

COSC150: Class exploration 21 April 2020

Multiple models of Effects of Social Distancing in Javascript

1. The goals of the class explorations today are for you
 - a. Continue to get comfortable “deconstructing” an existing model to understand its structure, this time in a “modern” language, javascript
 - b. Continue to gain confidence in modifying someone else’s code, and
 - c. Spark some interest in exploring how social distancing (or lack thereof) can be modeled with different agent properties.

(Note: *deconstruction* is the leading learning mode for most scientific programmers . . . *run, modify, write*).

2. **Turning Code to a Story, Turning a Story into Code:** In class today we again turn a simple story into a code. We'll use the Susceptible (healthy) → Infected (sick) → Recovered model so you see that you get the same result as the “systems dynamics” approach and in many ways the main features of last week’s NetLogo model. The approach we will take is “directed inquiry” so I’ll start by suggesting questions, observations, and changes.
 - a. Recall the basic story:
 - i. If a healthy person is next to a sick person, there is a chance that the healthy person changes into a sick person.
 - ii. After a specified number of days, a sick person could recover.
 - iii. Healthy and sick and recovered persons move randomly in the world.
 - b. Start by downloading:
<http://webs.wofford.edu/panoffrm/COSC150/EpidemicJS.zip>
 - i. Extract the files: You should get a Folder named EpidemicJS, and in that folder 2 files: Epidemic.html and Epidemic.js
 - ii. You will need a PLAIN TEXT EDITOR, not Microsoft Word, please. . .
 - iii. As an initial test, if you double click on the html file, does it run?
 - c. Follow the instructor to look at the actual code pieces and make various modifications.
 - i. Each time you change the code, you must SAVE and RELOAD THE HTML file to run.
 - ii. Keep track of which part of the code is changed and its effect.
 - iii. Which changes are “cosmetic” (semantics) and which really change the model?
 - d. By the end of class, you should have seen (or run yourself) *5* different ways to affect the speed of the transmission of the disease.

NOTE: if you are using a tablet to approximate a computer, you will load and reload: <http://webs.wofford.edu/panoffrm/COSC150/EpidemicJS/Epidemic.html> after each instructor edit. (most tablets must run their files from a server)