COSC 350 Assignment 4 Fall 2024

Due Dec 9.

Use the Blackboard link to submit all your answers in one file named GroupNameA4, where GroupName is your group name.

1. From the command prompt in Windows, run the command below:

netstat -r

Use the output to answer the questions and put your answers in the file GroupNameA4. **Please paste a readable screenshot of the output from the command** above your answers in the file GroupNameA4.

a) Write down the IPv4 address of the router. How many bits are in the network prefix of this address? Explain your answer.
b) Write down any multicast IPv4 address in the table. How do you know this is a multicast address?

2. Use Wireshark to open the file c350a4f24wififrame.pcap that is posted on Blackboard.

To display the correct frame to be analyzed (**frame 131**), please do the following.

Click on "Go" at the top of the screen. Type 131 in the box "Go to packet". Frame 131 should then show.

Use this frame, **frame 131**, to answer the questions and put your answers in the file GroupNameA4.

a) Double click on the part of the frame labeled as IEEE 802.11 QoS Data. Several MAC addresses are shown. Is the AP (access point) the ultimate receiver of this frame? Explain your answer.
b) Double click on the part of the frame labeled as Internet Protocol Version 4. Every IP datagram has an IP header and an IP payload. How many bytes are in the IP payload carried in this frame? Explain your answer.
c) Double click on the part of the frame labeled as Transmission Control Protocol.
What specific flags are set in the TCP header of this frame? Choose ONE of these flags. Indicate the flag you chose and explain the purpose of setting this flag.