Game of Life Candidate Instructions

The Game of Life is set in an infinite two-dimensional grid inhabited by “cells”. Every cell interacts with up to eight neighbours, which are the cells that are horizontally, vertically, or diagonally adjacent.

From an initial seed grid, the game "evolves" one iteration at a time. An iteration applies rules to the grid to determine its next state. These scenarios are:

Scenario 0: No interactions
- Given a game of life
- When there are no live cells
- Then on the next step there are still no live cells

Scenario 1: Underpopulation
- Given a game of life
- When a live cell has fewer than two neighbours
- Then this cell dies

Scenario 2: Overcrowding
- Given a game of life
- When a live cell has more than three neighbours
- Then this cell dies

Scenario 3: Survival
- Given a game of life
- When a live cell has two or three neighbours
- Then this cell stays alive

Scenario 4: Creation of Life
- Given a game of life
- When an empty position has exactly three neighbouring cells
- Then a cell is created in this position

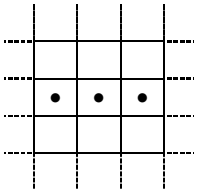
When applied these scenarios result in the following:

Scenario 5: Grid with no live cells
- Given a game of life with the initial state containing no live cells
- When the game evolves one turn
- Then the next state also contains no live cells

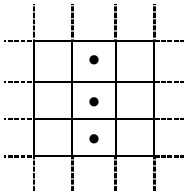
Continued overleaf…

Scenario 6: Expected game outcome for seeded grid

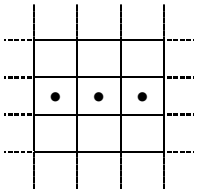
Given a game of life with the initial state…



When the game evolves one turn
Then the next state is…



When the game evolves another turn
Then the next state is…



Key: • = live cell