Lab Report

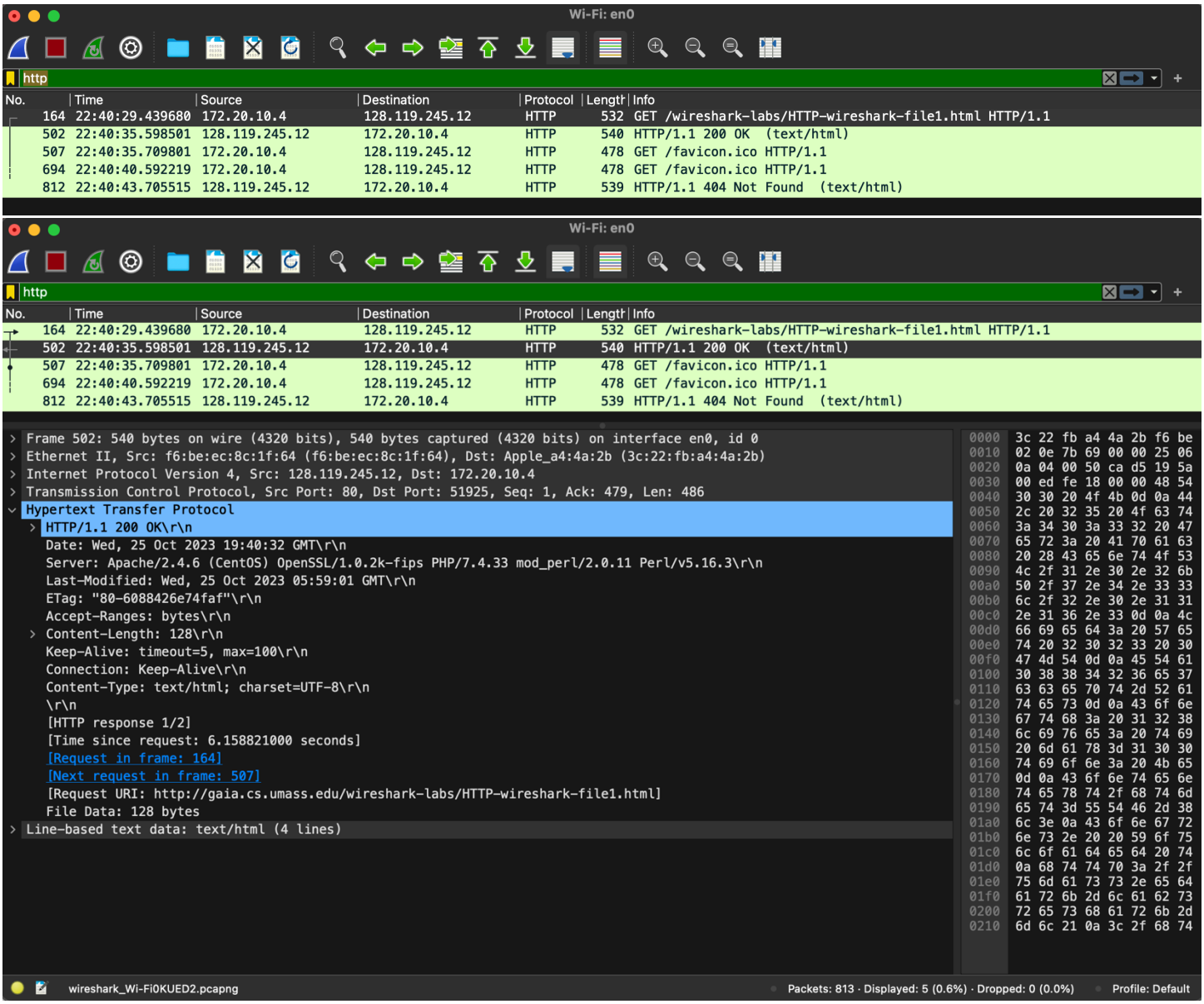
CSE351, Computer Networks

Name: Malak Mohamed Helmy Elbakry ID: 20P2434

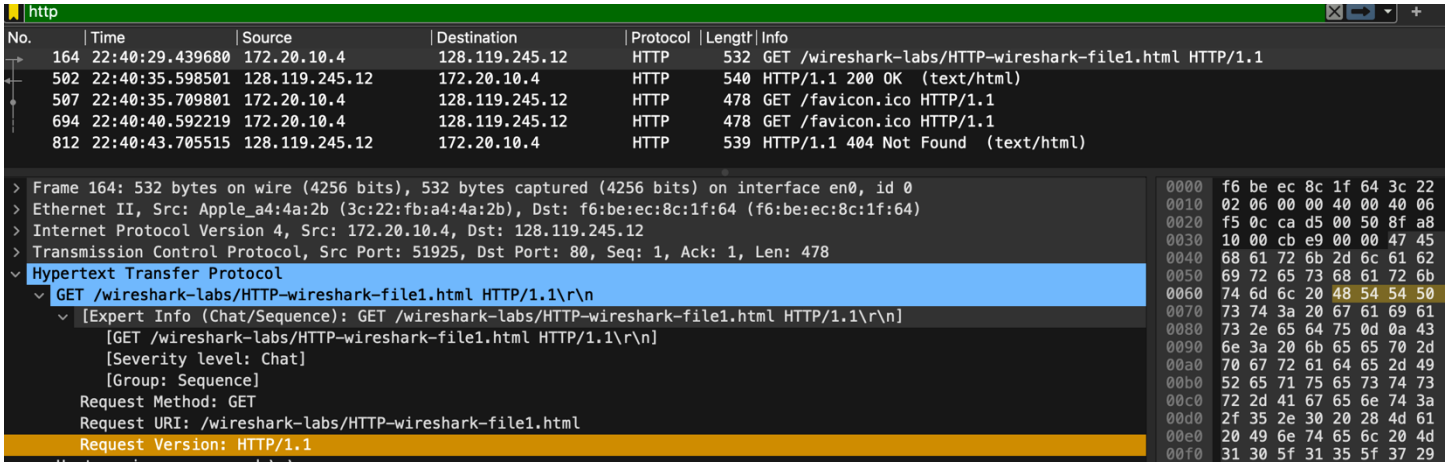
Lab No: (2) Experiment Title: Wireshark_HTTP_v7.0

Date: 25 / 10 /2023

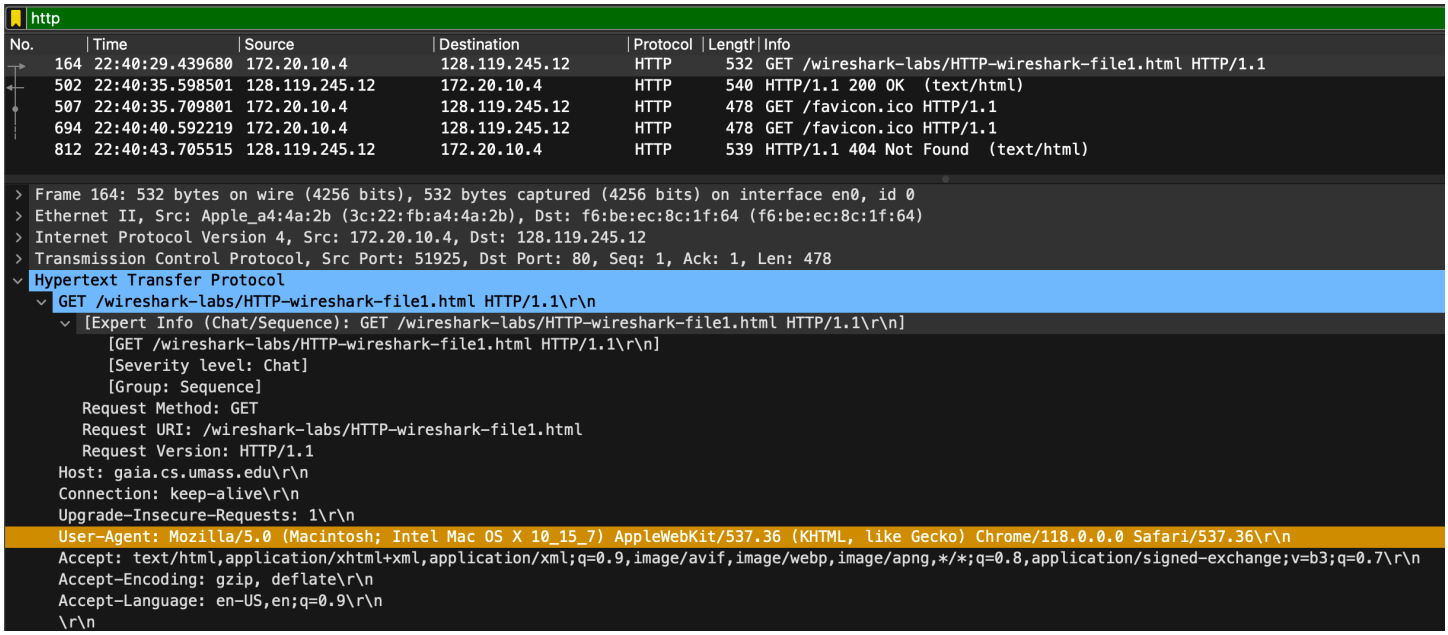
The Basic HTTP GET/response interaction:



1. Question 1



2. Question 2

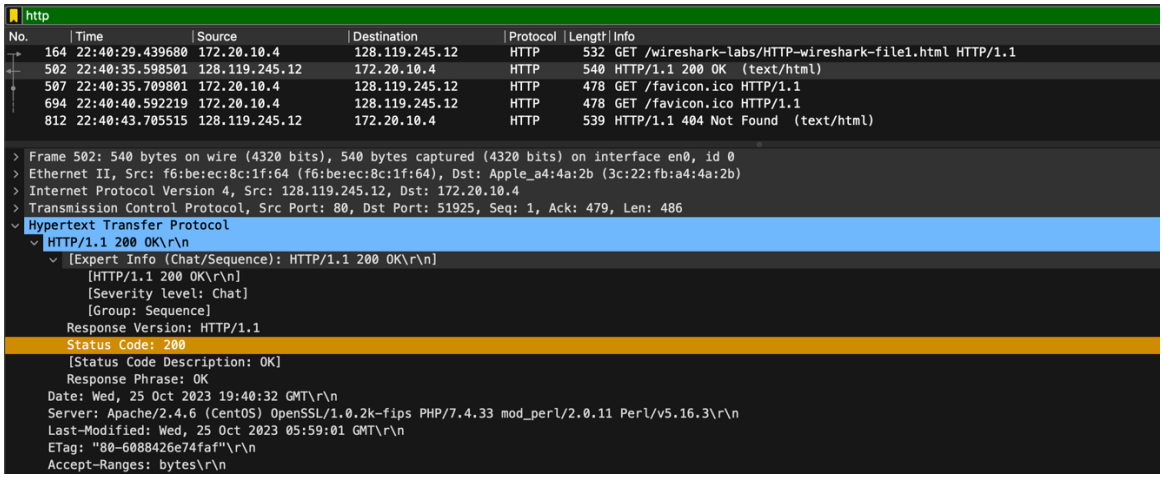


3. Question 3

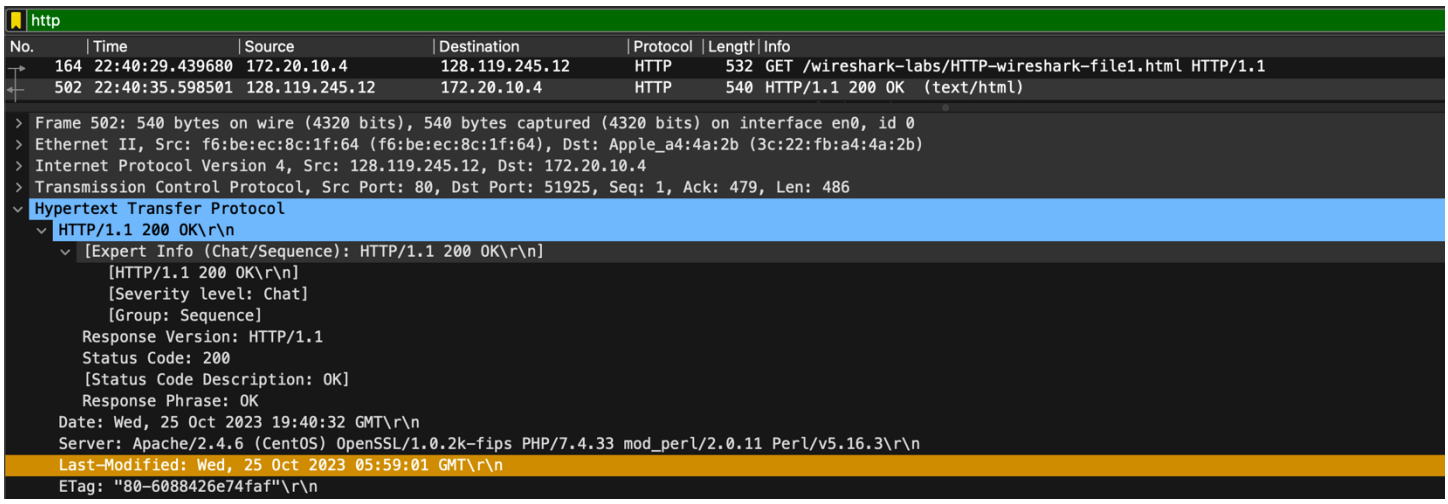
4. Question 4

My IP address : 172.20.10.4 IP of the gaia.cs.umass.edu server: 128.119.245.12

Status Code:200



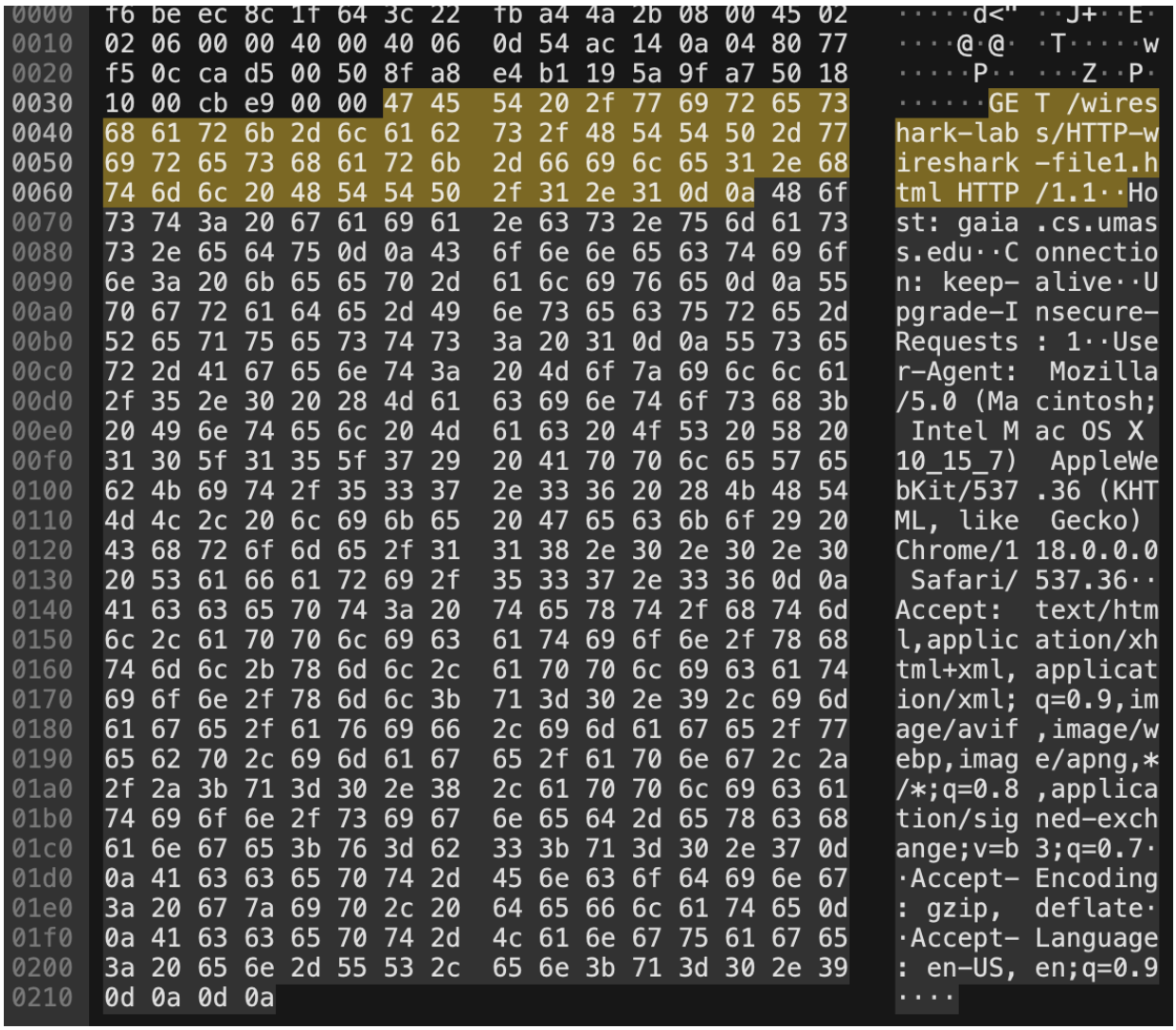
5. Question 5



6. Question 6

7. Question 7

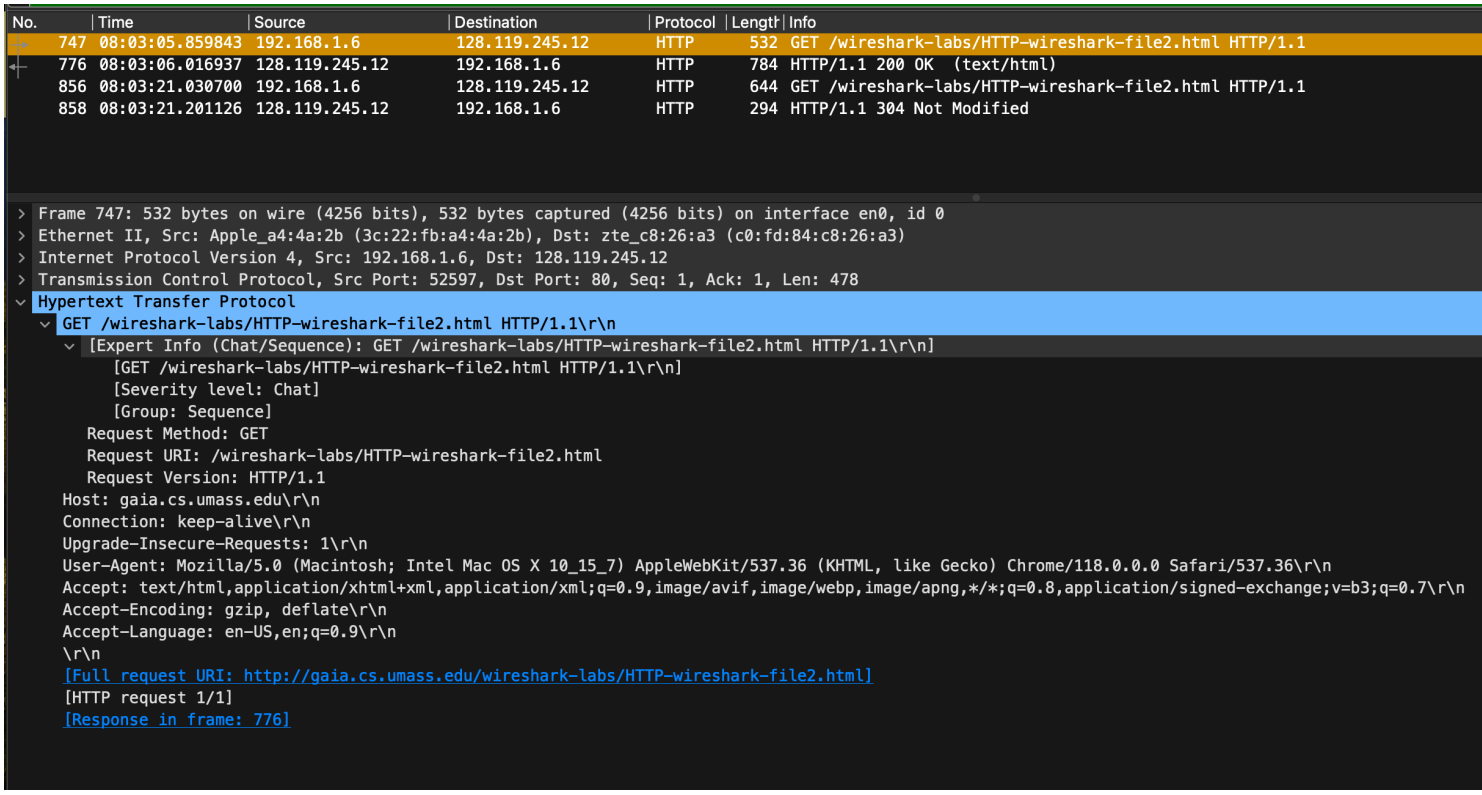
No there is no any headers within the data that are not displayed in the packet-listing window.


0000 f6 be ec 8c 1f 64 3c 22 fb a4 4a 2b 08 00 45 02 ·····d<" ··J+··E·
0010 02 06 00 00 40 00 40 06 0d 54 ac 14 0a 04 80 77 ····@·@· ·T·····w
0020 f5 0c ca d5 00 50 8f a8 e4 b1 19 5a 9f a7 50 18 ·····P·· ···Z··P·
0030 10 00 cb e9 00 00 47 45 54 20 2f 77 69 72 65 73 ·····GE T /wires
0040 68 61 72 6b 2d 6c 61 62 73 2f 48 54 54 50 2d 77 hark-lab s/HTTP-w
0050 69 72 65 73 68 61 72 6b 2d 66 69 6c 65 31 2e 68 ireshark -file1.h
0060 74 6d 6c 20 48 54 54 50 2f 31 2e 31 0d 0a 48 6f tml HTTP /1.1··Ho
0070 73 74 3a 20 67 61 69 61 2e 63 73 2e 75 6d 61 73 st: gaia .cs.umas
0080 73 2e 65 64 75 0d 0a 43 6f 6e 6e 65 63 74 69 6f s.edu··C onnectio
0090 6e 3a 20 6b 65 65 70 2d 61 6c 69 76 65 0d 0a 55 n: keep- alive··U
00a0 70 67 72 61 64 65 2d 49 6e 73 65 63 75 72 65 2d pgrade-I nsecure-
00b0 52 65 71 75 65 73 74 73 3a 20 31 0d 0a 55 73 65 Requests : 1··Use
00c0 72 2d 41 67 65 6e 74 3a 20 4d 6f 7a 69 6c 6c 61 r-Agent: Mozilla
00d0 2f 35 2e 30 20 28 4d 61 63 69 6e 74 6f 73 68 3b /5.0 (Ma cintosh;
00e0 20 49 6e 74 65 6c 20 4d 61 63 20 4f 53 20 58 20 Intel M ac OS X
00f0 31 30 5f 31 35 5f 37 29 20 41 70 70 6c 65 57 65 10_15_7) AppleWe
0100 62 4b 69 74 2f 35 33 37 2e 33 36 20 28 4b 48 54 bKit/537 .36 (KHT
0110 4d 4c 2c 20 6c 69 6b 65 20 47 65 63 6b 6f 29 20 ML, like Gecko)
0120 43 68 72 6f 6d 65 2f 31 31 38 2e 30 2e 30 2e 30 Chrome/1 18.0.0.0
0130 20 53 61 66 61 72 69 2f 35 33 37 2e 33 36 0d 0a Safari/ 537.36··
0140 41 63 63 65 70 74 3a 20 74 65 78 74 2f 68 74 6d Accept: text/htm
0150 6c 2c 61 70 70 6c 69 63 61 74 69 6f 6e 2f 78 68 l,applic ation/xh
0160 74 6d 6c 2b 78 6d 6c 2c 61 70 70 6c 69 63 61 74 tml+xml, applicat
0170 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2e 39 2c 69 6d ion/xml; q=0.9,im
0180 61 67 65 2f 61 76 69 66 2c 69 6d 61 67 65 2f 77 age/avif ,image/w
0190 65 62 70 2c 69 6d 61 67 65 2f 61 70 6e 67 2c 2a ebp,imag e/apng,*
01a0 2f 2a 3b 71 3d 30 2e 38 2c 61 70 70 6c 69 63 61 /*;q=0.8 ,applica
01b0 74 69 6f 6e 2f 73 69 67 6e 65 64 2d 65 78 63 68 tion/sig ned-exch
01c0 61 6e 67 65 3b 76 3d 62 33 3b 71 3d 30 2e 37 0d ange;v=b 3;q=0.7·
01d0 0a 41 63 63 65 70 74 2d 45 6e 63 6f 64 69 6e 67 ·Accept- Encoding
01e0 3a 20 67 7a 69 70 2c 20 64 65 66 6c 61 74 65 0d : gzip, deflate·
01f0 0a 41 63 63 65 70 74 2d 4c 61 6e 67 75 61 67 65 ·Accept- Language
0200 3a 20 65 6e 2d 55 53 2c 65 6e 3b 71 3d 30 2e 39 : en-US, en;q=0.9
0210 0d 0a 0d 0a ····

The HTTP CONDITIONAL GET/response interaction

8. Question 8

   There is no IF-MODIFIED-SINCE as it was not cached before



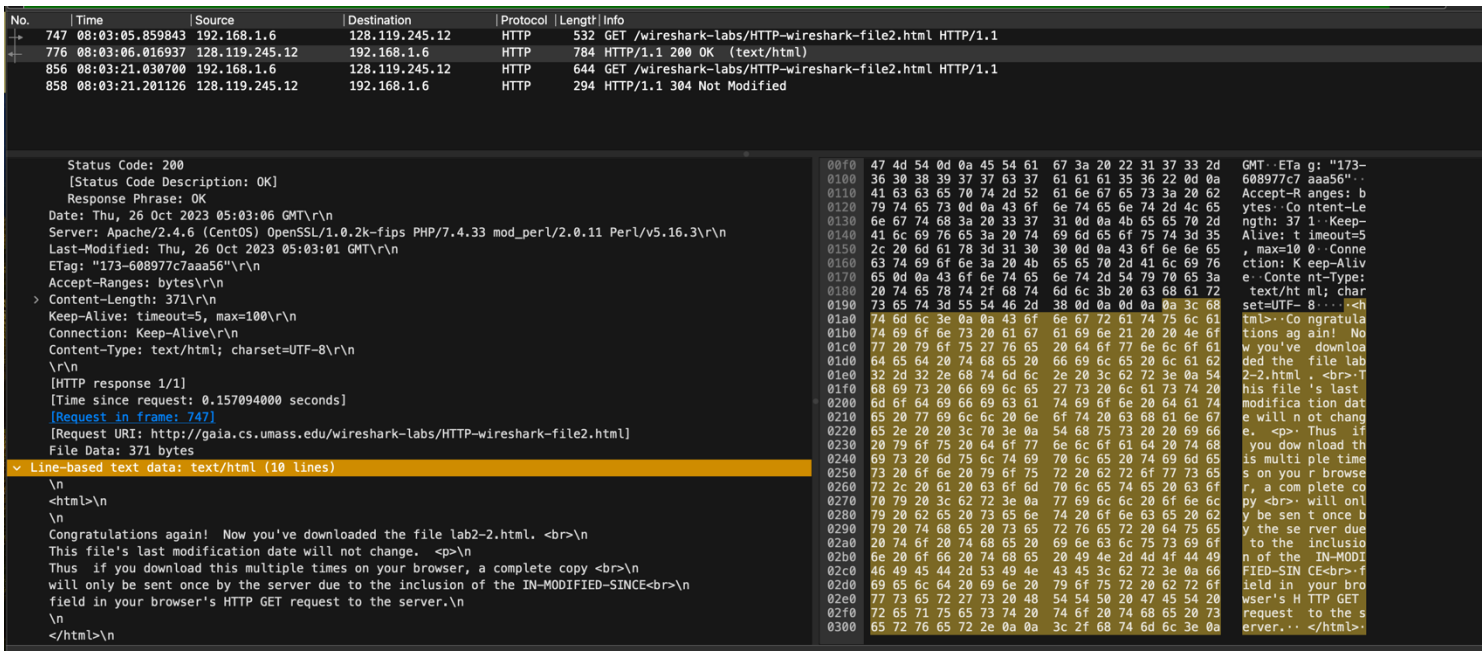
9. Question 9

   Knew from:

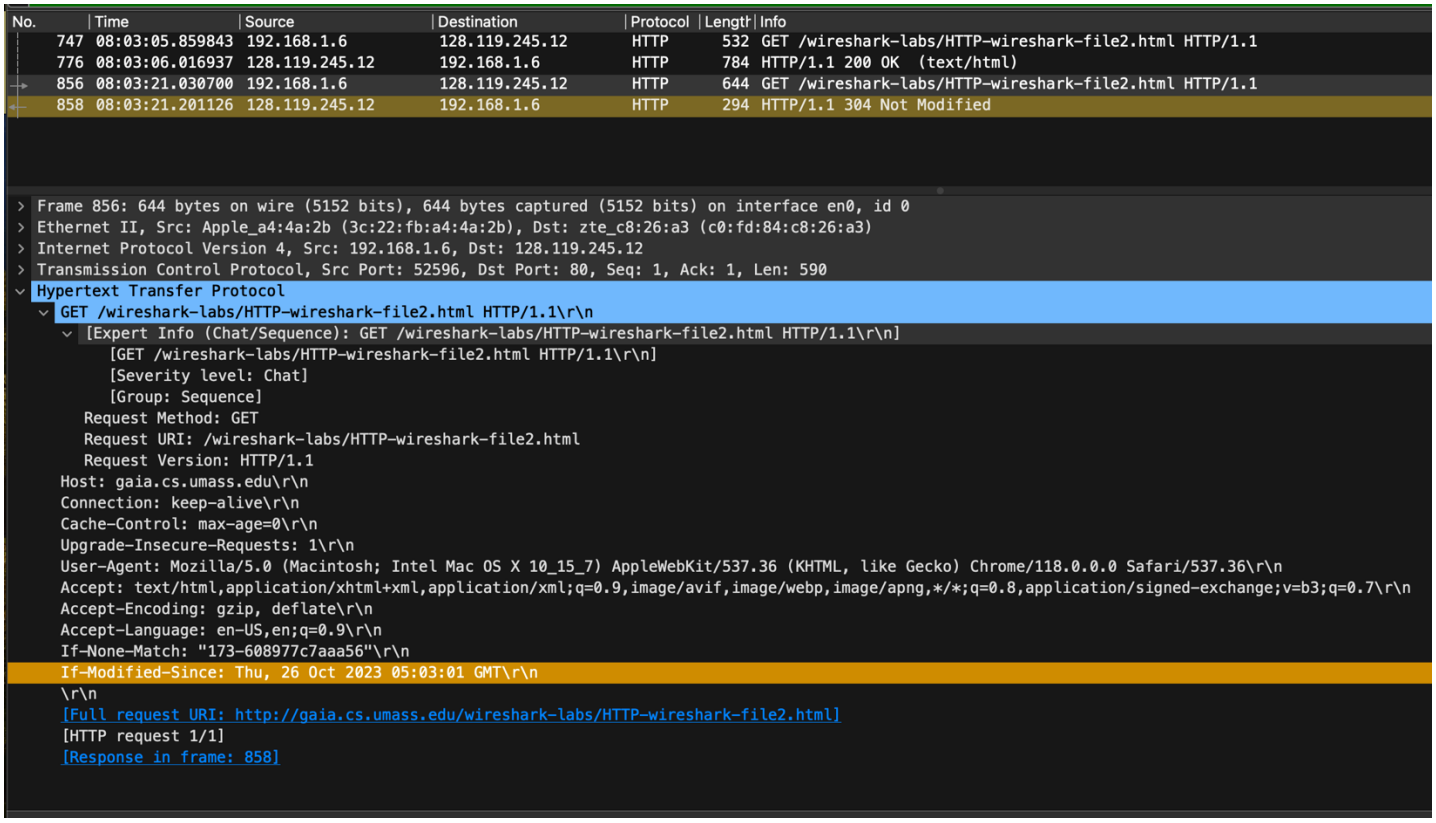
   1- In the line 776 it is visible the (text/html)

   2- In the details of the packet there is content length

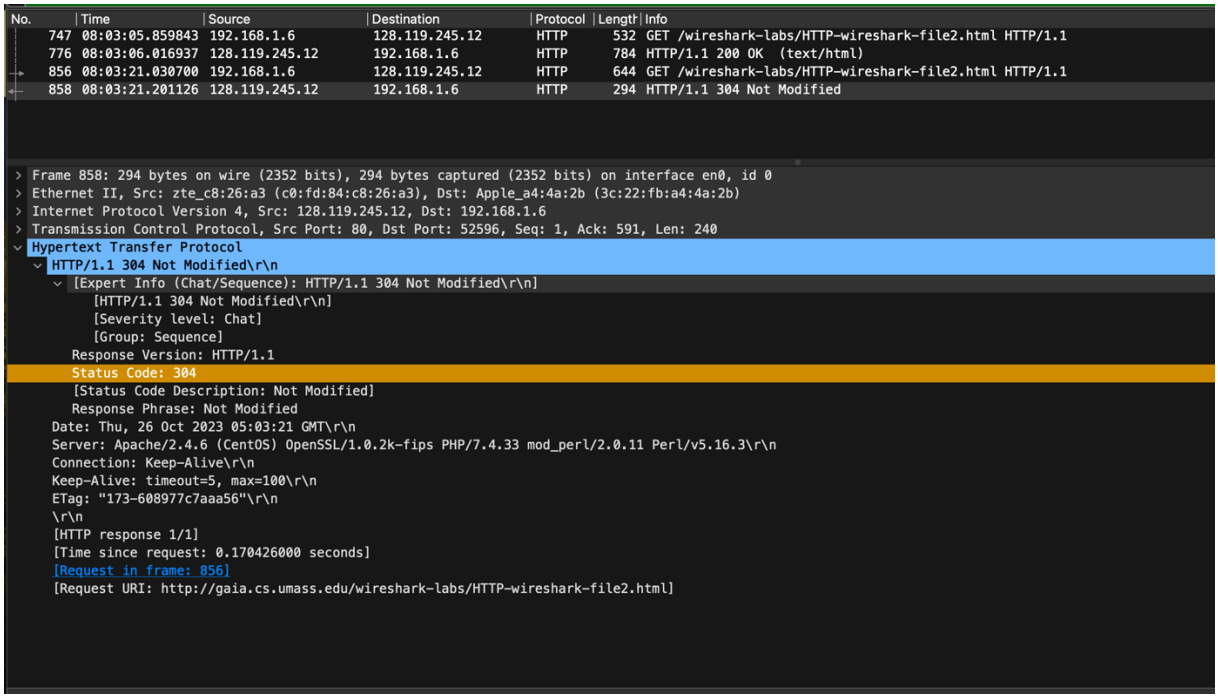
   3- Line-based text data is visible



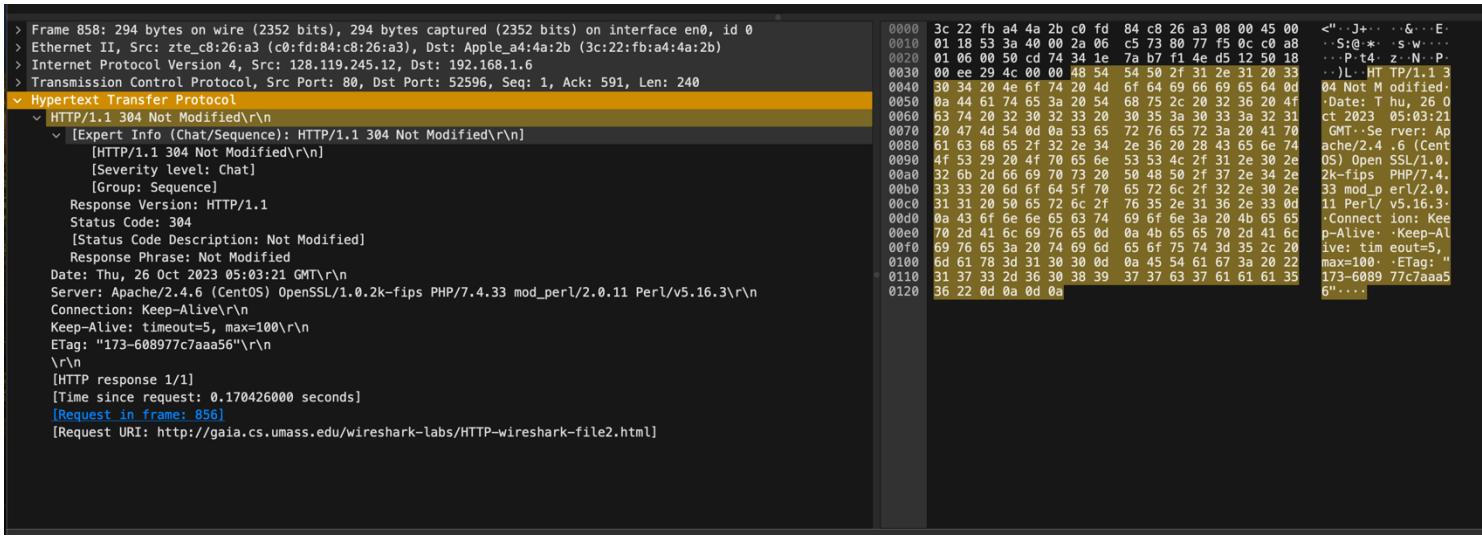
10. Question 10



11. Question 11



Status Code 304 -> Not Modified



No, the sever did not send the content in the second response, as there was

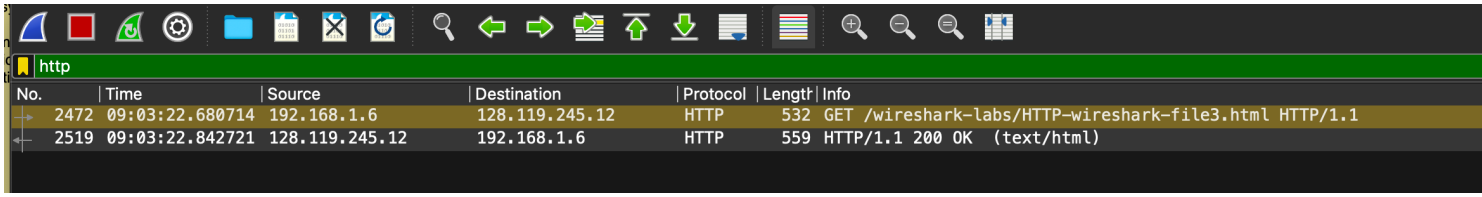
1- no line-based text
2- no text/html message with the packet received
3- no content length

Retrieving Long Documents

12. Question 12

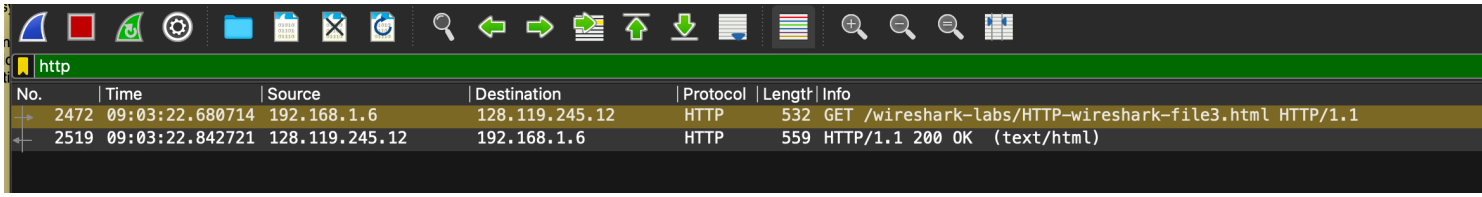
    Only one GET request

    Packet number is 2472



13. Question 13

    The number of the packet is 2519

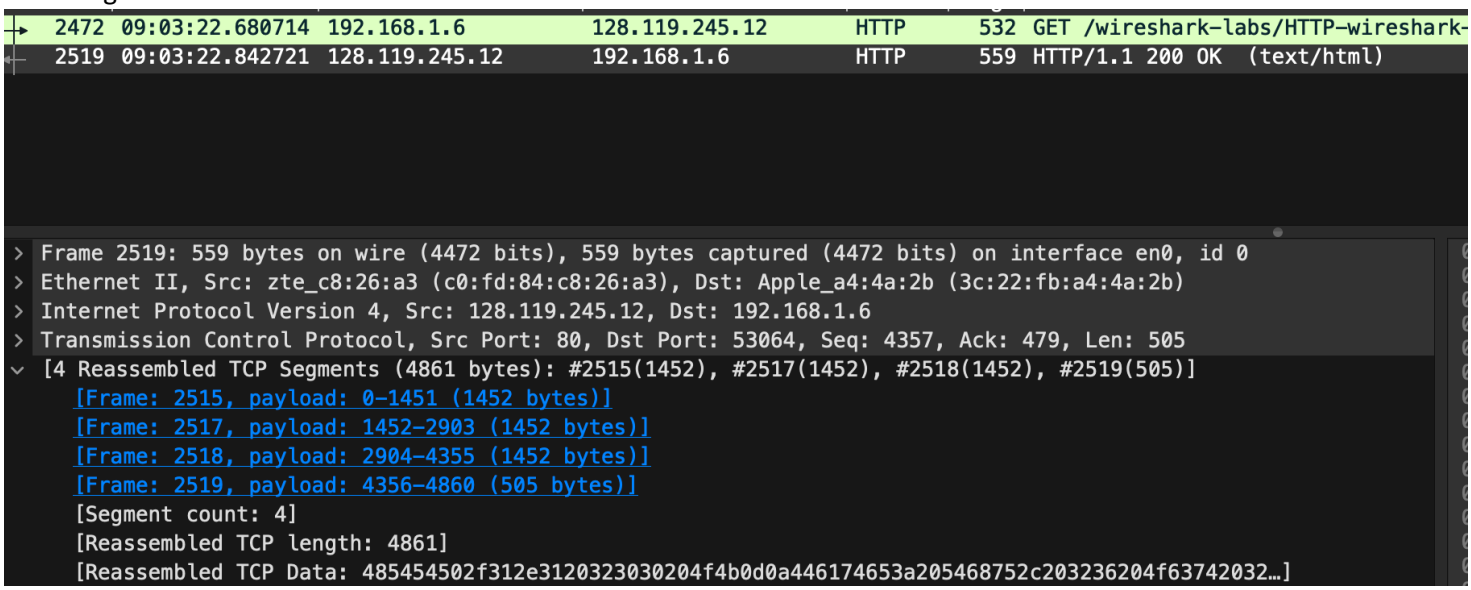


14. Question 14

    Status Code is 200

15. Question 15

    4 TCP segments

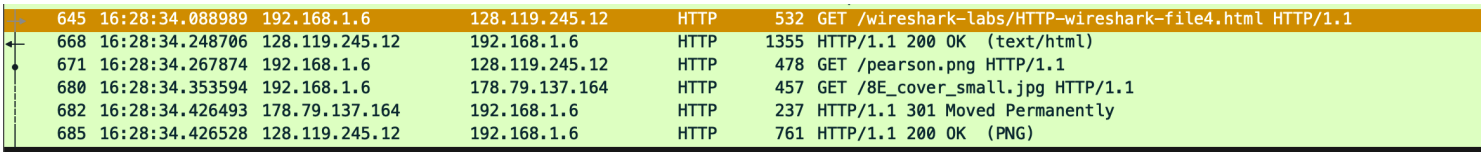


HTML Documents with Embedded Objects

16. Question 16

    3 GET requests, 1 for the html and the other 2 for the images

    The IP address : 128.119.245.12 and 178.79.137.164 (for the other photo)



645	16:28:34.088989	192.168.1.6	128.119.245.12	HTTP	532	GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
668	16:28:34.248706	128.119.245.12	192.168.1.6	HTTP	1355	HTTP/1.1 200 OK (text/html)
671	16:28:34.267874	192.168.1.6	128.119.245.12	HTTP	478	GET /pearson.png HTTP/1.1
680	16:28:34.353594	192.168.1.6	178.79.137.164	HTTP	457	GET /8E_cover_small.jpg HTTP/1.1
682	16:28:34.426493	178.79.137.164	192.168.1.6	HTTP	237	HTTP/1.1 301 Moved Permanently
685	16:28:34.426528	128.119.245.12	192.168.1.6	HTTP	761	HTTP/1.1 200 OK (PNG)

17. Question 17

Line wrap

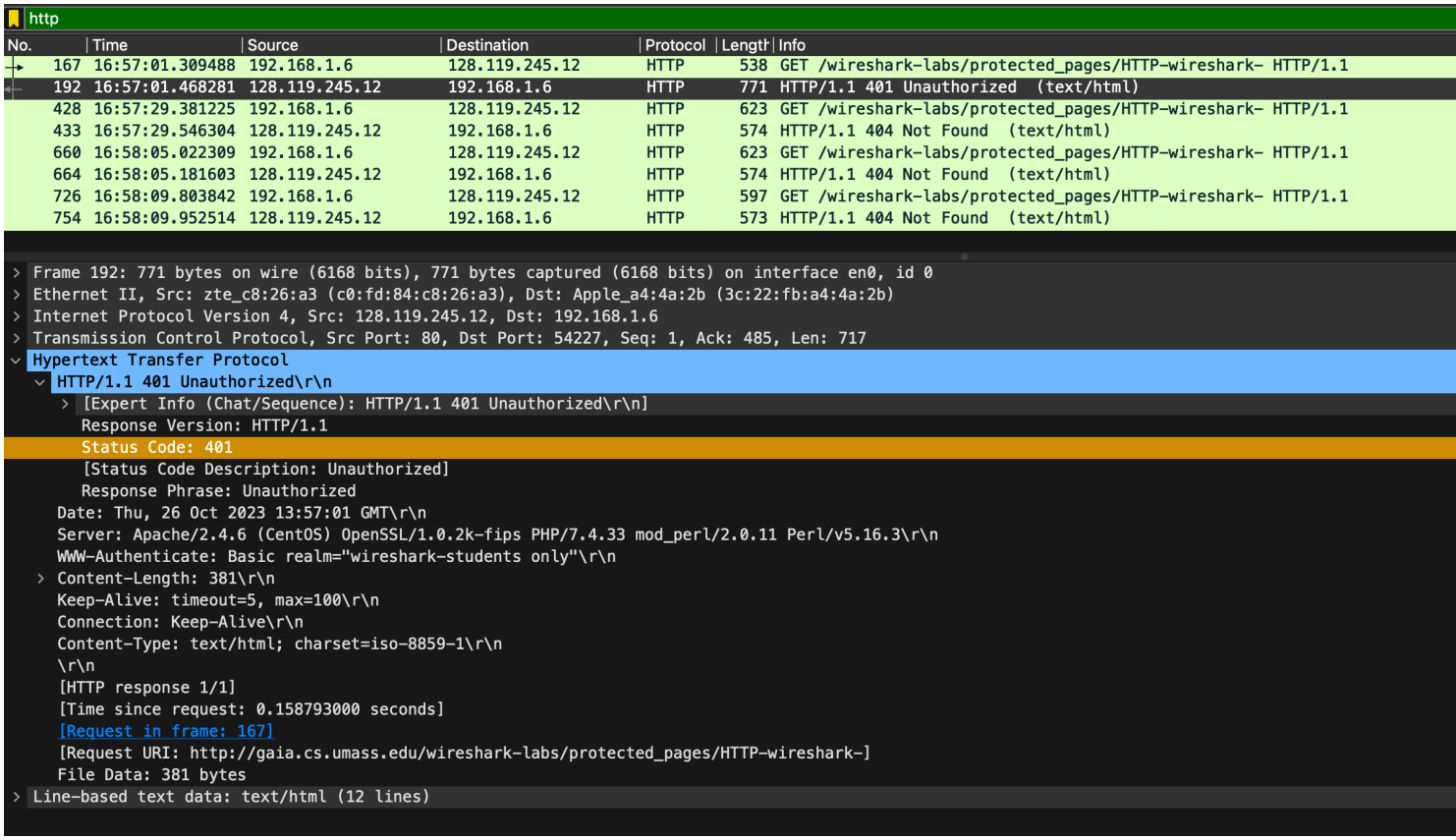
```
<html>
<head>
<title>Lab2-4 file: Embedded URLs</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#FFFFFF" text="#000000">

<p>
<img src="http://gaia.cs.umass.edu/pearson.png" WIDTH="140" HEIGHT="82" > </p>
<p>This little HTML file is being served by gaia.cs.umass.edu.
It contains two embedded images. The image above, also served from the
gaia.cs.umass.edu web site, is the logo of our publisher, Pearson.
The image of our 8th edition book cover below is stored at, and served from,
  a  WWW server kurose.cslash.net in France:</p>
<p align="left"><img src="http://kurose.cslash.net/8E_cover_small.jpg"
            width="168" height="220"></p>
And while we have your attention, you might want to take time to check out the
            available open resources for this book at
            <a href="http://gaia.cs.umass.edu/kurose_ross"> http://gaia.cs.umass.edu/kurose_ross</a>.

</body>
</html>
```

One of the photos were from the same source as the text and the other one from another source (src from img tag)

So, they were downloaded from 2 different sources in parallel

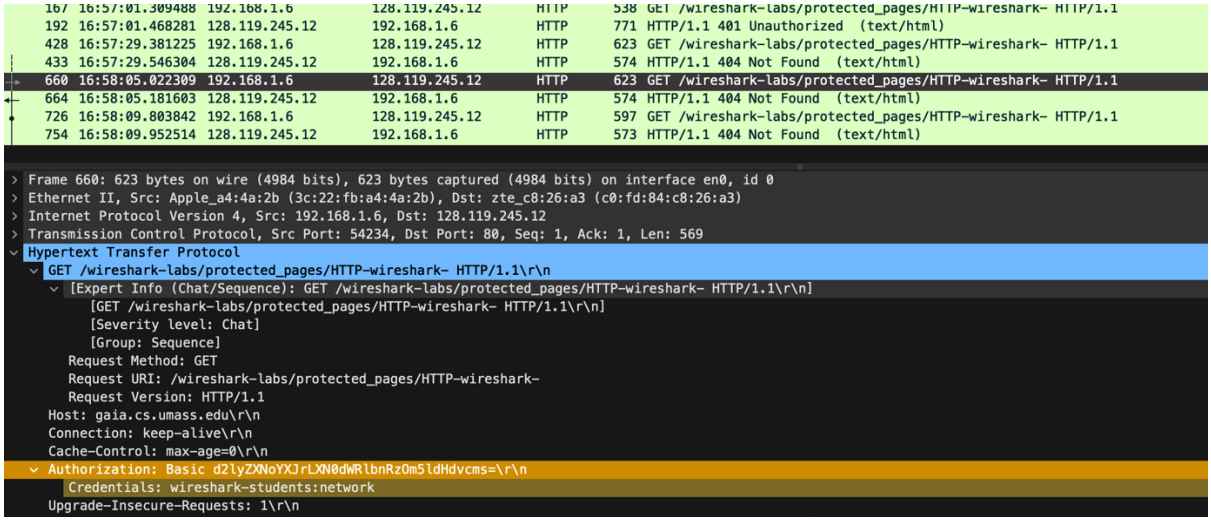
HTTP Authentication

18. Question 18



Status Code: 401 Unauthorized

19. Question 19



Authorization field