User Documentation
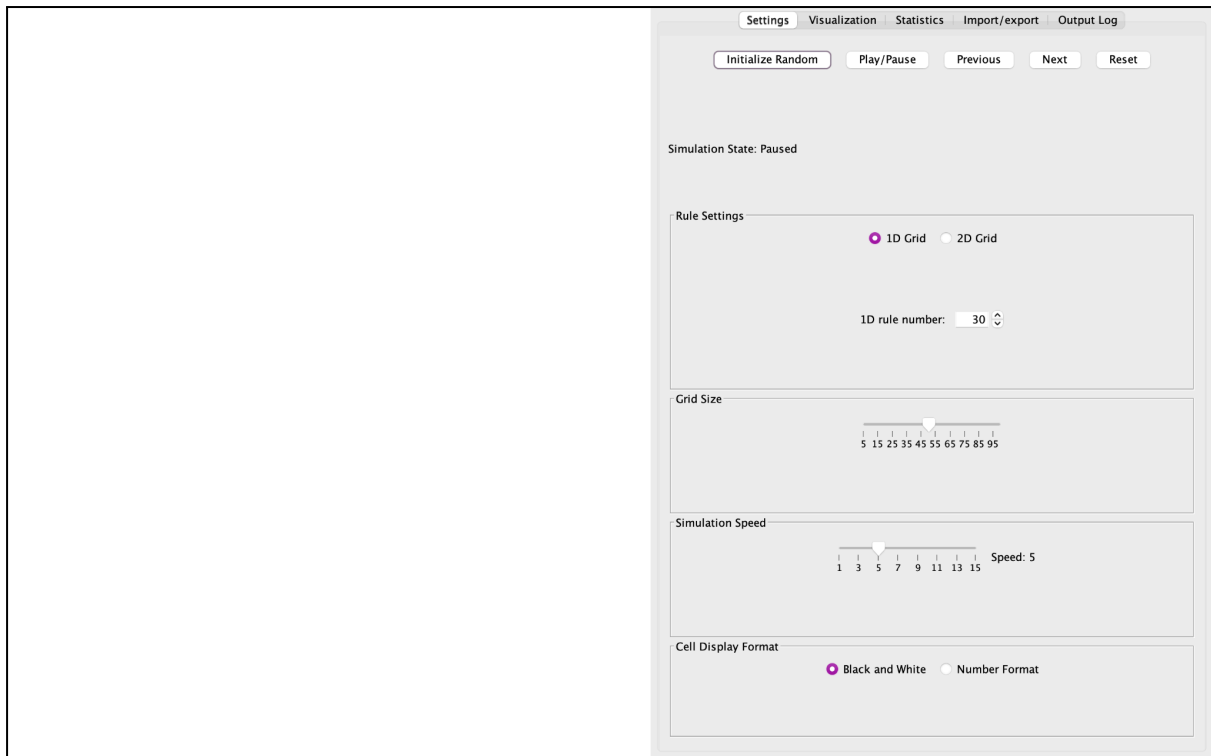
How to Use the Conway's Game of Life Simulator

GUI

1. Launch the Application

Use Java to run the program

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2. Configure the Grid

➢ Go to the Parameters tab.

➢ Choose 1D or 2D grid.

➢ Set Grid Size, Display Format (Black/White or 0/1), and Simulation Speed.

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3. Initialize the Simulation

➢ Click "Initialize Random" for a random setup.

➢ Or manually click cells on the grid to toggle them alive/dead.

➢ Optionally import a saved state via the Import/Export tab.

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4. Define Rules

➢ 1D: Enter a rule number (0–255).

➢ 2D: Specify conditions for Birth, Survival, Death, and Neighborhood type.

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5. Control the Simulation

➢ Play: Start the simulation.

➢ Pause: Stop the simulation to edit or view stats.

➢ Next / Previous: Step forward or back one generation while paused.

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6. Visualization & Stats

➢ Customize cell colors in the Visualization tab.

➢ View stats like alive/dead cells, population density, and entropy in the Statistics tab.

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7. Import / Export

➢ Export: Save current grid state to .xml.

➢ Import: Load a saved configuration (simulation must be paused).

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8. Reset or Exit

➢ Reset: Clears the grid while retaining settings.

➢ Close the window to exit the application.