CLASS NAME
USER DOCUMENTATION

INSTRUCTOR: DR. XXXXXXXX
no_reply@example.com

Programs' Functionalities

main.py : The operator of the program. The functions it holds includes loading network structure, initializing personnel's healthy status, operating environmental and personal health status update over timesteps, and concluding statistical summarization

utils.py : Helper functions for simulating probability-based health status change over death, recovery and holding still.

person.py : Class Person that simulated each individual's personal relationship connections and healthy information.

net_files : Folder that stores interpersonal relationships and initial infected person's information

Usage Guidance

To run the program, open the terminal, direct to the directory "main.py" file locates, and run **python main.py –s netfile trans_rate recov_rate death_rate suspe_time int_code** for simulation mode, and **python main.py –i** for interactive mode. Note that we customized a parameter named "***suspe_time***" which defines in how long a period of time a newly infected person will be diagnosed as Suspectible rather than Infected.

To customize network structure, create xxx.txt files in ***./net_files/*** folder in format of: the first line stores names and status of the persons who are infected initially, e.g. "***Amy 3,Bob -1***". Status Follow a rule that *[0: Healthy; >1: Susceptible; 1: Infected; -1: Recovered; None: Death]*. The next lines shows connection relationship by colons, e.g. "***Amy:Bob***"