Computer Networks
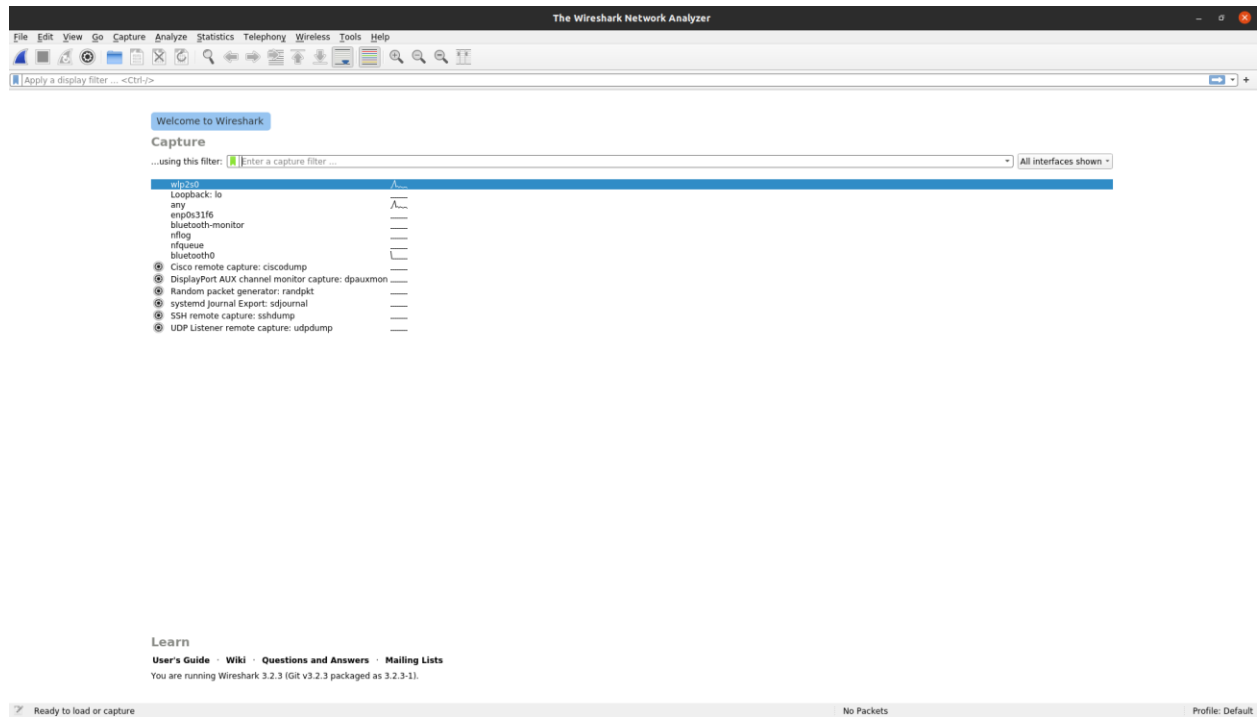Lab Task #8
Saad Ahmad
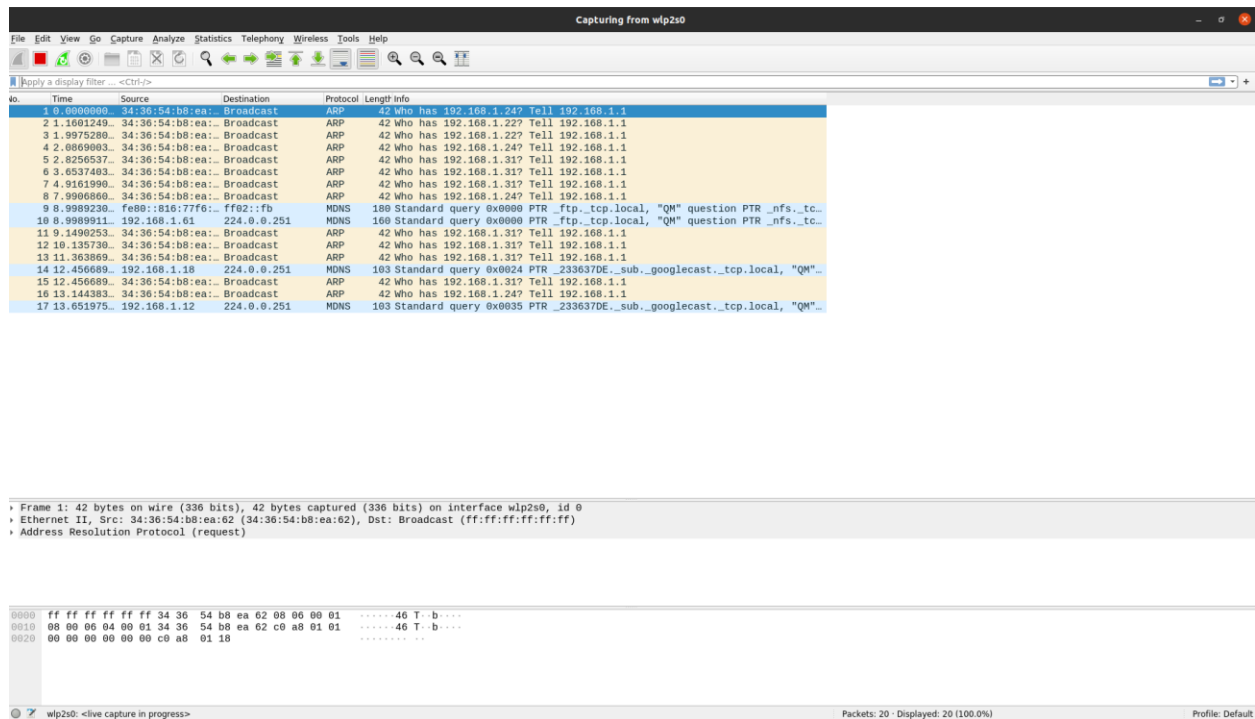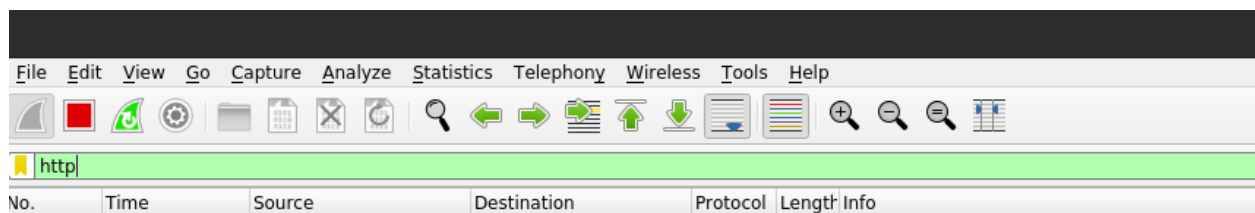20P-0051

Task#1

Open Wireshark

Then select you **wlp2s0**
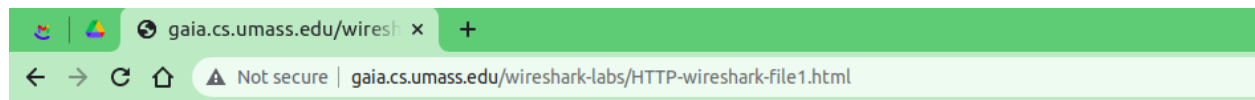
Now type the **http** in the filter bar.

Now go to your browser and clear its cache and run the following address in the new tab

http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html

Congratulations. You've downloaded the file http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html!

Now open the Wireshark again and stop capturing packets
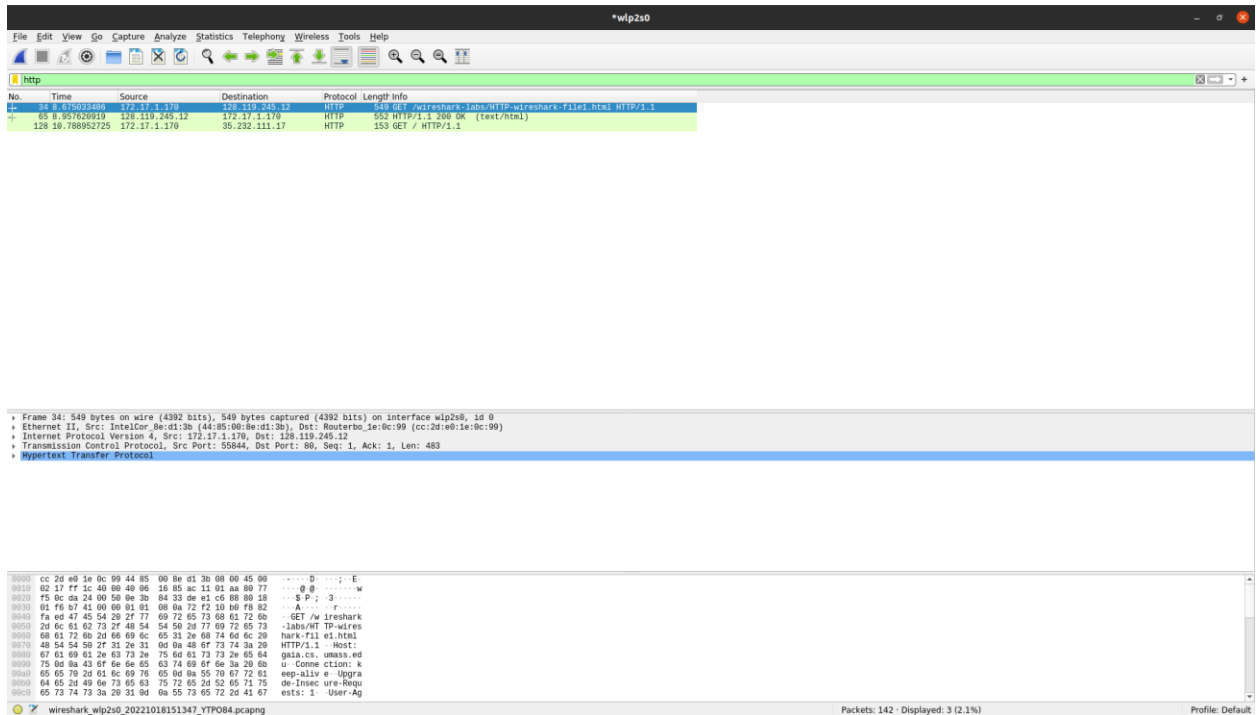
Questions & Answers:

1. My browser is running http version 1.1

2. Server is running http version 1.1

3. My language is en-US.

4. IP address of my computer is **172.17.1.170** and IP address of gaia.cs.umass.edu server is **128.119.245.12**

No.	Time	Source	Destination	Protocol	Length	Info
34	8.6750334…	172.17.1.170	128.119.245.12	HTTP	549	GET /wireshark-labs/HTTP-wireshark-file1.html HT…
65	8.9576209…	128.119.245.12	172.17.1.170	HTTP	552	HTTP/1.1 200 OK (text/html)

5. Status code is 200 OK

```
▼ Hypertext Transfer Protocol
    ▼ HTTP/1.1 200 OK\r\n
       ▶ [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
         Response Version: HTTP/1.1
         Status Code: 200
         [Status Code Description: OK]
         Response Phrase: OK
```

6. Last-modified: Tue, 18 Oct 2022 05:59:01 GMT

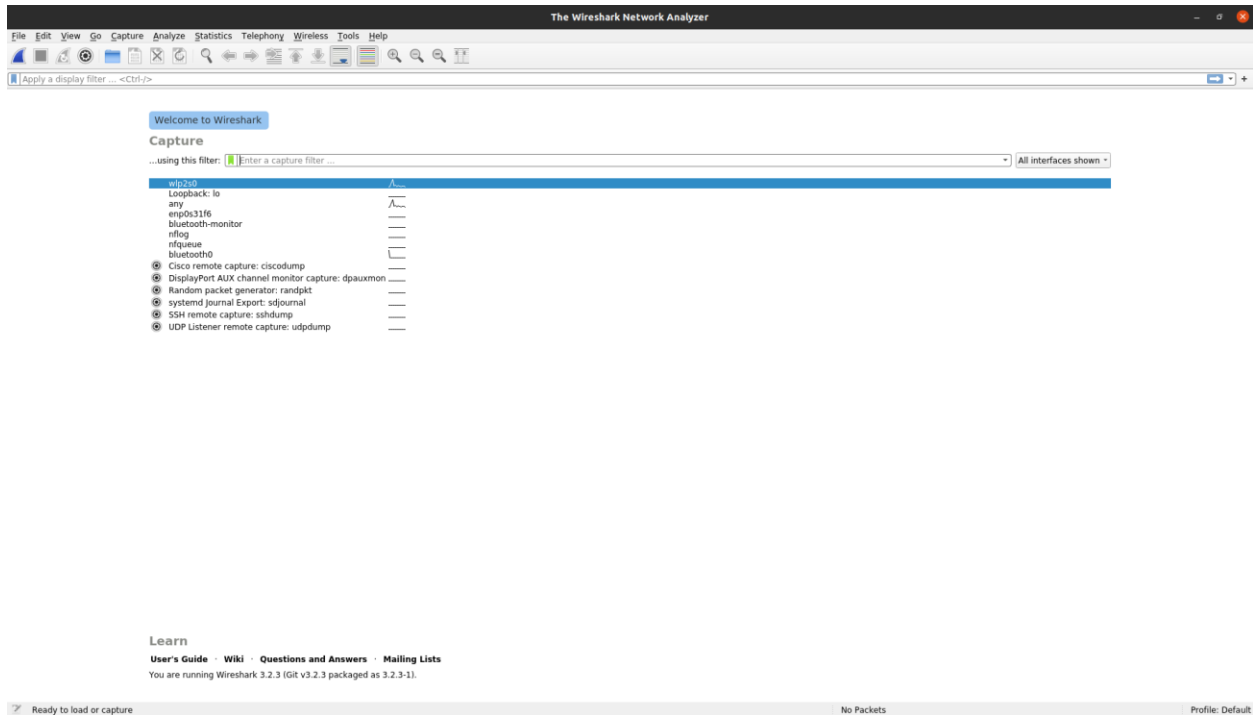7. Content-length: 128 bytes

```
▼ Content-Length: 128\r\n
     [Content length: 128]
```
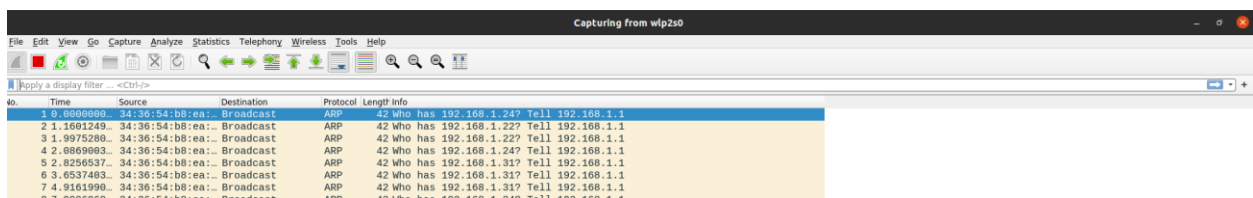
8. No

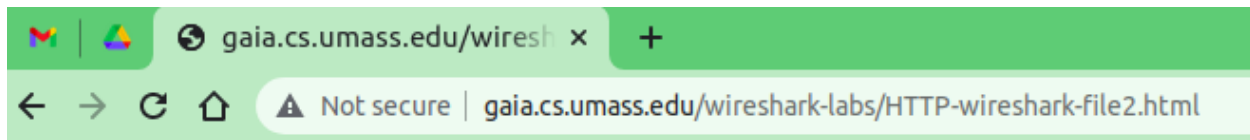# Task#2

Start up the Wireshark

then select you **wlp2s0** and then type the **http** in the filter bar.

Start up your web browser, and clear your browser's cache and run the following address in the new tab

http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html

it will display some lines

Congratulations again! Now you've downloaded the file lab2-2.html.
This file's last modification date will not change.

Thus if you download this multiple times on your browser, a complete copy
will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE
field in your browser's HTTP GET request to the server.

Quickly enter the same URL into your browser again

Stop Wireshark packet capture.

Questions & Answers:

1. No I don't see an "IF-MODIFIED-SINCE" line in the HTTP GET.

2. Yes, the server explicitly returns the contents of the file as we can find it in the line-based text data

```
▼ Line-based text data: text/html (10 lines)
    \n
    <html>\n
    \n
    Congratulations again!  Now you've downloaded the file lab2-2.html. <br>\n
    This file's last modification date will not change.   <p>\n
    Thus  if you download this multiple times on your browser, a complete copy <br>\n
    will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE<br>\n
    field in your browser's HTTP GET request to the server.\n
    \n
    </html>\n
```

3. Yes, we see an "IF-MODIFIED-SINCE:" line in the HTTP GET

   If-Modified-Since: Tue, 18 Oct 2022 05:59:01 GMT\r\n

   `If-Modified-Since: Tue, 18 Oct 2022 05:59:01 GMT\r\n`

4. the HTTP status code and phrase returned from the server in response is

   HTTP/1.1 304 Not Modified

No, the server explicitly didn't return the contents of the file it was return from the cache.

```
87 5.2346047… 172.17.1.170     128.119.245.12   HTTP   661 GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1
89 5.9993988… 128.119.245.12   172.17.1.170     HTTP   305 HTTP/1.1 304 Not Modified
```