# COMPUTER NETWORKS (CS F303)

## Assignment #1

## Wireshark and Network Programming

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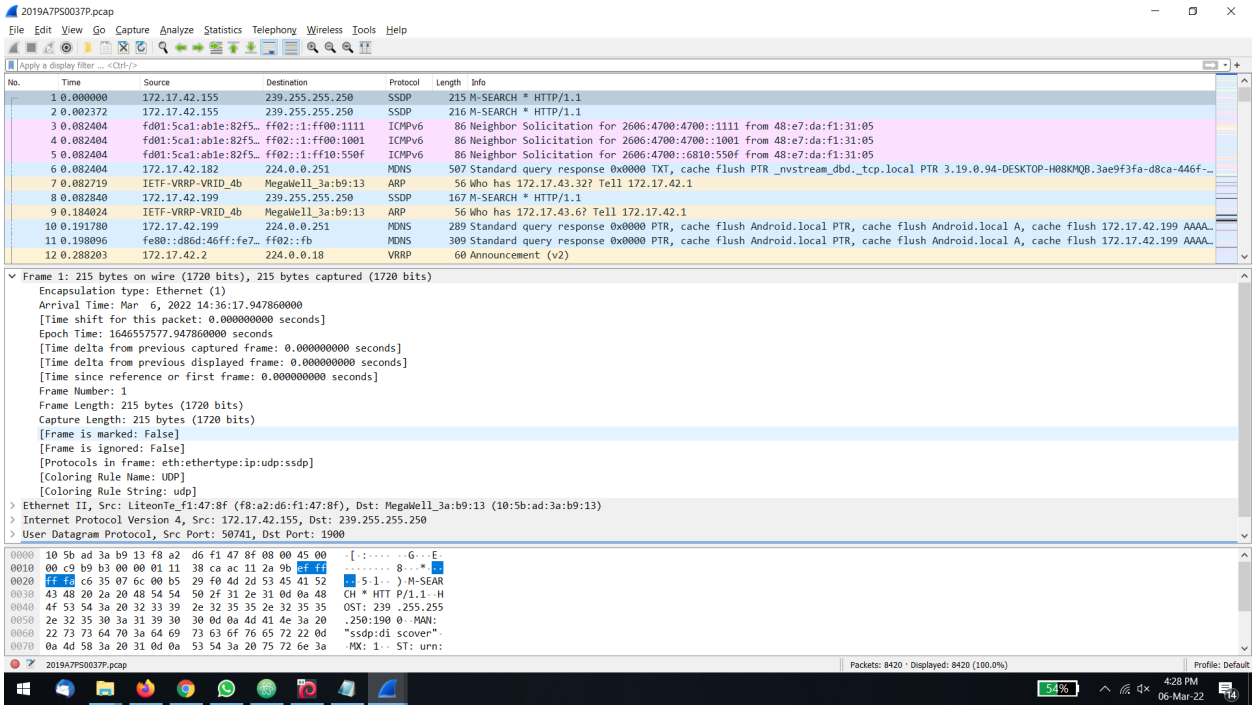
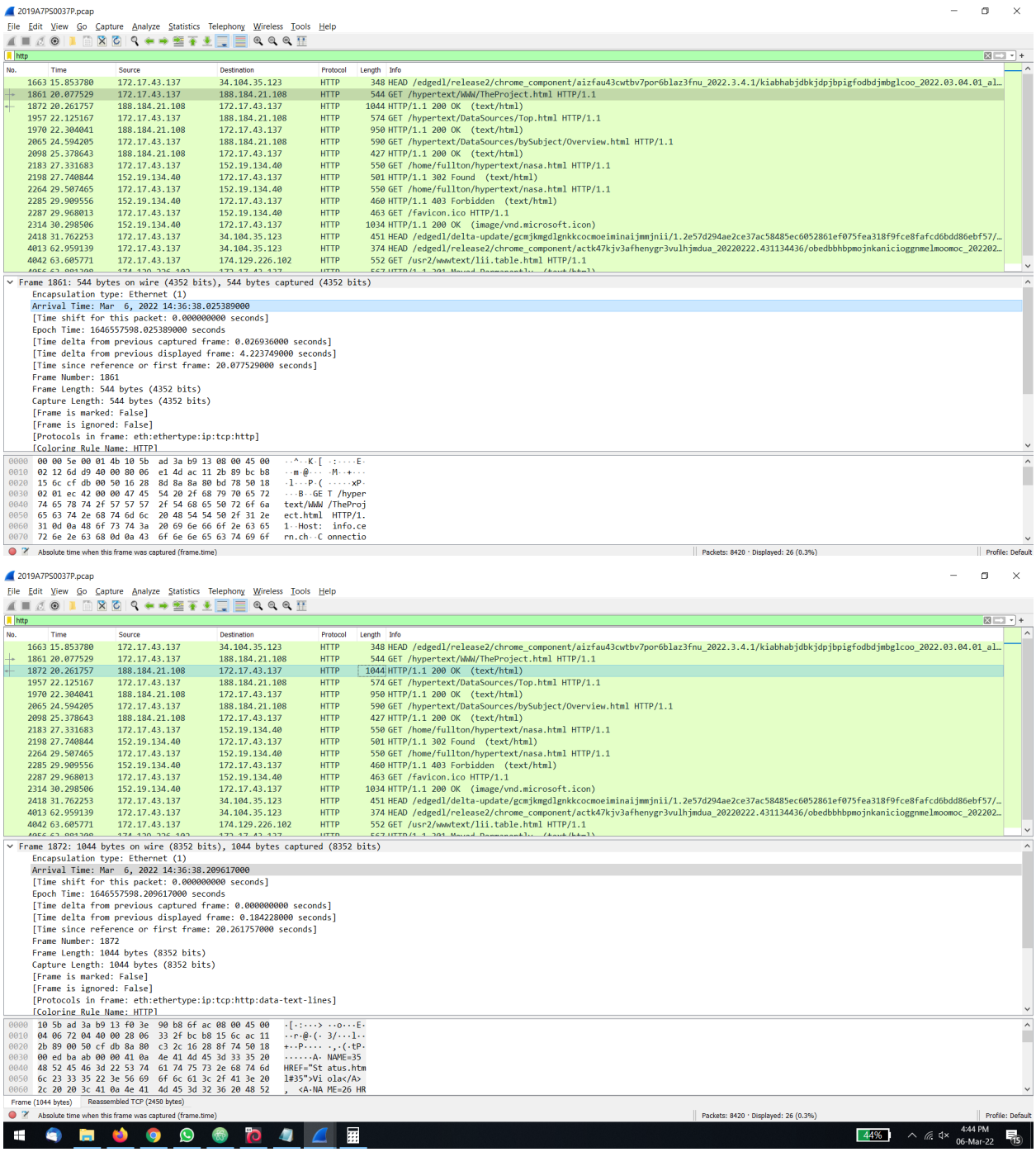
### Q.2 Traffic capturing and analysis using Wireshark.

1) What is the duration of your packet capture in seconds? What about the start and end time of the capture expressed in hh:mm:ss?

A. Duration of packet capture - 105.4550




B. Start and end time -
Arrival Time: 14:36:38.025
End Time - 14.36.38.209
Difference - 0.184 seconds



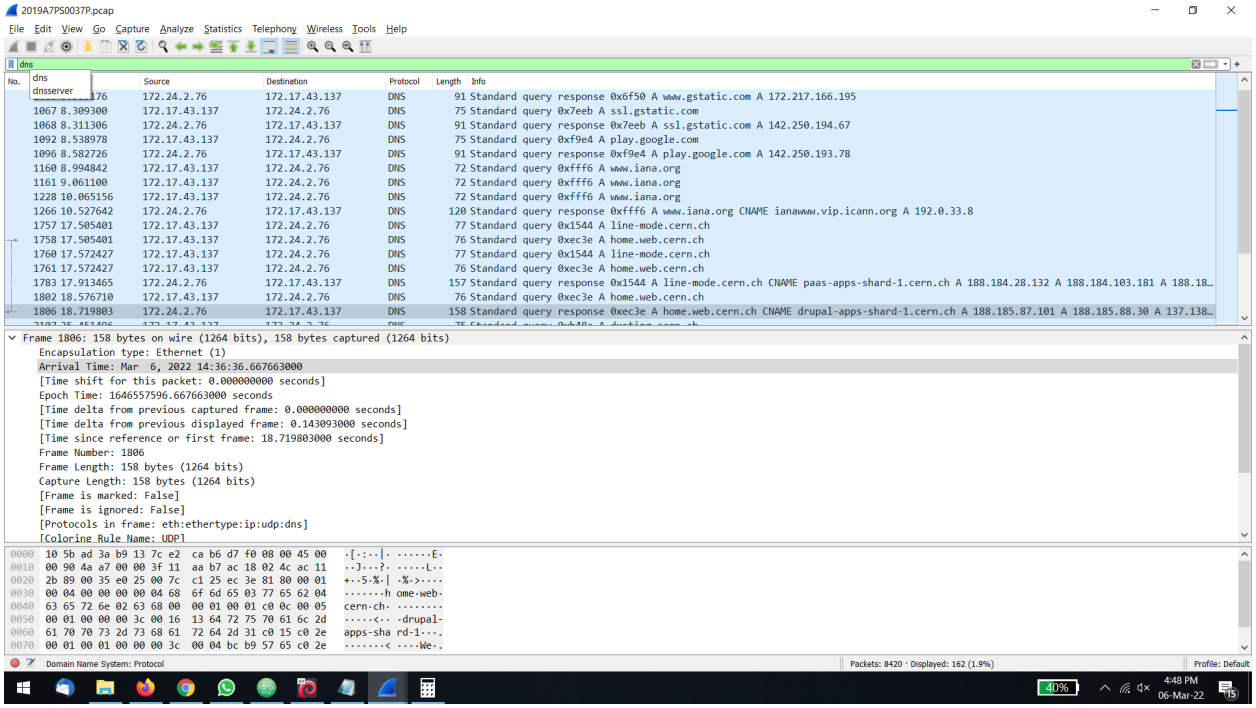

2) How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received for the web pages (at least 3) you visited in your web browser?

a) 0.184 second b)0.178 sec c) 0.209 sec

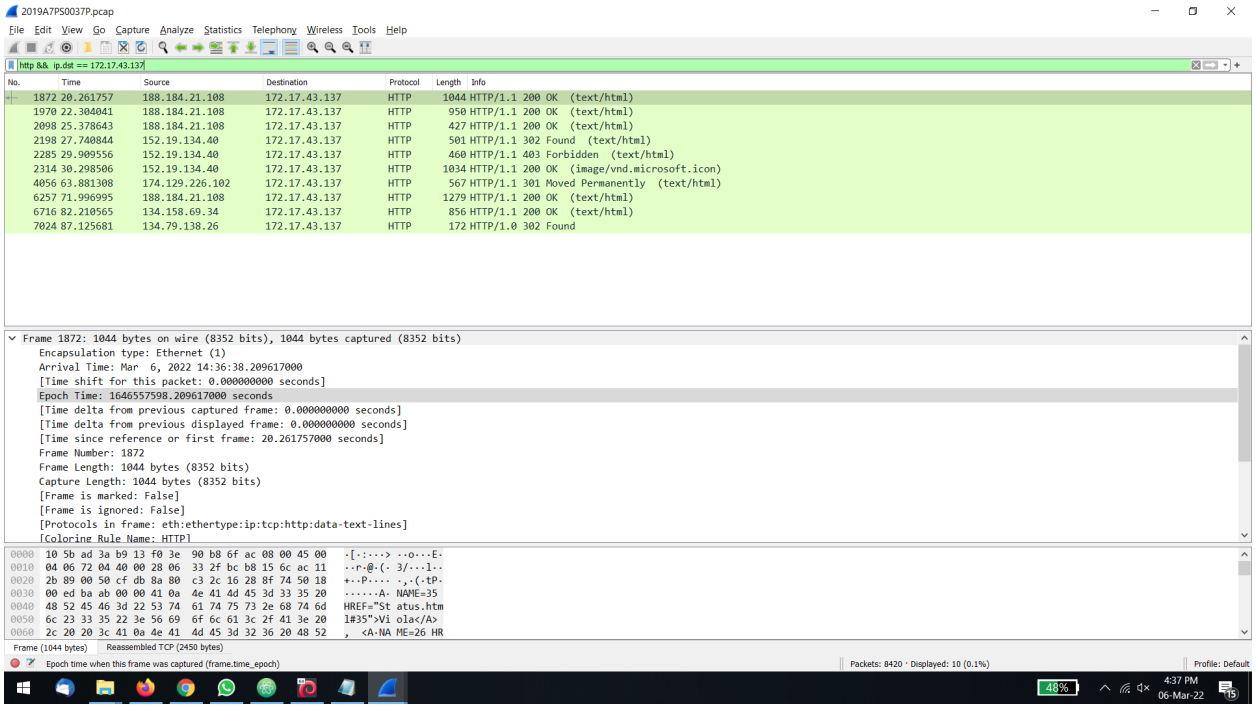
3) What is the Internet (IP) address of the URLs you visited and what is the Internet address of your computer?

IP address of websites visited =
(Info.cern.ch) - 188.184.21.108

4) What is the IP address of the DNS server you are connecting to?
172.24.2.76



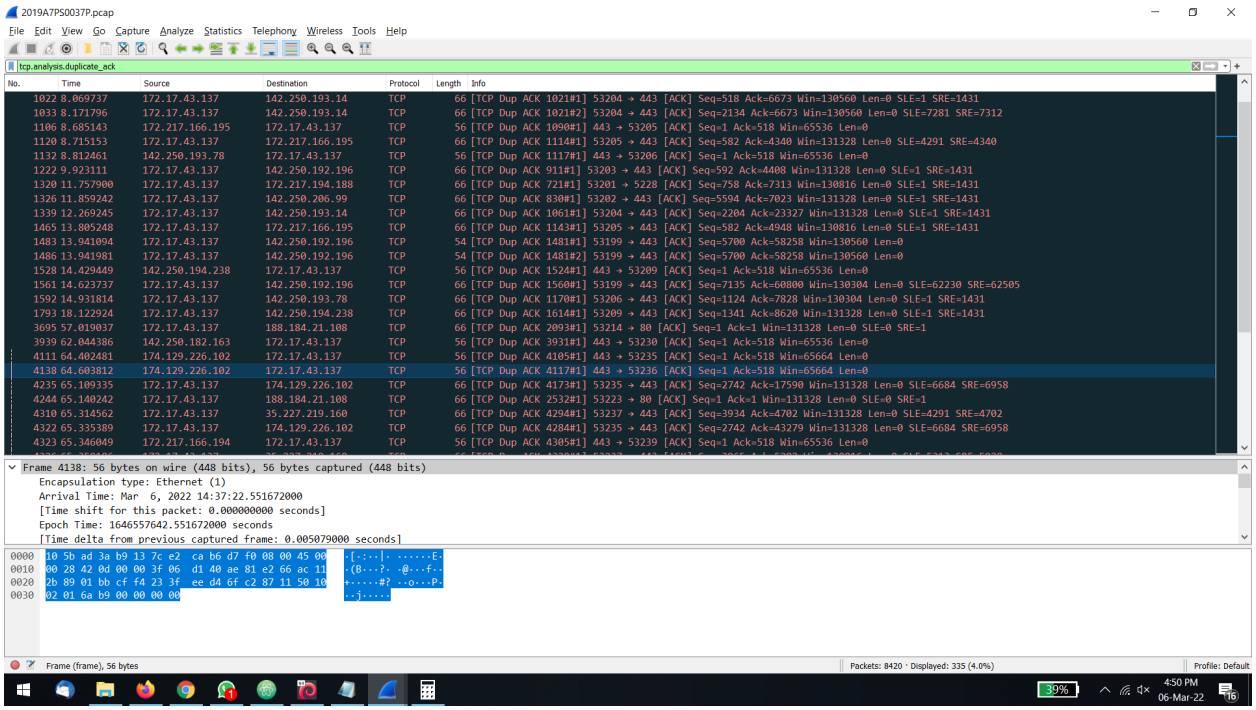

5) List the application layer protocols that you see in protocols field that are using UDP and TCP respectively.
6) Locate TCP handshake segments and find the sequence number of SYN, SYN+ACK and ACK messages of all the TCP connections made by your computer.
7) Find out all incoming (received by your machine) http traffic.




8) Find out the list of all TCP connections which have been reset. Provide appropriate reason for connection reset.

9) List all TCP segments which are sent and received by your machine having header length more than 20 bytes. Give the appropriate reason for header length larger than the default size.

10) List all the duplicate ACK TCP segments.




11) Provide the sequence number of any one out-of-order TCP segment captured in your trace file.

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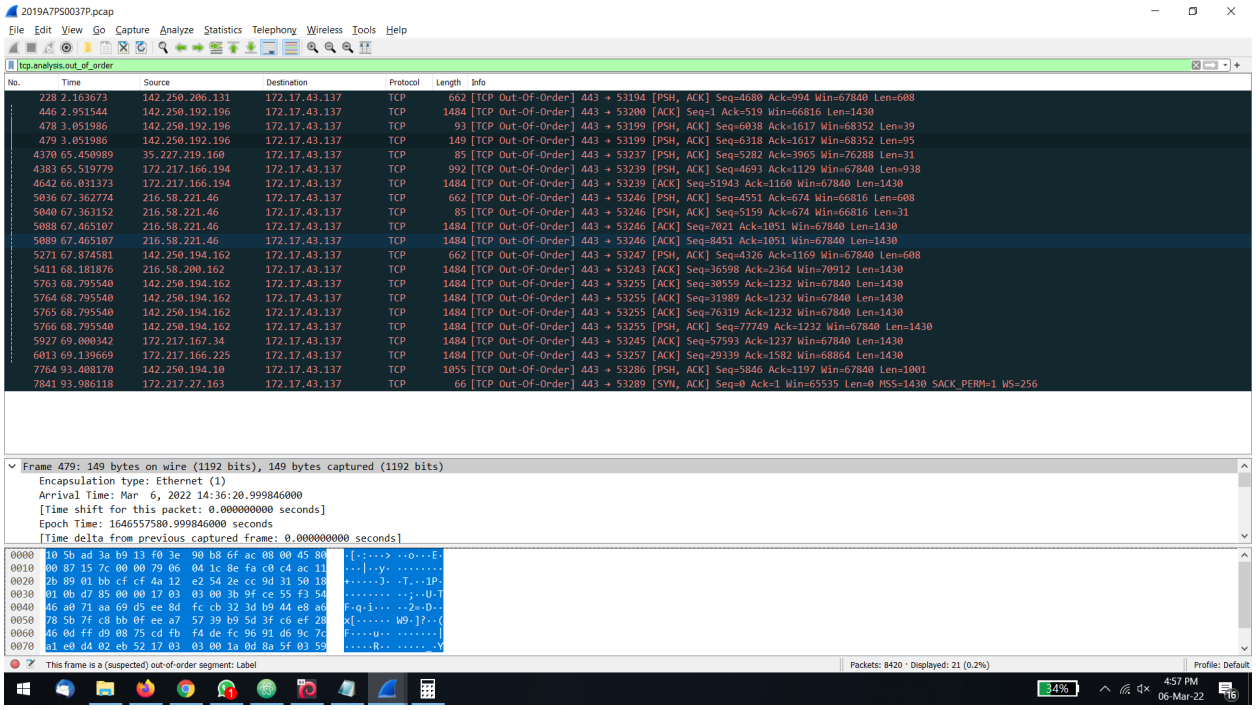
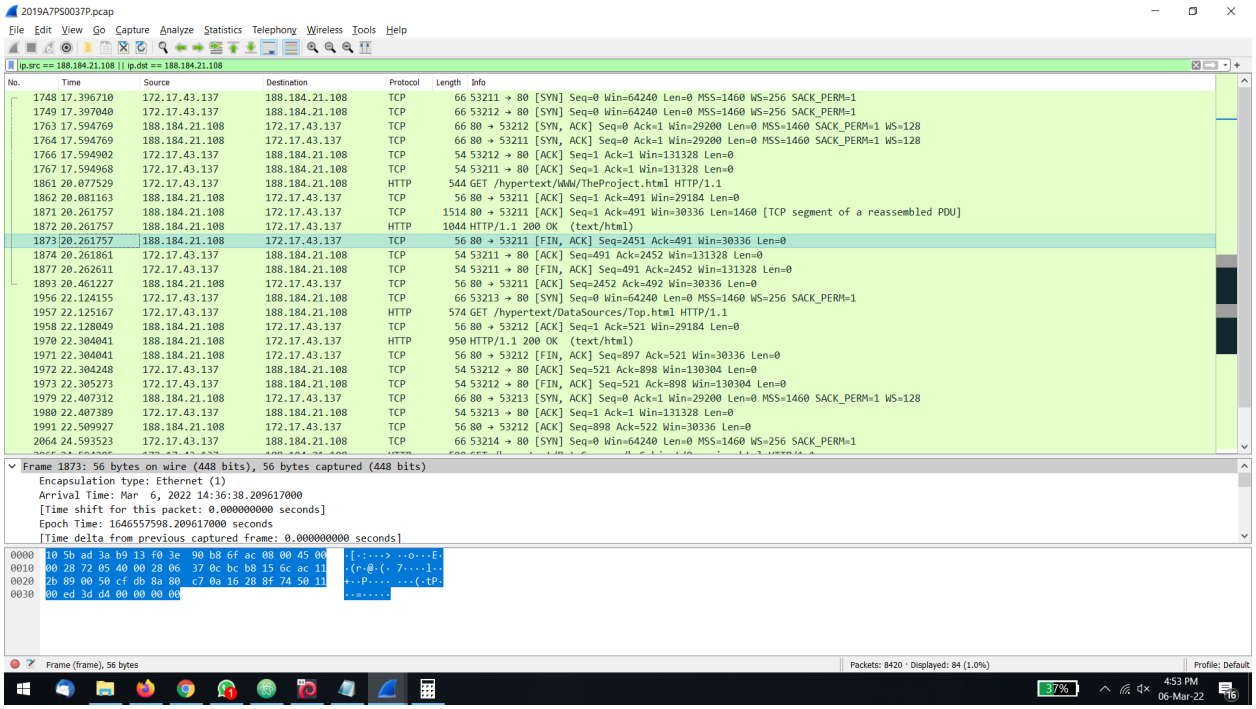


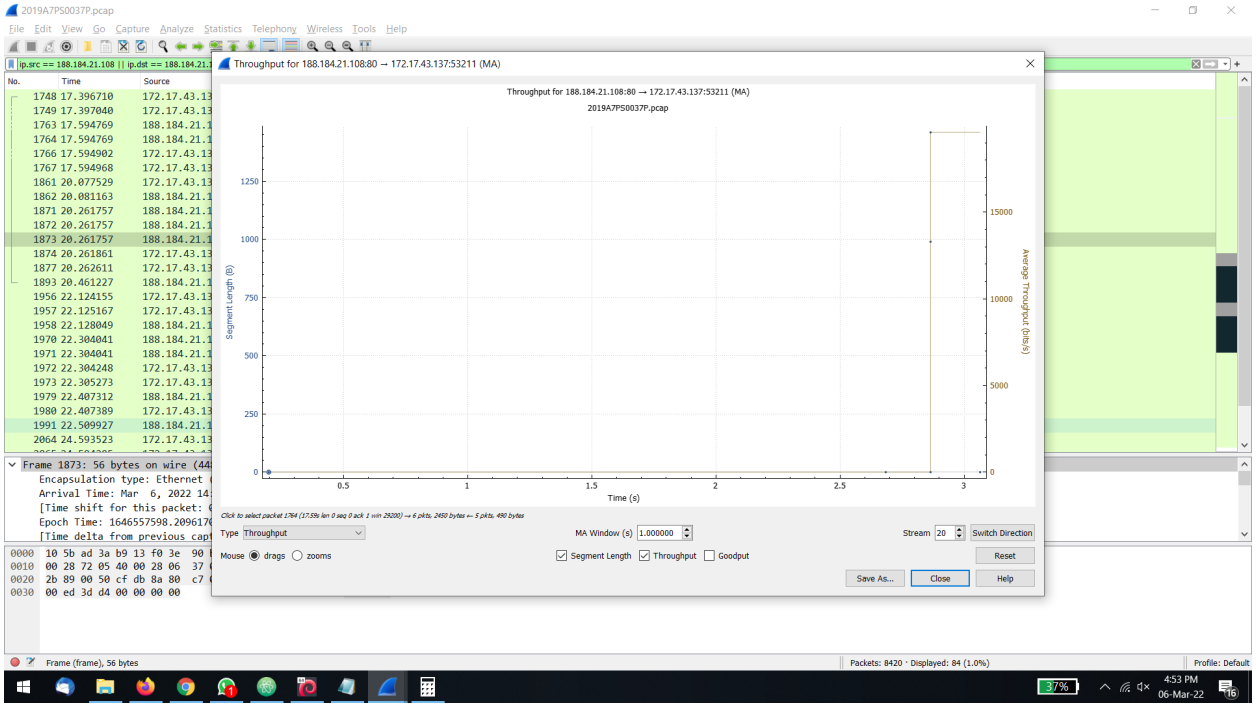

12) How many number of HTTP request (i.e., GET and POST) messages did your browser send?

Number of http - 11

13) Find out all the traffic between your machine and a particular (of your choice) web site (IP address).




14) Calculate the throughput of all the TCP connection involved in question 13.


2019A7PS0037P.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
Throughput for 188.184.21.108:80 → 172.17.43.137:53211 (MA)
Throughput for 188.184.21.108:80 → 172.17.43.137:53211 (MA)
2019A7PS0037P.pcap
Segment Length (B)
Average Throughput (bits/s)
Time (s)
Type Throughput
MA Window (s) 1.000000
Stream 20
Switch Direction
Mouse drags zooms
Segment Length
Throughput
Goodput
Reset
Save As...
Close
Help
Frame (frame), 56 bytes
Packets: 8420 · Displayed: 84 (1.0%)
Profile: Default
37%
4:53 PM
06-Mar-22