CS3093D Networks Laboratory - Assignment 2

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Question 1

Instructions

- The Code for TCP server is '1/src/tcp_server.c' and '1/src/tcp_client.c'
- \bullet The Code for UDP server is '1/src/udp_server.c' and '1/src/udp_client.c'
- The fruits code is kept common for both using header file 'fruits.h' and 'fruits.c'
- Code can be compiled by running make, which will place binaries for all in bin/ folder

Screenshots Question 1

Figure 1: Demo of TCP Client and Server

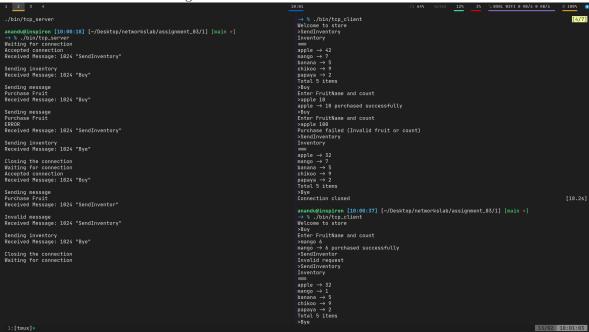
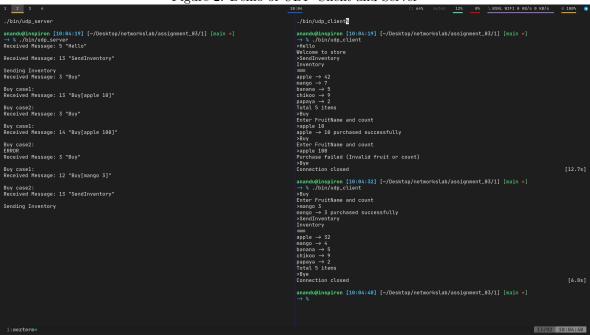


Figure 2: Demo of UDP Client and Server



Question 2

Instructions

- The code is in '2/src' named server.c and cilent.c
- Common structs for Packet and other constants are defined in common.h
- Code can be compiled by running 'make', which will place all the binaries in bin/ folder
- 'make dummy' command can be used to generate a dummy sequential 50MB file
- Client will print the transmission rate every 0.1 seconds in kbps, and write the same to "stats.dat"
- Server will send "file.bin" and Client will write it to "output", md5sum can be used to verify integrity
- Server implements Stop and Wait ARQ, will send packet to client and wait for ACK until timeout.
- \bullet Server calculates and outputs Round Trip Time when it receivse successful ACK back.
- 'make graph' command can be used to display the "stats.dat" using gnuplot

Figure 3: Screenshot of Server

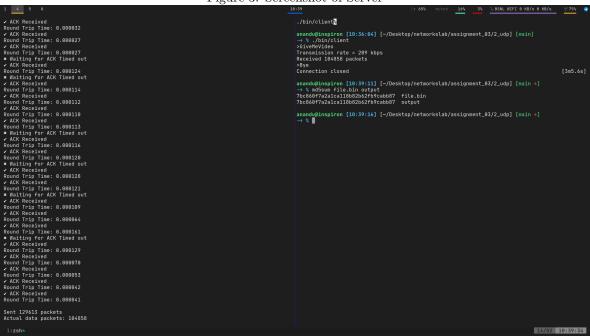


Figure 4: Graph of Transmission rate every 0.1 seconds

