4CCS1PPA Coursework 3: Game of Life

Coursework completed by: Caleb Chan [caleb.chan@kcl.ac.uk](mailto:caleb.chan@kcl.ac.uk) and Alexander Wickman [alexander.wickman@kcl.ac.uk](mailto:alexander.wickman@kcl.ac.uk)

# Life Forms

**Mycoplasma**

* Follows rules outlined in base task. If cell has fewer than two neighbours, it will die. If the cell has two or three live neighbours it will live on the next generation. If the cell has more than three neighbours it will die. Any dead cell that is dead and has exactly three neighbours, will come alive.

**Influenza**

* Becomes alive after three generation cycles after initial creation. Once alive, it will remain alive only if it has three or more living neighbours. If it has two or less neighbours, it will die. It will also die if at least one neighbour is a white blood cell.

**Flavobacterium**

* Changes colour depending on the number of neighbours.

**White Blood Cell**

* Under the assumption that white blood cell only recognises and targets the influenza cell.

# Challenge Tasks:

1. **Non-Deterministic Cells**
2. **Symbiosis**
3. **Disease**