Network Dynamics

December 2022

Assignment

1. Generate a random network with 100(00) nodes.
2. Randomly choose one (or more in case of larger network) node and set it as "infected".
3. Iterate over time (let's say 1 day = 1 iteration, consider 50 days)
   - Probability of infecting neighboring node $p = 0.15$ (applies only for infected, you can choose different value)
   - Time to heal $h = 7$ (days)
   - Probability of death $d = 0.03$ (for as long as the node is infected; remove node on death)
   - After overcomming infection there's 21 day immunity
4. Run the above experiments for reasonable amount of random runs (100 at least?)
5. What are stats on the number of dead?
6. Will sickness vanish during measured interval?