NEHAL JHAJHARIA (U20CS093)

COMPUTER NETWORKS

Practical Exam

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1. Start capturing packets http packets from the following url: **5**
http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html and

answer the following questions.

1. What version of HTTP is the server running 1.0 or 1.1?
2. What languages (if any) does your browser indicate that it can accept to the server? In the captured session, what other information (if any) does the browser provide the server with regarding the user/browser?
3. What is the IP address of your computer and of the gaia.cs.umass.edu server?
4. What is the status code returned from the server to your browser?
5. When was the HTML file that you are retrieving last modified at the server?

1) HTTP 1.1

2) language - Indian English, Great Britain English

3) my ip - 192.168.213.8

   gaia ip - 128.119.245.12

4) Status returned is OK

5) Last modified date - Tuesday, 22 Nov 2022, 06:59:01 GMT

2. Write a program using client server socket programming: Client needs to authenticate itself by entering a server defined string as a password (like OTP) and then to say Hi to server. Server replies with a Hello.

client.py

```python
from socket import *



# Create

cliSock = socket(AF_INET, SOCK_STREAM)



# Connect

cliSock.connect(('localhost', 5004))



data = input("Enter password : ")



# Send data

cliSock.send(data.encode())



# recv data

msg = cliSock.recv(4096).decode()

if msg != "Hello" :

    cliSock.close()

    print("Server : " + msg)

else :

    print("Server : " + msg)

    data = "Hi"

    cliSock.send(data.encode())
```

server.py

```python
from socket import *


# Create socket

serSock = socket(AF_INET, SOCK_STREAM)


# Bind

serSock.bind(('localhost', 5004))


# Listen

serSock.listen(1)


pswd = "u20cs093"


# Stay active and respond
while True:

    print("Server is ready to receive password...")

    cliSock, cliAddr = serSock.accept()


    password = cliSock.recv(4096).decode()

    msg = ''

    if password != pswd :

        msg = "Wrong password!!"

        print(msg)

        cliSock.send(msg.encode())
```

```python
        cliSock.close()

        break



    msg = "Hello"

    cliSock.send(msg.encode())

    msg = cliSock.recv(4096).decode()

    print("Connected.")

    print("Client : " + msg)

    cliSock.close()
```

```
[jhajharia@Nehals-MacBook-Air Lab Practical % python3 cli.py
Enter password : u20cs093
Server : Hello
jhajharia@Nehals-MacBook-Air Lab Practical % ▊
```

```
[jhajharia@Nehals-MacBook-Air Lab Practical % python3 ser.py
Server is ready to receive password...
Connected.
Client : Hi
Server is ready to receive password...
▊
```