App Description

Quaranteam - Cellular Automaton: Infectious Disease

Alexander Martin, Jared Perttunen, Alec Rospierski, Devin Stewart,
Ben Vigna, Calvin Voss

Summary:

The app will be similar to Conway's Game of Life. However, instead of simulating life, the app will simulate infectious disease by having more than two states and objects, air, and people can contract the disease. While there are more rules to discuss and define, the main one is that contagious people, surfaces, and areas can infect other people, surfaces, and areas. Players will also be able to set their own rules and parameters, as well as continue current games and review past games' data.

Users:

- Middle School Students. Expected to be around 12 years. The students are expected to have little experience with technology.
- Middle School Teachers. Expected to be between their 20s and 60s, and may have limited knowledge of technology.

App Usage:

- Students will be able to change input variables in order to simulate the spread of the virus over various surfaces.
- Students will be able to setup the tile map of different surfaces in the simulation
- Students will be able to login to save both their map and configurations
- Students will also be able to export their maps and configurations to files.

Data types:

- Users
- Cell map
    - Width and height of grid
- Virus parameters
    - Days simulated
    - Viral amount
    - Contagious period
    - Contaminated period
- Player parameters
    - Moving freely/autopilot
    - Death state
    - Masked/Unmasked
    - Items sanitized