Artificial Life Simulation - Greenies and Blueies

1.0 About

This project is to simulate two types artificial life forms which can feed, grow and reproduce. The first type which resembles plants which reproduce and grow. And the second type reproduce, grow and feed on first type.

2.0 Implementation

The world which I simulated in here is a grid with an area of 100x100. A single cell of the grid can only be occupied by a single creature of any type at any given step.

The first type of creatures which I named 'Greenies' grows one unit in each step until it grows six units. And also it can create an offspring in a random empty neighboring cell in each step.

The second type of creatures which I named 'Blueies' also grows one unit in each step until it grows six units. And it can eat a greeny in random neighboring cell and move to that cell. But for that the neighboring greeny must be 3 units large. And it also reproduce like greeny but it only place th new bluey in a cell that is occupied by a greeny.

3.0 Prerequisites

This script is written in python. Install 'python' and 'Tkinter' to run the script. (use synaptic package manager in Ubuntu to install them.)

4.0 Running the Application

Use fallowing command to run the application.

   python main.py

Left click on any place on the window to place a greeny in there. And right click to place a bluey. But blues can only place on a greeny. Press 'R' key to reset and 'P' to pause. And use 'Up' and 'Down' arrow keys to change the step time (speed).
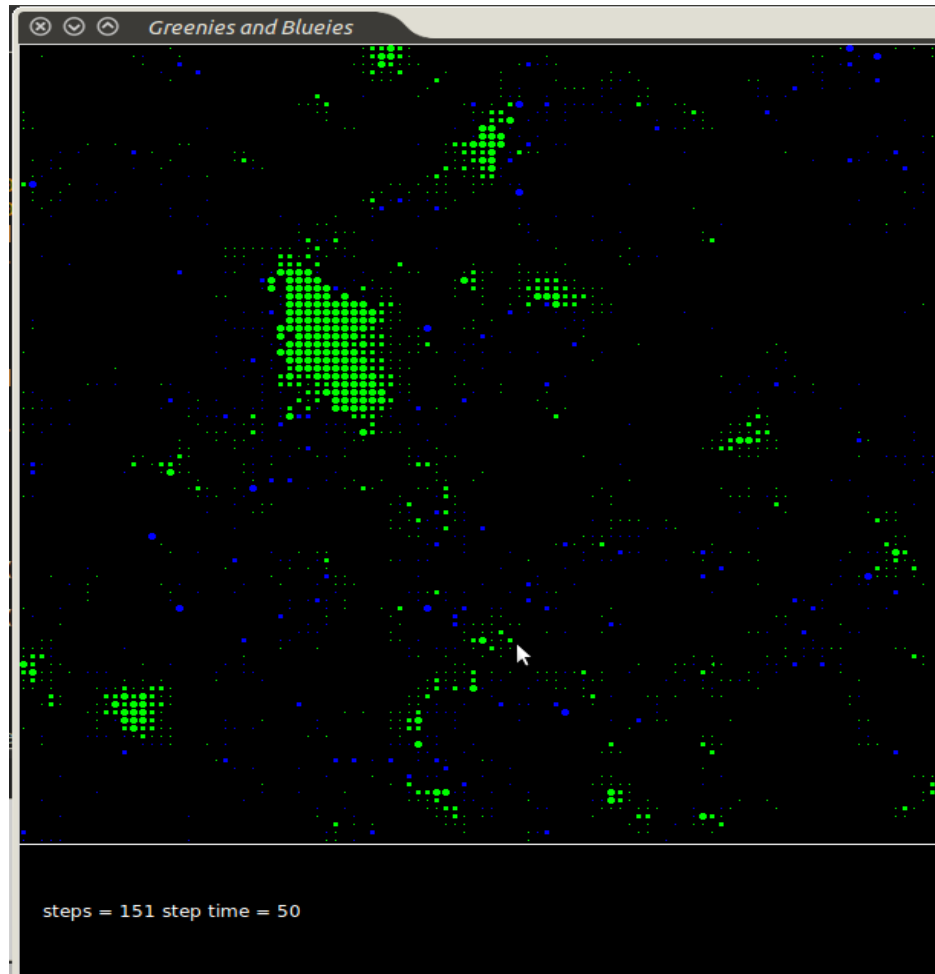
5.0 Screen shots

Figure 5.1

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6.0 Licenses