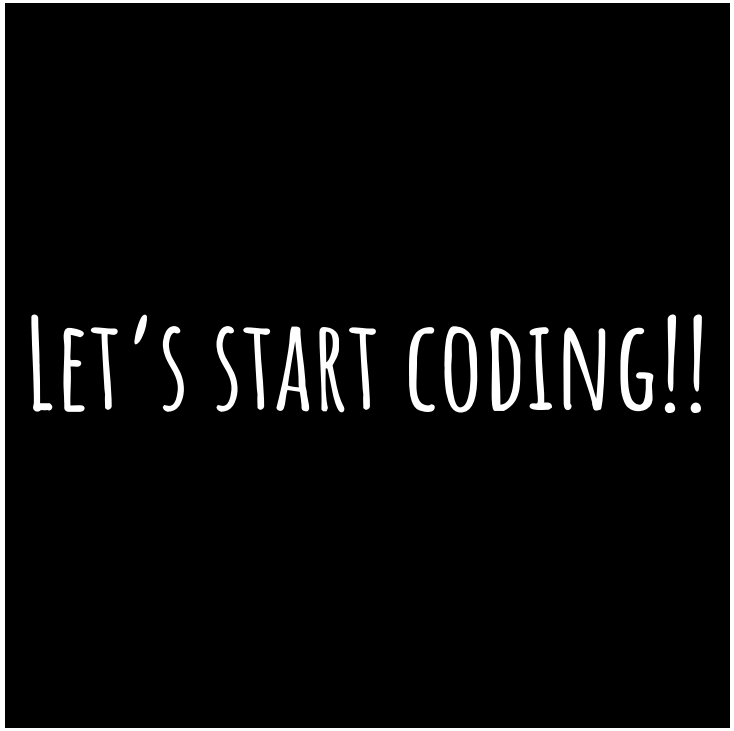
Grid



Matrix

Number_of_alive_neighbors / dead(**D**)_or_alive(**A**)

9	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D
8	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D
7	0/D	0/D	0/D	1/D	2/D	3/D	2/D	1/D	0/D	0/D
6	0/D	0/D	0/D	2/D	2/A	4/A	2/A	2/D	0/D	0/D
5	0/D	0/D	0/D	3/D	3/A	7/D	3/A	3/D	0/D	0/D
4	0/D	0/D	0/D	2/D	2/A	5/D	2/A	2/D	0/D	0/D
3	0/D	0/D	0/D	1/D	2/D	2/A	2/D	1/D	0/D	0/D
2	0/D	0/D	0/D	0/D	1/D	1/D	1/D	0/D	0/D	0/D
1	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D
0	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D	0/D
	0	1	2	3	4	5	6	7	8	9 X


Let's start coding!!

Week1 Survey

- Anything you'd like to share?
  - Suggestions
  - Complaints
  - Stories?
- End of Week-1 survey: https://www.surveymonkey.com/r/S79W3FR