# CSE471: DATA COMMUNICATIONS AND COMPUTER NETWORKS

## YEDITEPE UNIVERSITY

### FALL 2021

### ASSIGNMENT 5 – DUE DATE DECEMBER 21ST, 2021

1. For the purpose of this assignment, please run a browser of your choice and go to the **neverssl.com** web site. In the mean time, monitor every step of the transactions between your computer and the server host machine. Using the data you have captured, address the following questions; (1) How to determine GET request and its response in the process? (2) Which type of protocol has been used for GET response and its response? (3) Examine the packet structure and determine the source/destination IP and source/destination port. Please support all of your answers with Wireshark screenshots.

2. Following the above scenario, please connect to the **www.windy.com** web site, while running Wireshark application in the background to collect and log network traffic. From the collected data set, please identify the **IP resolution process** and show all the steps required for this process using screenshots.

3. While running the Wireshark application, execute "*nslookup*" command for **www.kernel.org** website. Show us the DNS query and its response with details of the queries and answers. Please use screenshot to show queries and answers.

4. Please explain briefly how a computer obtains an IP? While running the Wireshark application, execute the following commands below and show DHCP Discover, DHCP Offer, DHCP Request, and DHCP ACK packets. Please use screenshot to show each step.

```
ipconfig /release
ipconfig /renew
```

5. As you already know, HTTP POST method can be used to send file or data to remote hosts. Bearing this in mind, please use Wireshark application to log network traffic while you are sending data to **httpbin.org** and show the data properties of the packet that contain the file information. Furthermore, explain the property contents of the packet and provide a screenshot.

You can use the following curl command:
```
curl -X POST -H 'Content-Type: application/json' -d '{"name":
        "YOURNAME"}' "http://httpbin.org/post"
```

Submit your assignments in a zip file, which has your student number as name, through the YULEARN site (https://yulearn.yeditepe.edu.tr) latest by the end of Tuesday, 21st December 2021.