# Computer Networks
## TCP

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**Q1:** What is the IP address and TCP port number used by the client computer (source) that is transferring the file to mnit.ac.in? To answer this question, it's probably easiest to select an HTTP message and explore the details of the TCP packet used to carry this HTTP message, using the "details of the selected packet header window".

**Ans:**   IP address of source: 192.168.43.64

TCP port number of client computer: 59238



**Q2:** What is the IP address of mnit.ac.in? On what port number is it sending and receiving TCP segments for this connection?

**Ans:** From above screenshot we get that

IP address of destination (mnit.ac.in): 210.212.97.131

TCP port number of destination: 80

Q3:  What is the IP address and TCP port number used by your client computer (source) to transfer the file to mnit.ac.in?

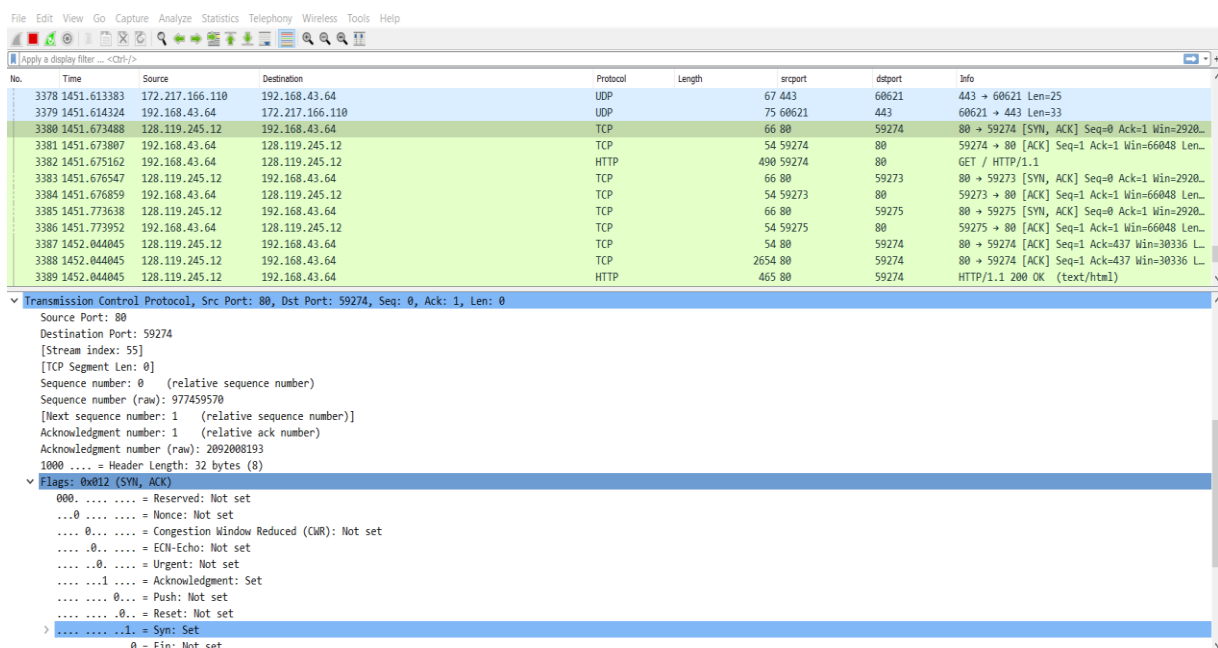Ans:   From above screenshot we get that

      IP address of source: 192.168.43.64

      TCP port number of client computer: 59238


Q4:  What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between the client computer and gaia.cs.umass.edu? What is it in the segment that identifies the segment as a SYN segment?

Ans:   Sequence number of the TCP SYN segment is used to initiate the TCP connection between the client and gaia.cs.umass.edu. This value is 0 in this trace.

 The SYN flag is set to 1 and it indicates that this segment is a SYN segment.

Q5:  What is the sequence number of the SYNACK segment sent by mnit.ac.in to the client computer in reply to the SYN? What is the value of the Acknowledgement field in the SYNACK segment? How did mnit.ac.in determine that value? What is it in the segment that identifies the segment as a SYNACK segment?

Ans:  Sequence number of the SYNACK segment from gais.cs.umass.edu to the client computer in reply to the SYN has he value of 0 in this trace.

The value of the Acknowledgement field in the SYNACK segment is 1. The value of the Acknowledgement field in the SYNACK segment is determined by gaia.cs.umass.edu by adding 1 to the initial sequence number of SYN segment from the client computer (i.e. the sequence number of the SYN segment initiated by the client computer is 0.).

The SYN flag and Acknowledgement flag in the segment are set to 1 and they indicate that this segment is a SYNACK segment.