Time unit = months

System(population, infected, number of people vaccinated, birth rate, death rate<sans influenza>, infection rate, disease death rate<flu effectiveness>)

State( pop, infected people, vaccinated people)

Vaccinated people = read in percentage data and apply to population

Pop = pop\*birth –pop \*death

Without Vaccine Situation

Infected [t+1] = infected[t] + infected \* infection rate

Killed by flu = Infected\* Disease Death rate

With Vaccine situation

Infected = infected + infected \* infection rate

Killed by Flu = Infected/ population \* (population – (number of people vaccinated/population))

Vaccinated = read in data