# Assignment 3

**Part 1:-**

1)

My browser is running HTTP/1.1

The server is running HTTP/1.1

2)

**Accept-Language: en-US,en;q=0.5**

Hence, the language is English(US).

3)

My computer ip is **10.196.8.81**

gaia.cs.umass.edu server’s IP is **128.119.245.12**

4)

Status code: **200** is returned from the server to my computer.

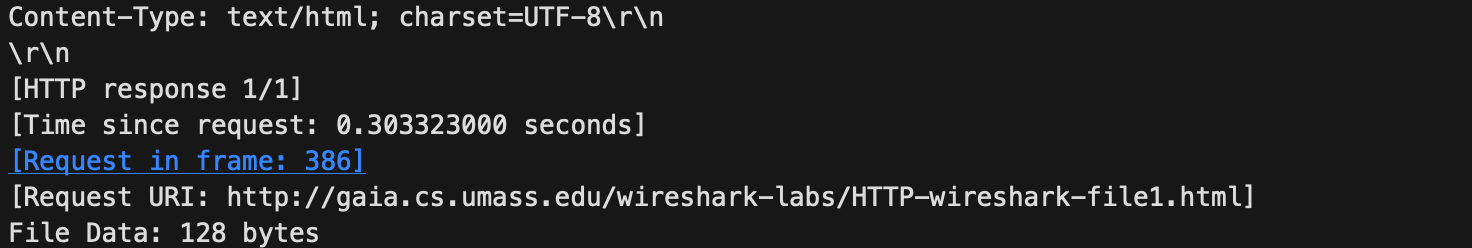
5)

The HTML file which I retreived was last modified on Tue, 16 Jan 2024 06:59:02 GMT

6)

128 bytes of content are being returned to your browser

7)

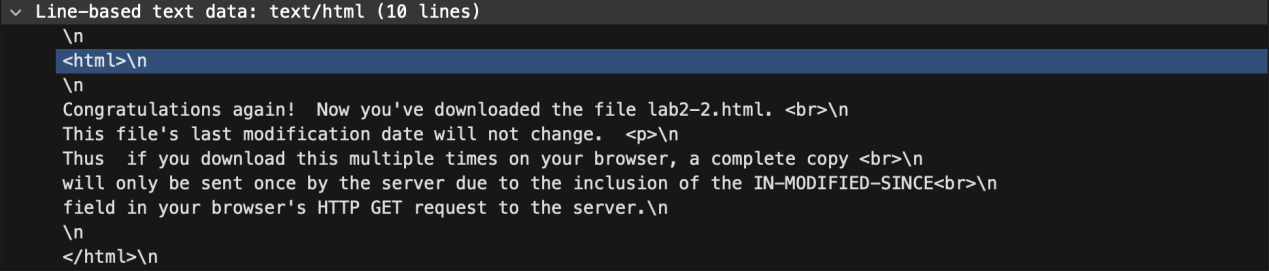
The following are not in the packet listing window but are in the package content window

**Part 2:-**

1)

No, I did not see “IF-MODIFIED-SINCE” line in the HTTP GET.

2)

Yes, initially the server did explicitly return the contents of the file as follows:

3)

Yes, I see an “IF-MODIFIED-SINCE:” line in the HTTP GET.

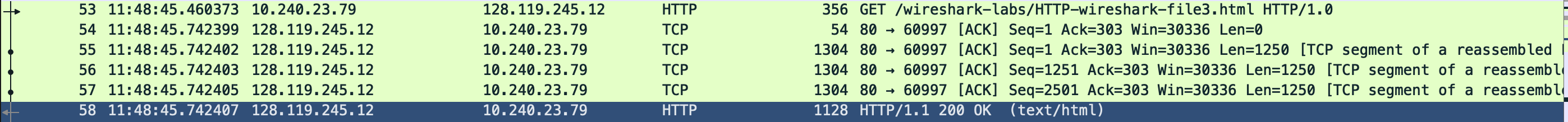
**Tue, 16 Jan 2024 06:59:02 GMT\r\n** follows the respective header.

4)

Status code **304** status code is returned from the server in response to this second

HTTP GET.  
No, the server did not explicitly return the contents of the file since the IF-MODIFIED-SINCE time is same as the time for last modified in the previous request. Since, nothing was modified in the previous sent file, no new content was received.

**Part 3:-**



1)

The browser sent 1 HTTP GET request message. The associated packet number is **53**.

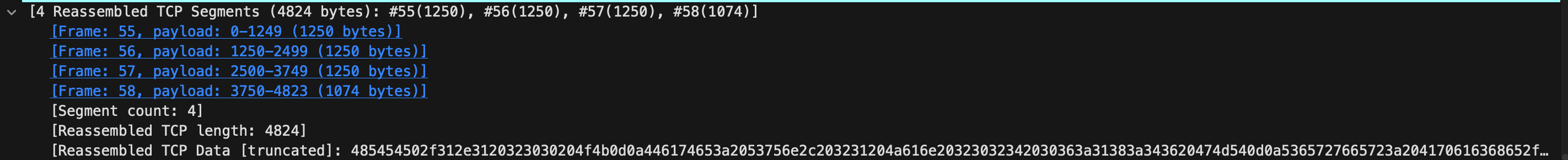
2)

Packet number **58** contains the status code and phrase associated with the response to the request.

3)

Status code: **200**

Response Phrase: **OK**

4)

**4** TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights with the data distribution as follows: **1250 bytes** in the first three and **1074 bytes** in the last one sending a total of **4824 bytes**.

**Part 4:-**

1)

The browser sent 3 HTTP GET response to the source.

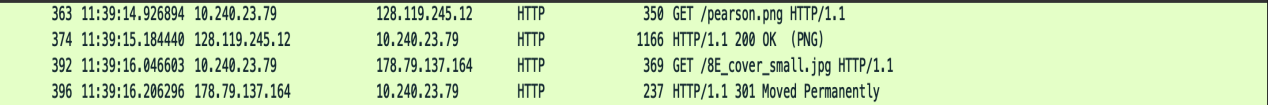
The first one was sent to **128.119.245.12**

The second one was sent to **128.119.245.12**

The third one was sent to **178.79.137.164**

2)

The images were downloaded serially. We can tell this by looking at the time log of each of the packets as shown in the below screenshot.



There was a time difference of nearly 1.02 seconds between the downloading of these two images.

**Part 5:-**

1)

The server’s response for the first HTTP GET request sent was

status code: **401** message: **Unauthorized** message

Screenshot 2024-01-21 at 12.04.07 PM

2)

When the browser sends the GET request for the second time, there is an extra field of Authorization: Basic header which took in our login credentials such as username and password.

