A quick game of playing god.

1. The theme of this piece has to do with large scale systems of cellular automata over time and how slight changes to input can cause massive changes in output (Chaos Theory). This relates to our lives as humans and how we interact with systems so much bigger than us, and how we may change those systems just by existing inside of them.
2. We are expecting to write this in Processing, however, if the program is not fast enough to handle everything we may move to a lower level language or seek more involved optimizations.
3. The primary motivator for this project's base is Conway's game of life, which has a very specific set of rules and logic which stimulate a certain behavior of the automata. The user in this will have control over those rules, as well as choosing how the simulation may start, and interacting with the simulation while it is running. (like a "hand of god").
4. For looks, we think monochrome will be the most striking visually, a picture is attached of an iteration from the early stage of this project. As for sounds, we are considering having different frequencies/ chords based on live data from the simulation such as: "How many cells are alive or died in the previous iteration", or using the "center of mass" of the game to determine what sound is played.
5. Other concepts and techniques we are considering have to do with chance operations to determine initial states for the simulation, and glitches, some of which have already come up in development where interaction spawns highly complex behavior that was not intended.
6. Challenges we anticipate with this project include:
    1. Optimization for larger scale variants.
    2. Working with the complexities of Processing's sound libraries.
    3. Having a clean and understandable GUI or way of letting the user know what to do.