Conway's Game of Life Coursework

Conway's Game of Life Explanation (Q1)

Game of Life is a cellular automata designed by Conway in 1970. It is a zero-player game and the only input provided is the initial state of the game board. The state of the board is updated at each iteration of the game in a cell-by-cell basis. The decision of the state of each cell in the next iteration depends on the number of cells that are alive in its 8-neighbourhood and on the state of each cell in particular. Therefore:

1) If a cell is alive and has exactly two or three neighbours alive it will be alive in the next iteration. Otherwise, it dies.

2) If a cell is dead and has exactly three neighbours alive it will be alive in the next iteration. Otherwise, it remains dead.

Compile Instructions

Code Organisation

Results

Video uploaded to YouTube demonstrating Game of Life:

https://www.youtube.com/watch?v=949ciYmRyhE

This video has been generated running this program with the following command:

$ GameOfLife –random 100 –iter 500 –output output.txt

Then, the file output.txt is converted into a video with the following command:

$ python extras/txt_to_video.py output.txt video.mp4