# **Project 2 - RDT 3.0 - README**

# Jacob Leiner

# COP 5518 Computing Essentials

# Date of Project Submission: 8/2/2020

# **Background**

I was unable to finish my project in time and get it working fully.

# **Command Line with Parameters**

Receiver <port>

Network <port> <lostPercent> <delayedPercent> <errorPercent>

Sender <port> <rcvHost> <rcvPort> <networkHost> <networkPort>

# **Completed Work**

I was able to get the Sender and Receiver programs to send chunked data in multiple packets to each other directly successfully using ACKs to determine whether the message was received by the receiver program to allow the sender program to send the next packet. I added in the network program and was able to successfully get the packets to send back and forth in the same manner. I have added a check for the sequence number and error flag which has caused my program to break and get caught up with a null response after the second packet has been sent from the sender to the receiver. The network program receives the messages, parses the message to determine where to send the next packet and stores these in class variables, and then performs checks using a random int generator to see if the received packet should be manipulated in any way. The network program uses threads to forward packets that manipulate the program based off of the program parameters. The network program prints out statistics and information about the packets it is forwarding to console.

# **Unfinished Work**

The program works as long as the network parameters remain 0 for everything except for the port number. When increasing the parameters for error packets, the program eventually breaks after this value proves true. I am not able to figure out in time what the issue is. If the delay or lost parameters are increased, the program continues to work but the sequence numbers get switched and the program gets stuck on the packet that is currently being sent.