Họ và tên: Lê Trung Sơn

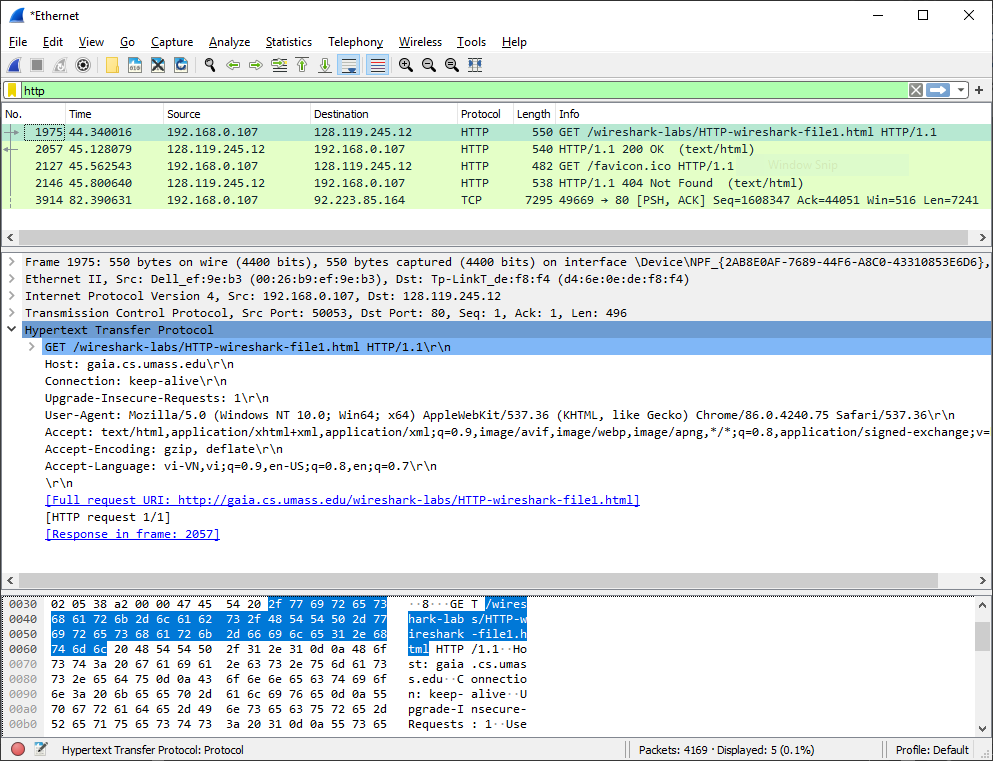
MSSV: 1810482

LAB 2

**I. The Basic HTTP GET/response interaction**

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

- Trình duyệt đang chạy HTTP version 1.1



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

- Ngôn ngữ đó là vi-VN,vi;q=0.9,en-US;q=0.8,en;q=0.7

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

- IP của máy là 192.168.0.107

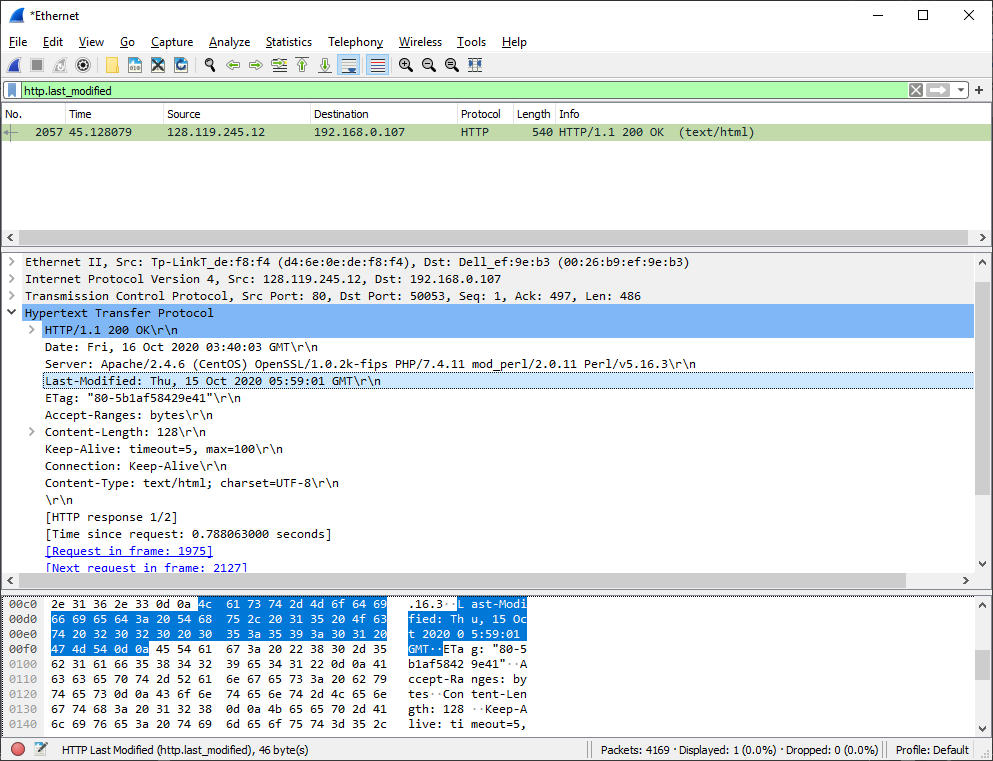
- IP của gaia.cs.umass.edu server là 128.119.245.12

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

- Status code trả về 200 OK

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

- Ta nhập http.last\_modified vào ô filter



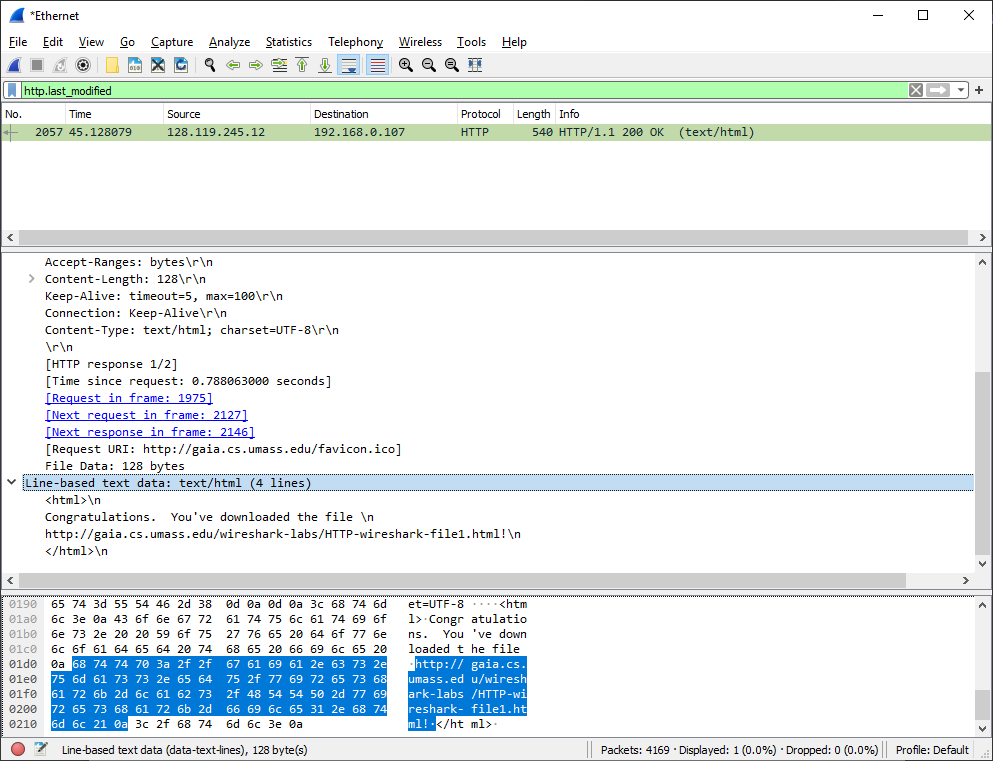
- Kết quả trả về là Thu, 15 Oct 2020 05:59:01 GMT

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

- Là 128 bytes

**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.**

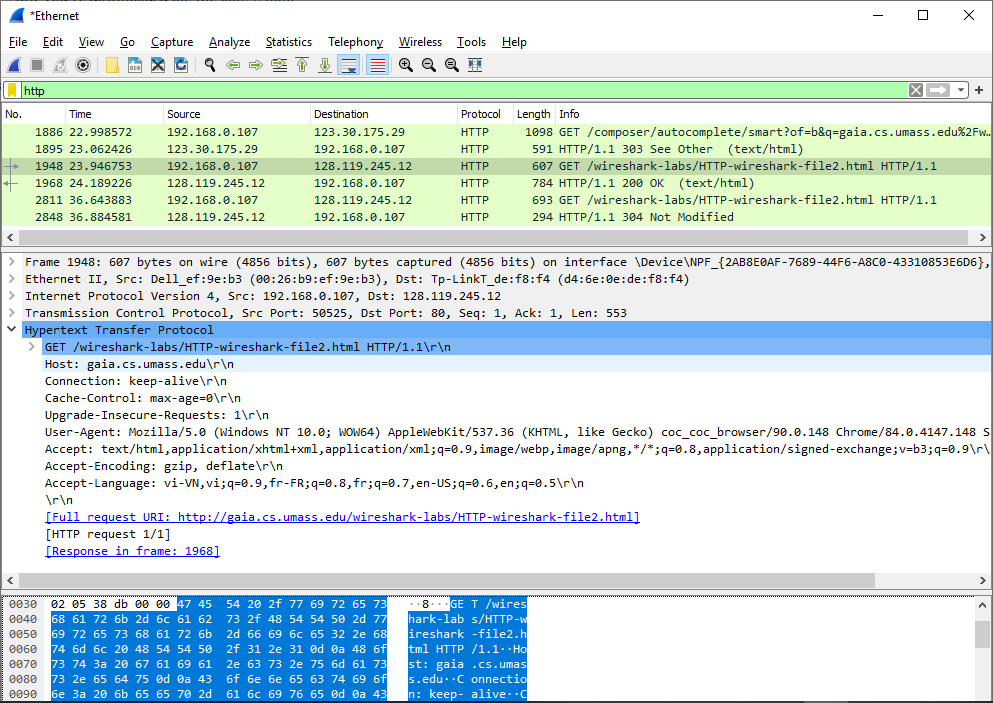
- Không có sự khác biệt. Dữ liệu thô hiển thị đầy đủ và giống với packet-listing window



**II. The HTTP CONDITIONAL GET/response interaction**

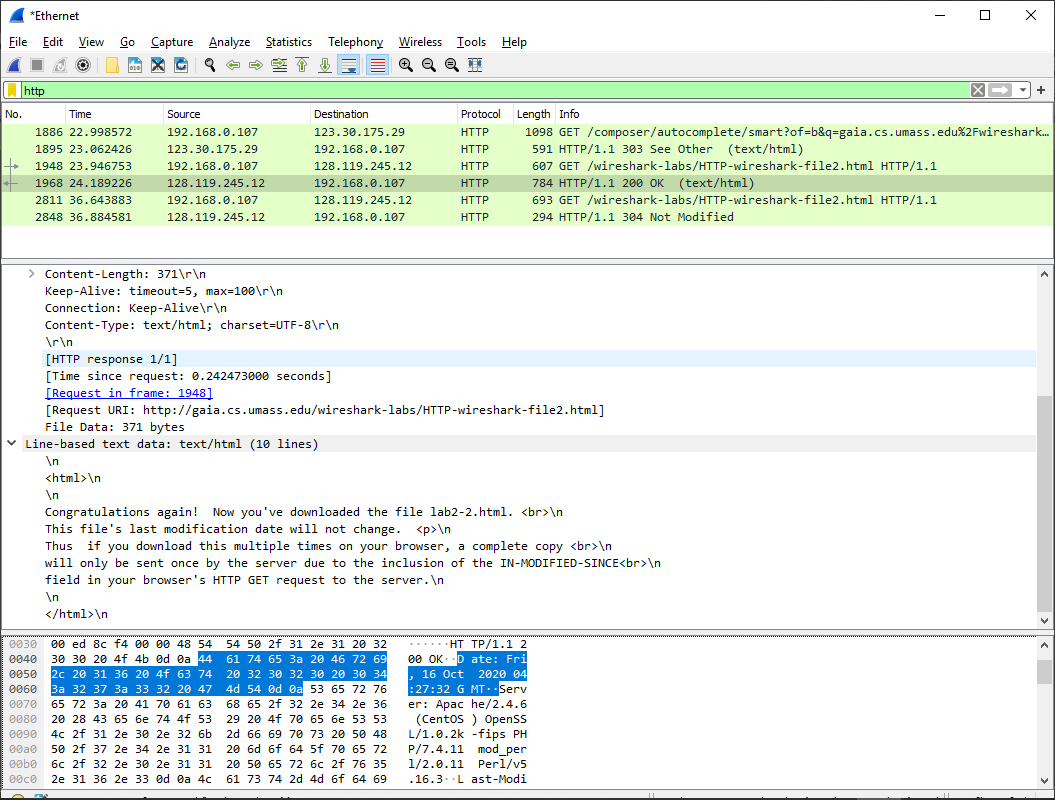
**8. Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE” line in the HTTP GET?**

- Không có truờng IF-MODIFIED-SINCE



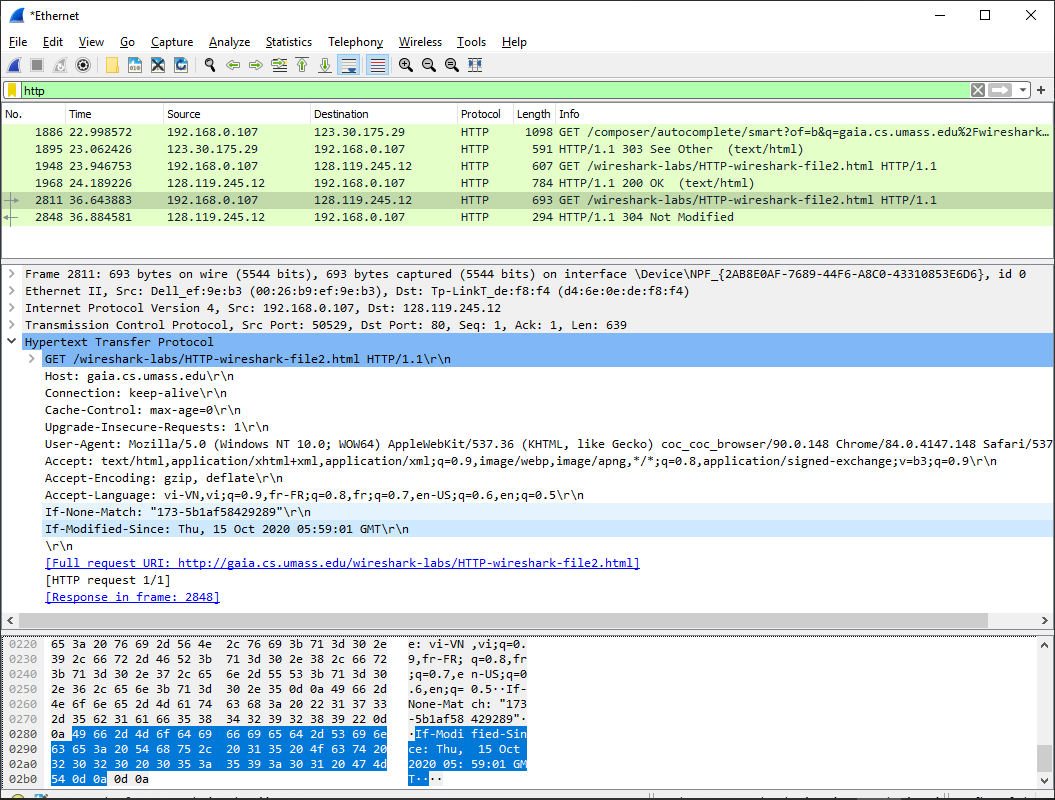
**9. Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?**

- Máy chủ phản hồi thì có trả về nội dung một cách rõ ràng như hình duới



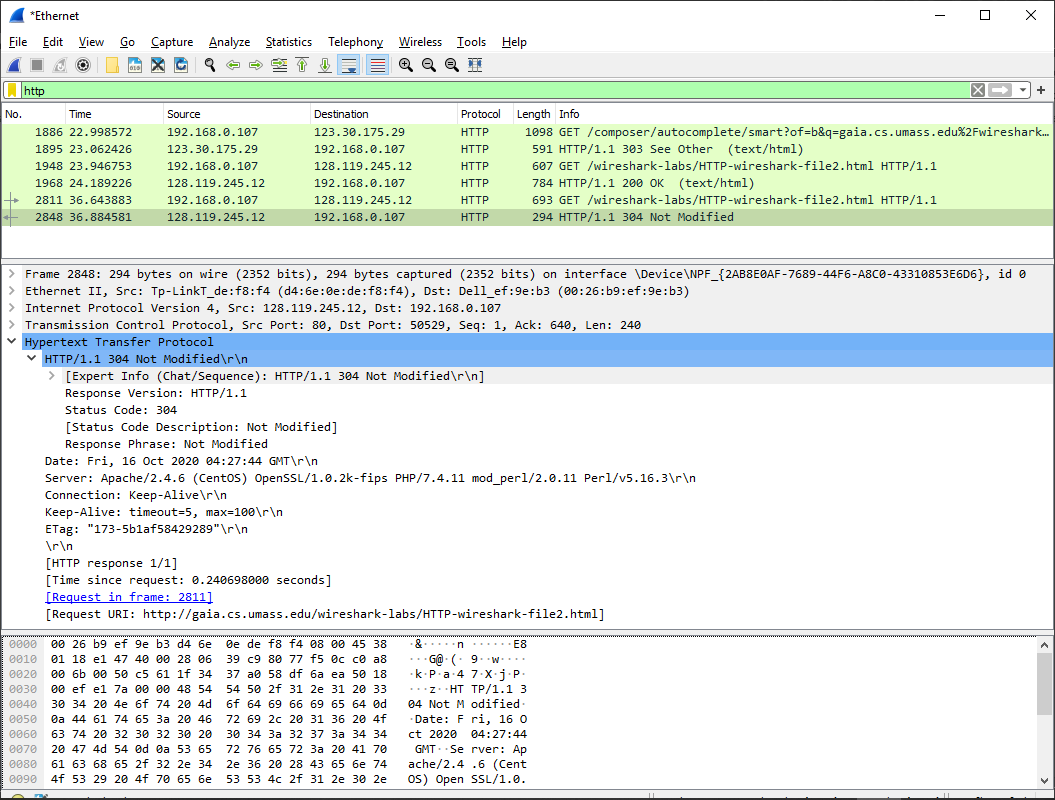
**10. Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE:” line in the HTTP GET? If so, what information follows the “IF-MODIFIED-SINCE:” header?**

- If-Modified-Since: Thu, 15 Oct 2020 05:59:01 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.**

- Status code trả về là 304 Not Modified. Máy chủ phản hồi thì không có trả về nội dung như lần trước, Bởi vì không có sự thay đổi nên máy chủ trả về nôi dụng ngắn hơn để tiết kiệm tài nguyên

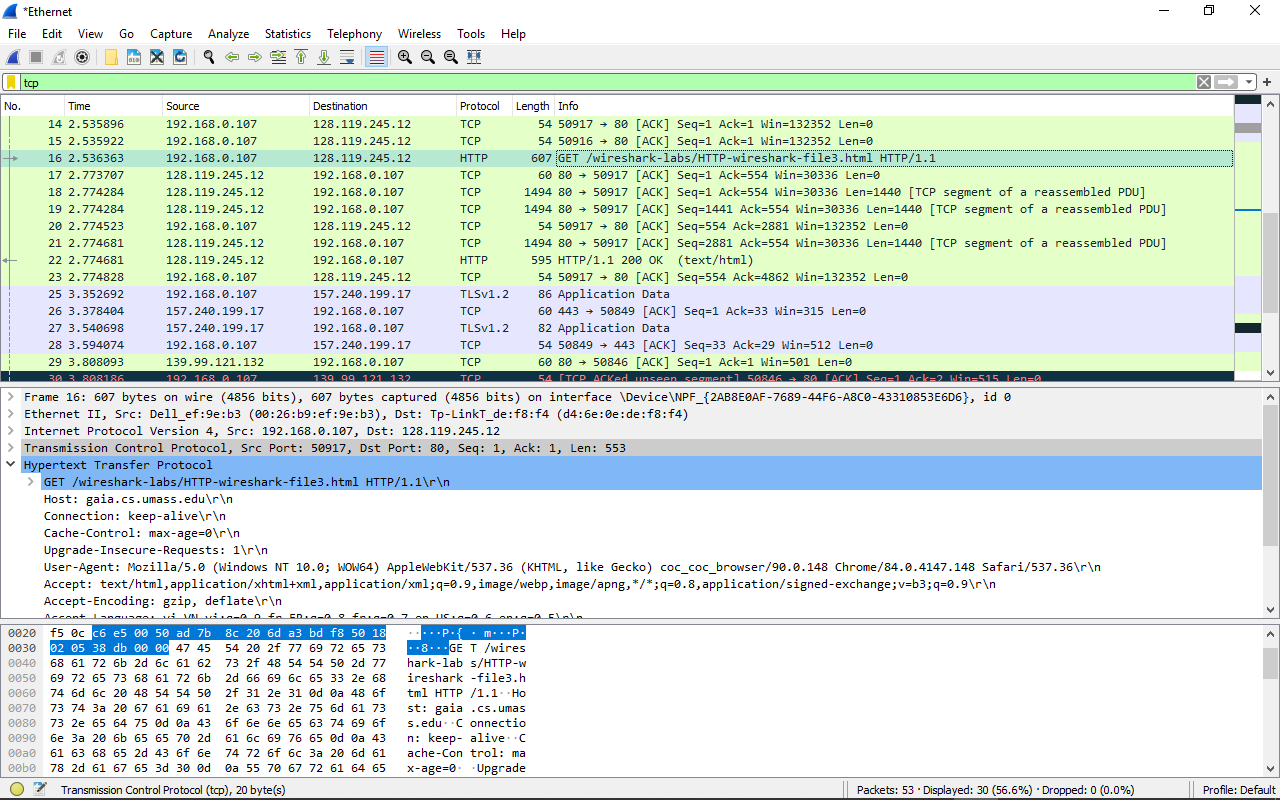


**III. Retrieving Long Documents**

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

- Số request messages là 1

- Packet number là 16



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

- Packet number là 18

**14. What is the status code and Phrase in the response?**

- Status code là 200 OK

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

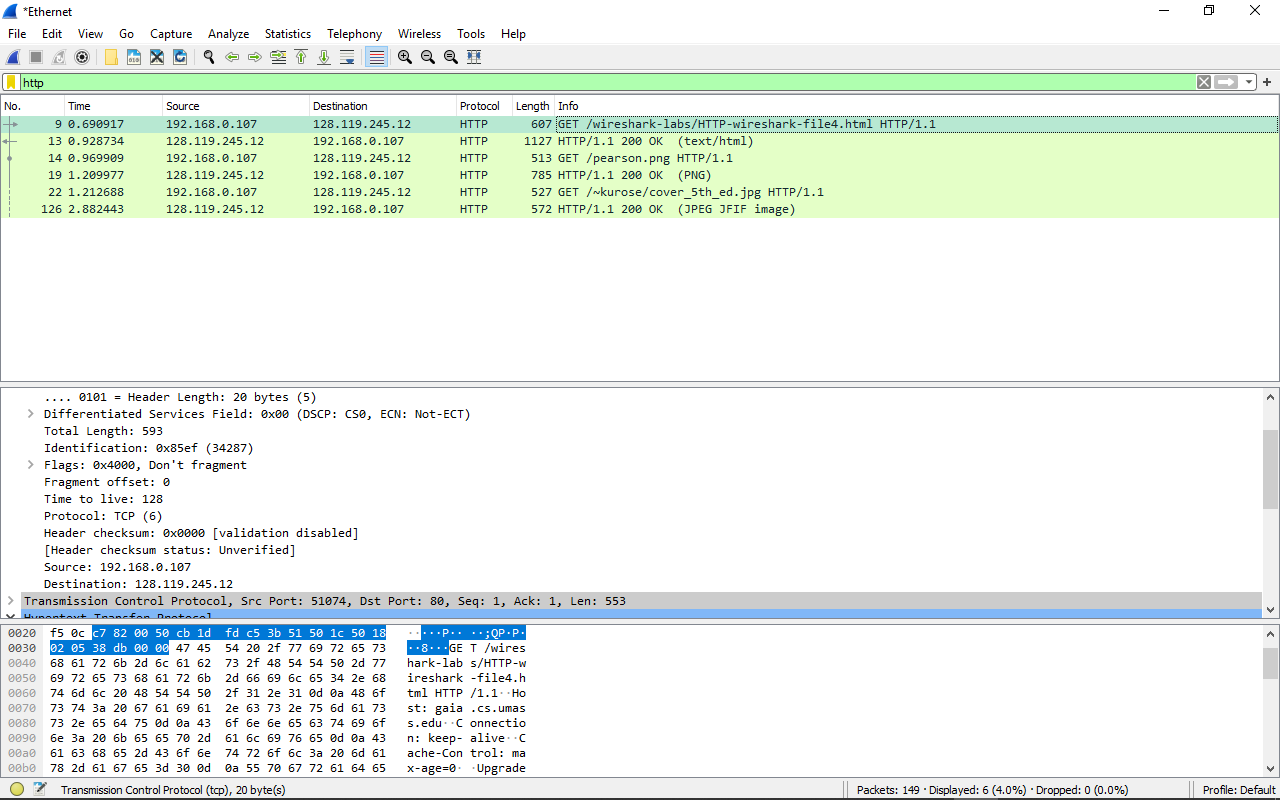
- Cần 3 cái là 18, 19 và 21

**IV. 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?**

- Có 3 GET request được gửi đi, đó là: packet 9 (/wireshark-labs/HTTP-wireshark-file4.html), packet 14 (/pearson.png) và packet 22 (/~kurose/cover\_5th\_ed.jpg)

- Cả 3 packet đều gửi đến địa chỉ 128.119.245.12



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

- Trình duyệt tải hình ảnh xuống theo cách tuần tự theo thời gian. Từng status code trả về là 200 OK sau khi tải ảnh thành công lần lượt theo thứ tự sau khi GET request được gửi đi

**V. HTTP Authentication**

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

- Phản hồi của máy chủ là HTTP/1.1 401 Unauthorized\r\n

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

- Trường mới được thêm vào là Authorization: Basic d2lyZXNoYXJrLXN0dWRlbnRzOm5ldHdvcms=\r\n và Credentials: wireshark-students:network

