

Coding Challenge

Let's play a game

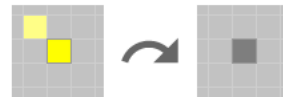
This is not your typical computer game. It is a cellular automaton.

It consists of a collection of cells which, based on a few mathematical rules, can live, die or multiply. Depending on the initial conditions, the cells form various patterns throughout the course of the game.

Rules

For a space that is populated:

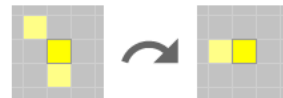
Each cell with one or no neighbors dies, as if by solitude.



Each cell with four or more neighbors dies, as if by overpopulation.

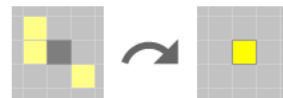


Each cell with two or three neighbors survives.



For a space that is empty or unpopulated

Each cell with three neighbors becomes populated.



Task

We defined a 480 x 240 world for the cells to live in. The world is represented in JavaScript by an Array of Array of Boolean, false mean the cell is dead, true means the cell is live

We provided a render(world) function for you, which accepts the world and renders the live cells as green dots on the canvas

We also provided a lexicon in ./src/lexicon.json which contains some predefined initial patterns that are fun to look at, the format of the pattern is, '.' means dead (false), 'O' means live (true) and '\n' means the end of a row

What you need to do:

Clone the basic project setup from <https://github.com/adawongau/coding-test>.

JavaScript

Fetch provided src/lexicon.json with an xhr request and load the predefined patterns into a <select/> with the name shown as option values. You must NOT modify lexicon.json.

When you select one of the patterns, it should display the description of the pattern on the page

When you click the Start button, the program should kick off the evolution of life. It puts the selected pattern in the middle of the world and evolve to the next state every 100 milliseconds

HTML & CSS

We are not looking for a very pretty app, do make sure a basic level of alignment is done on all the labels and inputs.

This is what an unstyled game should look like

