

ATHARVA YADAV
ROLL NO. 127
BATCH : S23

NETWORK LAB ASSIGNMENT

AIM : Establish a WireShark Connection and analyse the protocols and its headers :
WIRESHARK

INSTALATION:

ChatGPT

ChatGPT

Here are the concise steps to install Wireshark on Windows:

1. **Download:**

- Go to the [Wireshark website](#).
- Download the installer for Windows.

2. **Run Installer:**

- Open the downloaded **.exe** file.

3. **Install Wireshark:**

- Follow the installation prompts.
- Choose components to install (like WinPcap or npcap).

4. **Add to PATH:**

- Select the option to add Wireshark to the system PATH.

5. **Complete Installation:**

- Finish the installation process.

6. **Launch Wireshark:**

- Open Wireshark from the Start menu or desktop shortcut.

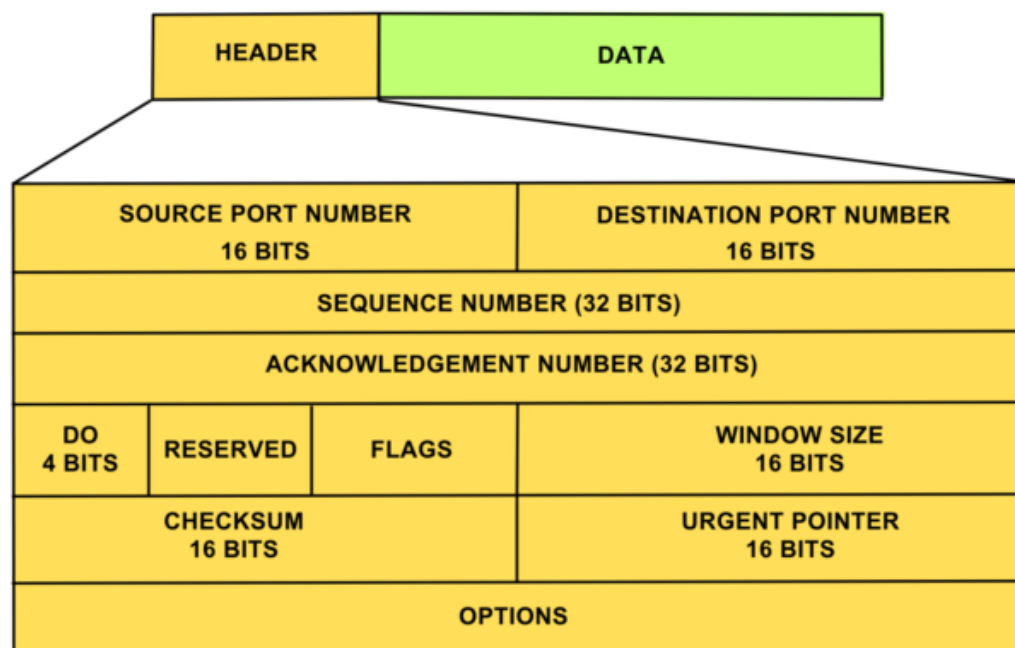
7. **Capture Privileges:**

- If needed, run Wireshark as Administrator for packet capture.

Wireshark is a network protocol analyzer used for:

- **Packet Analysis:** Capturing and inspecting network packets.
- **Network Troubleshooting:** Diagnosing and resolving network issues.
- **Protocol Analysis:** Understanding and analyzing various network protocols.
- **Security Analysis:** Identifying and investigating security threats in network traffic.
- **Network Performance Monitoring:** Monitoring network performance metrics.
- **Application Protocol Debugging:** Troubleshooting application-level protocols.
- **Educational Tool:** Teaching networking and packet analysis concepts.
- **Development and Testing:** Testing network-enabled applications.

TCP PROTOCOL :



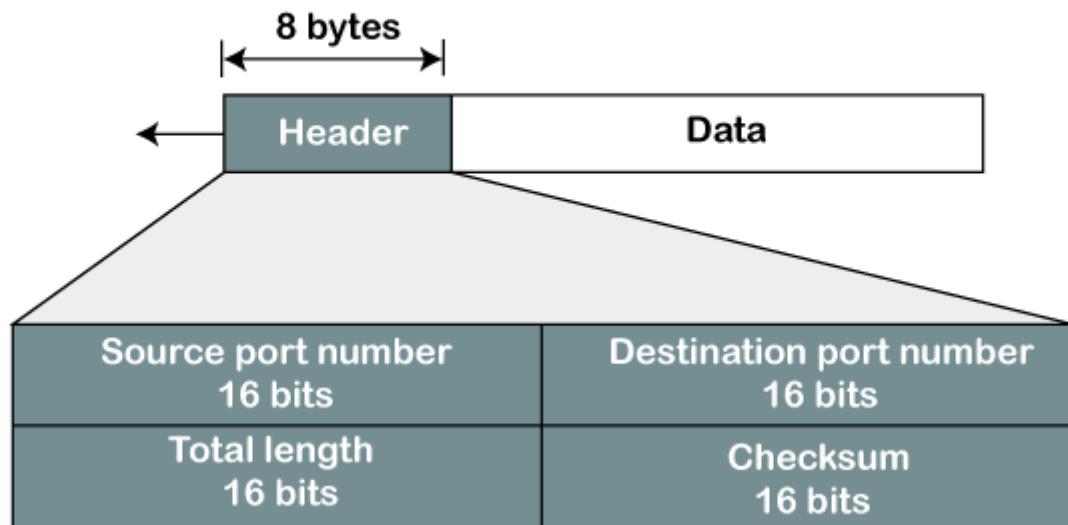
SOURCE PORT: 443	Destination Port: 50874
------------------	-------------------------

Sequence Number (raw): 1739018096					
Acknowledgment Number: 593 (relative ack number)					
<table border="1"> <tr> <td>0101 = Header Length: 20 bytes (5)</td><td>Reserved</td><td>Flags: 0x011 (FIN, ACK)</td></tr> </table>		0101 = Header Length: 20 bytes (5)	Reserved	Flags: 0x011 (FIN, ACK)	Window: 261
0101 = Header Length: 20 bytes (5)	Reserved	Flags: 0x011 (FIN, ACK)			
Checksum: 0xa5a7		Urgent Pointer: 0			

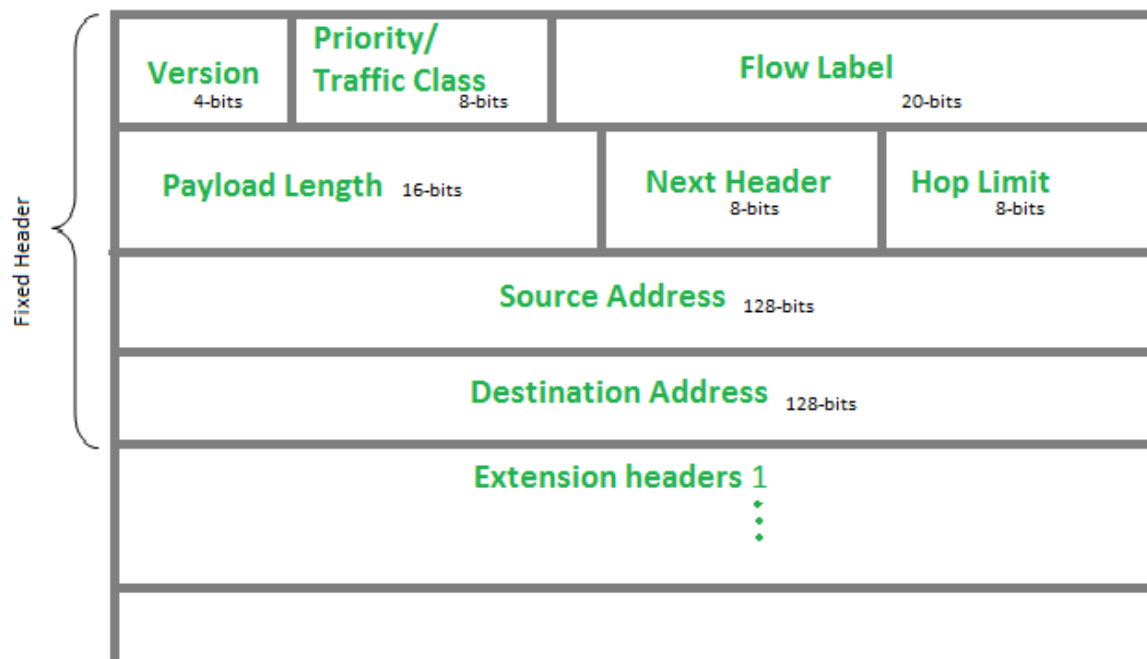
UDP PROTOCOL :

Source Port: 54799	Destination Port: 443
Length: 37	Checksum: 0x6b51 [unverified]

UDP Header Format



IP HEADER:



<div> <div>Version: 6</div> <div>Traffic Class: 0x00 (DSCP: CS0, ECN: Not-ECT)</div> </div>		Flow Label: 0x00000
Payload Length: 36	<div> <div>Next Header: IPv6 Hop-by-Hop Option (0)</div> <div>Hop Limit: 1</div> </div>	
Source Address: fe80::ba63:928b:ccaa:d22b		
Destination Address: ff02::16		

CONCLUSION : The network assignment on installing Wireshark equips you with a valuable tool for network analysis and troubleshooting. Wireshark is a powerful packet sniffer that allows you to capture and inspect network traffic data flowing across your network. By successfully installing Wireshark

LO 5: To observe and study the traffic flow and the contents of protocol frames.