1)

a)

HTTP 1.1

b)

Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:141.0) Gecko/20100101 Firefox/141.0

2)

a) Received a 3XX series status code

b)

302 Found

c) Location Header

3)

a)

The traffic is **encrypted** because it uses **HTTPS** (HyperText Transfer Protocol

Secure).The payload (which would be the actual data, like HTML, images, etc.) is encrypted and cannot be read directly from Wireshark because it is **protected** by encryption

b)

The encrypted traffic uses **TLS** (Transport Layer Security). HTTPS is an implementation TLS on top of HTTP.

c)

Port 443 is the default port for HTTPS

4)

```
(base) student@cclab-OptiPlex-5070:~/Desktop/cs161$ python3 server.py
Socket successfully created
socket binded to 12345
socket is listening
Got connection from ('127.0.0.1', 54108)
(base) student@cclab-OptiPlex-5070:~/Desktop/cs161$
```

```
(base) student@cclab-OptiPlex-5070:~/Desktop/cs161$ python3 client.py
Thank you for connecting
(base) student@cclab-OptiPlex-5070:~/Desktop/cs161$
```