Q1: Before I visit http://ceng.metu.edu.tr, I flushed my DNS cache so that when I visit the website, It would have to go get a new resolution from the server.

It took one DNS query to resolve.

The destination IP for the first DNS query is 208.67.220.220.

The transaction ID is 0xfcd0.

• Q2:

1. No: 38, Time: 5.543456

2. No: 59, Time: 5.978965

3. No: 68, Time: 6.145489

4. No: 73, Time: 6.146808

5. No: 74, Time: 6.147014

• Q3: User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.87 Safari/537.36

Accept Language: tr-TR,tr;q=0.9,en-US;q=0.8,en;q=0.7

• **Q4:** Yes.

- Q5: Request and response packet can be matched using filters. To find the response for a request one can use the filter http://response_for.uri contains "URI" where URI is the request's URI. Another way is to look at the frame numbers. In a response packet's information under Hypertext Transfer Protocol there is [Request in frame: X] section where X is the request's packet number. So when we filter http://response_in == X we find the request packet of the X.
- Q6: The max number of connections made to ceng.metu.edu.tr is 6. I used the filter ((tcp.flags.syn == 1) || (tcp.flags.fin == 1) || (tcp.flags.reset == 1))&& (tcp.dstport == 80) to see number of opened and closed connections. SYN indicates opened connections and FIN indicates closed connections. The max number of opened connections is always 6. (I also considered my Ip and ceng.metu.edu.tr's Ip.)

Bonus:

username: Palpatine

password: Order66

Content: ceng435{This-is-why-https-is-important}