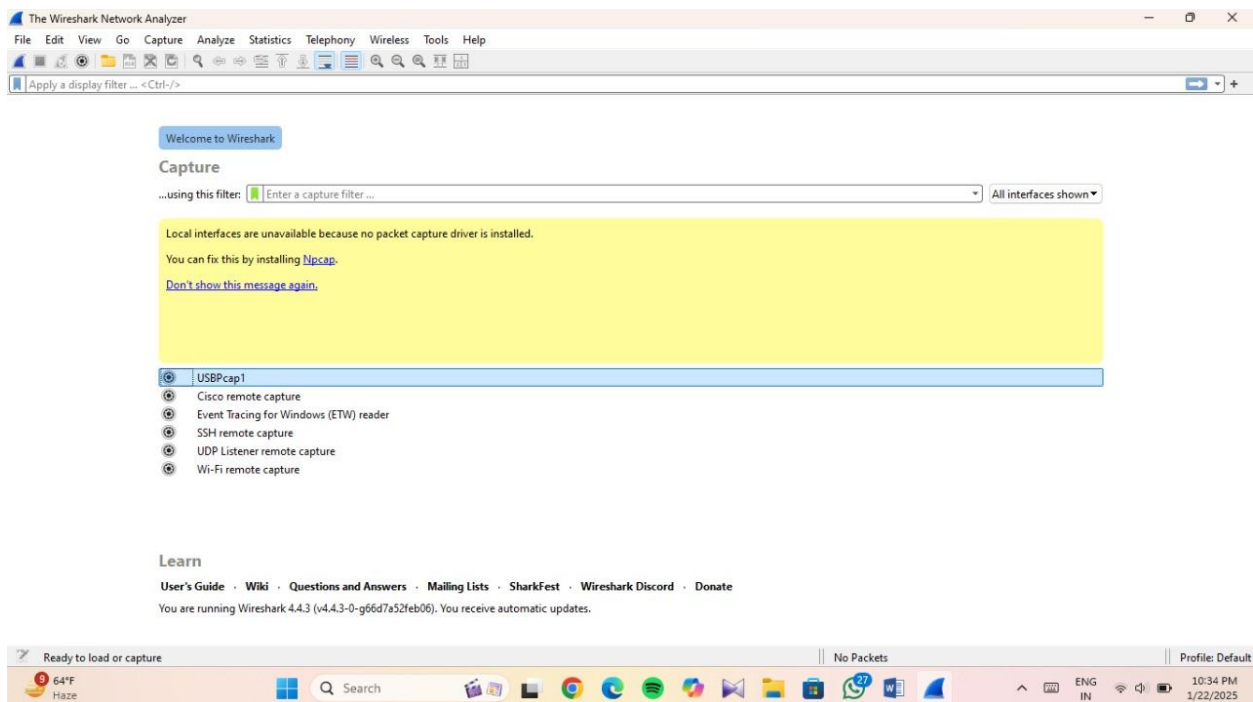**Wireshark:**

Wireshark is a tool that lets you see what's happening on your computer network. It shows you all the data being sent and received, like websites you visit, files you download, or emails you send.

Wireshark is a powerful tool for capturing and analyzing network data, showing detailed information about packets traveling between your computer and the internet. It helps you understand traffic by revealing who is sending data, where it's going, and what type of data is being transmitted. With its ability to diagnose network issues, Wireshark is great for solving problems like slow internet or connectivity errors. Additionally, it's widely used in cybersecurity to study data flows and detect potential threats, making it an essential tool for both troubleshooting and learning.

Wireshark Install:

1.Capture packets while browsing the internet:

2. Identify HTTP Vs HTTPS traffic

2.1 Identify HTTP traffic:

Identify HTTP Traffic using port 80:

2.2 Identify HTTPS TRAFFIC:

Using SSL filter :

Identify HTTPS :

Using port 443:

3.Identify the IP address of a website you visit.

4.Ping google.com:


```
Command Prompt                                                                                    —  □  ×

Microsoft Windows [Version 10.0.22631.4602]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>ping google.com

Pinging google.com [2404:6800:4009:827::200e] with 32 bytes of data:
Reply from 2404:6800:4009:827::200e: time=20ms
Reply from 2404:6800:4009:827::200e: time=117ms
Reply from 2404:6800:4009:827::200e: time=19ms
Reply from 2404:6800:4009:827::200e: time=65ms

Ping statistics for 2404:6800:4009:827::200e:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 19ms, Maximum = 117ms, Average = 55ms

C:\Users\HP>
```

5.tracert google.com


```
Command Prompt                                                                                    —  □  ×

C:\Users\HP>ping google.com

Pinging google.com [2404:6800:4009:827::200e] with 32 bytes of data:
Reply from 2404:6800:4009:827::200e: time=20ms
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Reply from 2404:6800:4009:827::200e: time=65ms

Ping statistics for 2404:6800:4009:827::200e:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 19ms, Maximum = 117ms, Average = 55ms

C:\Users\HP>tracert google.com

Tracing route to google.com [2404:6800:4009:827::200e]
over a maximum of 30 hops:

  1     3 ms     5 ms     4 ms  2405:201:3027:5047:8ea3:99ff:fe91:fee
  2     *        *        *     Request timed out.
  3    47 ms     9 ms    10 ms  2405:200:801:1200::1004
  4    32 ms     8 ms     9 ms  2405:200:801:1200::105e
  5    26 ms     8 ms     5 ms  2405:200:870:3168:61::6
  6     *        *        *     Request timed out.
  7   119 ms     9 ms   208 ms  2405:200:801:1200::4ba
  8     *        *        *     Request timed out.
  9    24 ms    64 ms    23 ms  2405:200:801:200::9b3
 10    20 ms    21 ms    22 ms  2001:4860:1:1::270
 11    85 ms    58 ms     *     2001:4860:0:1::871f
 12    52 ms    22 ms    22 ms  2001:4860:0:1::2b4b
 13    56 ms    23 ms    48 ms  bom12s14-in-x0e.1e100.net [2404:6800:4009:827::200e]

Trace complete.

C:\Users\HP>
```