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CSCE 350

Nov. 29, 2016

Project 4

**Broadcast Simulation**

I modified Simulate::RunSimulation() to simulate broadcasting a message through a series of nodes. The nodes were read in and stored in a map<string, Node>. I used two var, bool done to break out of a while loop when every node had received the message and int time to keep track of the time. I iterate over the map, initializing the first node with the message. The algorithm then checks if the current node is allowed to send the message. If the node is allowed, the links of the node are accessed and message sent in the vector order. I used int clockAdder to keep track of when the nodes should get the message. The nodes get the time they should get the message along with the label of which node sent the message. Time is incremented. In a separate for loop I iterate over the map to see if any nodes have not received the message. In the event a node hasn’t received the message, the loop is broken and done is set to false, otherwise, if all nodes have received the message, done is set to true, the while loop is broken.