After running cellsim, we see first from the console and graphical output that it is able to faithfully emulate the aspects of prokaryotes in an isolated space we were hoping to. Although there are obviously many simplifications it would be nice to elaborate such as the chemical processes inside the cell, mutation and intercellular communication by populations.

Examining the more specific results of the simulation, we see that populations which tend to be separate from the rest so that they are less likely to be killed by other cells will make up a significant portion of the later periods of the simulation’s timescale. We also find that the final cells will be younger cells with a moderately increased number of flagella, probably because older cells or cells with excessive numbers of flagella are more likely to encounter and be killed by another cell.