HW1 HTTP

Part I. The Basic HTTP GET/response interaction (60%)

Descriptions:

Let's begin our exploration of HTTP by downloading a very simple HTML file - one that is very short, and contains no embedded objects.   Do the following:

1. Start up your web browser.
2. Start up the Wireshark packet sniffer, as described in the Introductory lab (but don't yet begin packet capture).   Enter "http" (just the letters, not the quotation marks, and in lower case) in the display-filter-specification window, so that only captured HTTP messages will be displayed later in the packet-listing window. (We're only interested in the HTTP protocol here, and don't want to see the clutter of all captured packets).
3. Wait a bit more than one minute (we'll see why shortly), and then begin Wireshark packet capture.
4. Enter the following to your browser
   http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html
   Your browser should display the very simple, one-line HTML file.
5. Stop Wireshark packet capture.

By looking at the information in the HTTP GET and response messages, answer the following questions

(Please take a screenshot to show your moodle and wireshark then highlight the answer or you will get no score.)

Example Question: Is your browser running HTTP version 1.0, 1.1, or 2? What version of HTTP is the server running? Example
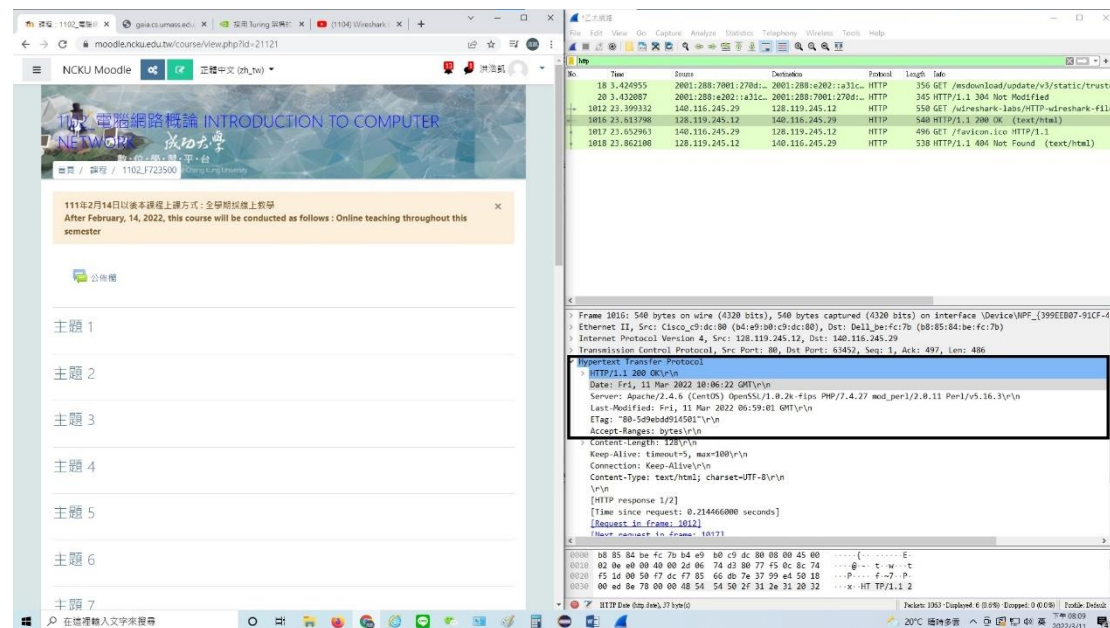
ANS:
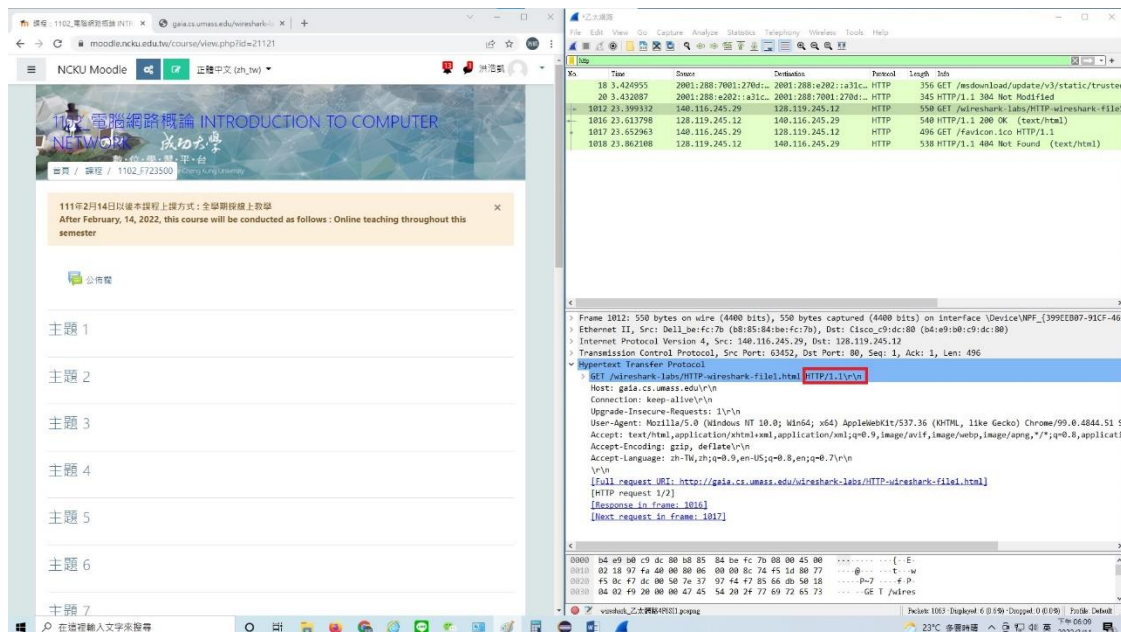
Question 1-1: What is the IP address of your computer? What is the IP address of the gaia.cs.umass.edu server? (20%).

Question 1-2: What is the status code returned from the server to your browser? (20%) (The answer may found in marked region)
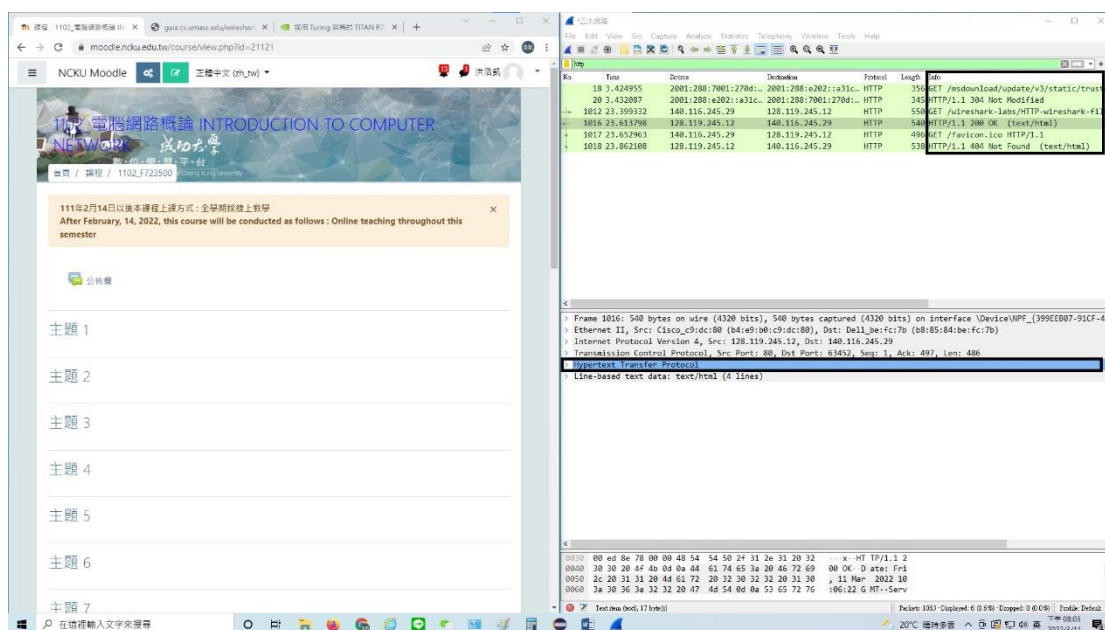
Question 1-3: When was the HTML file that you are retrieving last modified at the server? (20%) (The answer may found in marked region)

Part II. The HTTP CONDITIONAL GET/response

interaction (40%)

Descriptions:

Recall from Section 2.2.5 of the text, that most web browsers perform object caching and thus often perform a conditional GET when retrieving an HTTP object. Before performing the steps below, make sure your browser's cache is empty. Now do the following:

· Start up your web browser, and make sure your browser's cache is cleared, as discussed above.

· Start up the Wireshark packet sniffer

· Enter the following URL into your browser
http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html
Your browser should display a very simple five-line HTML file.

· Quickly enter the same URL into your browser again (or simply select the refresh button on your browser)

· Stop Wireshark packet capture, and enter "http" (again, in lower case without the quotation marks) in the display-filter-specification window, so that only captured HTTP messages will be displayed later in the packet-listing window.

Answer the following questions:

Question 2-1: 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? (20%) (The answer may found in marked region)

Question 2-2: What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? (20%) (The answer may found in marked region)