Class: CS-372
Term: Fall 2017
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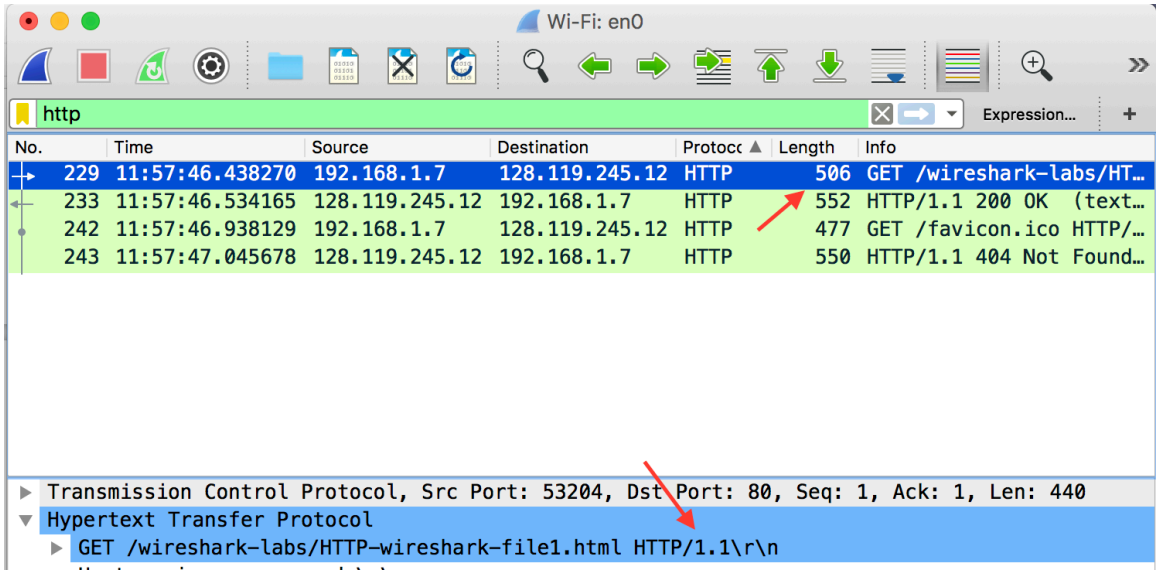
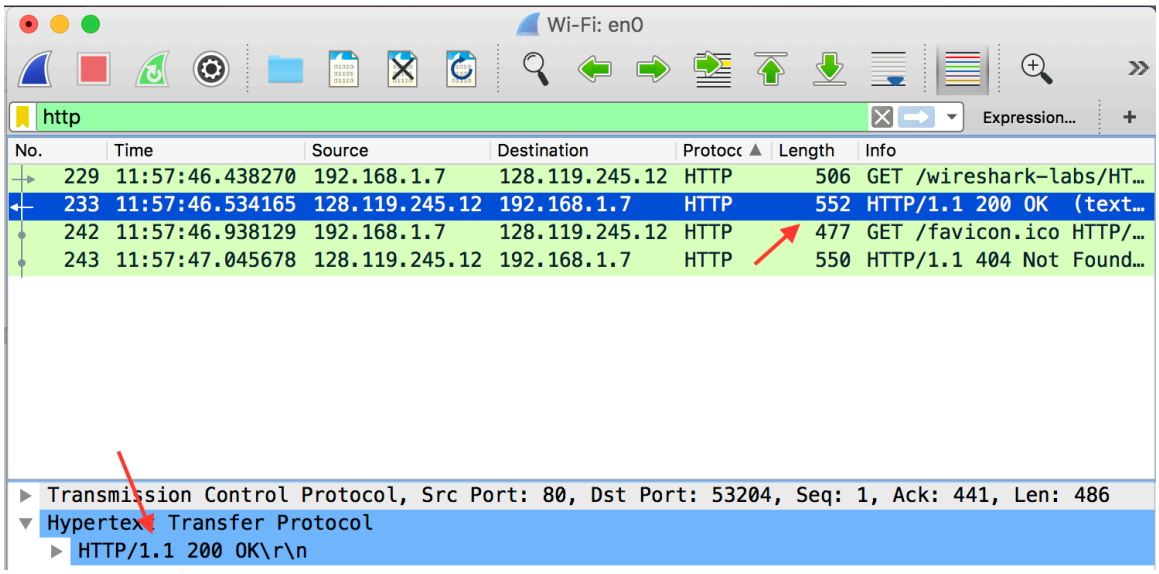
Date: October 22, 2017
Lab: #2

1) Is your browser running HTTP version 1.0 or 1.1? What version of HTTP is the server running?

Answer:
My browser is running HTTP version 1.1
In the screen shot below, see the 1.1 in the request line made by my browser.

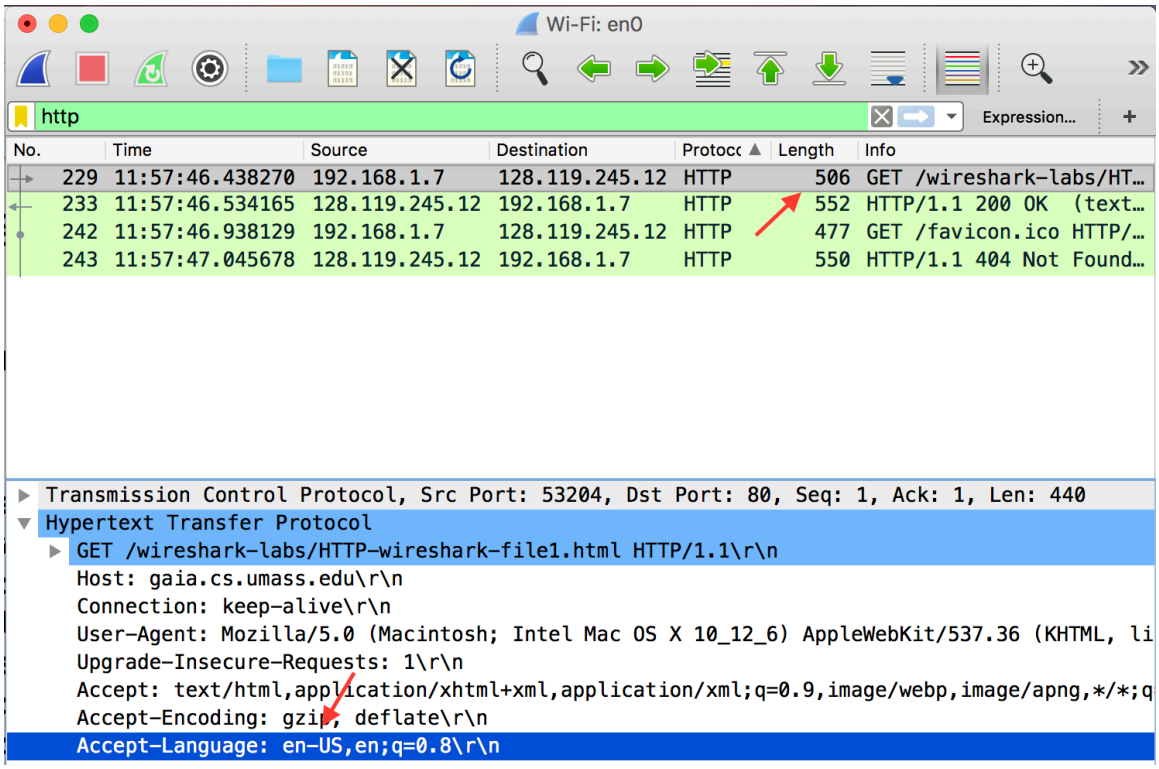


The server is running HTTP version 1.1
In the screen shot below, see the 1.1 in the status line returned by the server.



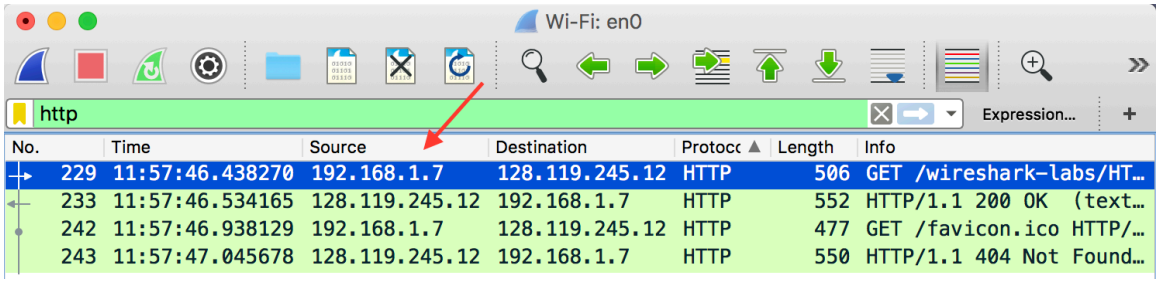
2) What languages (if any) does your browser indicate that it can accept from the server?

Answer:
My browser indicates that it can accept the English-US language from the server. See screen shot below.

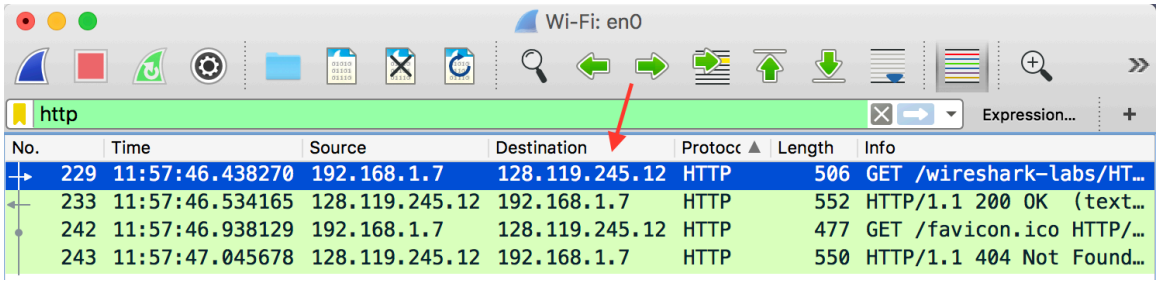


3) What is the IP address of your computer? Of the gaia.cs.umass.edu server?

Answer:
The IP address of my computer is 192.186.1.7
See screen shot below.

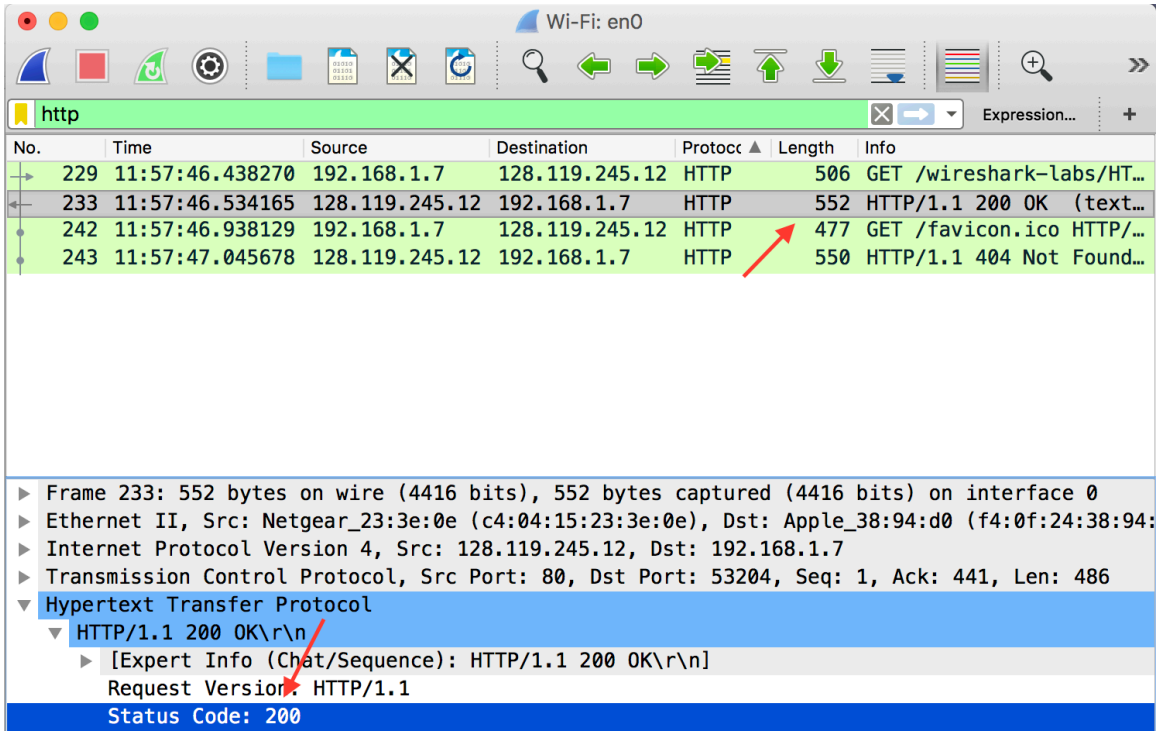


The IP address of gaia.cs.umass.edu server is 128.119.245.12
See screen shot below.



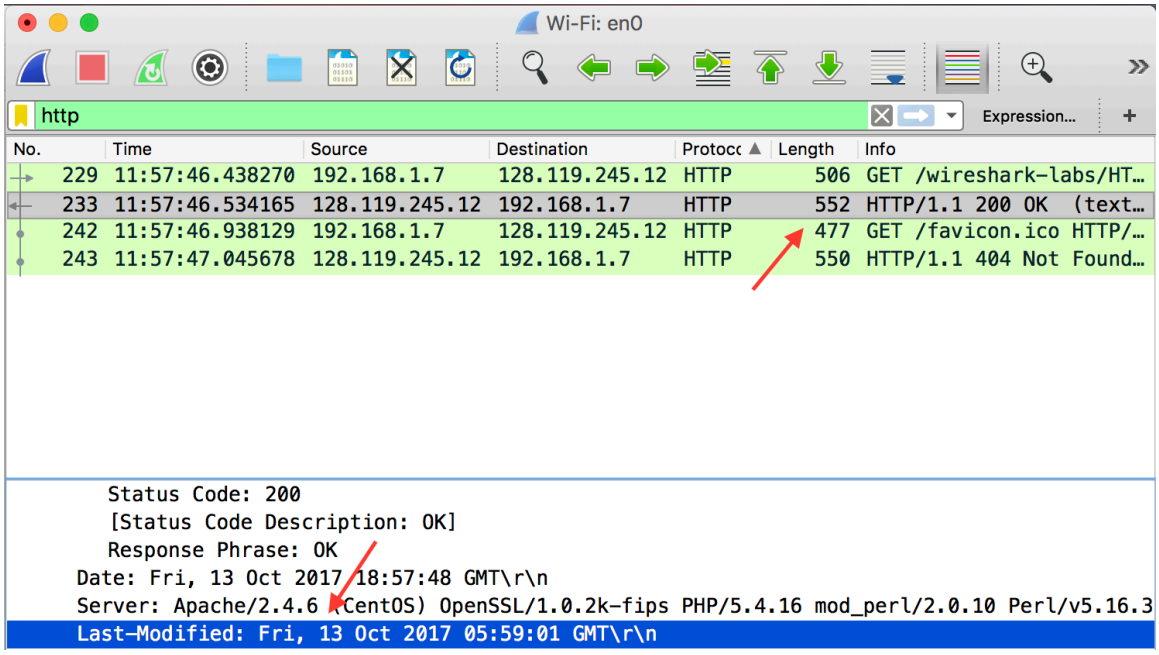
4) What is the status code returned from the server to your browser?

Answer:
200
See screen shot below.



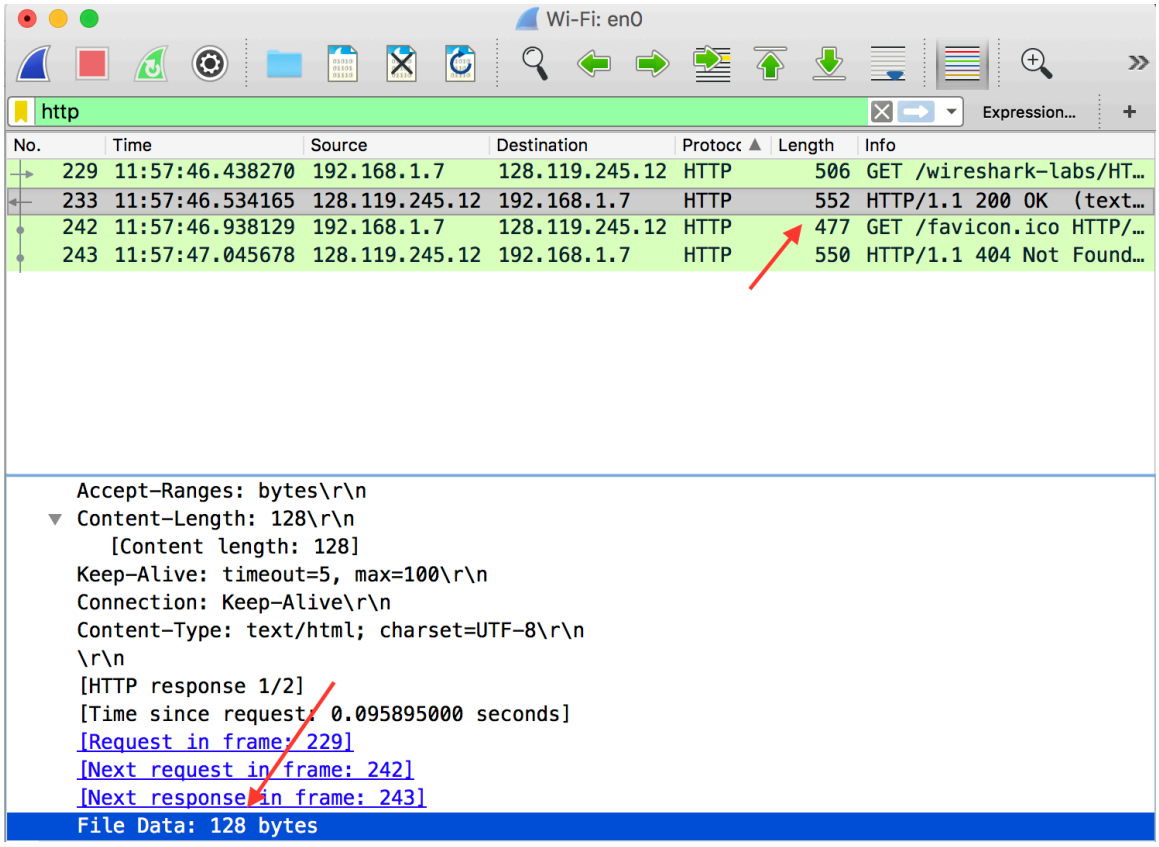
5) When was the HTML file that you are retrieving last modified at the server?

Answer:
Friday, 13 October 2017 05:59:01 GMT
See screen shot below.



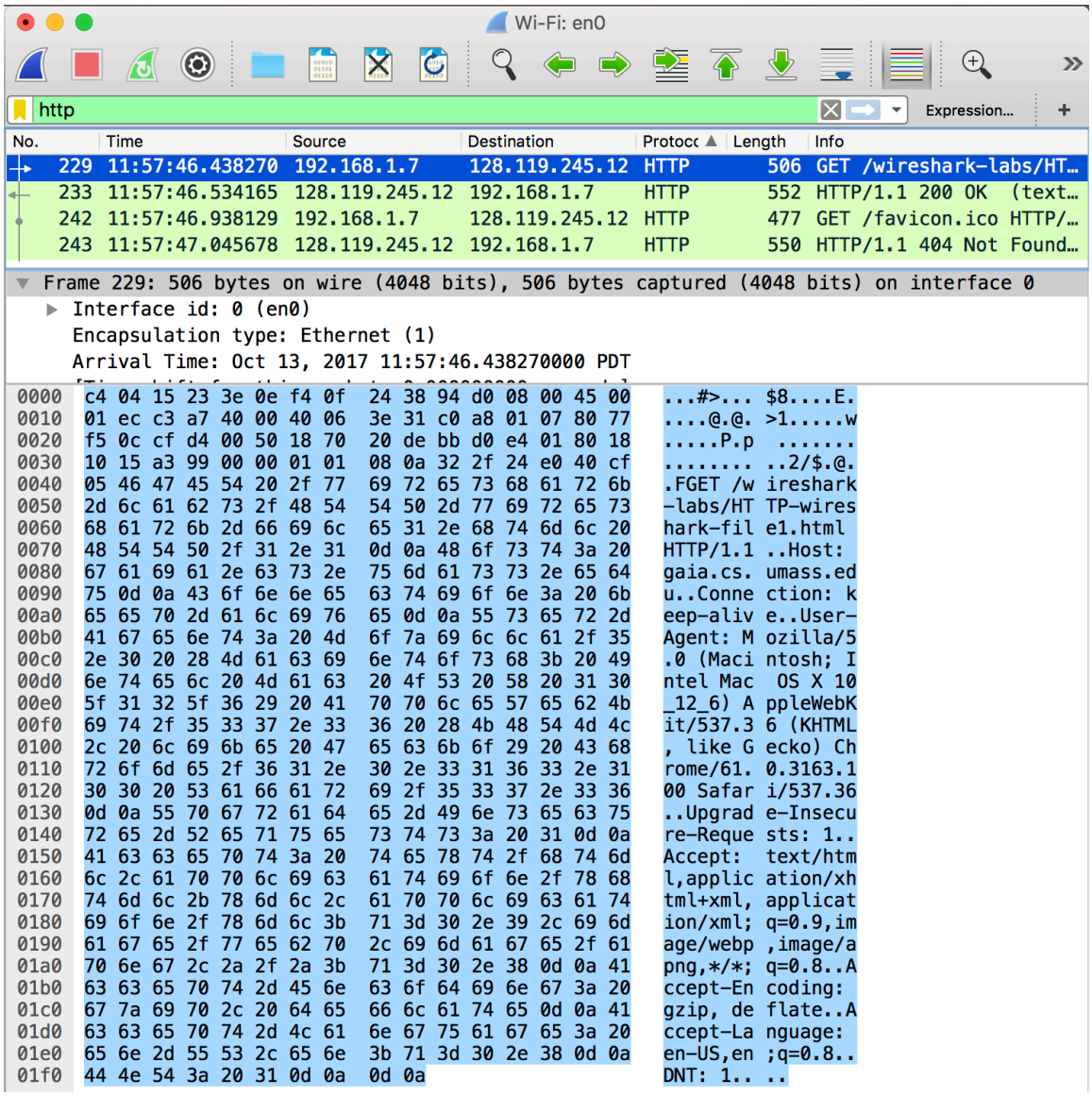
6) How many bytes of content are being returned to your browser?

Answer:
128 bytes
See screen shot below.



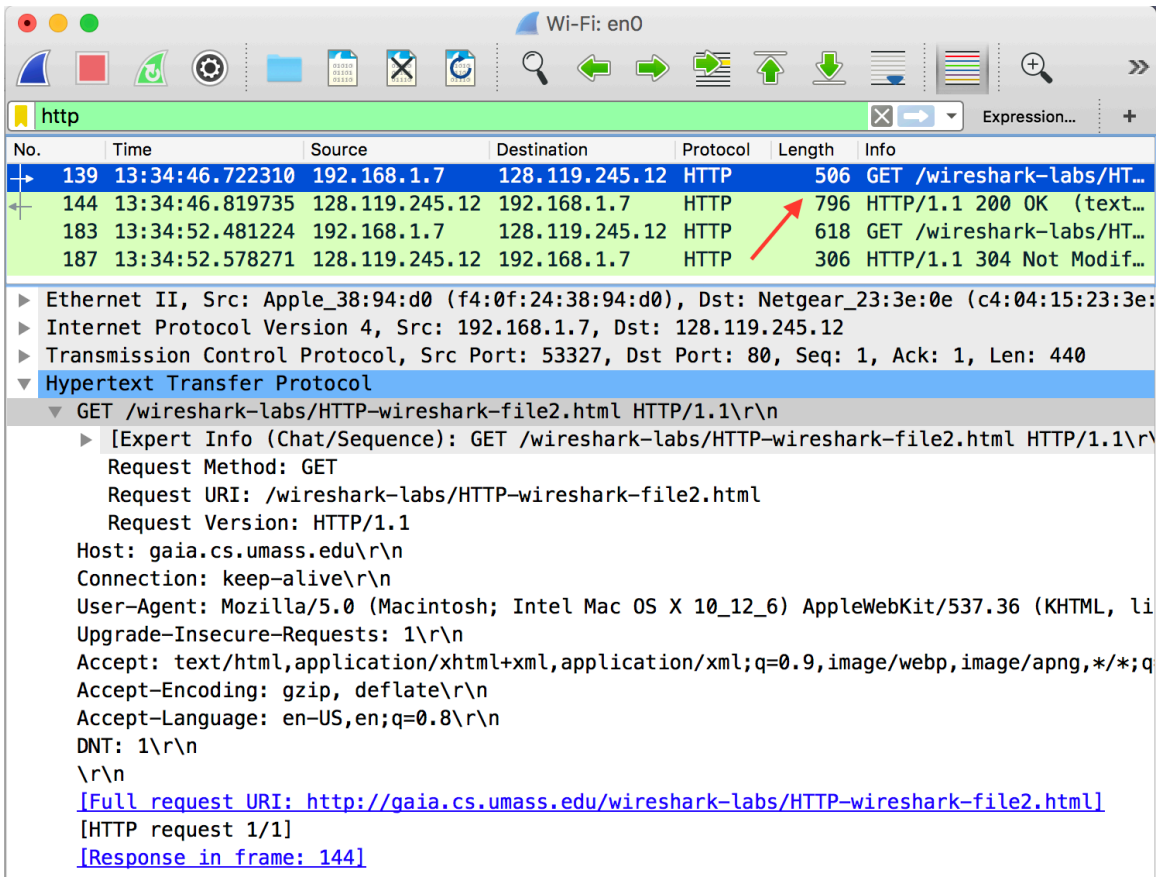
7) By inspecting the raw data in the packet content window, do you see any headers within the data that are not displayed in the packet-listing window? If so, name one.

Answer:
After an extensive inspection of the raw data in the packet content window, it was determined that all the headers within the data are in fact displayed in the packet-listing window.
See screen shot below.



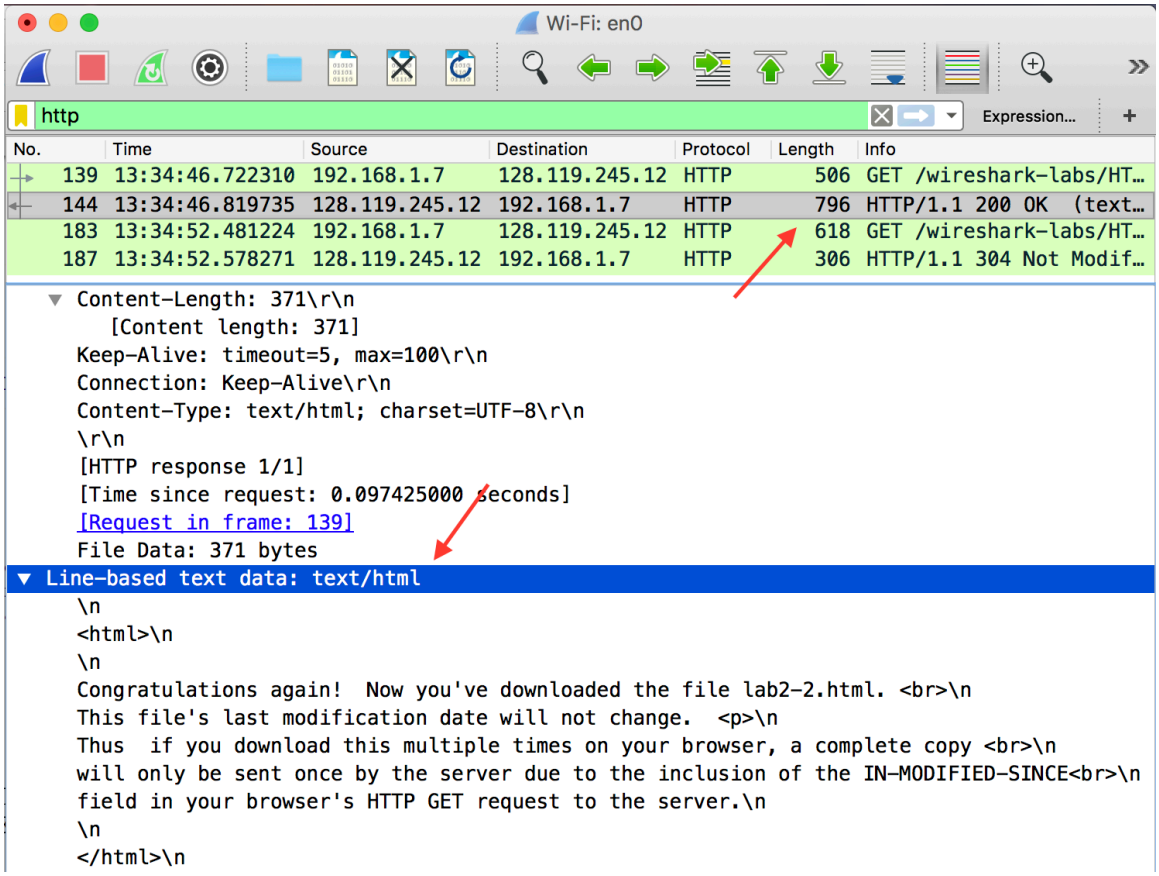
8) Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE” line in the HTTP GET?

Answer:
No
See screen shot below.



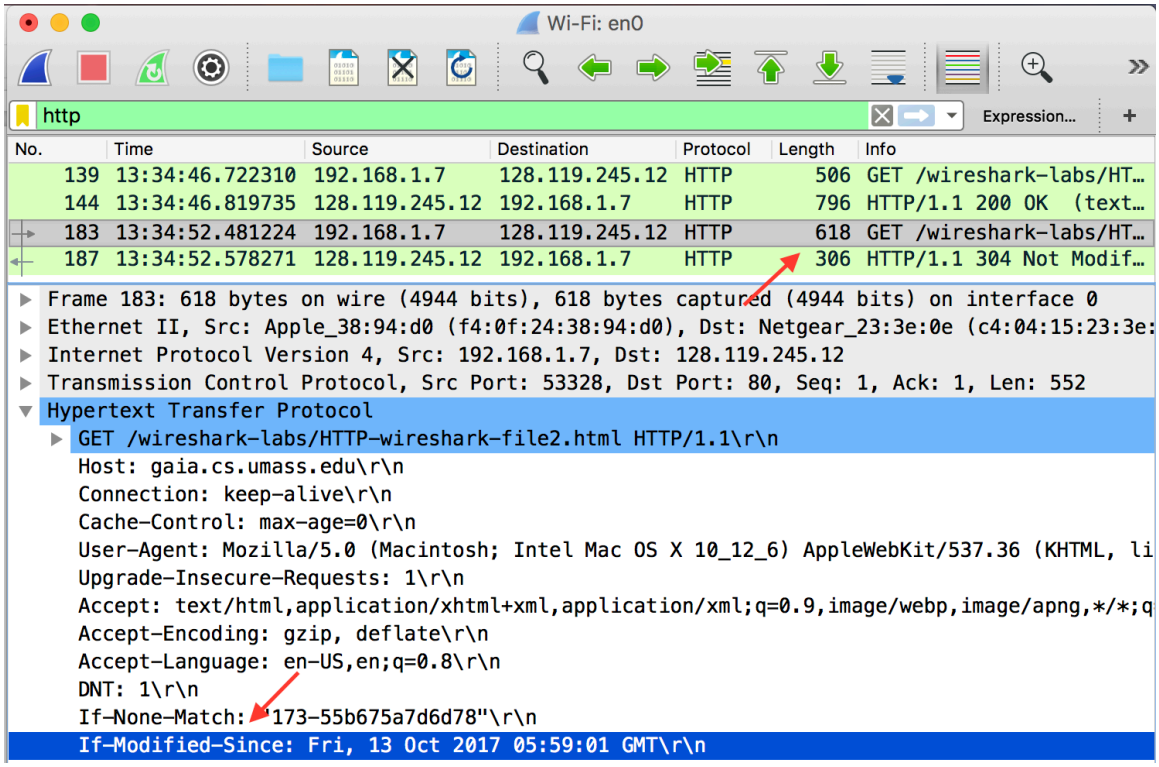
9) Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?

Answer:
Yes, because the contents can be seen in line-based text data.
See screen shot below.



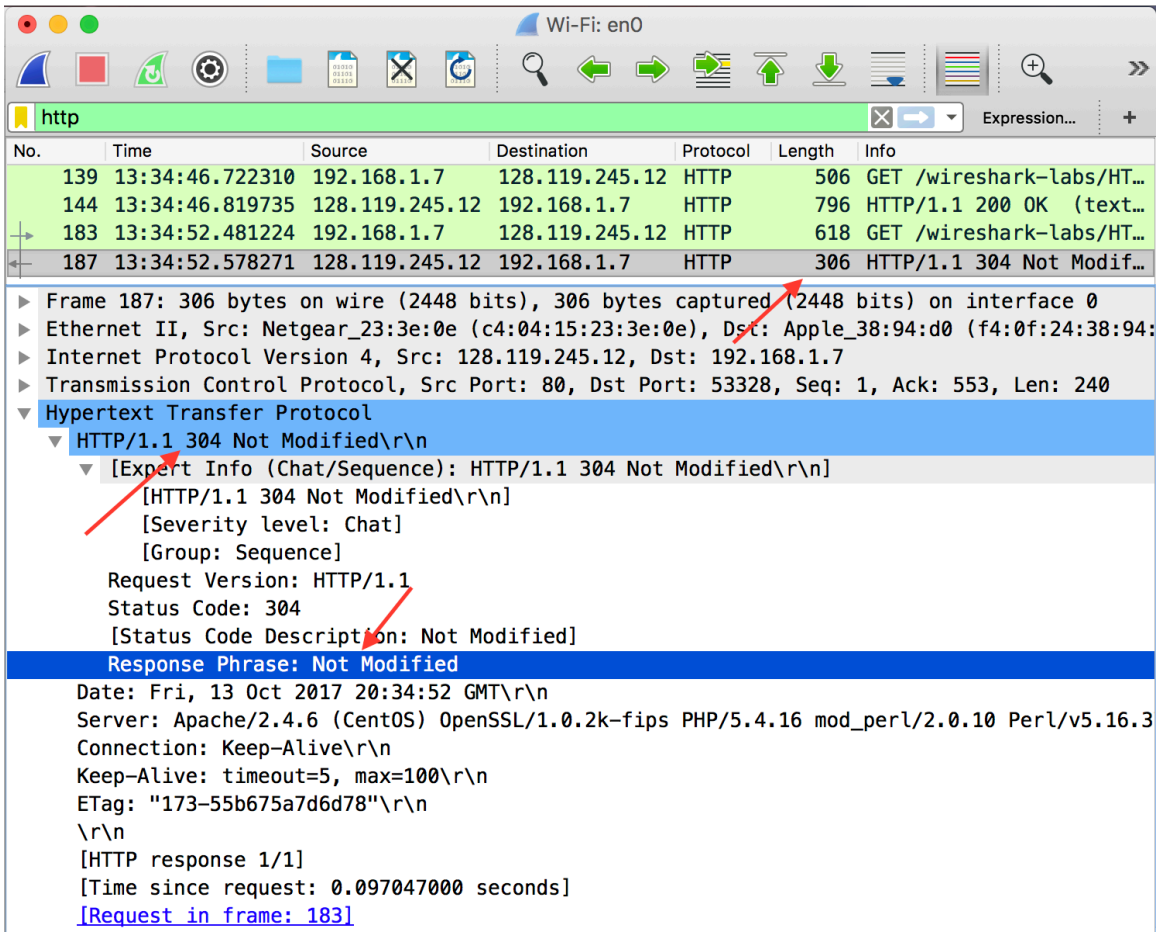
10) Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE:” line in the HTTP GET? If so, what information follows the “IF-MODIFIED-SINCE:” header?

Answer:
Yes, there is an “IF-MODIFIED-SINCE:” line in the HTTP GET. The date “Fri, 13 Oct 2017 05:59:01 GMT” follows the “IF-MODIFIED-SINCE:” header.
See screen shot below.



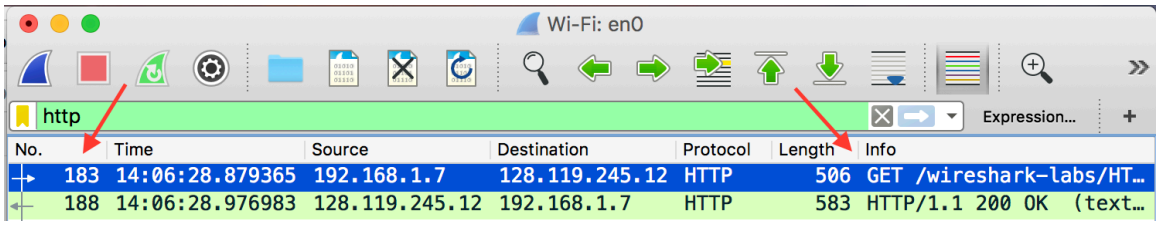
11) What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.

Answer:
HTTP/1.1 304 Not Modified
The server did not explicitly return the contents of the file because the browser loaded it from its cache.
See screen shot below.



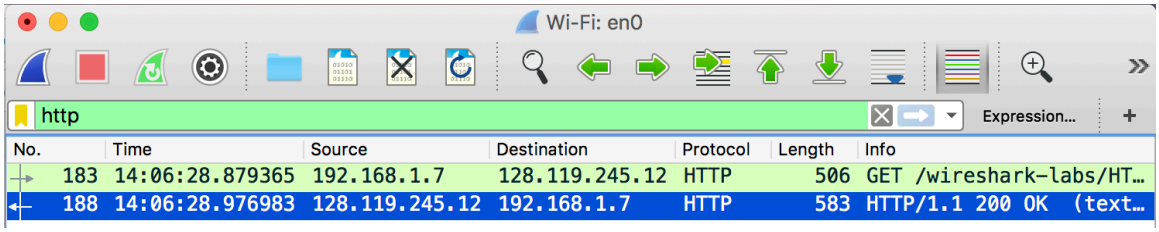
12) How many HTTP GET request messages did your browser send? Which packet number in the trace contains the GET request message for the Bill of Rights?

Answer:
My browser only sent 1 HTTP GET request message. Packet number 183 contained the GET request message for the Bill of Rights.
See screen shot below.



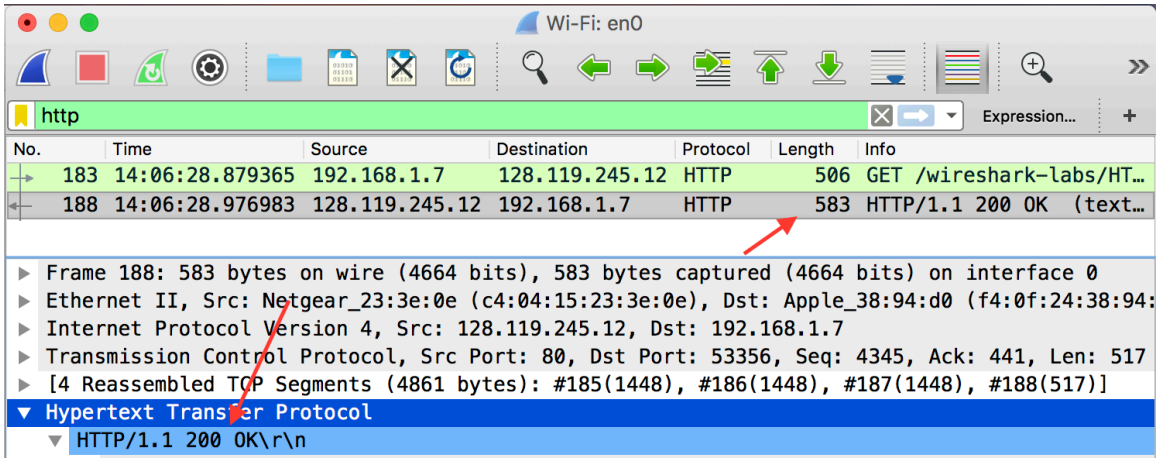
13) Which packet number in the trace contains the status code and phrase associated with the response to the HTTP GET request?

Answer:
Packet number 188
See screen shot below.



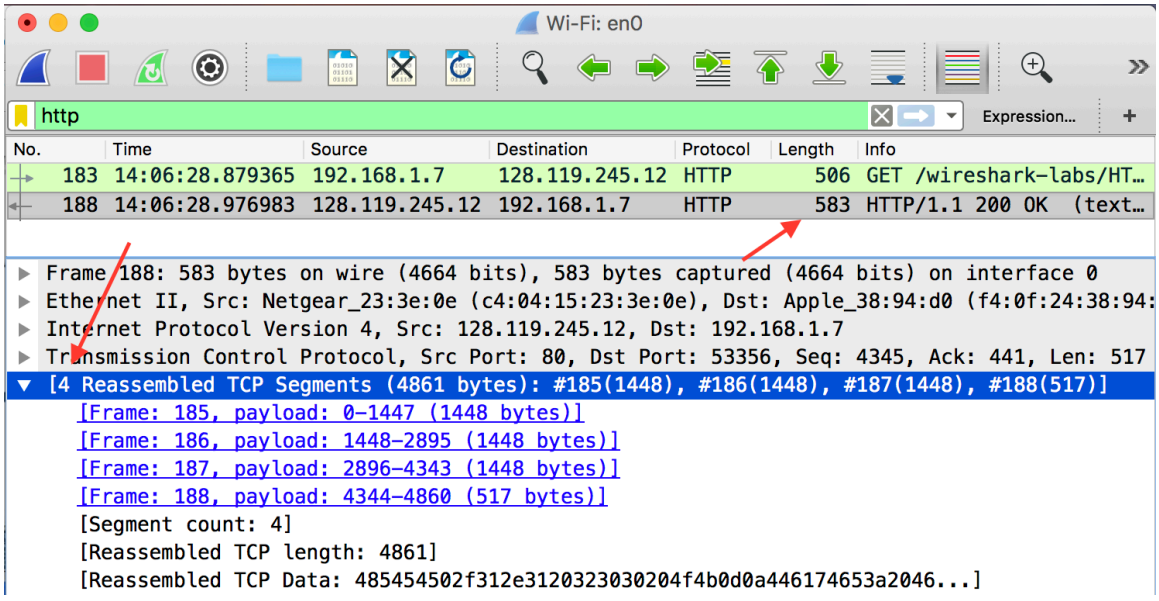
14) What is the status code and phrase in the response?

Answer:
HTTP/1.1 200 OK
See screen shot below.



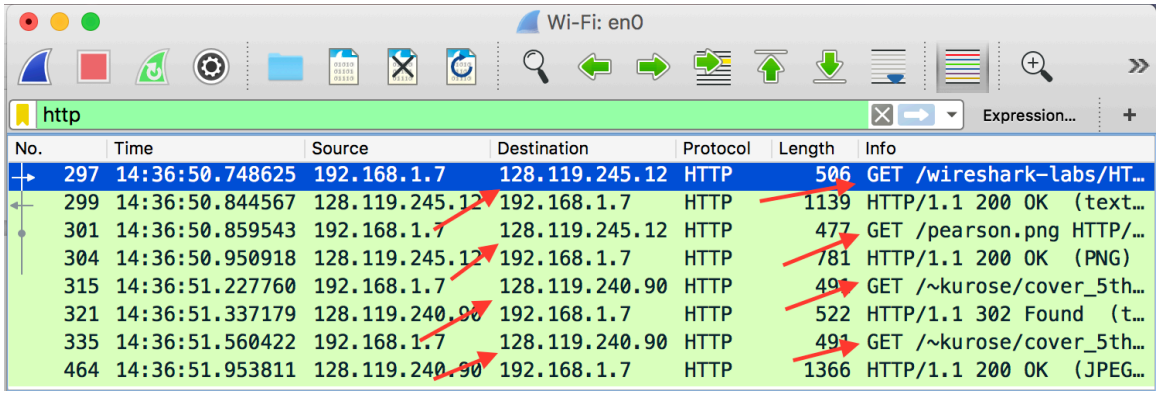
15) How many data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights?

Answer:
There was 4 data-containing TCP segments.
See the screen shot below.



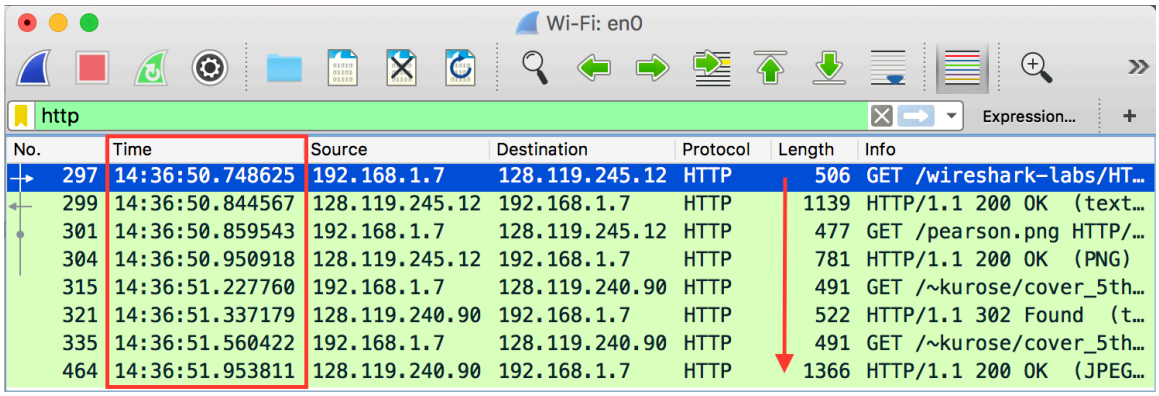
16) How many HTTP GET request messages did your browser send? To which Internet addresses were these GET requests sent?

Answer:
My browser sent 4 HTTP GET request messages. The following are the IP address that the 4 HTTP GET requests were sent to:
128.119.245.12
128.119.245.12
128.119.240.19
128.119.240.19
See screen shot below.



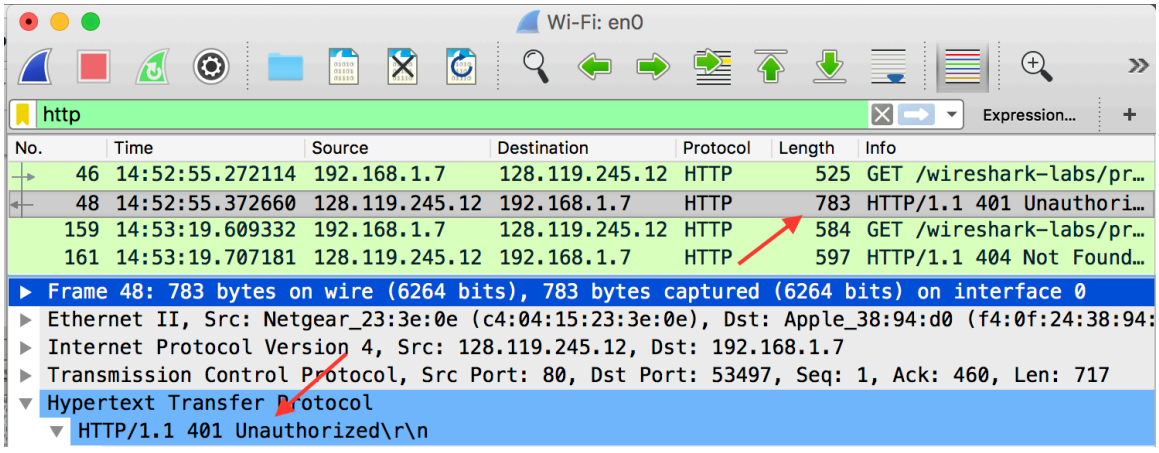
17) Can you tell whether your browser downloaded the two images serially, or whether they were downloaded from the two websites in parallel? Explain.

Answer:
My browser downloaded the two images serially because one image was requested and then returned and then another image was requested and then returned. Also, the time stamps indicate that time elapsed after each HTTP GET request. Also, if the images were downloaded in parallel, I think there would only be one HTTP GET request for both images.
See screen shot below.



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

Answer:
HTTP/1.1 401 Unauthorized
See screen shot below.



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

Answer:
Authorization: Basic ……..
See screen shot below.