ASSIGNMENT # 1

Computer Networks Lab

SPRING 2024

Deadline: 25 march 2024

Marks: 15

1. You have to implement TCP client server using socket programming in c++/c. Client will take an input string from user and will send it to server. Server is going to simply receive the string and display it.

2. Now you have to use two laptops or computers. If not available at home, then you can use lab computers. Place client code at one computer and server on another computer. Now your client should be able to connect server which is on another computer.

3. Run Wireshark and capture network traffic. Remember Wireshark should be running when you will perform step no 2.

4. Close Wireshark capturing once client is done sending message to server.

5. Using Wireshark, you have to examine packets that are sent between client and server and answer following questions.

6. What is source IP address?

7. What is destination IP address?

8. Using Wireshark, find out what message was sent by client to server.

9. What is source port number?

10. What is destination port number?

11. Now modify your code such that message sent by client should not be that easy to sniff through Wireshark

12. After modifying code, show what difference you have observed in Wireshark after step no 11.

Guideline: This is individual assignment. You have to submit pdf file in which you have to attach screenshots of each step you perform. While answering above questions, also attach labeled screenshot showing where you have founded your answer. Moreover, when attaching screenshots in each step, also add detailed comments what you are doing and why. In detailed report, also show how you have managed to connect two computers and what changes were required in client and server code. You will be graded on the basis of quality of report.

Submission: Submit pdf file named as your roll no and name.

NOTE: Plagiarism will result in zero marks in all assignments.