Assignment:

1. **Source files: (check BB)**
    a. **Server file: server.c**
    b. **Client file: client,c**

2. **Screenshot of program running (Check BB)**

3. **Screenshot of Wireshark capture summary page (Check BB)**

4. **Table Summary:**

	10KB	20KB	30KB	40KB	50KB
TCP total IP payload bytes	10000	20000	30000	40000	50000
TCP total header bytes	1004	1804	2604	3404	4204

*Note we are using KB to 1000 bytes not 1024 for simplicity

5. **Questions and answers:**

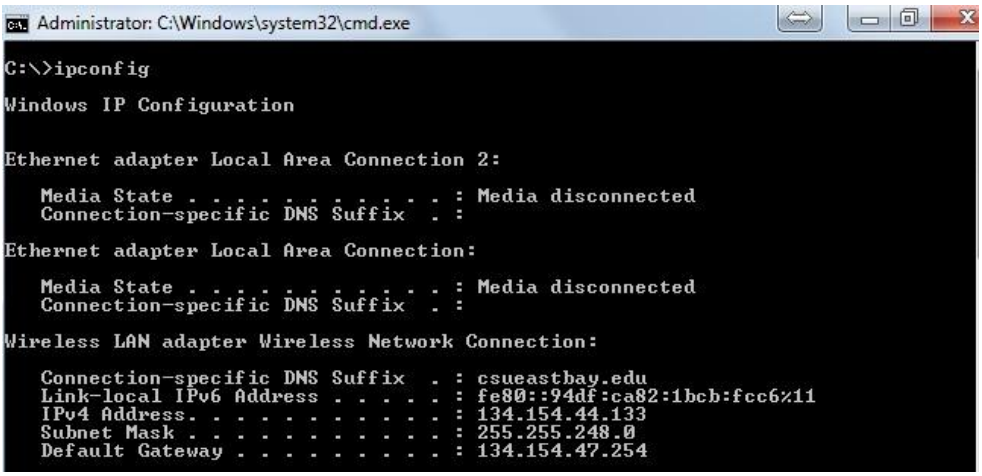
Q. 1 What operating systems did you use ?

Ans. Client: Linux (Ubuntu)

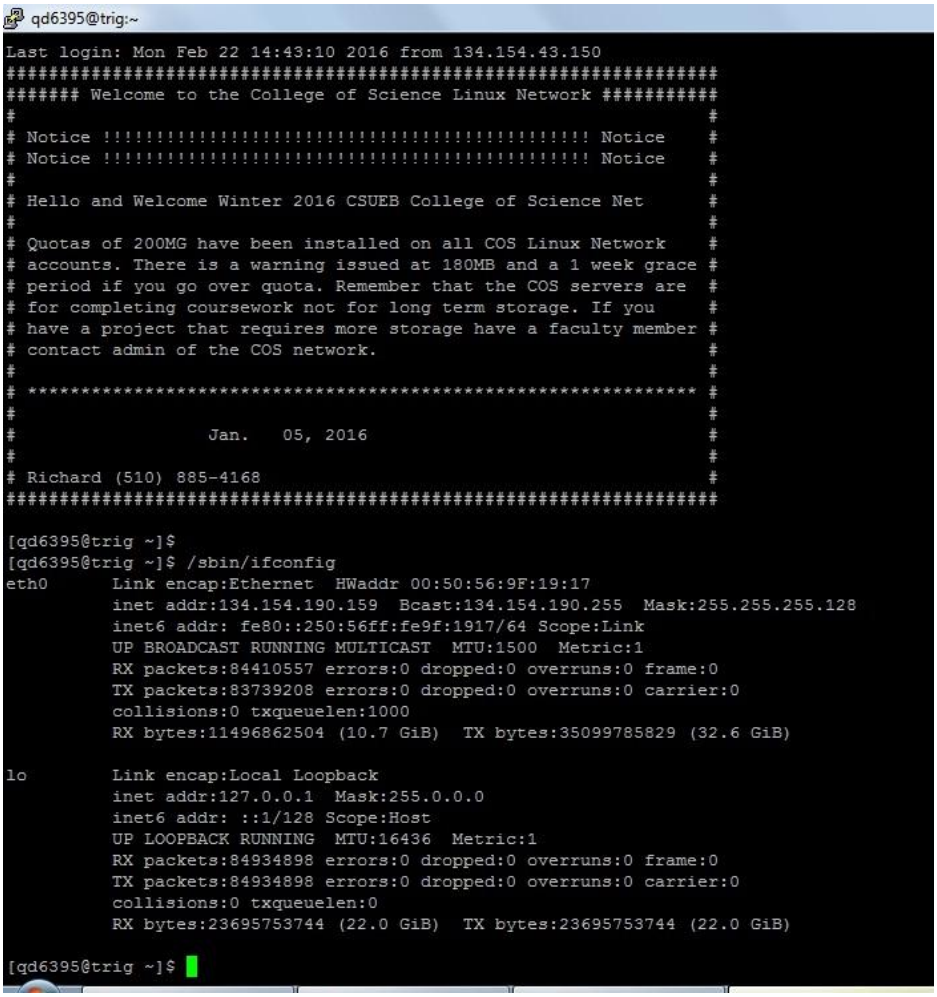
Server: trig.sci.csueastbay.edu

Q. 2 What were the IP addresses and netmasks for your two machines?

Ans. Client Machine:
IP Address:134.154.44.133
Subnet mask:255.255.248.0



Server Machine:
IP Address:134.154.190.159
Subnet mask:255.255.255.128



Q. 3 Did the amount of overhead for TCP increase proportionally as the file size increased? In other words, was the overhead twice as much for the 20 KB file as the 10 KB file and so on? Why or why not? Again, provide calculations to support.

Ans. Yes. From following graph is linear. It shows that amount of overhead for TCP increase proportionally as the file size increase.

For

first file (10KB) – overhead is 1004

second file (20KB) – overhead is 1804

third file (30KB) – overhead is 2604

fourth file (40KB) – overhead is 3404

fifth file (50KB) – overhead is 4204

From above it shows that overhead is increased 80% of the initial.

Overhead is not twice as much for the 20 KB file as the 10 KB file because While sending the 10 KB file all SYN, ACK, etc. are present and for 20 KB file only actual data is increased and rest of all message are same.