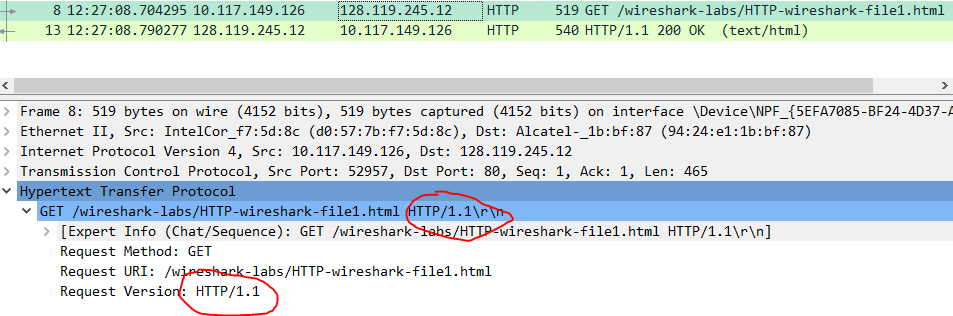
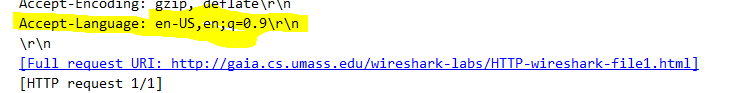
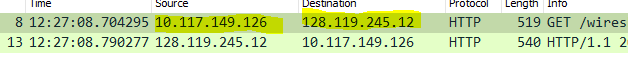
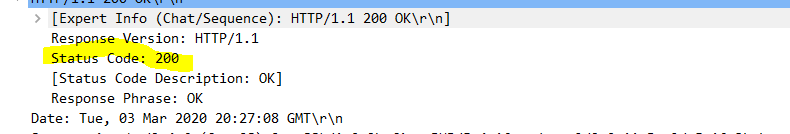
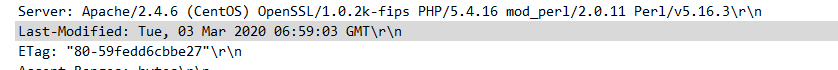
CSC138\_Sec 02\_Lab2\_Nhat\_Doan

Student ID: 217523684

1. The Basic HTTP GET/response interaction
2. My Browser is running HTTP version 1.1 and so the server. Both uses HTTP 1.1 to request and respond.
3. Languages that my browser indicate that it can accept to the server is: en-US, en , q = 0.9
4. My IP address is: 10.117.149.126

The gaia.cs.umass.edu server IP address is: 128.119.245.12

1. The Status Code returned from the server to my browser is: 200.
2. When was the HTML file that you are retrieving last modified at the server?

It was last modified on Tuesday, 03 Mar 2020 06:59:03 GMT

1. How many bytes of content are being returned to your browser?

128 bytes was returned from the server. 

1. By inspecting the raw data in the packet content window, do you see any headers within the data that are not displayed in the packet-listing window? If so, name one.

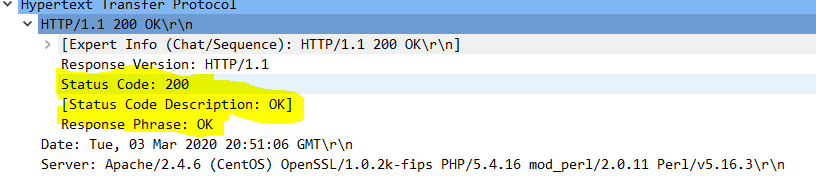
There is no headers within the data

1. The HTTP CONDITIONAL GET/response interaction

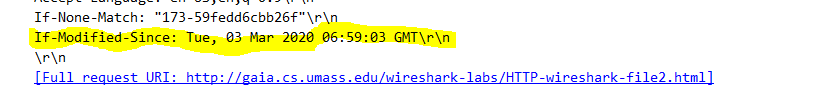
8. Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE” line in the HTTP GET?

There is no “IF-MODIFIED-SINCE” line.

9. Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?

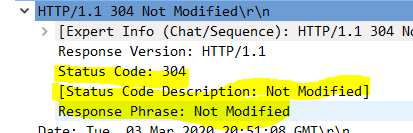
The server explicitly return the contents of the file because it sends Status Code 200 with response phase OK

10. Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE:'' line in the HTTP GET? If so, what information follows the “IF-MODIFIED-SINCE:” header?

Yes, there is a “IF-MODIFIED-SINCE” line, and it contents is Tue, 03 Mar 2020 06:59:03 GMT.\r\n

11. What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.

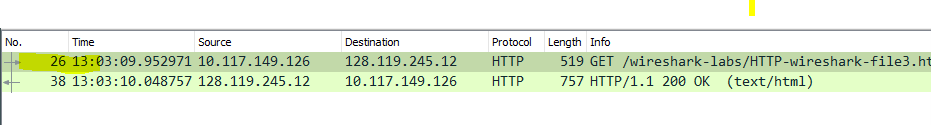
The Status Code is 304 and Phase is Not Modified. The server did not return the contents of the file. The reason is that the browser tries to send 2 Get requests instantaneously one after each other, and at the second Get request, since this is the conditional get request, and if the file did not get modified, it will not be returned based on the previous request.



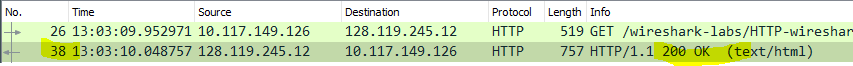
1. Retrieving Long Documents

12. How many HTTP GET request messages did your browser send? Which packet number in the trace contains the GET message for the Bill Of Rights?

There is only one Get Request message from my browser.

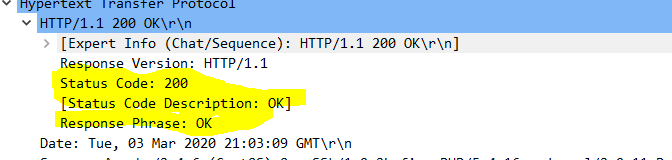
Packer number 26 contains the Get request for the Bill Of Right

13. Which packet number in the trace contains the status code and phrase associated with the response to the HTTP GET request?

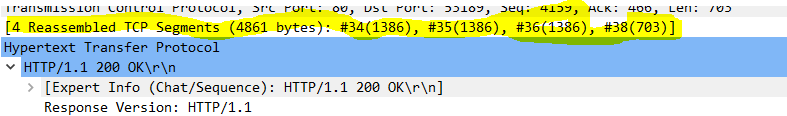
Packet number 38 contains the status code and phrase within the response message. 

14. What is the status code and phrase in the response?

Status code is : 200

Response phrase is: OK

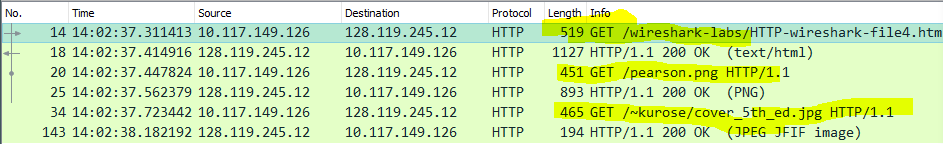
15. How many data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights?

There are 4 reassembled TCP segment that carry the single HTTP response and the test for the Bill Of Right. 4861 bytes 

1. HTML Documents with Embedded Objects

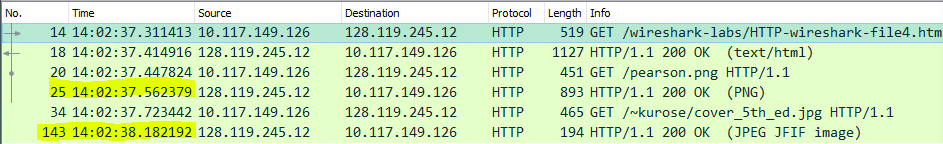
16. How many HTTP GET request messages did your browser send? To which Internet addresses were these GET requests sent?

There are 3 Get Requests from my browser to the address of 128.119.245.12



17. Can you tell whether your browser downloaded the two images serially, or whether they were downloaded from the two websites in parallel? Explain.

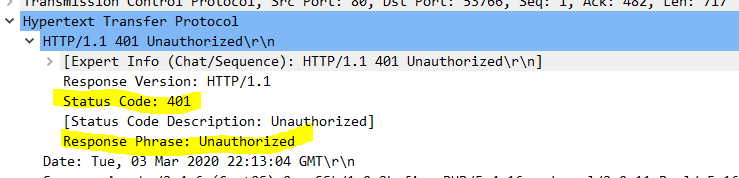
The two images were loaded serially because the time of the 2 packets was happening one after another. In this case, the pearson image with the tail PNG was returned to the browser first, and after 0.20 second later, the cover image with the tail JEG JFIF was returned. Therefore, they were returned at different time, thus they were sent serially.



1. HTTP Authentication

18. What is the server’s response (status code and phrase) in response to the initial HTTP GET message from your browser?

The server response with Status Code “ 401” and Response Phrase “Unauthorized”.



19. When your browser sends the HTTP GET message for the second time, what new field is included in the HTTP GET message?

The new field is “Authorization : Basic d2lyZXNoYXJrLXN0dWRlbnRzOm5ldHdvcms=”

