Seattle.rb Workshop

Have laptop, will code!

March 2015

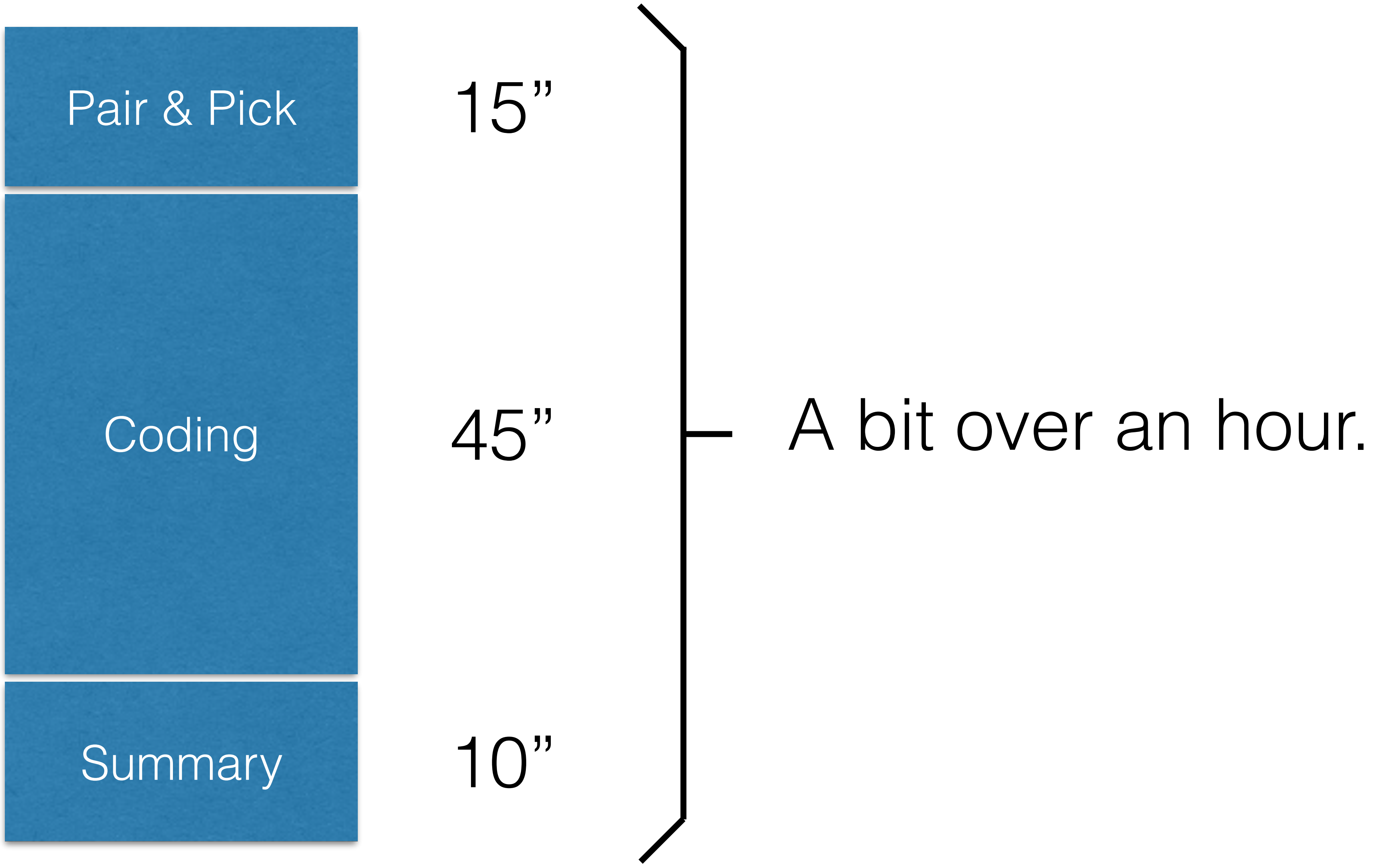
What?

Code a kata together to practice and learn.

You choose the level of difficulty.

It is about how we code, not the code itself.

How long?



Pair & Pick

15”

Coding

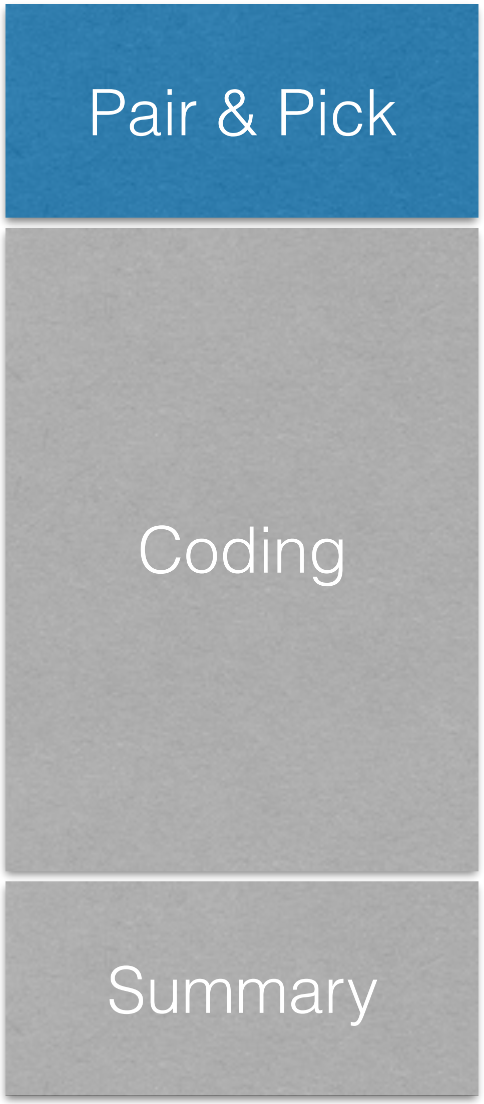
45”

Summary

10”

A bit over an hour.

How will it work?



Pair & Pick

Coding

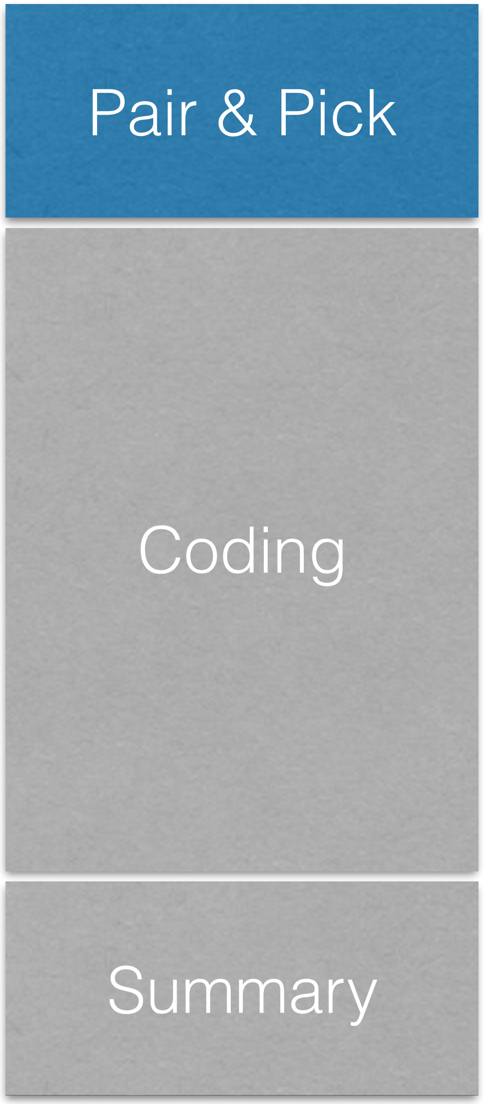
Summary

Step 1: Pair Up!

By experience level.

Yet totally flexible.

How will it work?



Pair & Pick

Coding

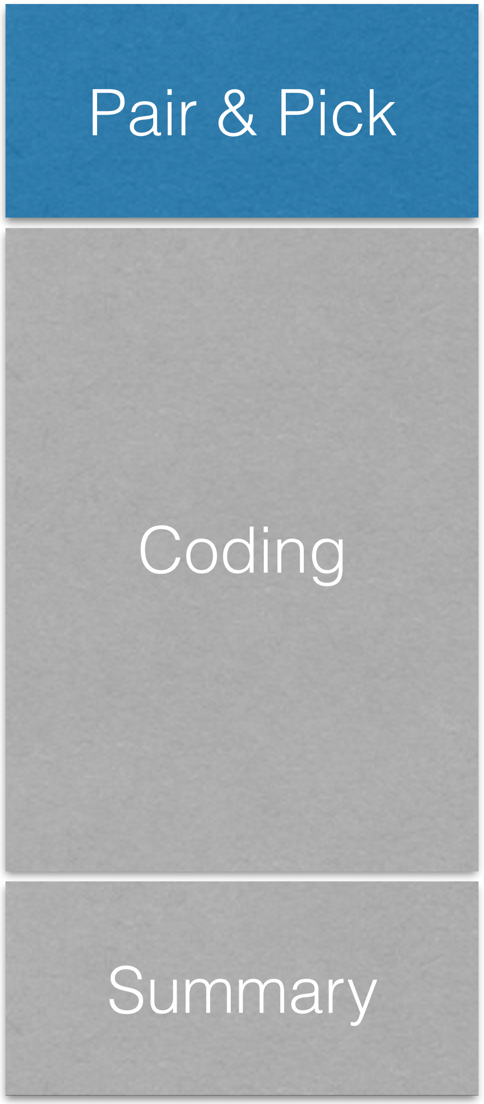
Summary

Step 2: Pick your poison!

The exercise is to recode…

…a kata you know…

How will it work?



Pair & Pick

Coding

Summary

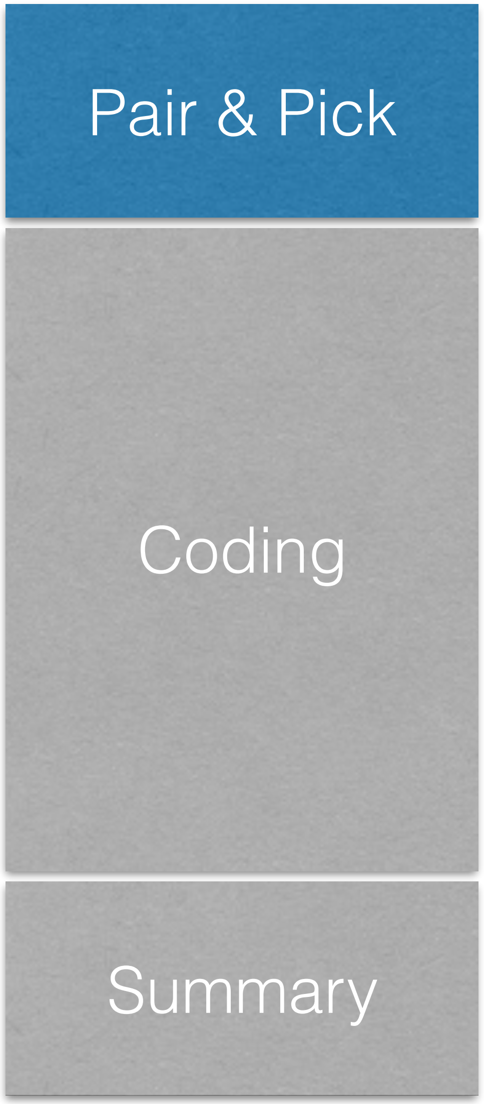
Step 2: Pick your poison!

The exercise is to recode…

…a kata you know…

…with added constraint/s

How will it work?



Pair & Pick

Coding

Summary

Step 2: Pick your poison!

The exercise is to recode…

…a kata you know…

…with added constraint/s

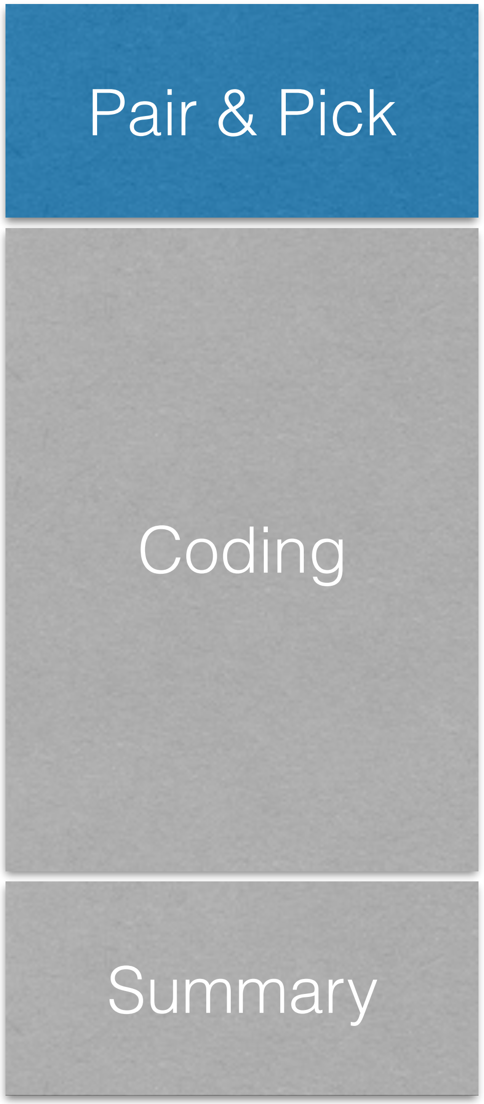
…randomized!!

Wheel of Misfortune

Example Constraints:

- mute ping pong
- no conditionals
- no primitives as I/O
- methods <= 3 lines
- no getter/setters
- no instance vars
- …and many more

How will it work?



Pair & Pick

Coding

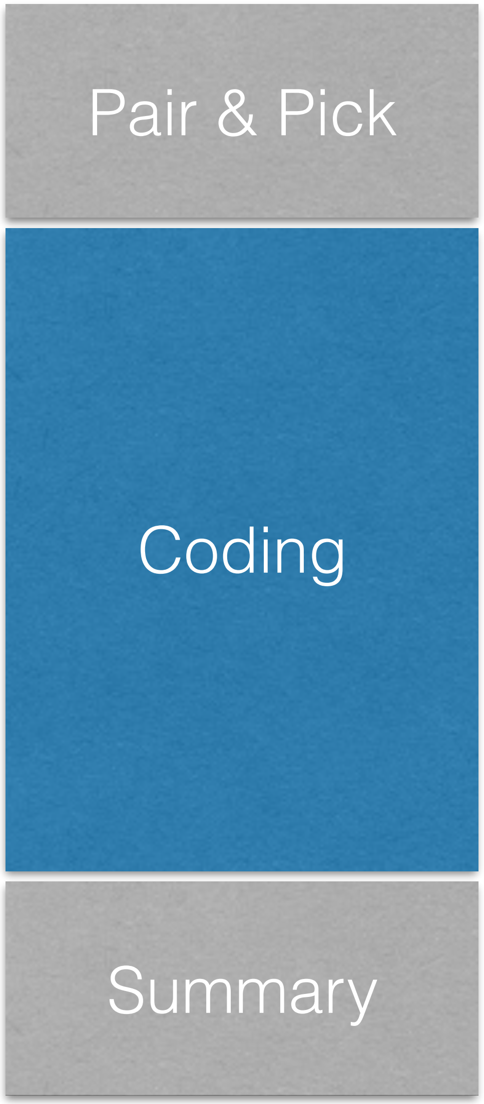
Summary

Fear not!

- You can pick your constraint,
- …or let fate decide (i.e. wheel!),
- …or come up with your own,
- …or even choose to code in Scheme!

You and your partner decide.

How will it work?



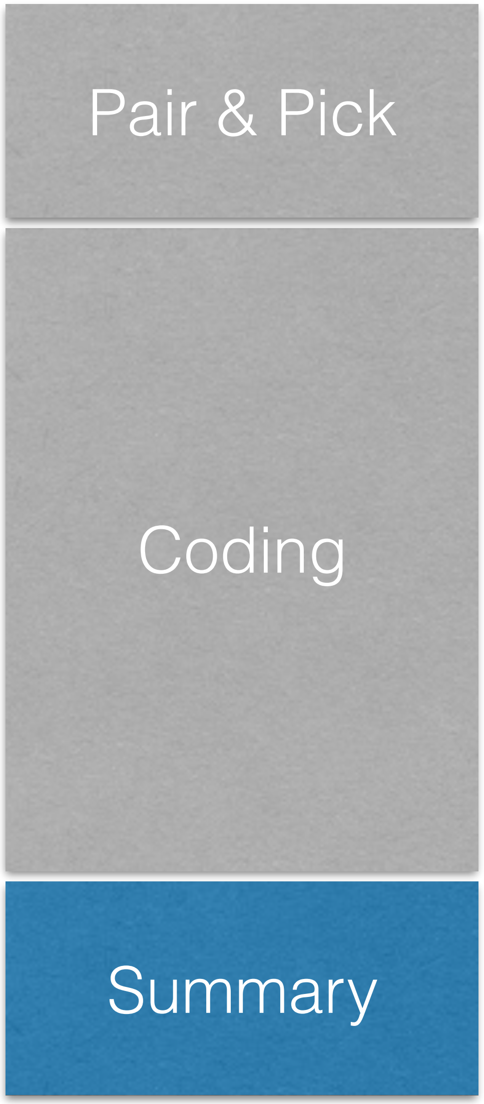
Pair & Pick

Coding

Summary

Coding for 45 minutes.

How will it work?



Pair & Pick

Coding

Summary

Summary

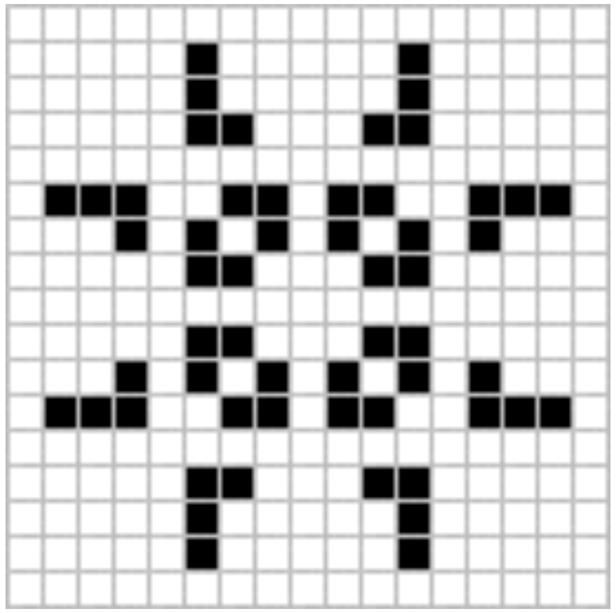
Volunteer basis.

Step up and share conclusions.

Show off cool code.

Which kata?

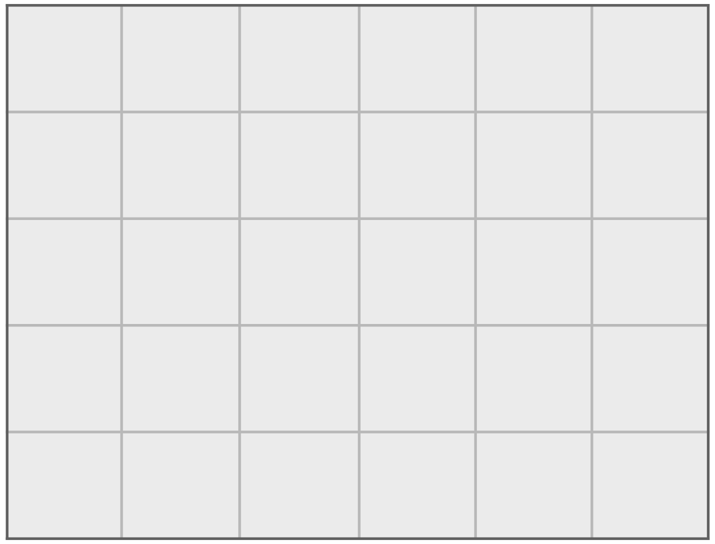
Conway's Game of Life (GoL):



- Easy to code, yet full of subtleties.
- Set up an initial pattern in the board.
- Run program and system evolves through generations.

Game of Life

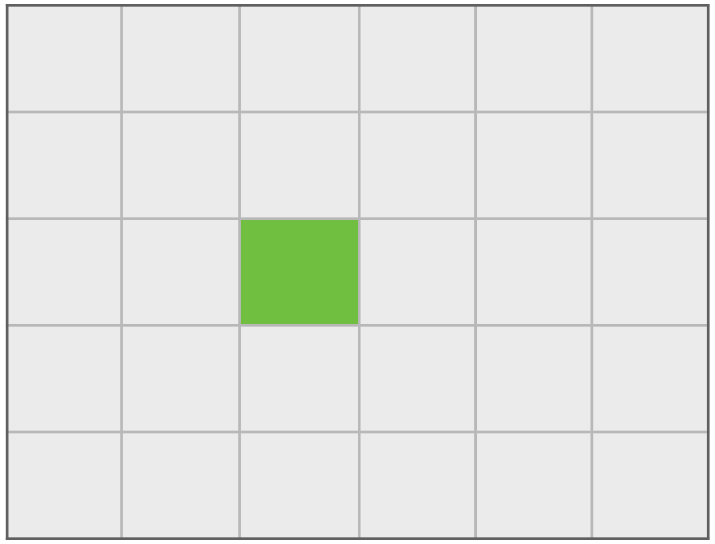
An infinite two-dimensional grid of square cells.



Game of Life

An infinite two-dimensional grid of square cells.

Each cell is in one of two possible states, dead or alive.

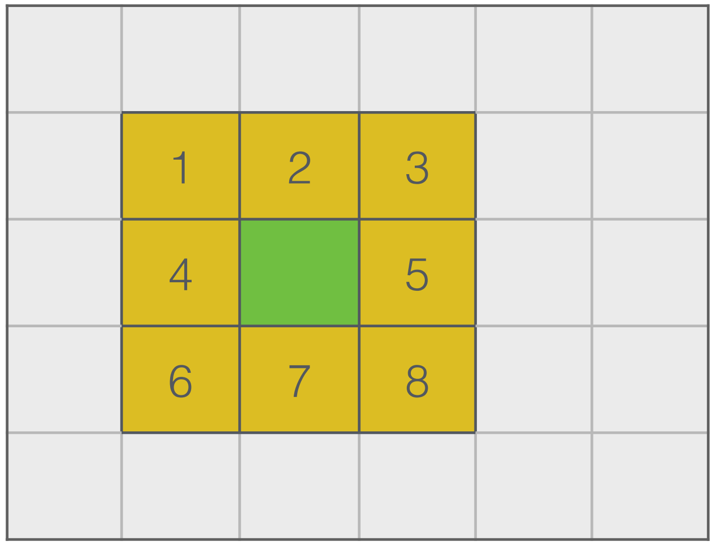


Game of Life

An infinite two-dimensional grid of square cells.

Each cell is in one of two possible states, dead or alive.

Every cell interacts with its eight neighbors.



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At each step in time, 4 rules decide which cells live and die.

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Every cell interacts with its eight neighbors.

At each step in time, 4 rules decide which cells live and die.

Births / deaths happen simultaneously in a tick of the clock.

It’s Alive!

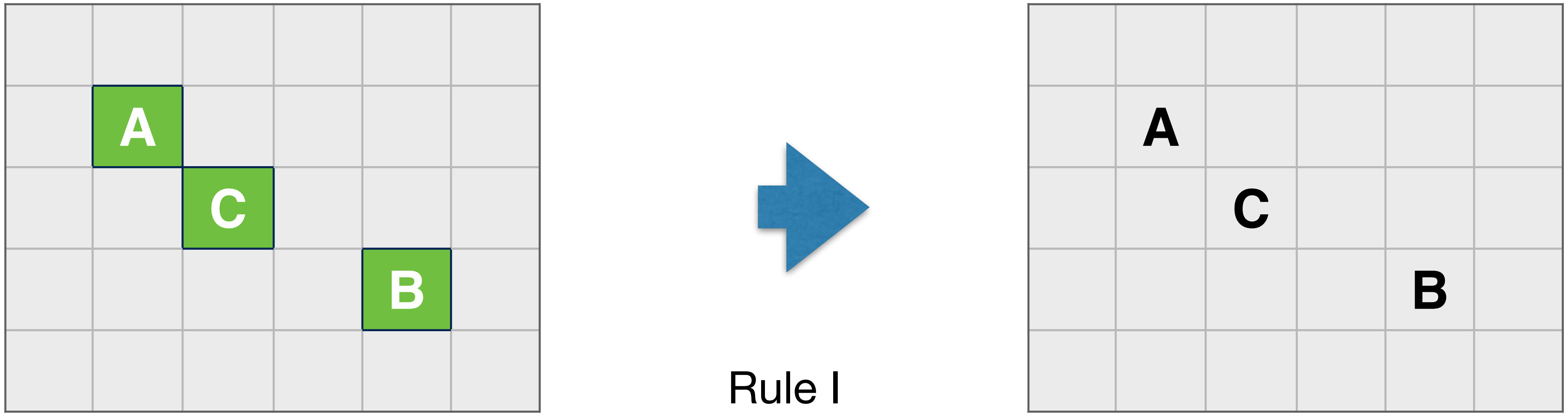
Visual example of how it looks

It’s Alive!

Spaceship

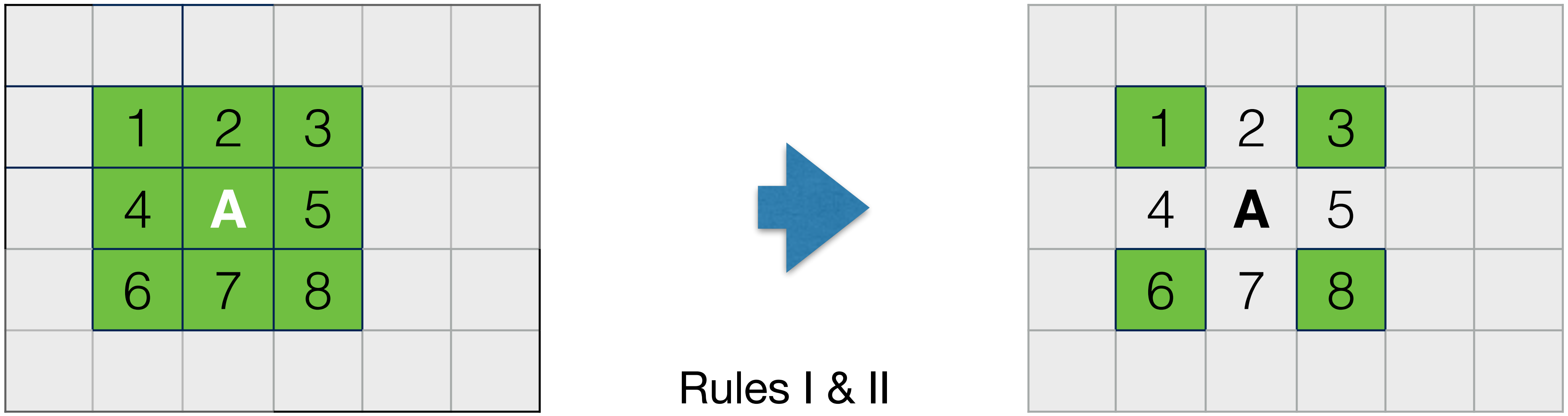
Game of Life Rules

I. A live cell with less than 2 live neighbors dies: underpopulation.



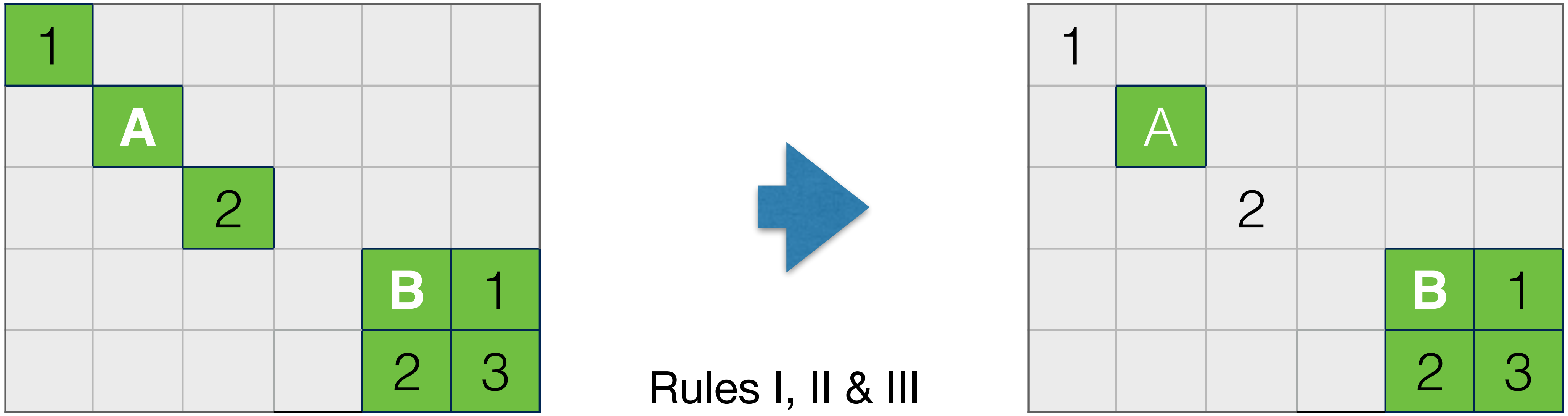
Game of Life Rules

II. A live cell with more than 3 live neighbors dies: overcrowding.



Game of Life Rules

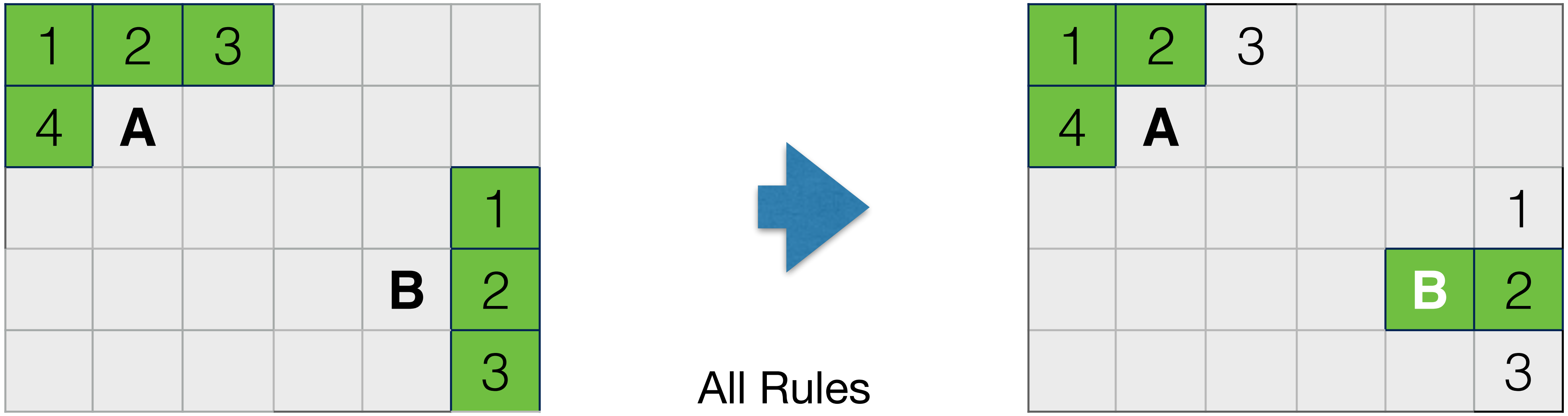
III. A live cell with 2 or 3 live neighbors lives on.



Rules I, II & III

Game of Life Rules

IV. A dead cell with **exactly** 3 live neighbors becomes alive!



Game of Life Rules

A live cell with less than 2 live neighbors dies.

A live cell with more than 3 live neighbors dies.

A live cell with 2 or 3 live neighbors lives on.

A square with 3 live neighbors becomes alive.

Rules ==> Testing !

Fork it!

https://github.com/SeaRbSg/workshops

- Example code (with testing),
- visualization code from Ryan Davis,
- and many more links (code, history, etc).

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