Name, SID, Date .....

In Class Assignment 3: John Conway's Game of Life

Benjamin Sanders, MS July 30, 2020

1 Instructions

You will program your own code in response to the problem described below. As this is an in-class assignment, you may work with one or two additional students if you choose. Write the names of your team members on this page, as well. Write the names of your team members in the code at the top.

You are welcome to use external sources, such as books, online research, etc. Make sure to cite each source in the spaces provided, or write N/A if you did not use an external source.

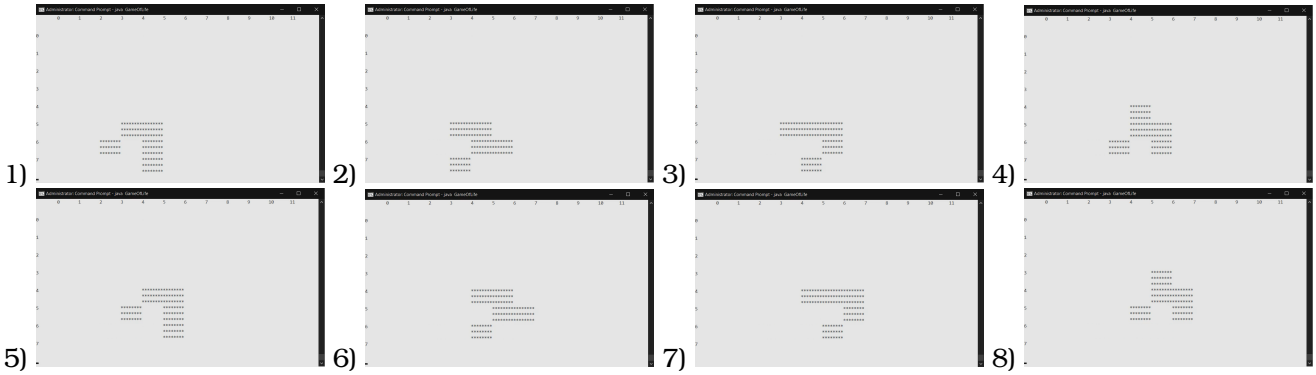
Turn in your work to Blackboard on or before the deadline to receive credit.

2 John Conway's Game of Life Rules

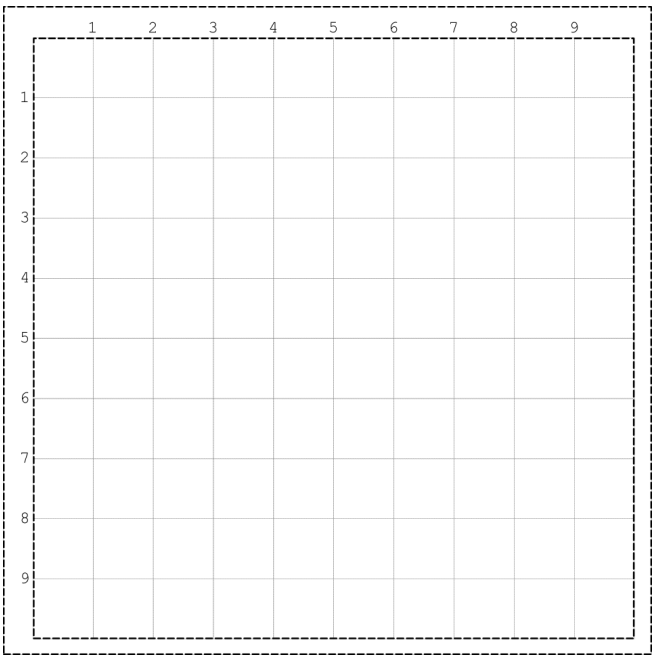
1. Any live cell with fewer than two live neighbours dies, as if by underpopulation.
2. Any live cell with two or three live neighbours lives on to the next generation.
3. Any live cell with more than three live neighbours dies, as if by overpopulation.
4. Any dead cell with exactly three live neighbours becomes a live cell, as if by reproduction.

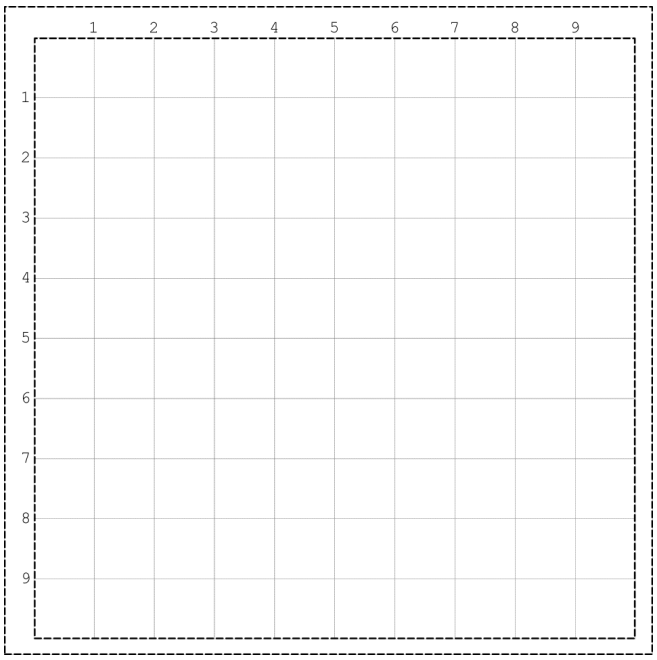
3 Assignment Description

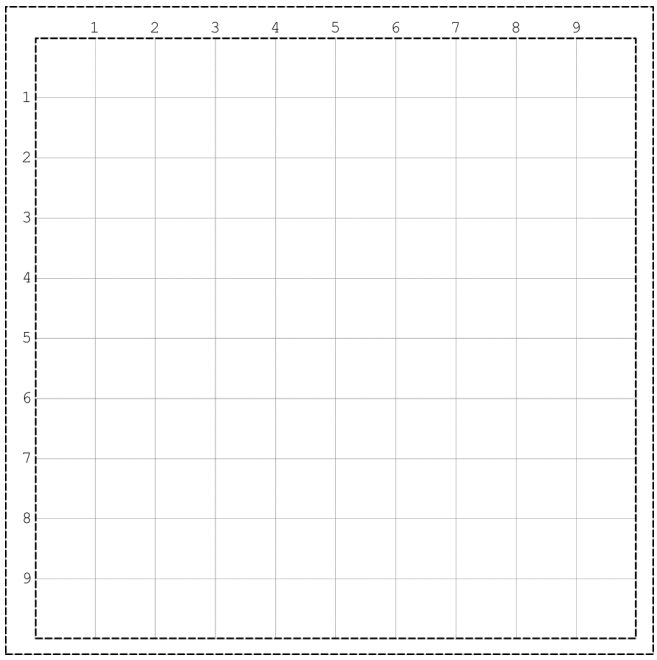
1. In a programming language such as Java, C++, C#, or Python, you and your team members will program a visual animation called *John Conway's Game of Life*. This animation does not need to be complex; it can simply be a printout to the terminal with pauses every second or so. Here is an example of Professor Sanders' implementation, which is a terminal printout. The specific starting configuration in this example is called a *glider* because it glides across the screen, without decay, over time.



2. Design three starting configurations for animated objects, below. When run through the Game of Life program, each starting configuration must produce at least two subsequent frames, and must initially be composed of at least three cells. You may use examples that you find online. Cite your sources if you use external sources.







4 Sources

If you used any external sources for this project, reference them here.

1. Source: .....
2. Source: .....

5 What to Turn In

Turn in one PDF or Word document on Blackboard, containing the following items.

1. All pages scanned or photographed of the In Class Assignment 3 completed document.
2. Any additional pages you used to complete the assignment.
3. All code pasted into the same document.