

Outline for gui prototype

Purpose:

Give the client a sensation of how the application will work and function before spending large amounts of time implementing full application code. This is not intended to be a first iteration of the project, but just provide something tangible for clients, investors, and potential user to see.

Prototype Status

Demonstrates the all the features that the first iteration is intended to have. Shows how the the interactive state grid will function work, but does not actually run a full cellular automata simulation since this is only a demonstration of frontend features. Has event listeners that print to the console when clicked to give indication of an interaction while not requiring the full backend to be implemented. Show some tabs, widgets and customizations that will be included in the first project iteration.

Running the project

The main entry point is included in the `src/GUI_Prototype.java` file. This can be run with any jdk version ≥ 22 .

Usage

In the application is divided into 2 main sections

State grid

- This component is where all the simulations and initial conditions will be set.
- The state grid in the prototpye is fixed at a 58 x 58 size, but will be variable in the final application.
- The entire grid is initialized to white, but each cell when clicked will change its start from white to black or vise versa.
- This demonstrates how the inital conditions will be set in the final application.

Options

Has event listeners to log interaction with each widget in the options section

- Parameters tab: Contains simulation settings
- Visualization: Sample color scheme setting
- Statistics: Demonstrates some of the stats that will be tracked throughout the progress of the simulation
- Import/Export: For saving set of rules and initial conditions.