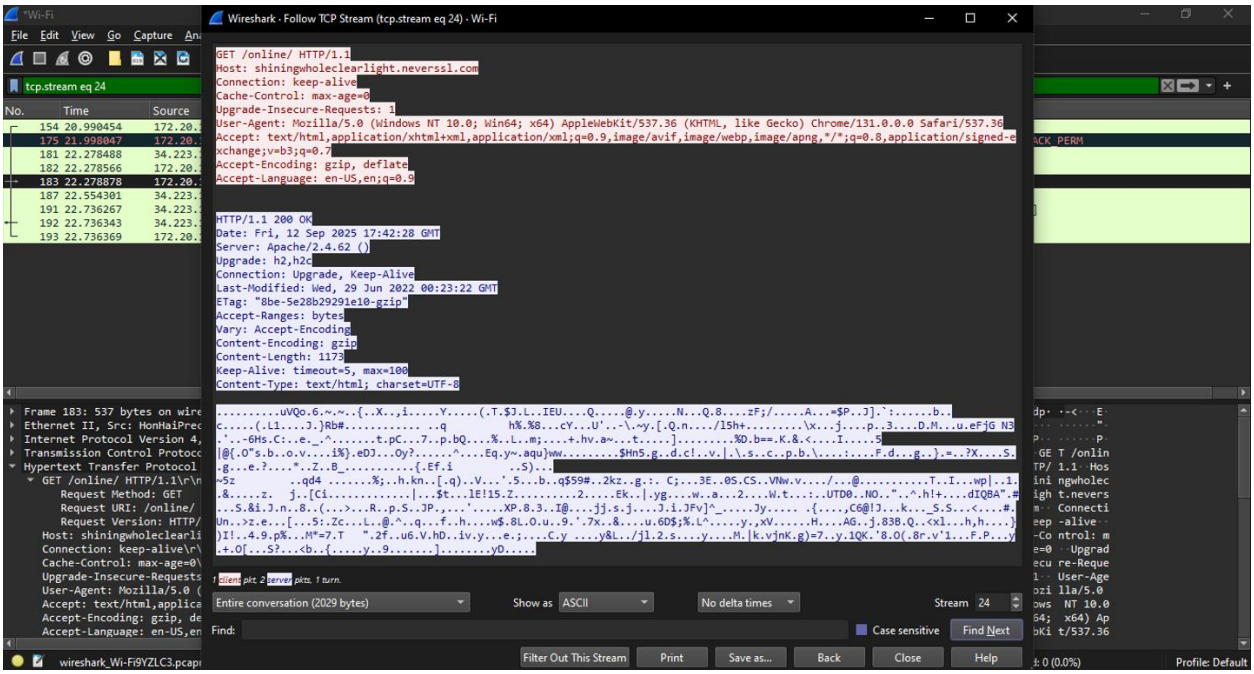
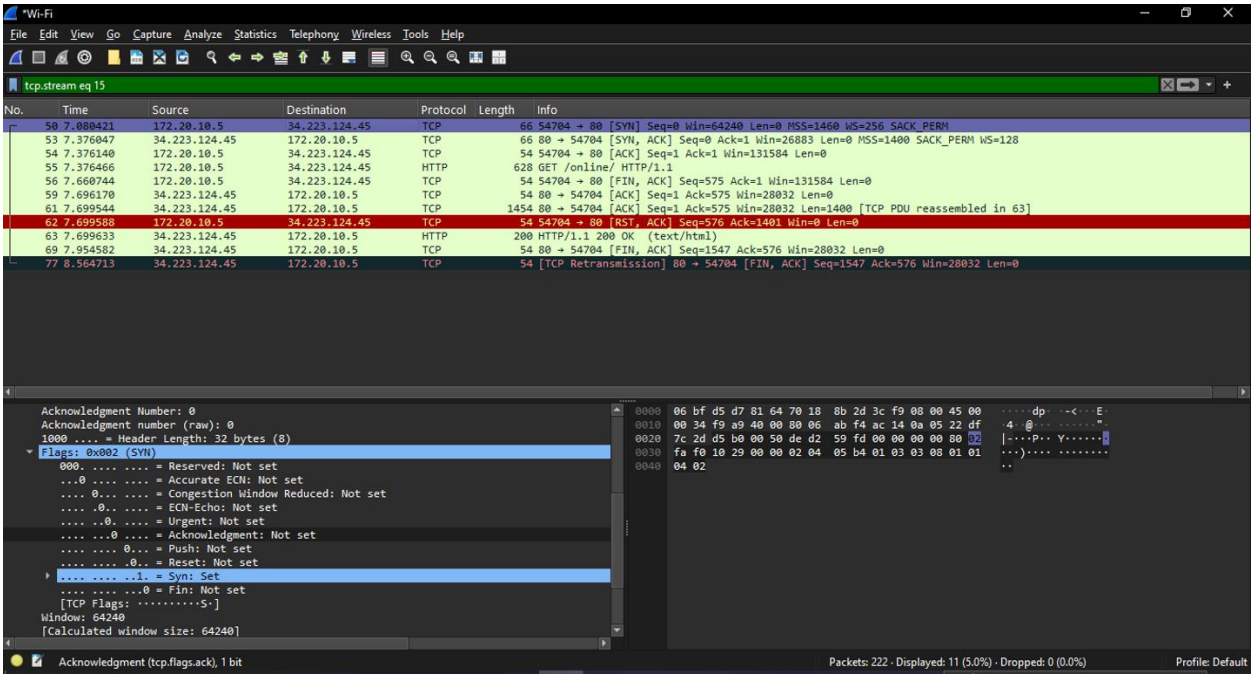
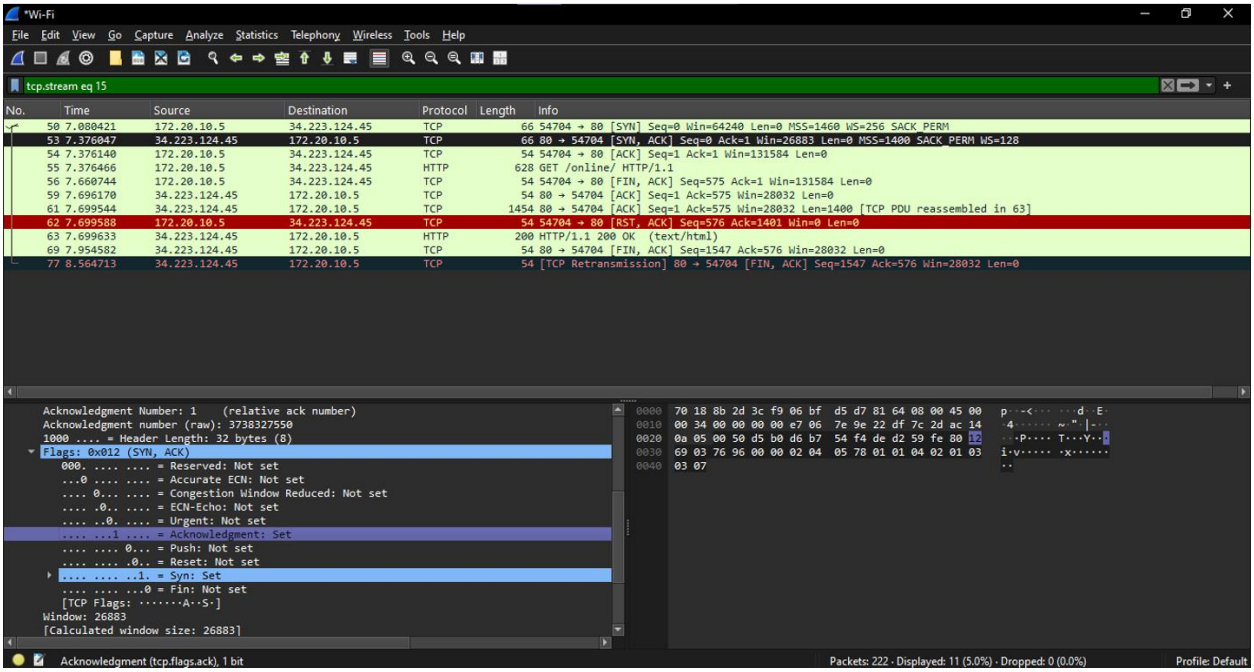
Filter TCP packets:



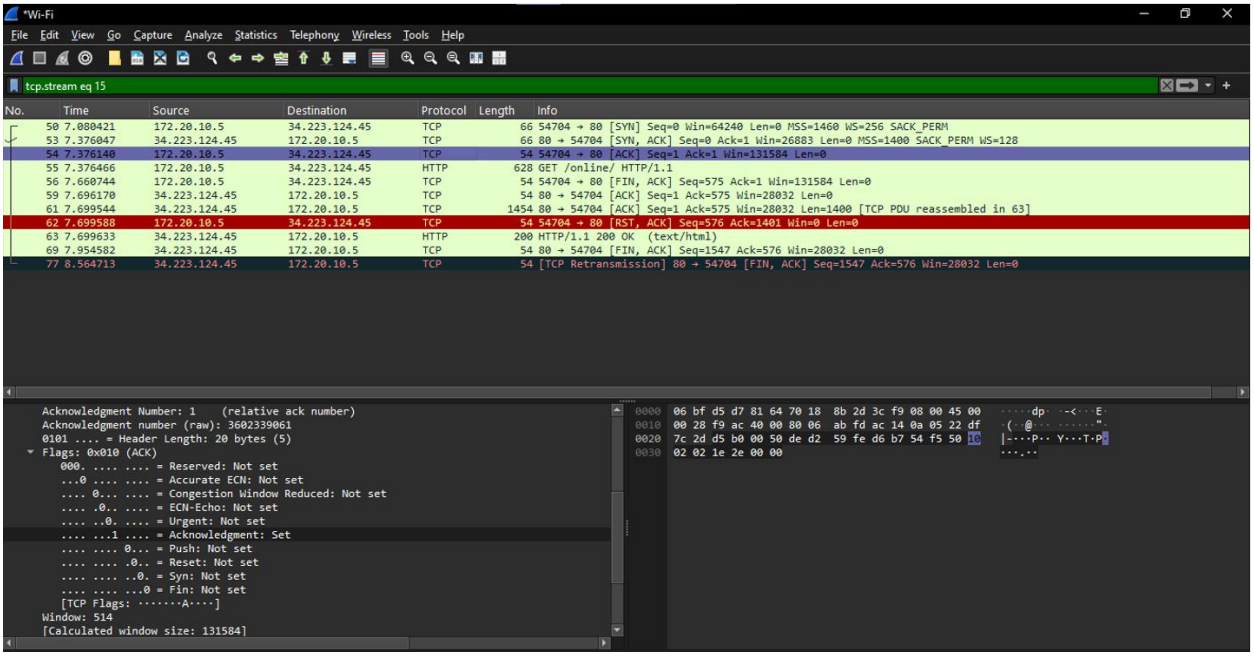
TCP handshake



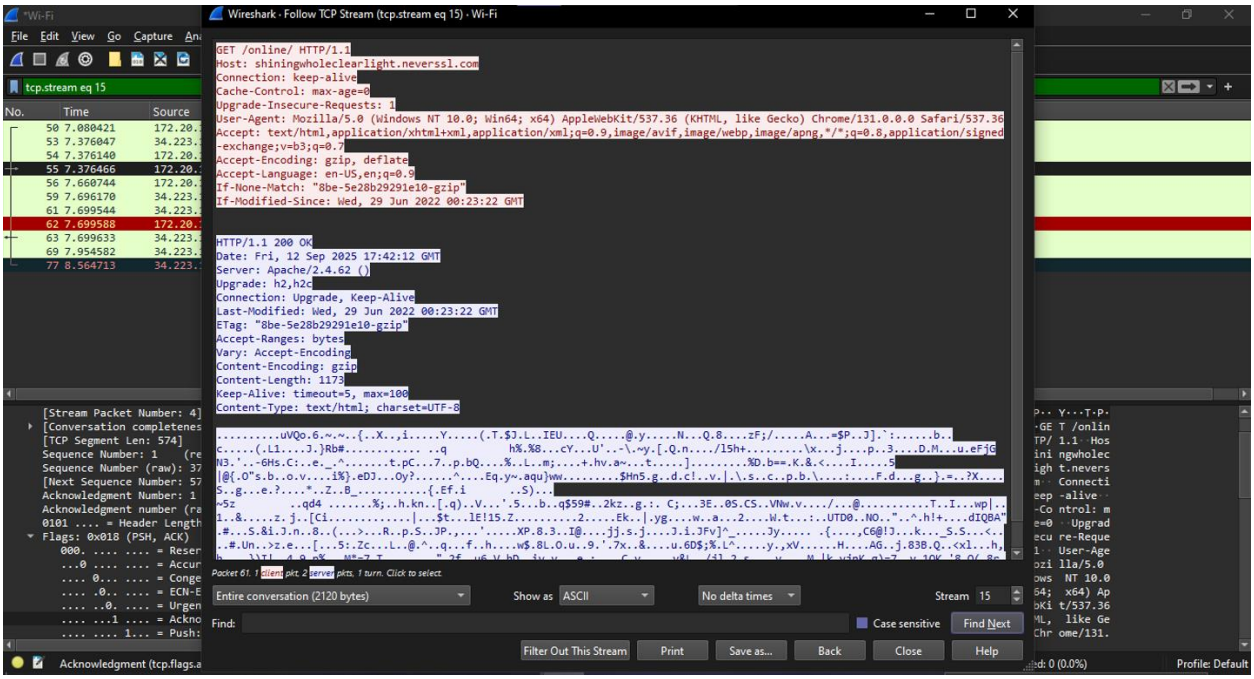
SYN-ACK: Acknowledges and responds to the SYN



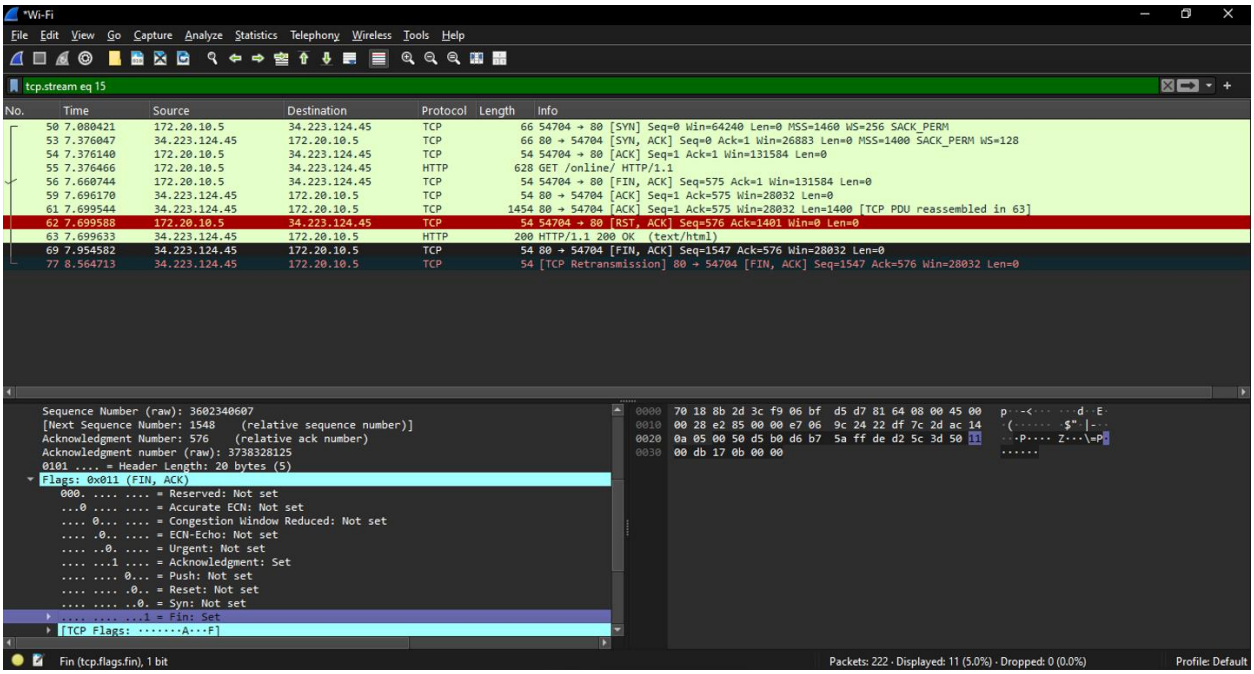
ACK: Acknowledges the SYN-ACK and establishes the connection:



Observe the data packets exchanged between the client and server



Look at the TCP termination process (FIN, ACK packets).



Task 1: Fill in the following table and provide reasons.

	TCP or UDP	Reasons
Reliability and Connection Establishment	TCP	TCP is connection-oriented and uses a handshake to establish a reliable connection.
Reliability and Connection Establishment	UDP	TCP guarantees data integrity using checksums and ensures packets are delivered in the correct order using sequence numbers.

Task 2: Identify the use Cases and Performance of TCP and UDP. ask 2: Identify the use Cases and Performance of TCP and UDP.

	TCP	UDP
Use cases	Web browsing (HTTP/HTTPS), Email, File transfer (FTP)	Video streaming, Online gaming, VoIP, Live broadcasts
Performance	Slower but reliable due to error checking, acknowledgments, and retransmissions	Faster with low latency because there is no connection setup or retransmission