Lab5 (100 points)

Important: We will demo in class or online. For in class demos, we will go around the room. Be prepared to demo at the start of class. The submitted code will be used only to verify that you did not copy from others, to compile and re-run your program, to make sure you were indeed demonstrating your own code, and to grade for documentation of your code.

In this program we will start with Lab4. We are going to introduce the concept of toPort, fromPort, and TTL. Now messages are directed to a specific machine (we will agree in class how to identify a machine). The protocol will evolve to include: the fromPort, the toPort, TTL, the location of the sender, the version, and the message. If TTL is 0, you will throw away the message. If you receive a message that is more than 2 squares away from you, using the Euclidean distance formula, your program will ignore it. If the message is for your node, and TTL > =0, then the program will print it out. Otherwise, if the sender was within 2 squares, and it is not for you, & TTL >0, you will decrement TTL, change location to be your location, and then forward the message to your peers. We will agree in class how to avoid loops (A sends to B, B sends to C, C sends to A).

Submit well-documented and well indented code along with a README file explaining how to run the program, and a makefile. Submit it using GitHub

The grading rubric is as follows:

- Program correctness and robustness (what happens if I give garbage input): 80%
- Coding style (comments, indentations, README, Makefile): 20%