Indian Institute of Information Technology, Allahabad
Department of Information Technology

Computer Networks(ICNE532C)

Lab Experiments.

Tools to be used and analysed

1. Wireshark
2. Packeth
3. Packet Tracer

Assignment Set No. 1 [Two to Three Weeks]

1. Use HTTP 1.0 and HTTP 1.1 and analyze the difference.
2. Establish TCP connection and share data.
3. Using UDP connection share data.
4. Using UDP and TCP, share the file of size >10 MB.
5. Analyze the parallel connection on the single port.
6. Analyse the maximum size (MTU) of TCP and UDP packet.

Assignment Set No. 2 [Two to Three Weeks]

1. Write your code to fragment and assembly the packet during data transfer.
2. Write your code for TCP connection between two devices. Manage the flags of the protocol and analyze it.
3. Implement UDP protocol and analyze the throughput when compared to TCP. Also analyze the delivery time or latency.

Assignment Set No. 3 [Two Weeks]

1. Analyse the ARP protocol through Wireshark

2. Implement multi-party chat application using socket programming. Implement opposite party writing hint in the same application. Implement using UDP and TCP protcol. Attach files and transfer it in chatting.

3. **Security related** - Block certain IP access, MAC address access, Port address access.

Assignment Set No. 4 [Two Weeks]

1. Analyse the framing in file transfer. Also encrypt the file and transfer it.

2. Use data link layer to share the data (Own implementation should be done).

3. Analyse the Data Link Layer flow control using the above.

4. Design the virtual circuit in packet switching using packet tracer.

Final: Assignment Set No. 5 [One Week]

1. Implement routing (Intra and Interdomain) protocol using packet tracer. Show the final forwarding table.

2. Analyze the Transmission Control Block