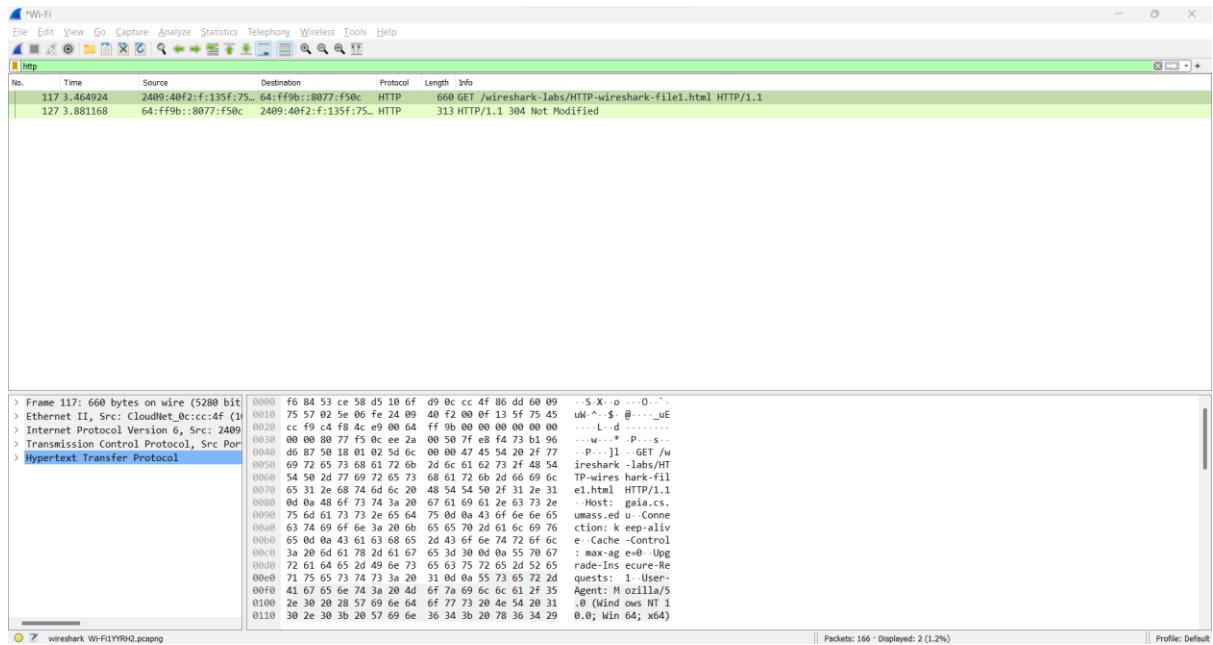
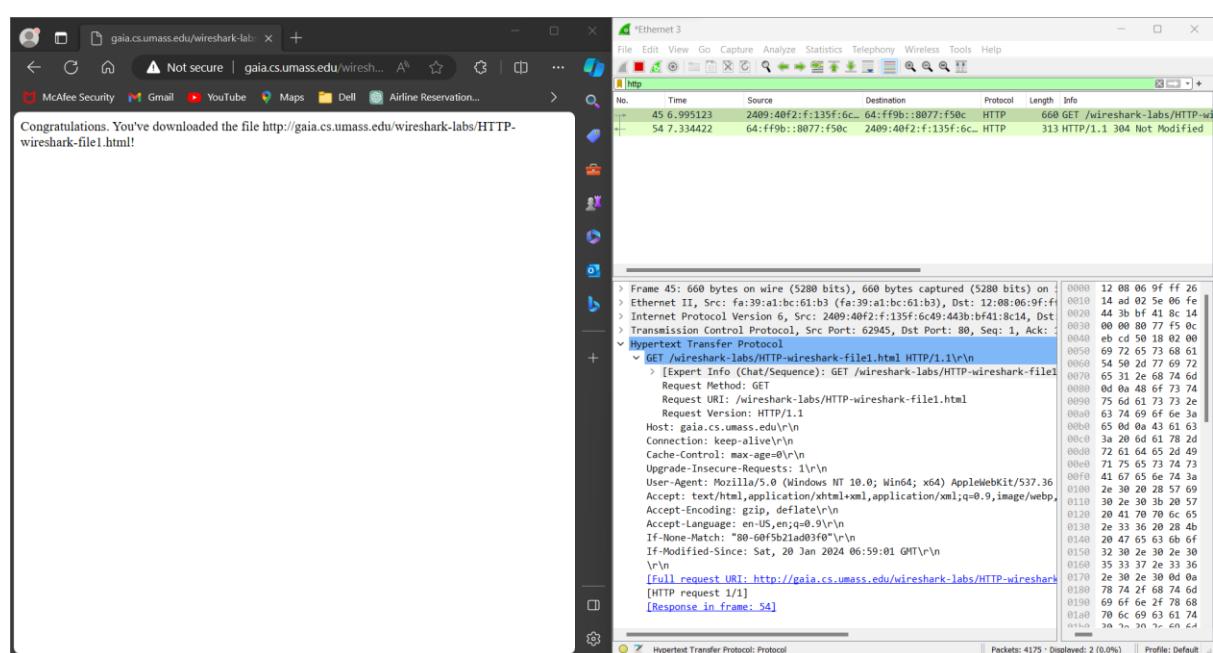
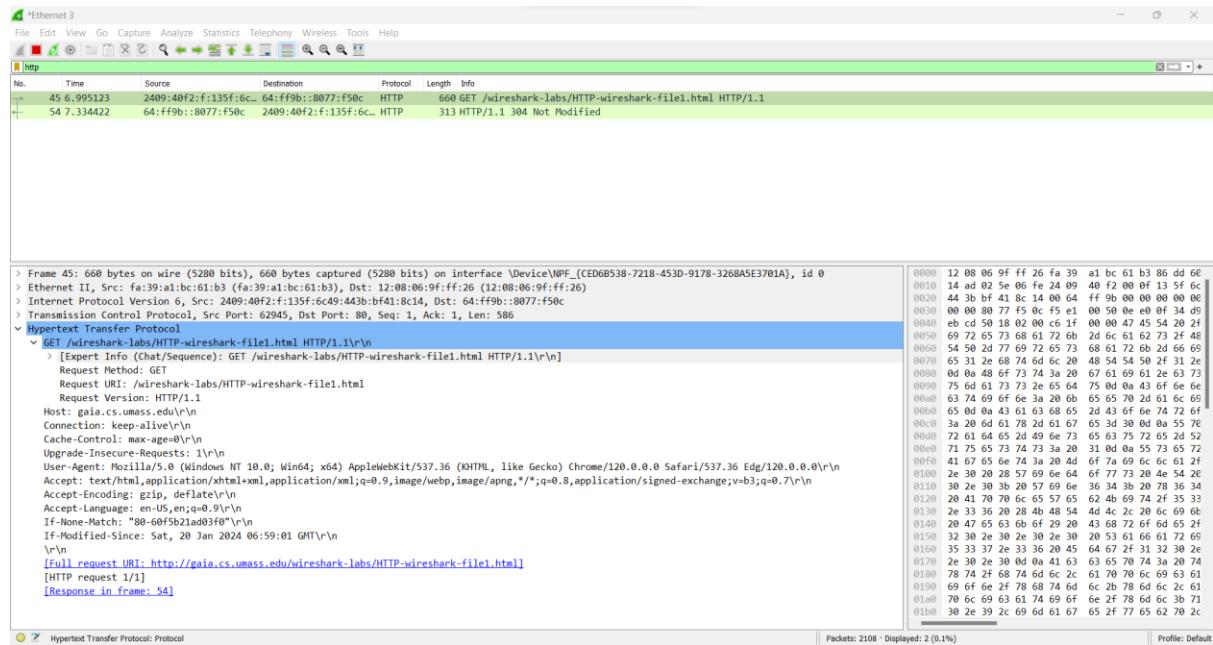


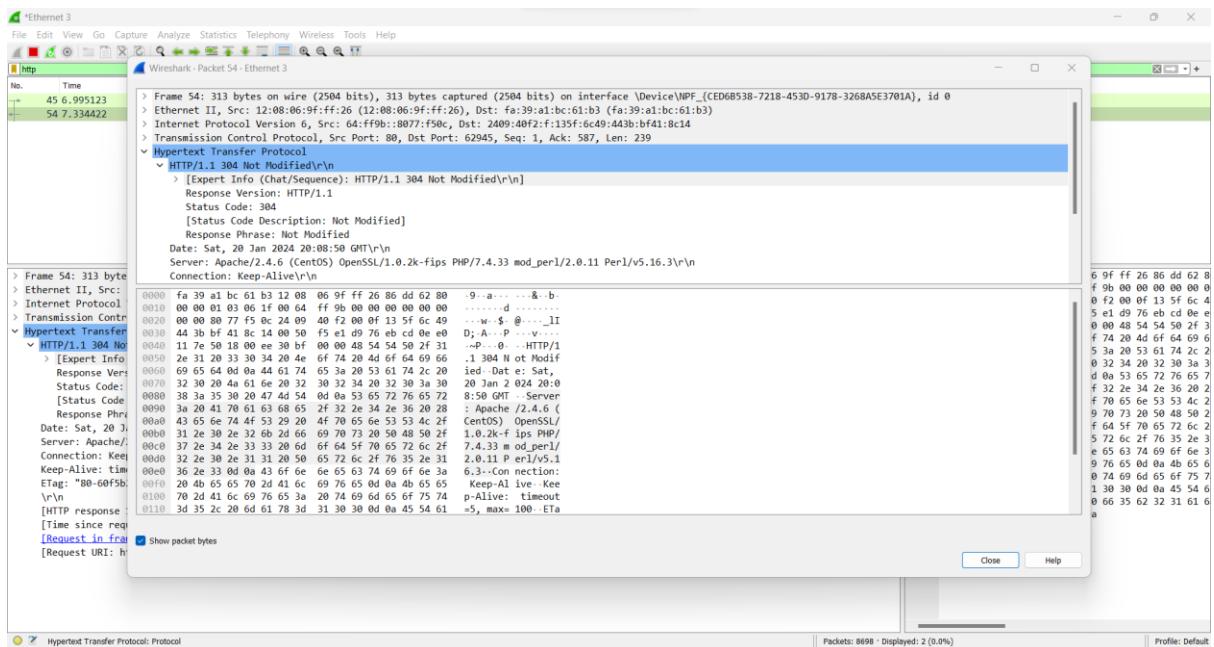
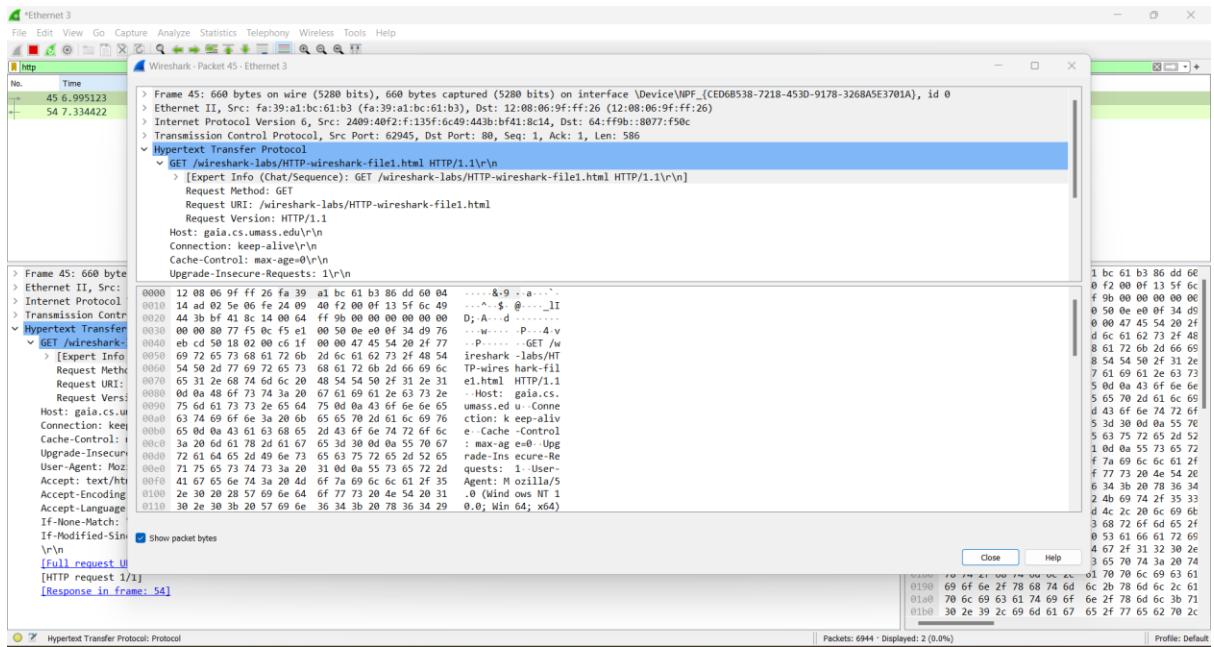
## Basic HTTP GET/response interaction:

- Start the web browser
- Start the wireshark packet sniffer.
- Enter http on the display filter window and capture only the "HTTP".
- Now only HTTP mssgs would be displayed.
- Browser link used:
- <http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html>
- stop Wireshark packet Capture.

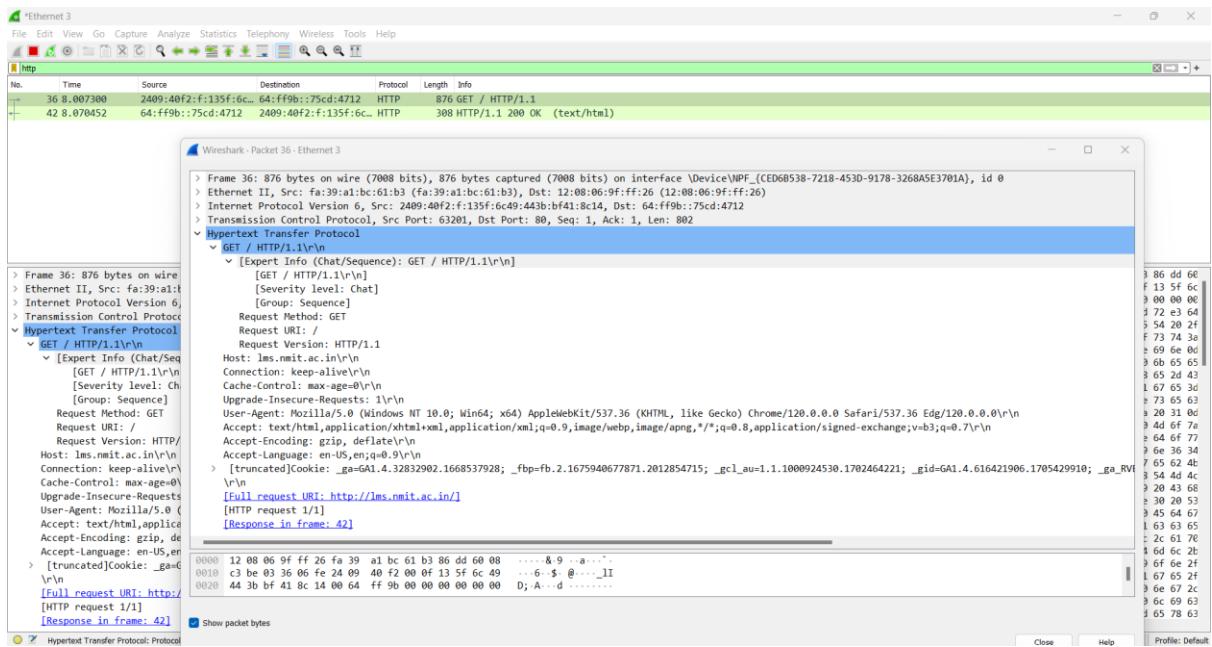
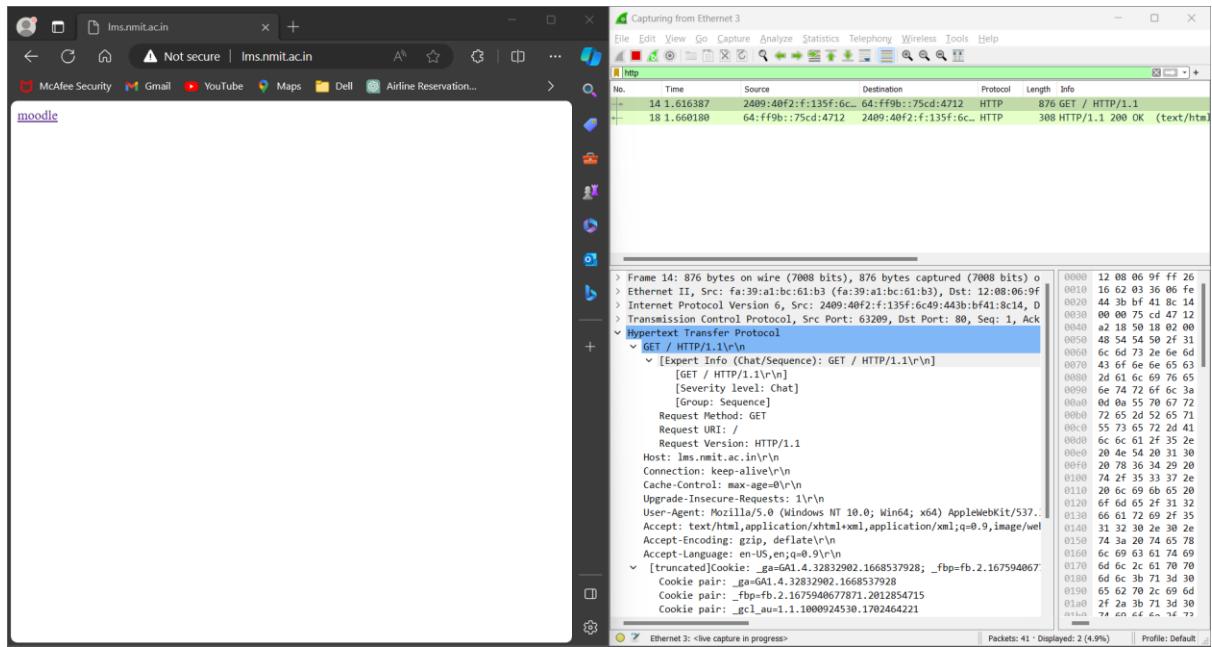


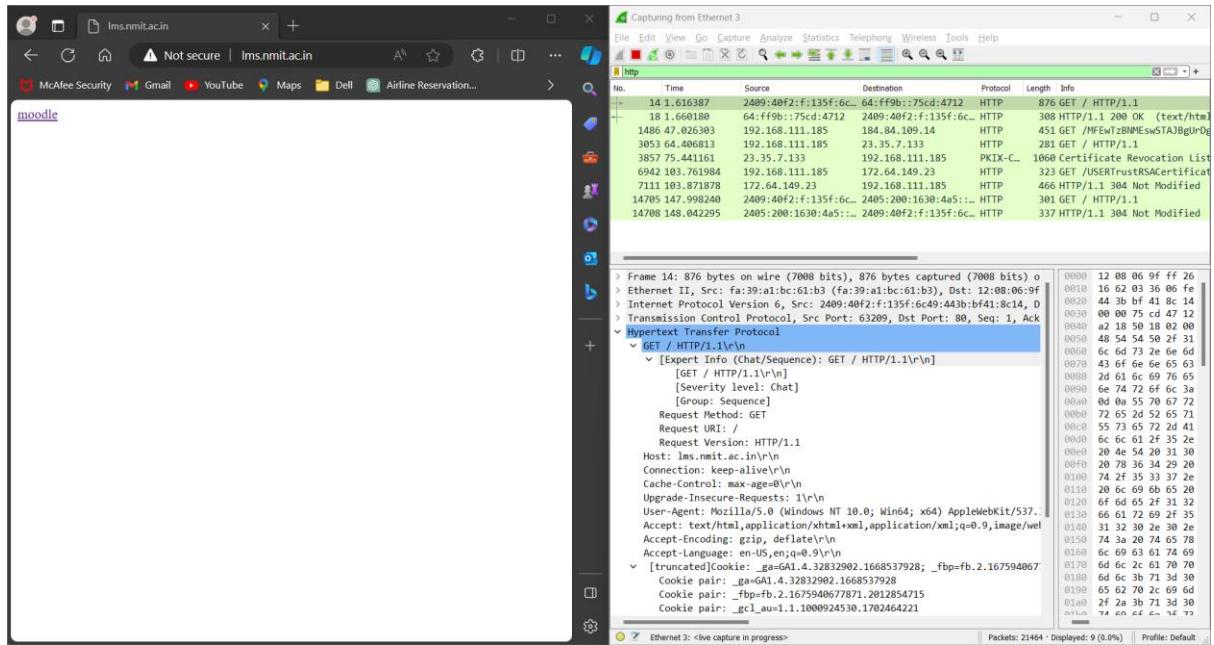
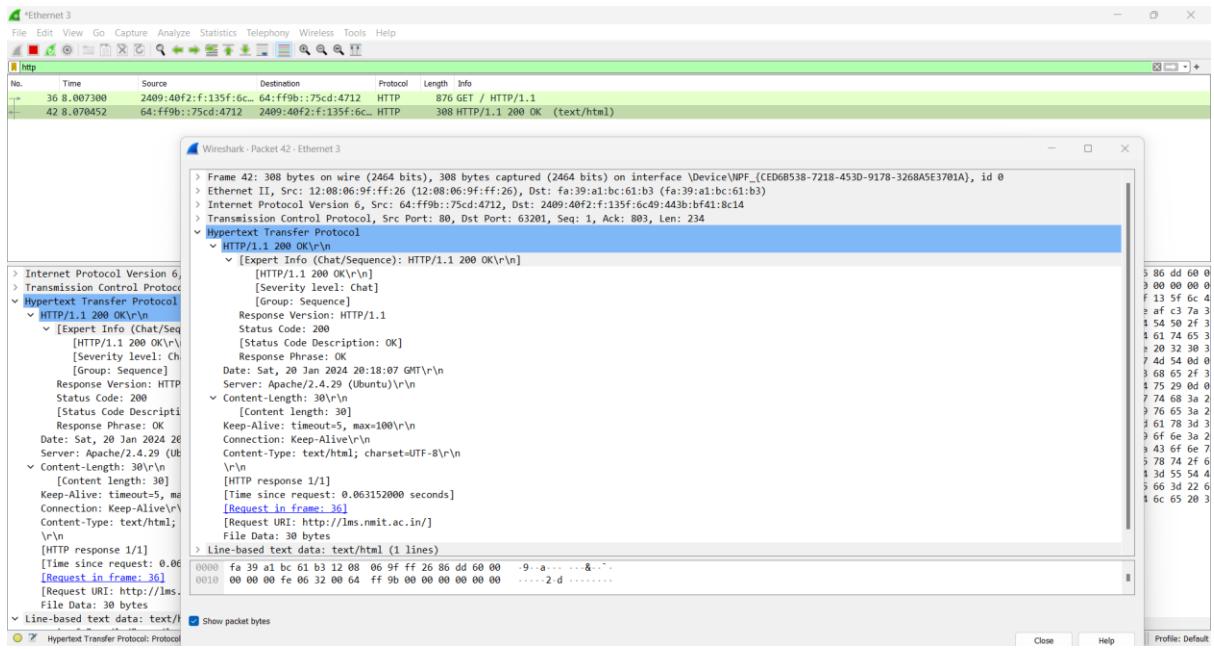
Obtained when we click on the browser link and capture the http





## Browser link: nmit lms





For retrieving long data :

Link: <http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file3.html>

The screenshot shows a web browser window displaying the Bill of Rights and a Wireshark capture window showing network traffic for the same session.

**Bill of Rights (Amendments 1-10 of the Constitution):**

The Conventions of a number of the States having, at the time of adopting the Constitution, expressed a desire, in order to prevent misconstruction or abuse of its powers, that further declaratory and restrictive clauses should be added, and as extending the ground of public confidence in the Government will best insure the beneficent ends of its institution;

Resolved, by the Senate and House of Representatives of the United States of America, in Congress assembled, two-thirds of both Houses concurring, that the following articles be proposed to the Legislatures of the several States, as amendments to the Constitution of the United States; all or any of which articles, when ratified by three-fourths of the said Legislatures, to be valid to all intents and purposes as part of the said Constitution, namely:

**Amendment I**

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

**Amendment II**

A well regulated militia, being necessary to the security of a free state, the right of the people to keep and bear arms, shall not be infringed.

**Amendment III**

No soldier shall, in time of peace be quartered in any house, without the consent of the owner, nor in time of war, but in a manner to be prescribed by law.

**Amendment IV**

Wireshark capture window showing network traffic for the Bill of Rights session:

Frame 1: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 2: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 3: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 4: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 5: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 6: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 7: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 8: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 9: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 10: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 11: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 12: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 13: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 14: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 15: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 16: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 17: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 18: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 19: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 20: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 21: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 22: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 23: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 24: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 25: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Wireshark detailed view of a single TCP connection:

Frame 2: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 3: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 4: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 5: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 6: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 7: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 8: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 9: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 10: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 11: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 12: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 13: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 14: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 15: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 16: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 17: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 18: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 19: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 20: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 21: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

Frame 22: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

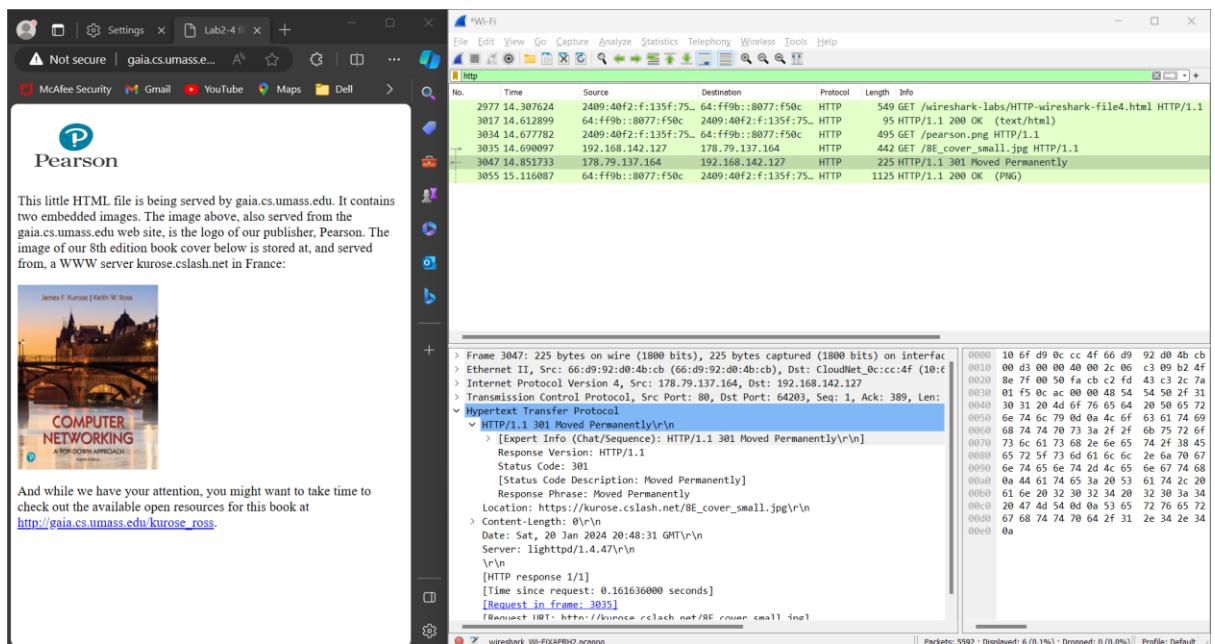
Frame 23: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

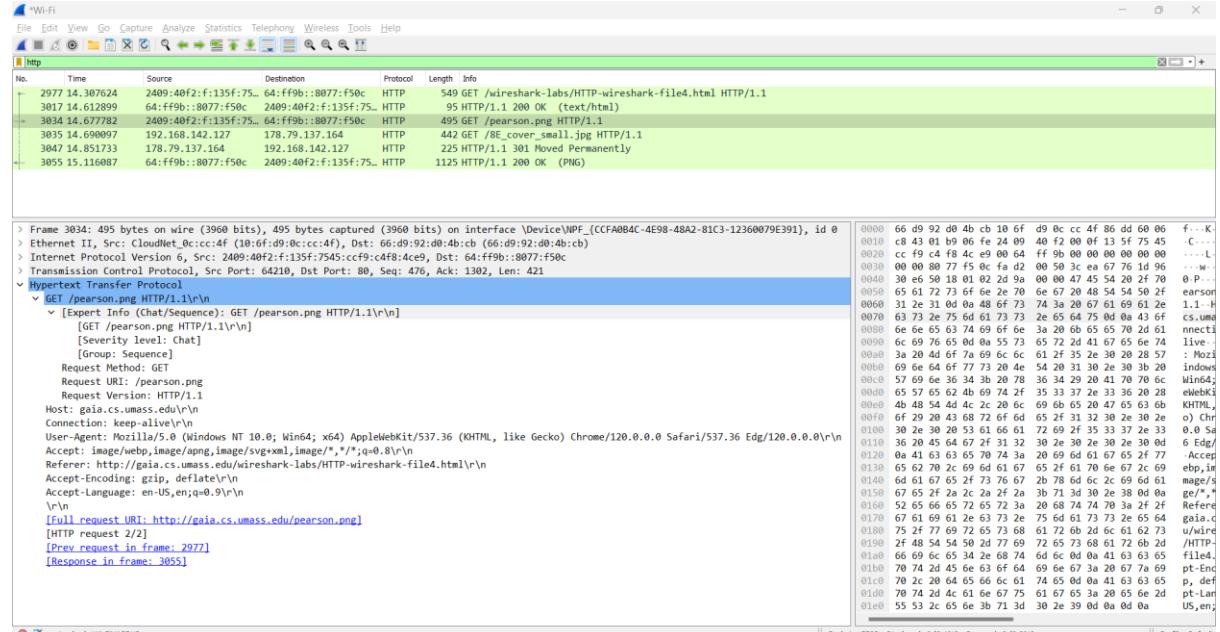
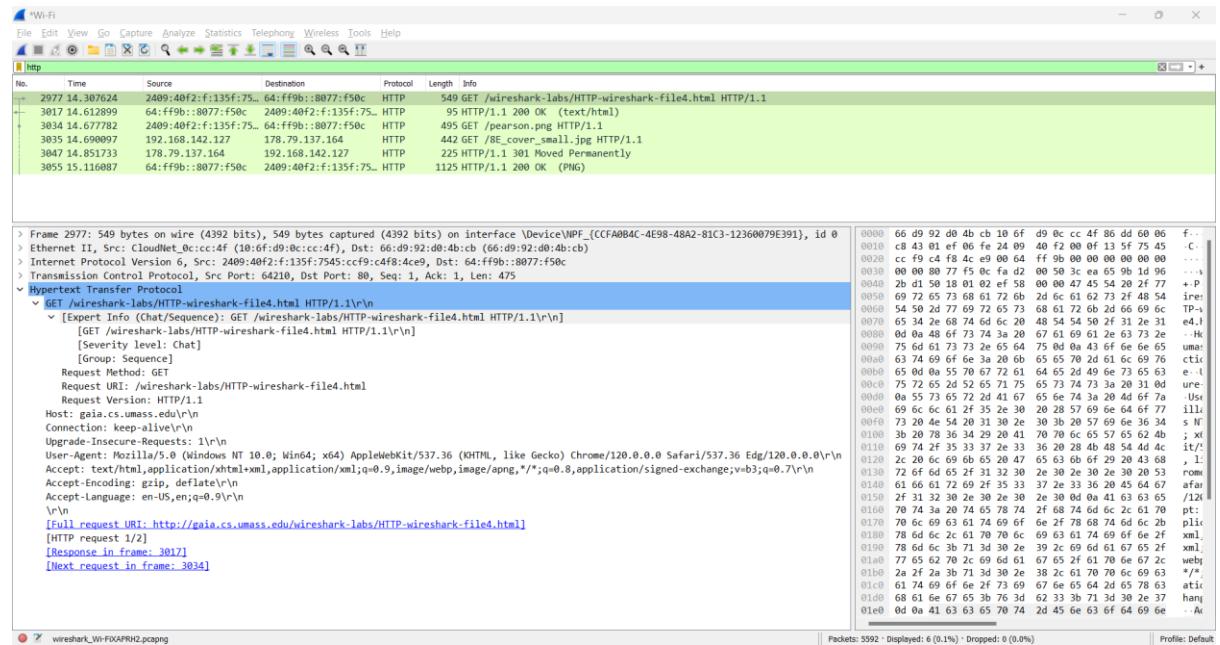
Frame 24: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

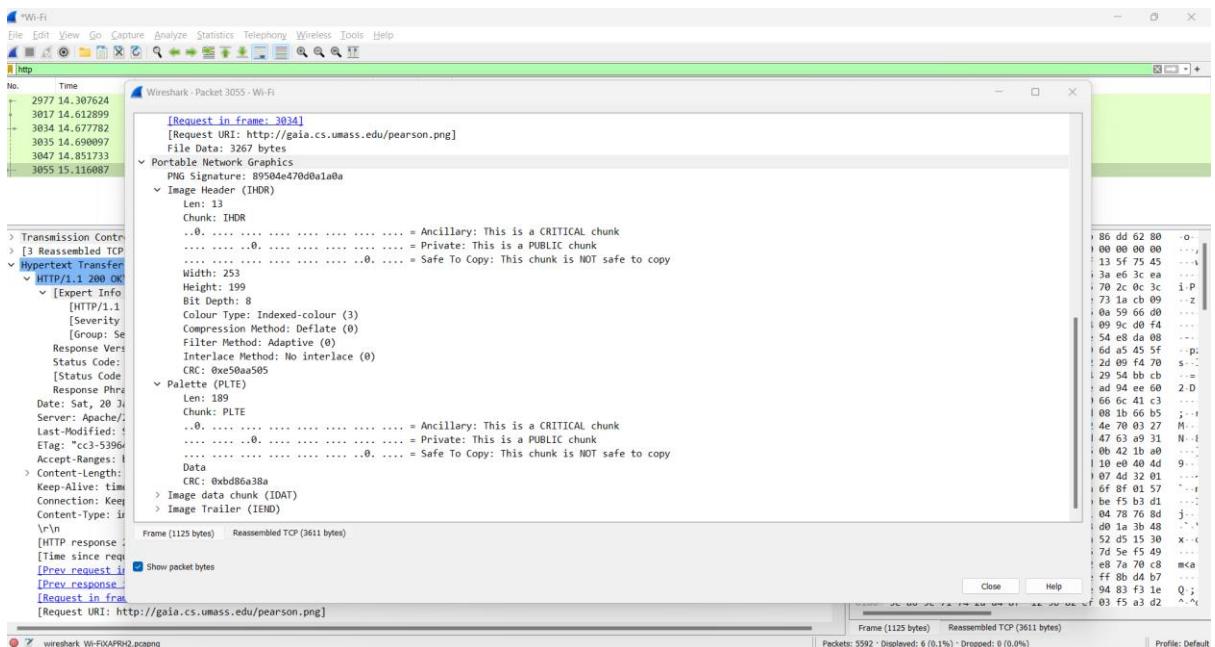
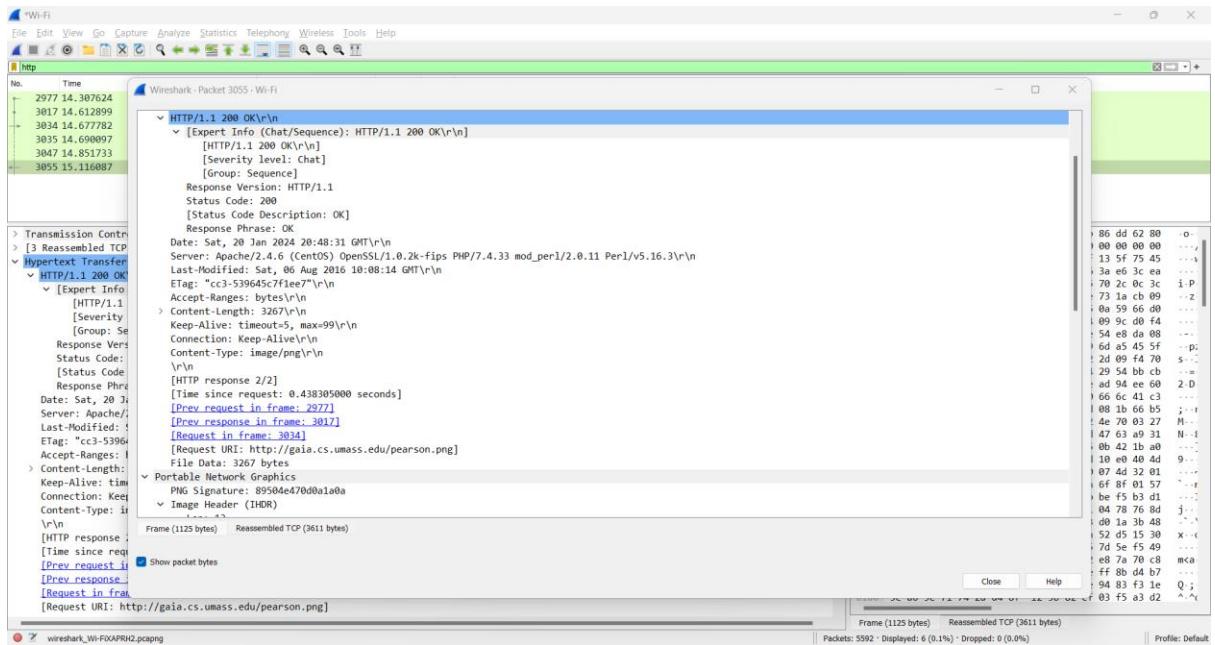
Frame 25: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface \Device\NPF\_{CCFA0B4C-4E98-48A2-81C3-12360079E391}, id 0

## HTML Document with Embedded Object:

- Start the web browser and the browser cache must be cleared
- Start the wireshark packet sniffer
- Link: <http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file5.html>
- Browser would display 2imgs.
- 2imgs are referenced in HTML FILE.i.e., imgs themselves are contained in the HTML; instead of the URLs for the images are contained in the downloaded HTML file.
- Stop and enter HTTP in the display-filter specification window now captured http mssgs are displayed.







## HTTP Authentication:

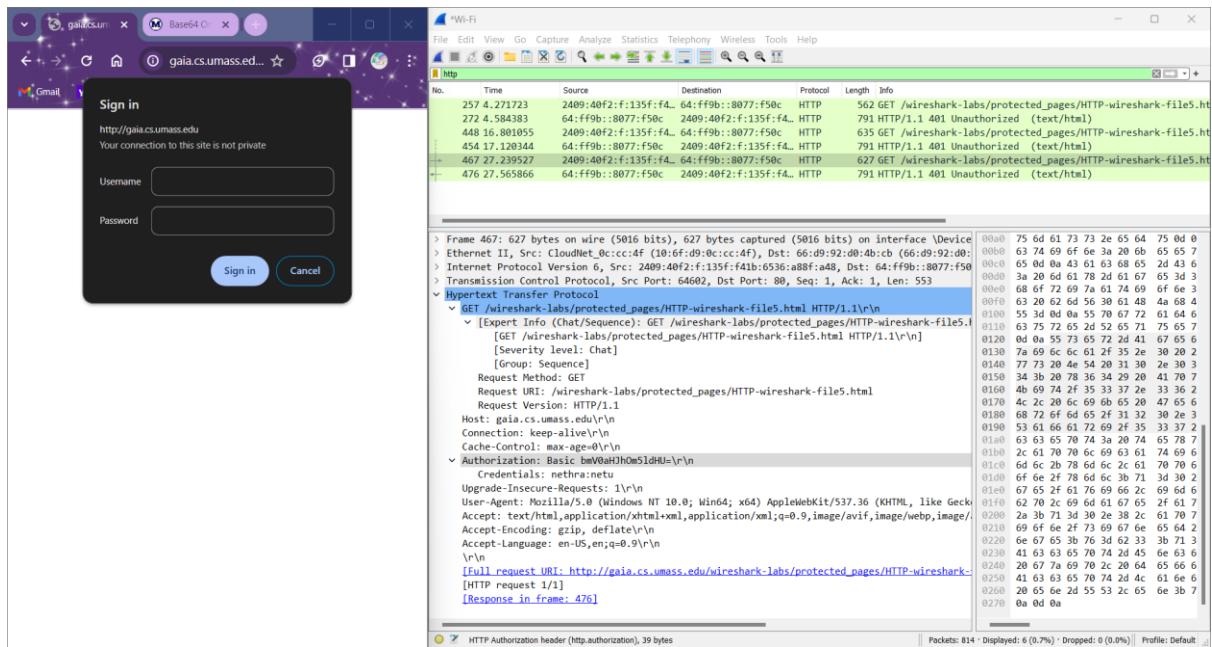
Make your browsers cache cleared and close your browser and start it up again

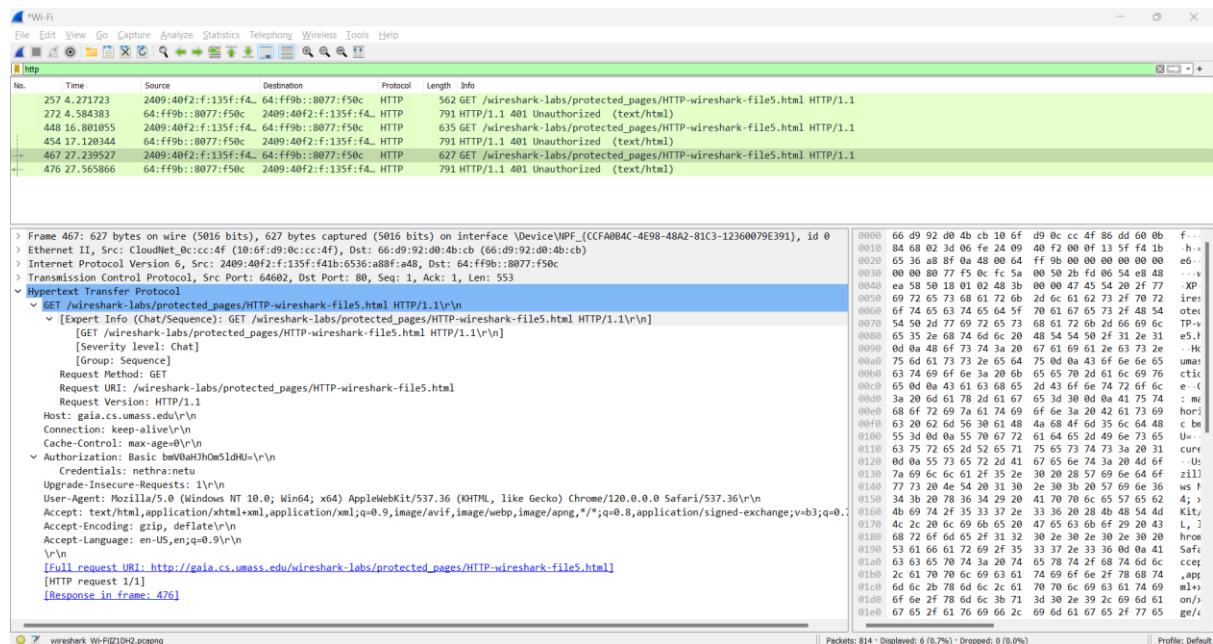
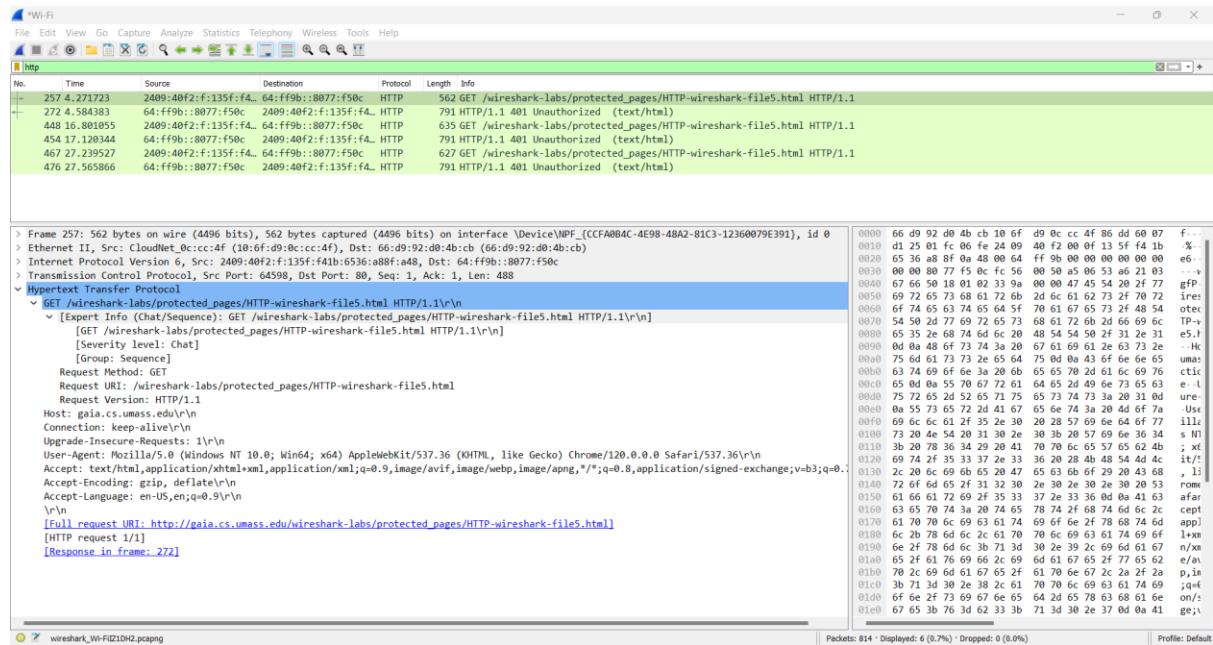
Start the wireshark

Link: [http://gaia.cs.umass.edu/wireshark-labs/protected\\_pages/HTTP-wireshark-file5.html](http://gaia.cs.umass.edu/wireshark-labs/protected_pages/HTTP-wireshark-file5.html)

Type the req username and password in the popup box.

Stop and capture “http”





Cache-Control: max-age=0\r\n

Authorization: Basic bmV0ahJhOm5ldHU=\r\n

Credentials: nethra:netu

Upgrade-Insecure-Requests: 1\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36\r\n

The entered user name and the password can be viewed here.

Link: <https://www motobit com/util/base64-decoder-encoder.asp>

Encode decode the code

- The authorized i.e., the code should be copied under copy value
- Then open the above link select decode option.
- Place the code to be decoded
- The username and password would be displayed.

