LAB 2

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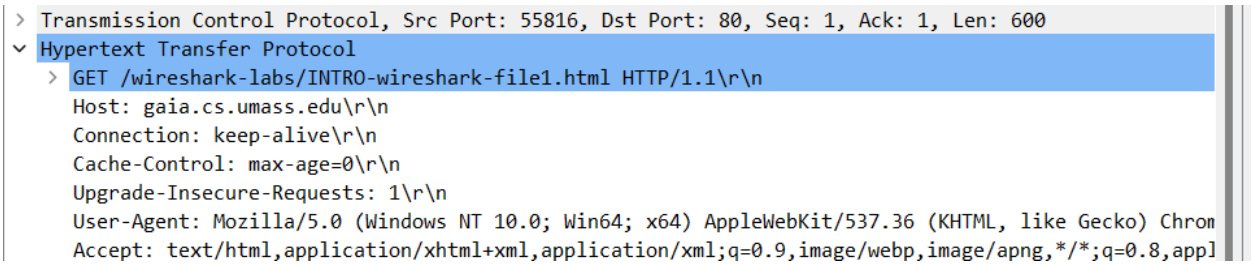
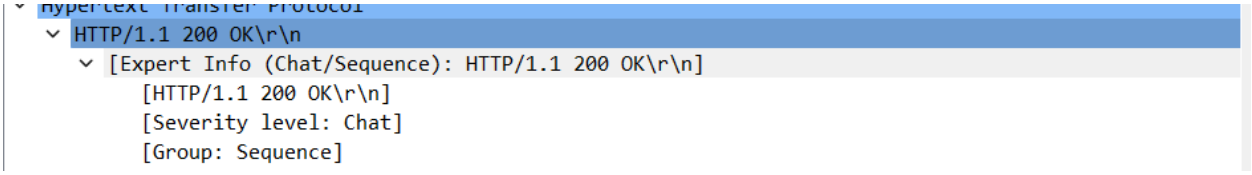
ID : 20p4797

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

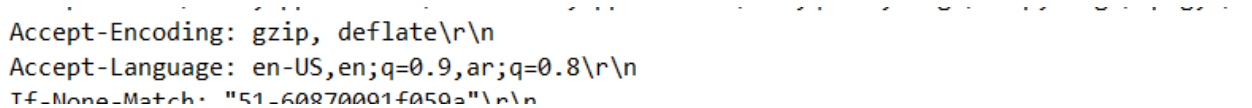
   -1.1 - 1.1



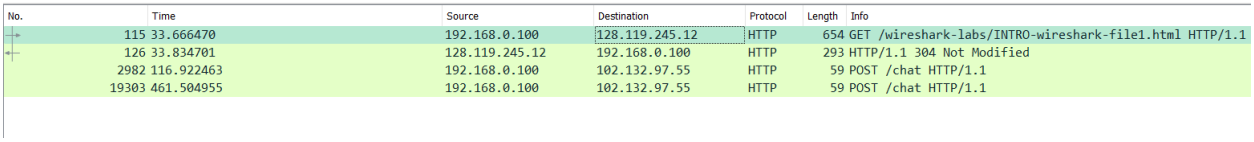


2. What languages (if any) does your browser indicate that it can accept to the server?

   -English - Arabic

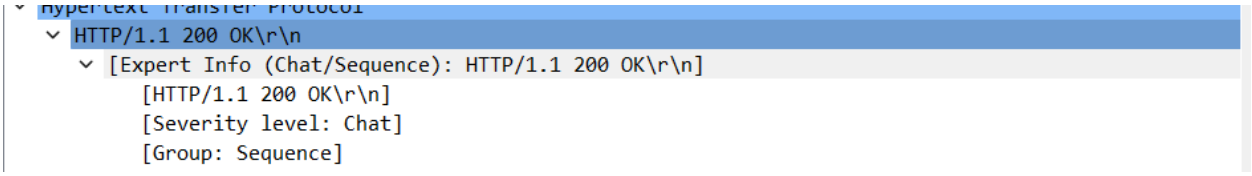


3. What is the IP address of your computer? Of the gaia.cs.umass.edu server?
   - For my computer 192.168.0.100
   - For the server 128.119.245.12

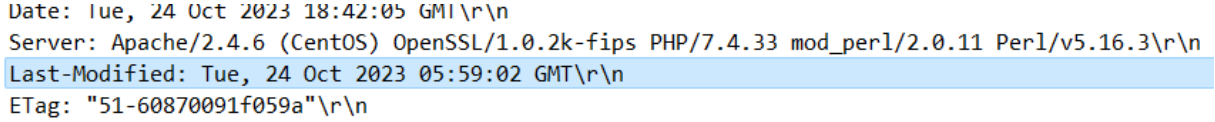


No.	Time	Source	Destination	Protocol	Length	Info
115	33.666470	192.168.0.100	128.119.245.12	HTTP	654	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
126	33.834701	128.119.245.12	192.168.0.100	HTTP	293	HTTP/1.1 304 Not Modified
2982	116.922463	192.168.0.100	102.132.97.55	HTTP	59	POST /chat HTTP/1.1
19303	461.504955	192.168.0.100	102.132.97.55	HTTP	59	POST /chat HTTP/1.1

4. What is the status code returned from the server to your browser?
   - 200



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



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

```
Content-Length: 81\r\n
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
```

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.
   - All found

```
0000  98 da c4 c7 e4 0c 9c 29  76 f2 4d d3 08 00 45 00   ·······) v·M···E·
0010  02 80 1f 35 40 00 80 06  00 00 c0 a8 00 64 80 77   ···5@··· ·····d·w
0020  f5 0c e0 8f 00 50 3b 1f  2d e7 7b b4 28 d0 50 18   ·····P;· -·{·(·P·
0030  02 00 39 03 00 00 47 45  54 20 2f 77 69 72 65 73   ··9···GE T /wires
0040  68 61 72 6b 2d 6c 61 62  73 2f 49 4e 54 52 4f 2d   hark-lab s/INTRO-
0050  77 69 72 65 73 68 61 72  6b 2d 66 69 6c 65 31 2e   wireshar k-file1.
0060  68 74 6d 6c 20 48 54 54  50 2f 31 2e 31 0d 0a 48   html HTT P/1.1··H
0070  6f 73 74 3a 20 67 61 69  61 2e 63 73 2e 75 6d 61   ost: gai a.cs.uma
0080  73 73 2e 65 64 75 0d 0a  43 6f 6e 6e 65 63 74 69   ss.edu·· Connecti
0090  6f 6e 3a 20 6b 65 65 70  2d 61 6c 69 76 65 0d 0a   on: keep -alive··
00a0  43 61 63 68 65 2d 43 6f  6e 74 72 6f 6c 3a 20 6d   Cache-Co ntrol: m
00b0  61 78 2d 61 67 65 3d 30  0d 0a 55 70 67 72 61 64   ax-age=0 ··Upgrad
00c0  65 2d 49 6e 73 65 63 75  72 65 2d 52 65 71 75 65   e-Insecu re-Reque
00d0  73 74 73 3a 20 31 0d 0a  55 73 65 72 2d 41 67 65   sts: 1·· User-Age
00e0  6e 74 3a 20 4d 6f 7a 69  6c 6c 61 2f 35 2e 30 20   nt: Mozi lla/5.0
00f0  28 57 69 6e 64 6f 77 73  20 4e 54 20 31 30 2e 30   (Windows  NT 10.0
0100  3b 20 57 69 6e 36 34 3b  20 78 36 34 29 20 41 70   ; Win64;  x64) Ap
0110  70 6c 65 57 65 62 4b 69  74 2f 35 33 37 2e 33 36   pleWebKi t/537.36
```

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?
   -no

```
    [Severity level: Chat]
    [Group: Sequence]
  Response Version: HTTP/1.1
  Status Code: 200
  [Status Code Description: OK]
  Response Phrase: OK
Date: Tue, 24 Oct 2023 18:42:05 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3\r\n
Last-Modified: Tue, 24 Oct 2023 05:59:02 GMT\r\n
ETag: "51-60870091f059a"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 81\r\n
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=UTF-8\r\n
\r\n
[HTTP response 1/1]
```

9. Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?
   - Yes from content length and there was message saying ok (html/file)

```
    [Severity level: Chat]
    [Group: Sequence]
  Response Version: HTTP/1.1
  Status Code: 200
  [Status Code Description: OK]
  Response Phrase: OK
Date: Tue, 24 Oct 2023 18:42:05 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3\r\n
Last-Modified: Tue, 24 Oct 2023 05:59:02 GMT\r\n
ETag: "51-60870091f059a"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 81\r\n
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=UTF-8\r\n
\r\n
[HTTP response 1/1]
```

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?

```
Accept-Language: en-US,en;q=0.9,ar;q=0.8\r\n
If-None-Match: "51-60870091f059a"\r\n
If-Modified-Since: Tue, 24 Oct 2023 05:59:02 GMT\r\n
\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
    - the server explicitly didn’t return the contents of the file

```
Hypertext Transfer Protocol
  HTTP/1.1 304 Not Modified\r\n
    [Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
      [HTTP/1.1 304 Not Modified\r\n]
```

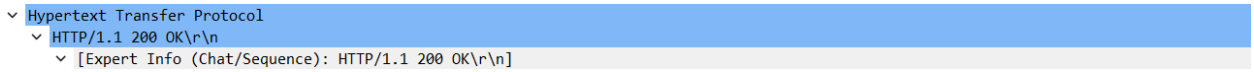
12. How many HTTP GET request messages did your browser send? Which packet number in the trace contains the GET message for the Bill or Rights?
    - One
    - 29

No.	Time	Source	Destination	Protocol	Length	Info
29	8.968485	192.168.0.100	128.119.245.12	HTTP	542	GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
47	9.146719	128.119.245.12	192.168.0.100	HTTP	775	HTTP/1.1 200 OK (text/html)

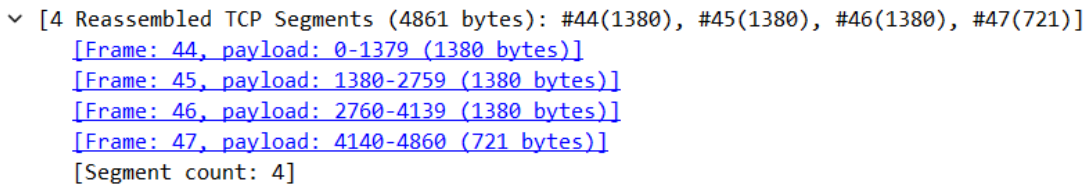
13. Which packet number in the trace contains the status code and phrase associated with the response to the HTTP GET request?
    - 49

No.	Time	Source	Destination	Protocol	Length	Info
29	8.968485	192.168.0.100	128.119.245.12	HTTP	542	GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
47	9.146719	128.119.245.12	192.168.0.100	HTTP	775	HTTP/1.1 200 OK (text/html)

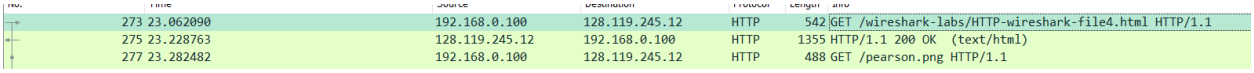
14. What is the status code and phrase in the response?



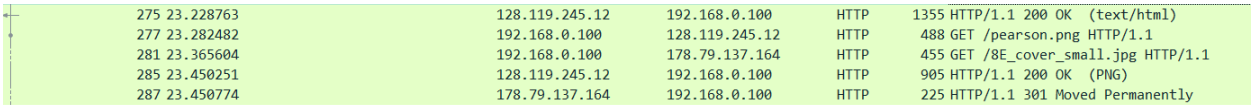
15. How many data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights?
    - 4



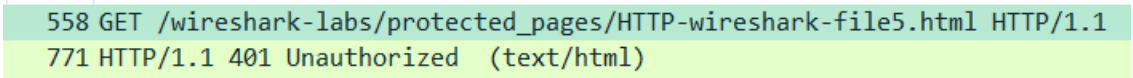
16. How many HTTP GET request messages did your browser send? To which Internet addresses were these GET requests sent?
    - 3 messages
    - 192.168.0.100



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.
    - Serially



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



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