Zeynep ERDOĞAN – 2171577

- **Q1:** Youtube uses TCP. For live streaming videos it is logical to use UDP because it is faster and It is not that important that some packages are lost. But for playback videos, We need more reliable protocols such as TCP. In TCP, even though some packages are lost, It retransmits them. Although every Youtube client has different internet speed, with TCP's flow control ability, It doesn't overwhelm them.
- **Q2:**

  My Ip: 10.70.25.232

  Youtube's Ip: 172.217.169.142

  Ceng's Ip: 144.122.171.44

- **Q3:**

Source port	**Destination port**
64917	80
64917	80
64918	80

- **Q4:**

Packet number	**Sequence Number**	**Ack number**
12472	0	0
12481	0	1
12483	1	1

- **Q5:**

packet number	**Sequence Number**
12512	4190
12513	5650
12514	7110
12515	8570
12516	10030

The length of each segment used to transmit the image is 1460 bytes.

- **Q6:** The minimum amount of available buffer space advertised at the received for the entire trace is 237 which is when ceng's servers send first ACK after I send first http get request(packet number 12492)
  When I filter with tcp.analysis.window_full to see if the receiver buffer space ever throttle the sender, I see two packets with TCP Window Full flag (packet 1663 and 1704) but when I filter tcp.analysis.zero_window I get no packages so receiver never says "stop" to sender. Which means the receiver buffer space **never** throttle the sender.