

## 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 can reproduce and grow. And the second type can reproduce, grow, move 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 at least 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. And also if a bluey does not have a greeny to it it shrink unit by unit and die.

### 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 a bluey 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

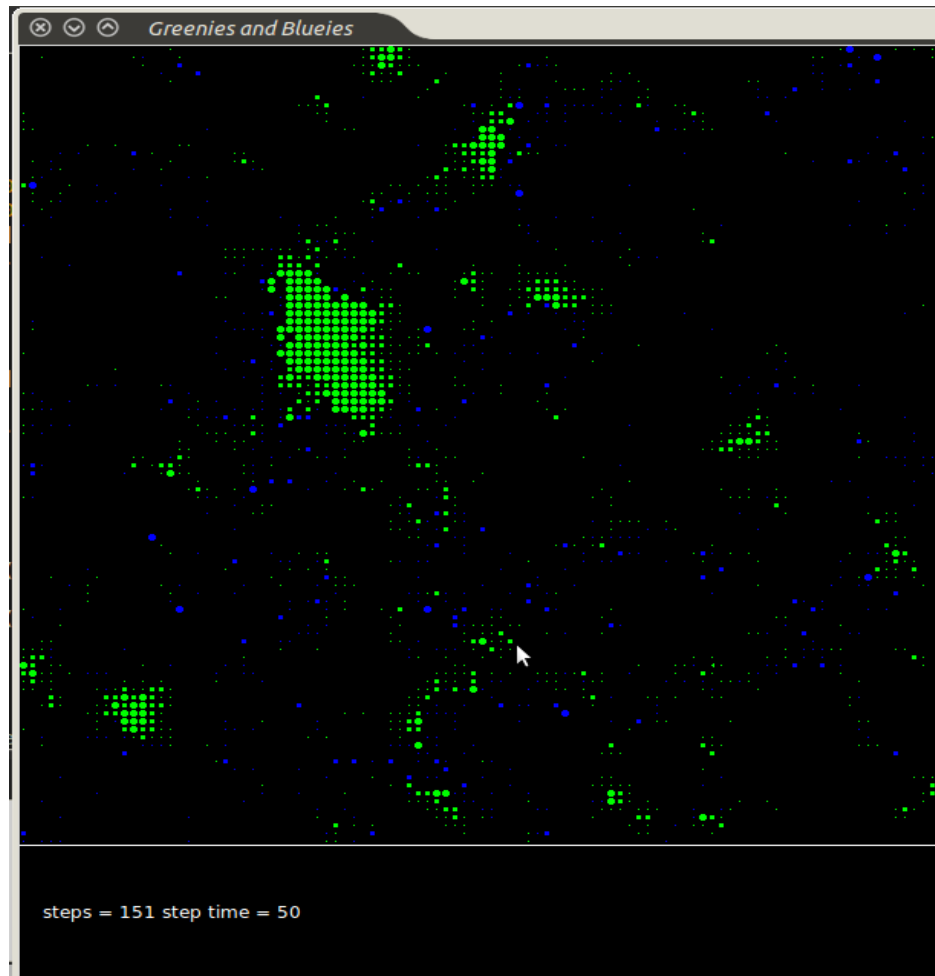


Figure 5.1

## 6.0 Author

- Tharindra Galahen
- [tcg.galahena@gmail.com](mailto:tcg.galahena@gmail.com)
- <http://www.inf0warri0r.blogspot.com>

## 6.0 Licenses

Copyright 2013 Tharindra Galahena

This is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or any later version. This is distributed in the hope that it will be useful, but **WITHOUT ANY WARRANTY**; without even the implied warranty of **MERCHANTABILITY** or **FITNESS FOR A PARTICULAR PURPOSE**. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this. If not, see <http://www.gnu.org/licenses/>.