Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 05

Course code: ICT-4202

Course title: Wireless and Mobile Communication Lab

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Session: 2015-2016

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Assistant Professor

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LAB NO.:05

Name of Experiment: Comparative Analysis of Wired and Wireless data using Wireshark

Objectives:

1. To capture a wired data packet from interface and comparing the analysis with wireless data packet.
2. Filtering packets applying a display filter such as udp, ip.src etc.
3. Displaying various statistics such as flow graph.
4. Finding any specific flow graph such as TCP flow.

Procedure:

Capturing: We will start Capturing, by clicking Capture menu and selecting two interface that one has wireless data packet and another is wired data packet. The captured packet will put on the show of the details of each packet transmitted over the wireless LAN and Ethernet. This process can be stopped by clicking on Stop capture button.

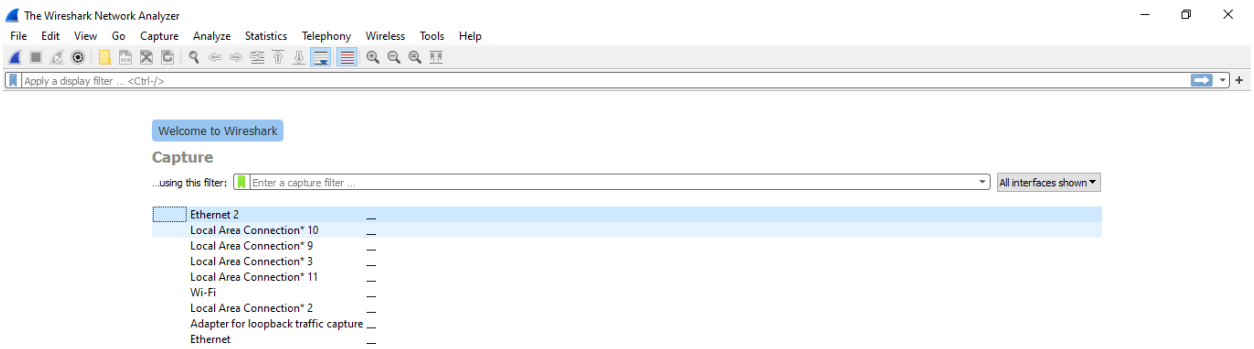

Figure: Wireshark Interface List

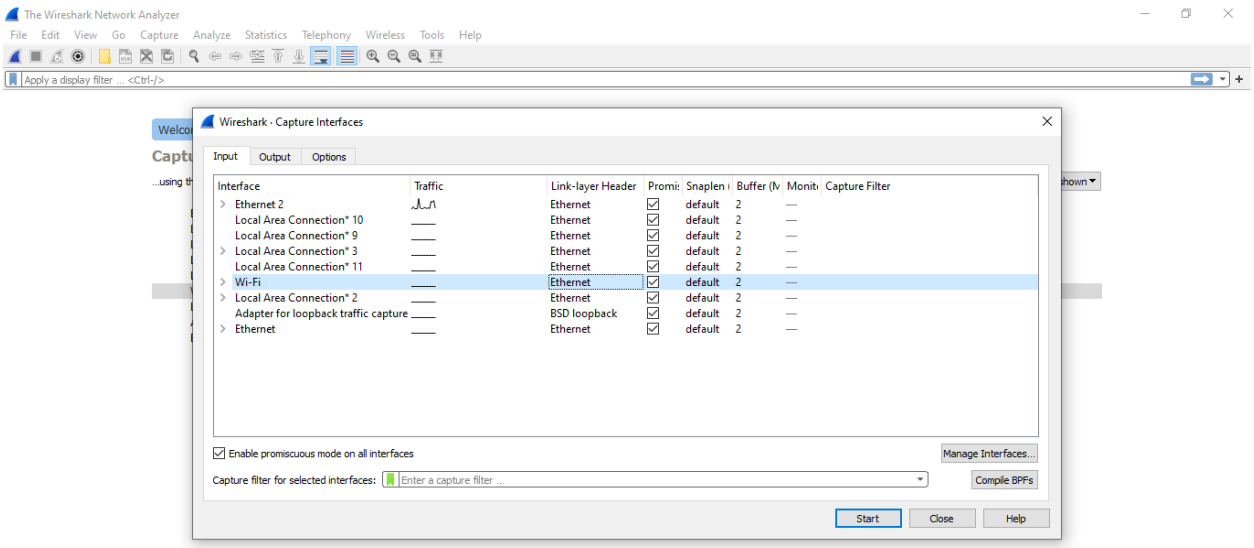

Figure: Start Capturing Interface for Wireless data packets (WiFi)

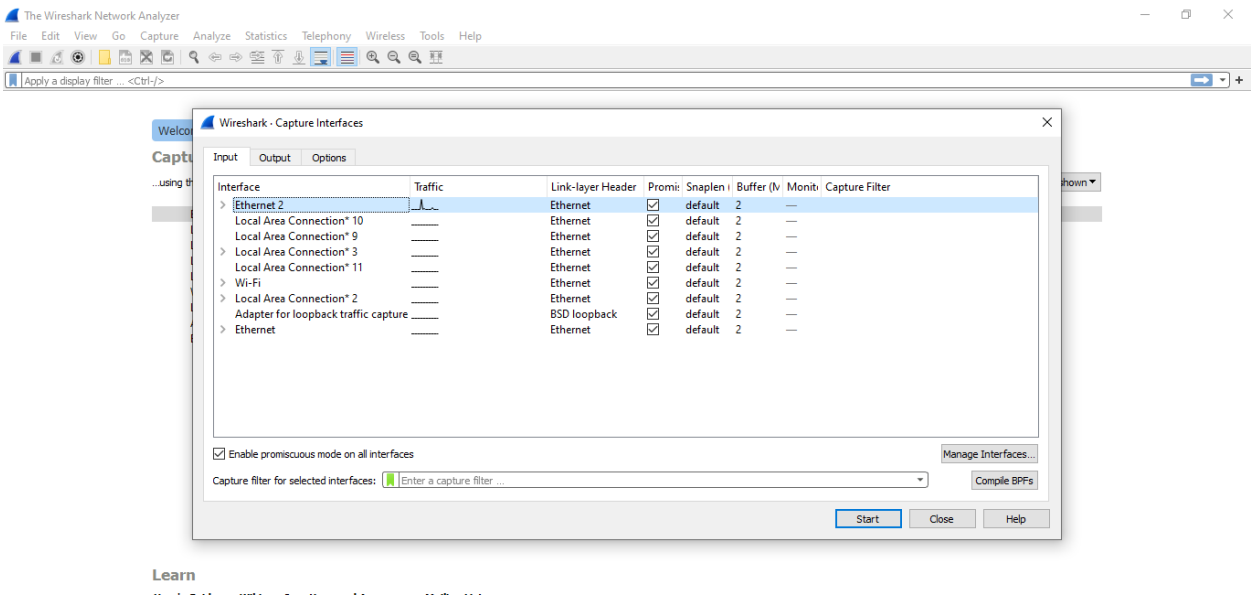

Figure: Start Capturing Interface for Wired data packets (Ethernet 2)

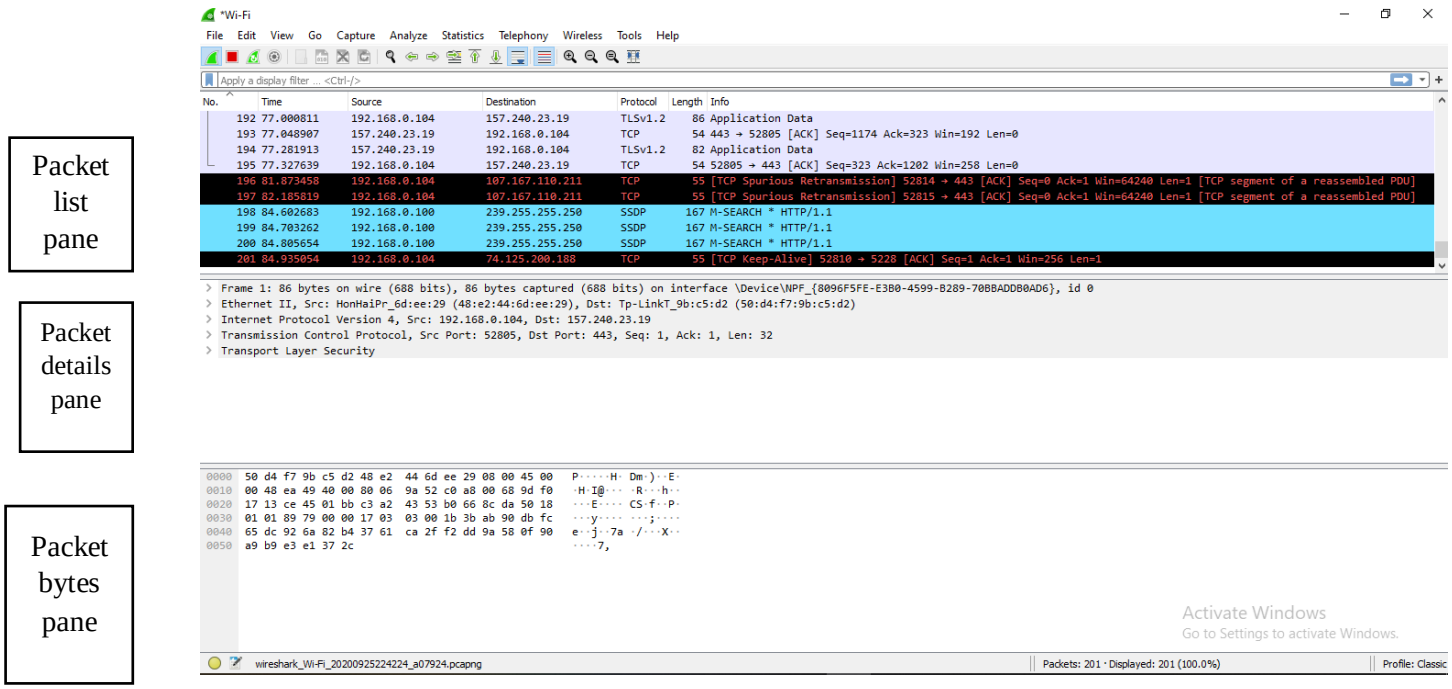

Figure: A sample packet capture window for Wireless Data Packets

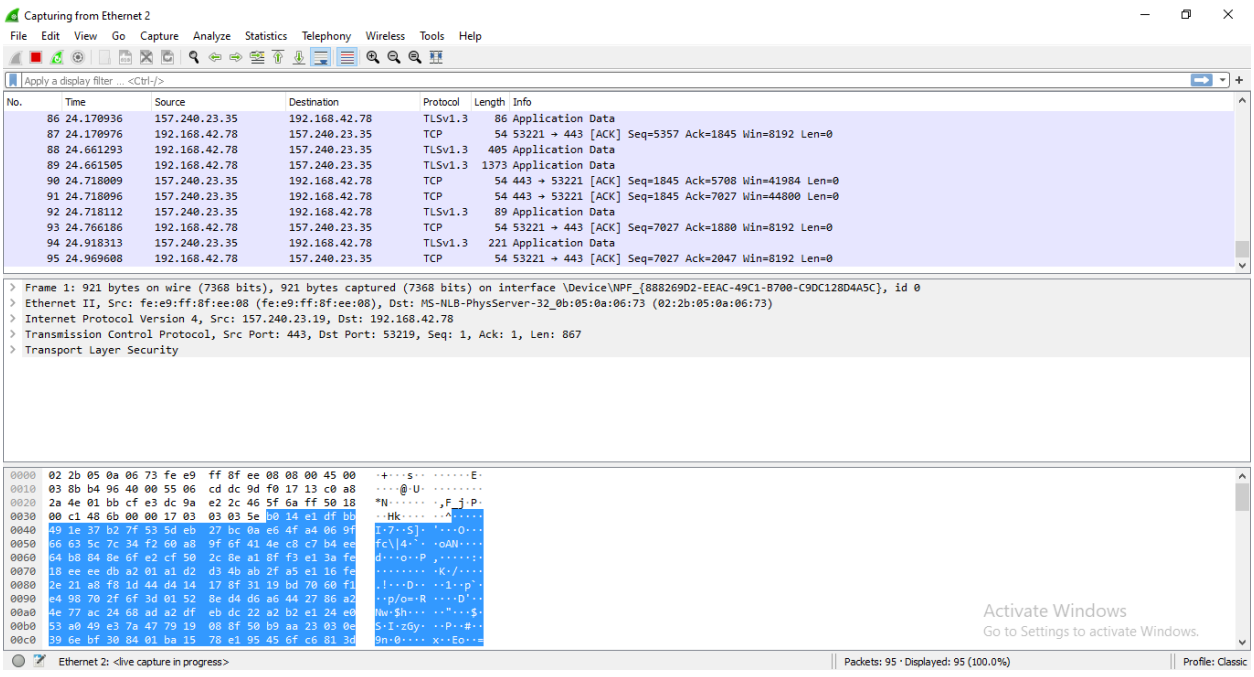

Figure: A sample packet capture window for Wired Data Pack

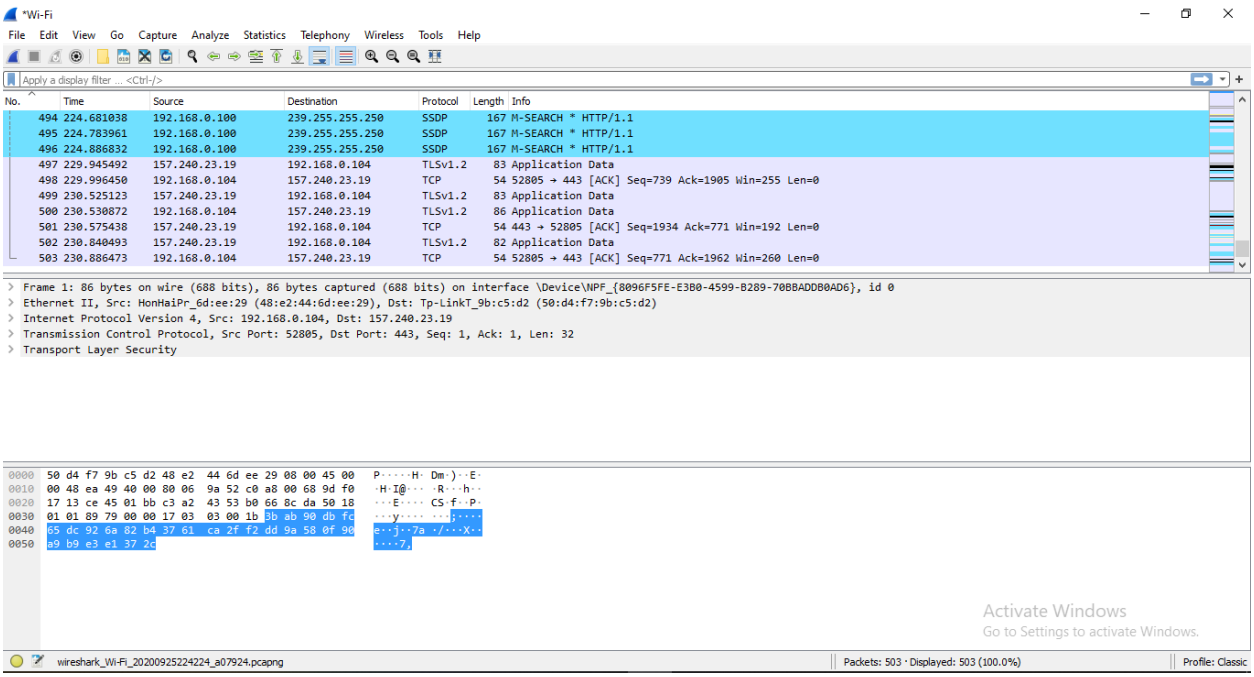

Figure: Stopping Capture for Wi-Fi (Wireless)

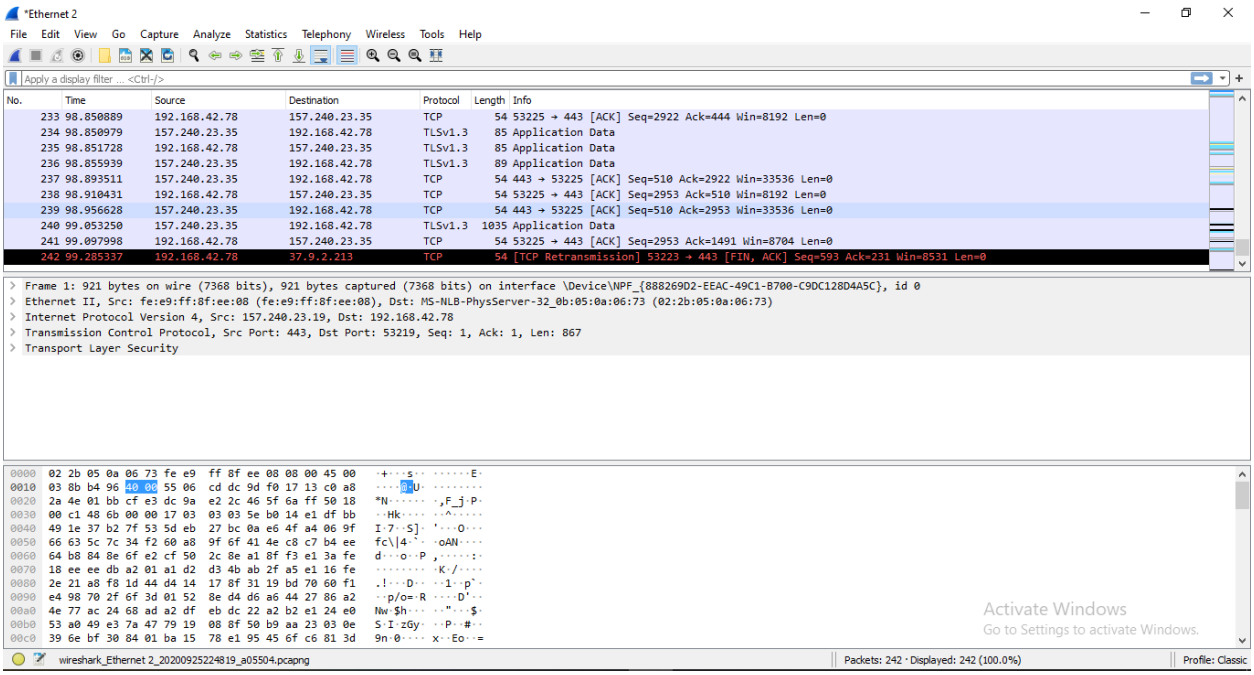

Figure: Stopping Capture for Wi-Fi (Wired)

Filtering: Filtering can be done applying a display filter (such as udp, IP source filter, IP destination filter etc.).

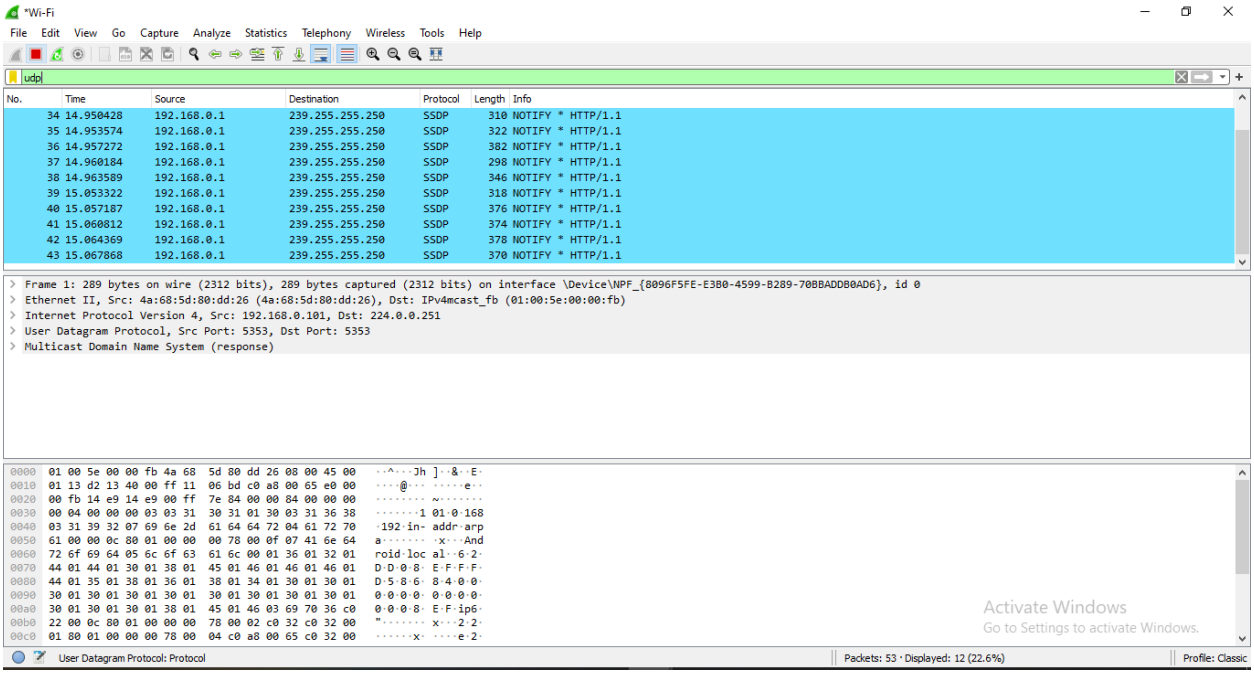

Figure: Filter by Protocol Wireless Data Packets

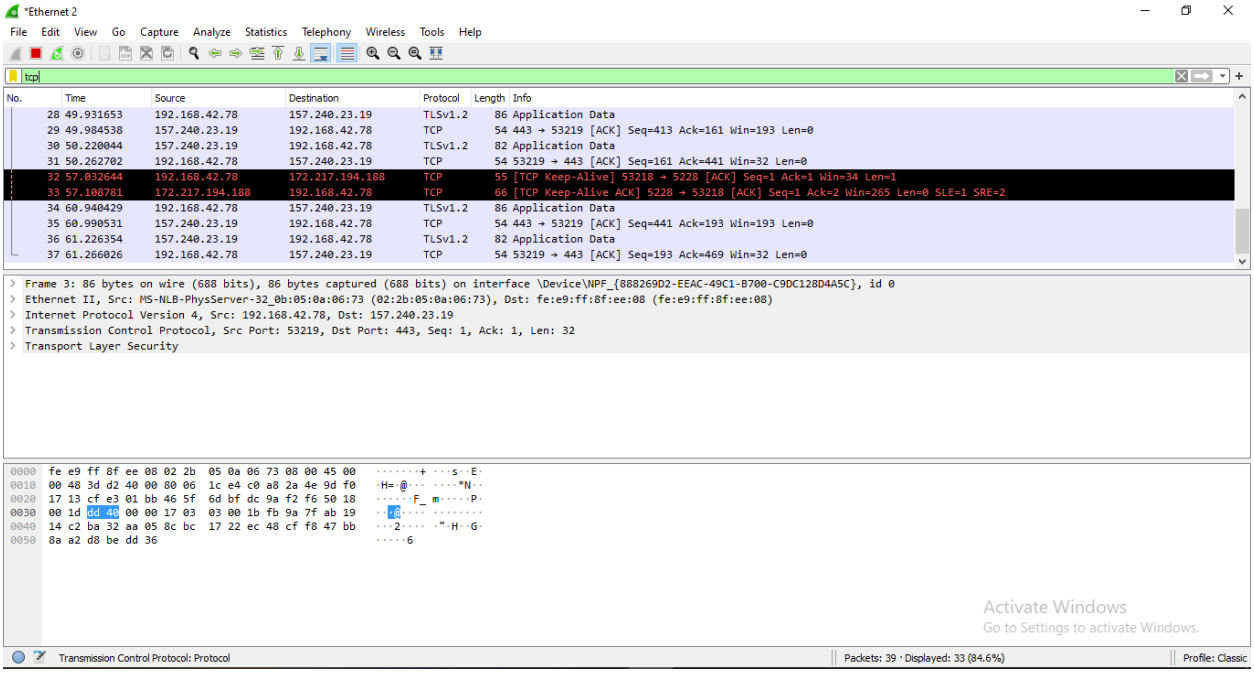

Figure: Filter by Protocol Wired Data Packets

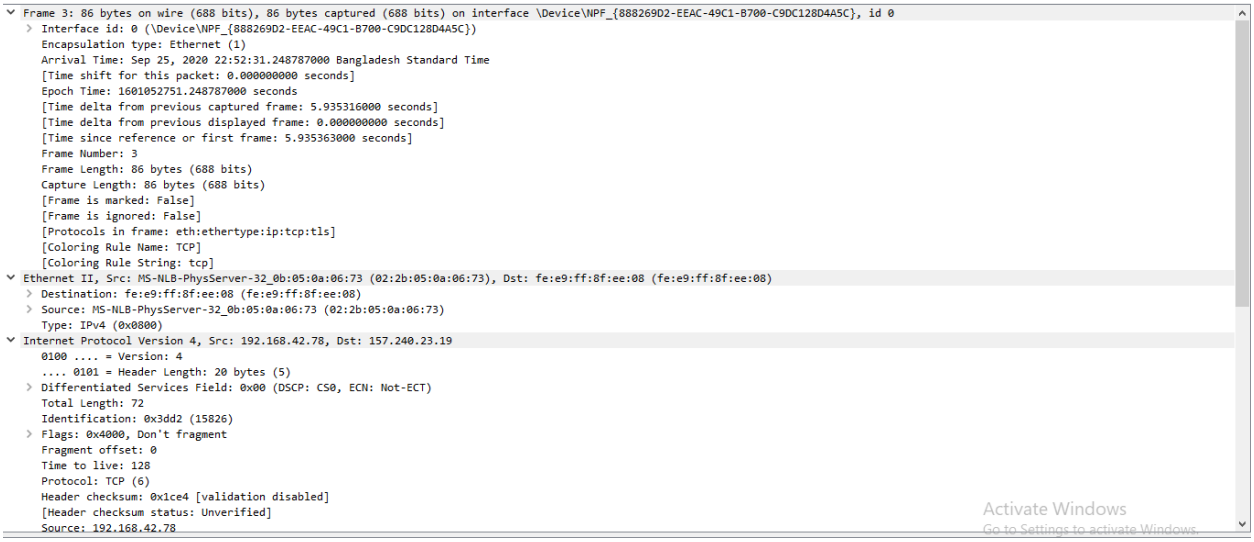

Figure: Packet Details Pane (Frame segment) for Wired Data Packets.

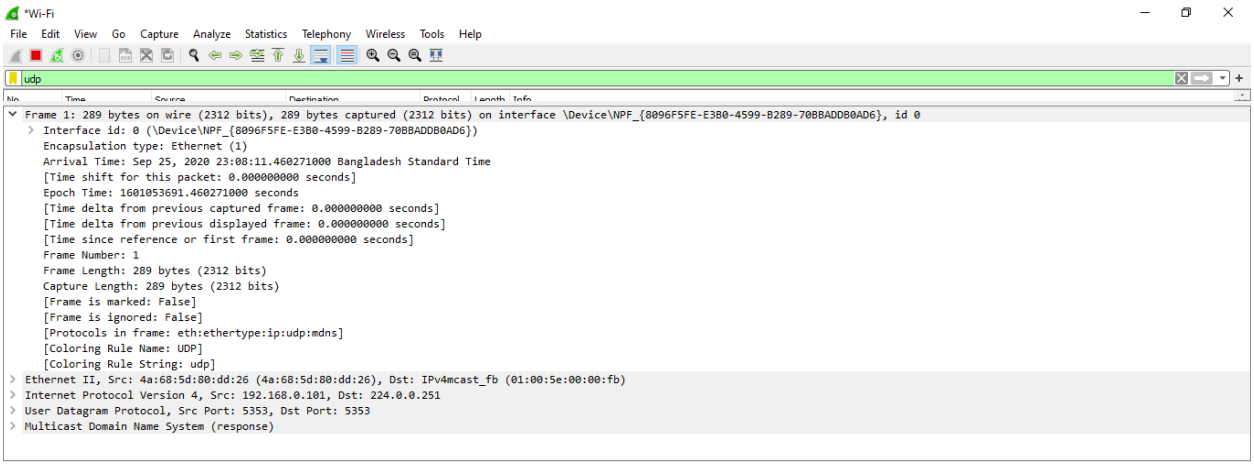

Figure: Packet Details Pane (Frame segment) for Wireless Data Packets.

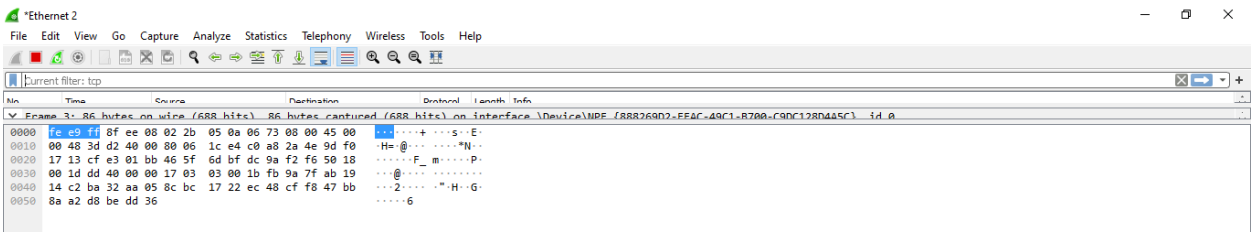

Figure: Packet Byte Pane for Wired data packet (USB Tethering)

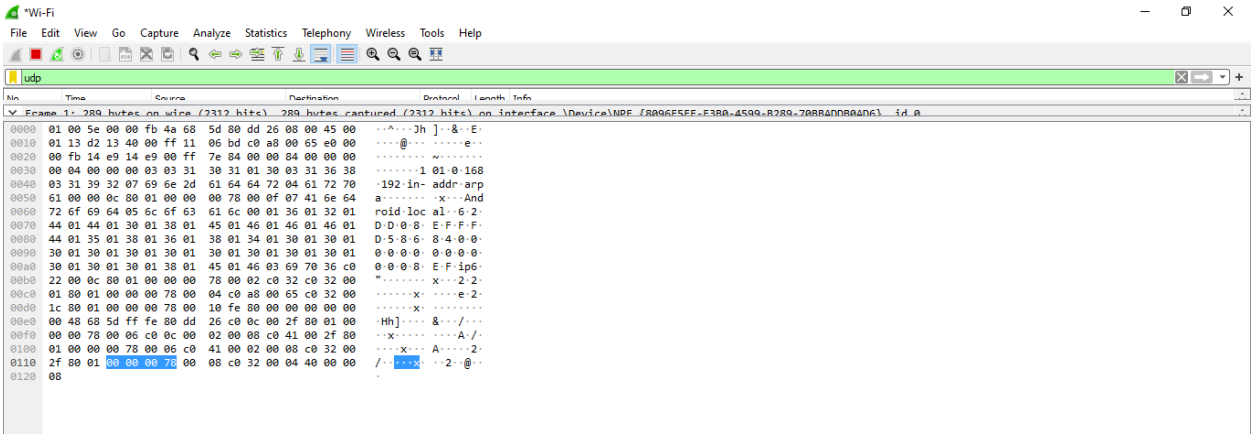

Figure 07-B: Packet Byte Pane (For Wi-Fi)

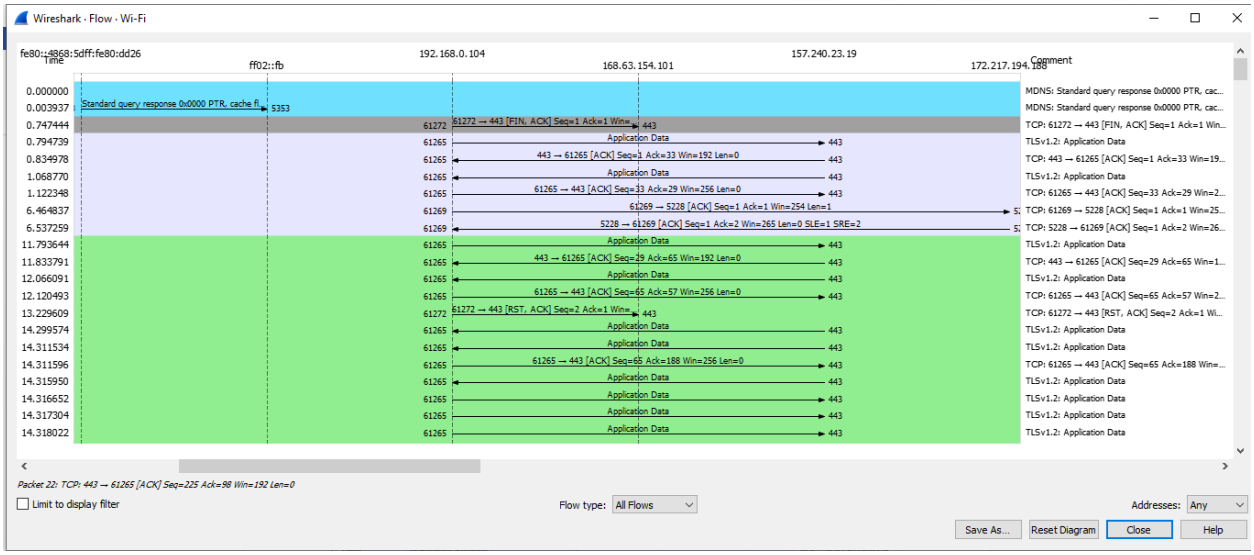

Figure 08-A: Statistics- Flow Graph -All Flows for Wi-Fi (Wireless Data Packages)

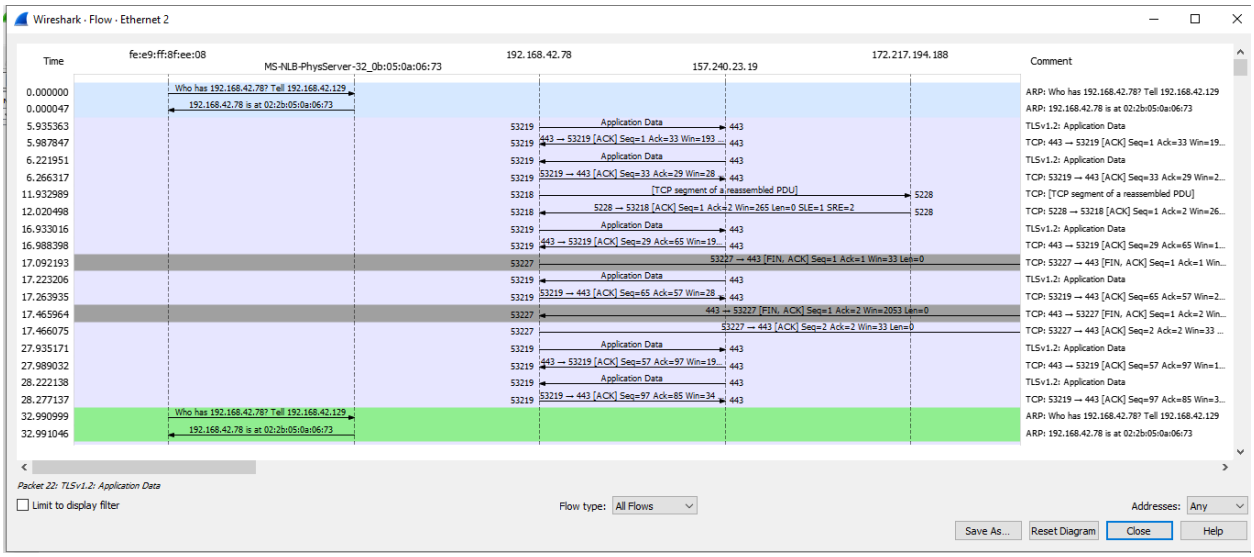

Figure 08-B: Statistics- Flow Graph -All Flows for Ethernet2(Wired Data Packages)

Conclusion:

Here in this experiment, using Wireshark live packet data from a network interface can be captured easily whether it is wired or wireless. Applying a display filter particular traffic can be monitored in both cases.Wired network is much more efficient than wireless network. Because wired data packages transfer rate are very much faster than wireless.

All tasks have been done perfectly.