

## EE4013 Lab 2

Q1: Both are using http 1.1

```
▶ Internet Protocol Version 4, Src: 128.119.245.12, Dst: 10.52.242.93
▶ Transmission Control Protocol, Src Port: 80, Dst Port: 60092, Seq: 1, Ack: 411, Len: 486
▼ Hypertext Transfer Protocol
  ▼ HTTP/1.1 200 OK\r\n
    ▶ [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Request Version: HTTP/1.1
      Status Code: 200
      Response Phrase: OK
      Date: Fri, 24 Feb 2017 13:50:31 GMT\r\n
      Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
      Last-Modified: Fri, 24 Feb 2017 06:59:01 GMT\r\n
      ETag: "80-5494143bd0885"\r\n
```

Q2: English(US)

```
Accept-Encoding: gzip, deflate, sdch\r\n
Accept-Language: en-US,en;q=0.8\r\n
\r\n
```

Q3: Server: 128.119.245.12  
My computer: 10.52.242.93

153	13:50:30.957173495	10.52.242.93	128.119.245.12	HTTP	478	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
178	13:50:31.194075207	128.119.245.12	10.52.242.93	HTTP	554	HTTP/1.1 200 OK (text/html)

Q4: Status code: 200

```
▼ Hypertext Transfer Protocol
  ▼ HTTP/1.1 200 OK\r\n
    ▶ [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Request Version: HTTP/1.1
      Status Code: 200
      Response Phrase: OK
      Date: Fri, 24 Feb 2017 13:50:31 GMT\r\n
      Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
      Last-Modified: Fri, 24 Feb 2017 06:59:01 GMT\r\n
      ETag: "80-5494143bd0885"\r\n
```

Q5: Last modified: Friday 24/Feb/2017 06:59:01 GMT

```
▼ Hypertext Transfer Protocol
  ▼ HTTP/1.1 200 OK\r\n
    ▶ [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Request Version: HTTP/1.1
      Status Code: 200
      Response Phrase: OK
      Date: Fri, 24 Feb 2017 13:50:31 GMT\r\n
      Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
      Last-Modified: Fri, 24 Feb 2017 06:59:01 GMT\r\n
      ETag: "80-5494143bd0885"\r\n
```

Q6: 128 bytes

```
Last-Modified: Fri, 24 Feb 2017 06:59:01 GMT\r\n
ETag: "80-5494143bd0885"\r\n
Accept-Ranges: bytes\r\n
▶ Content-Length: 128\r\n
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=UTF-8\r\n
```

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Q7: Accept-Ranges

```
Last-Modified: Fri, 24 Feb 2017 06:59:01 GMT\r\n
ETag: "80-5494143bd0885"\r\n
Accept-Ranges: bytes\r\n
▼ Content-Length: 128\r\n
  [Content length: 128]
Keep-Alive: timeout=5, max=100\r\n
```

Q8: No

```
HTTP/1.1 200 OK (text/html)
GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n
▶ [Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1]
  Request Method: GET
  Request URI: /wireshark-labs/HTTP-wireshark-file2.html
  Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:51.0) Gecko/20100101 Firefox/51.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
```

Q9: Yes. The content matches

```
Line-based text data: text/html
\r\n
<html>\r\n
\r\n
Congratulations again! Now you've downloaded the file lab2-2.html. <br>\r\n
This file's last modification date will not change. <p>\r\n
Thus if you download this multiple times on your browser, a complete copy <br>\r\n
will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE\r\n
field in your browser's HTTP GET request to the server.\r\n
\r\n
</html>\r\n
```

---

Q10: Yes, followed by time of first link

```
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:51.0) Gecko/20100101 Firefox/51.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
Upgrade-Insecure-Requests: 1\r\n
If-Modified-Since: Fri, 24 Feb 2017 06:59:01 GMT\r\n
If-None-Match: "173-5494143bd00b5"\r\n
Cache-Control: max-age=0\r\n
```

Q11: Status code: 304

Response Phrase: Not Modified

The server did not explicitly return the contents again, as the status code of 304 indicated no change.

```
HTTP/1.1 304 Not Modified\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
Request Version: HTTP/1.1
Status Code: 304
Response Phrase: Not Modified
Date: Fri, 24 Feb 2017 14:41:26 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
```

Q12: Browser sent 1 GET request

```
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file3.html]
[HTTP request 1/1]
[Response in frame: 31]
```

Packet Number : 25

19	14:49:22.1823458/0	10.52.242.93	23.23.99.127	HTTP	363 GET /health_check.js?ts=148/94/762095 HTTP/1.1
21	14:49:22.484319937	23.23.99.127	10.52.242.93	HTTP	571 HTTP/1.1 200 OK (text/javascript)
25	14:49:24.042983521	10.52.242.93	128.119.245.12	HTTP	431 GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
31	14:49:24.154544675	128.119.245.12	10.52.242.93	HTTP	2880 HTTP/1.1 200 OK (text/html)

Q13: Packet number: 31

19	14:49:22.1823458/0	10.52.242.93	23.23.99.127	HTTP	363 GET /health_check.js?ts=148/94/762095 HTTP/1.1
21	14:49:22.484319937	23.23.99.127	10.52.242.93	HTTP	571 HTTP/1.1 200 OK (text/javascript)
25	14:49:24.042983521	10.52.242.93	128.119.245.12	HTTP	431 GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
31	14:49:24.154544675	128.119.245.12	10.52.242.93	HTTP	2880 HTTP/1.1 200 OK (text/html)

Q14: Status Code: 200

Response Phrase: OK

```
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
Request Version: HTTP/1.1
Status Code: 200
Response Phrase: OK
Date: Fri, 24 Feb 2017 14:49:24 GMT\r\n
```

Q15: 2 TCP Segments were required

```
Transmission Control Protocol, Src Port: 80, Dst Port: 8080, Seq: 2047, Len: 0, Ecn: 0x01
[ 2 Reassembled TCP Segments (4861 bytes): #29(2047), #31(2814) ]
Hypertext Transfer Protocol
  HTTP/1.1 200 OK\r\n
```

Q16: 4 GET requests sent

49	15:03:21.710506187	10.52.242.93	128.119.245.12	HTTP	431 GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
55	15:03:22.028135059	128.119.245.12	10.52.242.93	HTTP	1139 HTTP/1.1 200 OK (text/html)
57	15:03:22.050498538	10.52.242.93	128.119.245.12	HTTP	388 GET /pearson.png HTTP/1.1
67	15:03:22.197873905	128.119.245.12	10.52.242.93	HTTP	781 HTTP/1.1 200 OK (PNG)
71	15:03:22.198518232	10.52.242.93	128.119.240.90	HTTP	402 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
76	15:03:22.401947281	128.119.240.90	10.52.242.93	HTTP	522 HTTP/1.1 302 Found (text/html)
89	15:03:22.408636431	10.52.242.93	128.119.240.90	HTTP	402 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
209	15:03:23.030457095	128.119.240.90	10.52.242.93	HTTP	2154 HTTP/1.1 200 OK (JPEG JFIF image)

Q17: Images were downloaded serially, as an OK was received before the next GET

49	15:03:21.710506187	10.52.242.93	128.119.245.12	HTTP	431 GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
55	15:03:22.028135059	128.119.245.12	10.52.242.93	HTTP	1139 HTTP/1.1 200 OK (text/html)
57	15:03:22.050498538	10.52.242.93	128.119.245.12	HTTP	388 GET /pearson.png HTTP/1.1
67	15:03:22.197873905	128.119.245.12	10.52.242.93	HTTP	781 HTTP/1.1 200 OK (PNG)
71	15:03:22.198518232	10.52.242.93	128.119.240.90	HTTP	402 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
76	15:03:22.401947281	128.119.240.90	10.52.242.93	HTTP	522 HTTP/1.1 302 Found (text/html)
89	15:03:22.408636431	10.52.242.93	128.119.240.90	HTTP	402 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
209	15:03:23.030457095	128.119.240.90	10.52.242.93	HTTP	2154 HTTP/1.1 200 OK (JPEG JFIF image)

Q18: Response: 404 Not Found

(entered username and password correctly so not sure what's wrong)

31	15:12:37.391918437	10.52.242.93	128.119.245.12	HTTP	505 GET /wireshark-labs/protected_pages/HTTP-wiresharkfile5.htm...
38	15:12:37.693237956	128.119.245.12	10.52.242.93	HTTP	595 HTTP/1.1 404 Not Found (text/html)
48	15:12:47.214466086	10.52.242.93	128.119.245.12	HTTP	505 GET /wireshark-labs/protected_pages/HTTP-wiresharkfile5.htm...
50	15:12:47.523710723	128.119.245.12	10.52.242.93	HTTP	595 HTTP/1.1 404 Not Found (text/html)
65	15:12:52.521524755	10.52.242.93	128.119.245.12	HTTP	489 GET /wireshark-labs/protected_pages/HTTP-wiresharkfile5.htm...
70	15:12:52.848241972	128.119.245.12	10.52.242.93	HTTP	783 HTTP/1.1 401 Unauthorized (text/html)

```
▼ Authorization: Basic d2lyZXNoYXJrLXN0dWRlbnRzOm5ldHdvcms=\r\n
Credentials: wireshark-students:network
```