Assignment 1 Evaluation
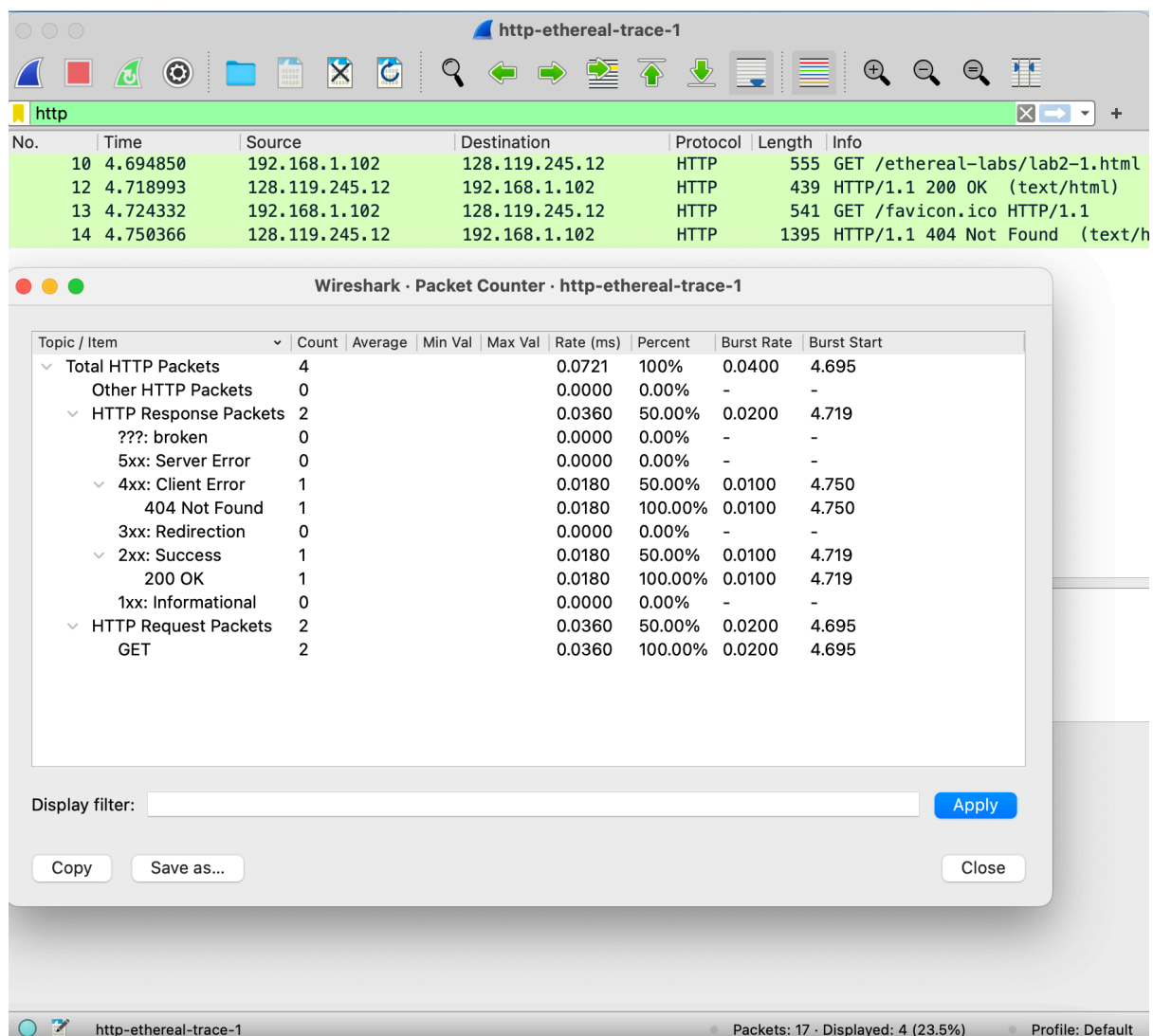**Task 4**

Ishaan Watts
2019PH10629

Q1 How many HTTP packets are captured?

4 HTTP packets are captured

Q2 What is the version of HTTP protocol?

HTTP/1.1 is used

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Frame 10: 555 bytes on wire (4440 bits), 555 bytes captured (4440 bits)
Ethernet II, Src: Dell_4f:36:23 (00:08:74:4f:36:23), Dst: LinksysG_da:af:73 (00:06:25:da:af:73)
Internet Protocol Version 4, Src: 192.168.1.102, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 4127, Dst Port: 80, Seq: 1, Ack: 1, Len: 501
Hypertext Transfer Protocol
  GET /ethereal-labs/lab2-1.html HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET /ethereal-labs/lab2-1.html HTTP/1.1\r\n]
      Request Method: GET
      Request URI: /ethereal-labs/lab2-1.html
      Request Version: HTTP/1.1
    Host: gaia.cs.umass.edu\r\n
    User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120 Netscape/7.01\r\n
    Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8,video/x-mng,imag…
    Accept-Language: en-us, en;q=0.50\r\n
    Accept-Encoding: gzip, deflate, compress;q=0.9\r\n
    Accept-Charset: ISO-8859-1, utf-8;q=0.66, *;q=0.66\r\n
    Keep-Alive: 300\r\n
    Connection: keep-alive\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-1.html]
    [HTTP request 1/2]
    [Response in frame: 12]
    [Next request in frame: 13]


000   00 06 25 da af 73 00 08   74 4f 36 23 08 00 45 00     ··%··s·· tO6#··E·
```

Q3 What is the IP address of the source and destination in HTTP Request packet?

IP address source --> 192.168.1.102
IP address destination --> 128.119.245.12

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                                      http-ethereal-trace-1

http

No.    Time        Source          Destination      Protocol  Length  Info
  10  4.694850    192.168.1.102   128.119.245.12    HTTP       555  GET /ethereal-labs/lab2-1.html
  12  4.718993    128.119.245.12  192.168.1.102     HTTP       439  HTTP/1.1 200 OK  (text/html)
  13  4.724332    192.168.1.102   128.119.245.12    HTTP       541  GET /favicon.ico HTTP/1.1
  14  4.750366    128.119.245.12  192.168.1.102     HTTP      1395  HTTP/1.1 404 Not Found  (text/h

> Frame 10: 555 bytes on wire (4440 bits), 555 bytes captured (4440 bits)
> Ethernet II, Src: Dell_4f:36:23 (00:08:74:4f:36:23), Dst: LinksysG_da:af:73 (00:06:25:da:af:73)
> Internet Protocol Version 4, Src: 192.168.1.102, Dst: 128.119.245.12
> Transmission Control Protocol, Src Port: 4127, Dst Port: 80, Seq: 1, Ack: 1, Len: 501
  Hypertext Transfer Protocol
  > GET /ethereal-labs/lab2-1.html HTTP/1.1\r\n
    Host: gaia.cs.umass.edu\r\n
    User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120 Netscape/7.01\r\n
    Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8,video/x-mng,image/
    Accept-Language: en-us, en;q=0.50\r\n
    Accept-Encoding: gzip, deflate, compress;q=0.9\r\n
    Accept-Charset: ISO-8859-1, utf-8;q=0.66, *;q=0.66\r\n
    Keep-Alive: 300\r\n
    Connection: keep-alive\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-1.html]
    [HTTP request 1/2]
```
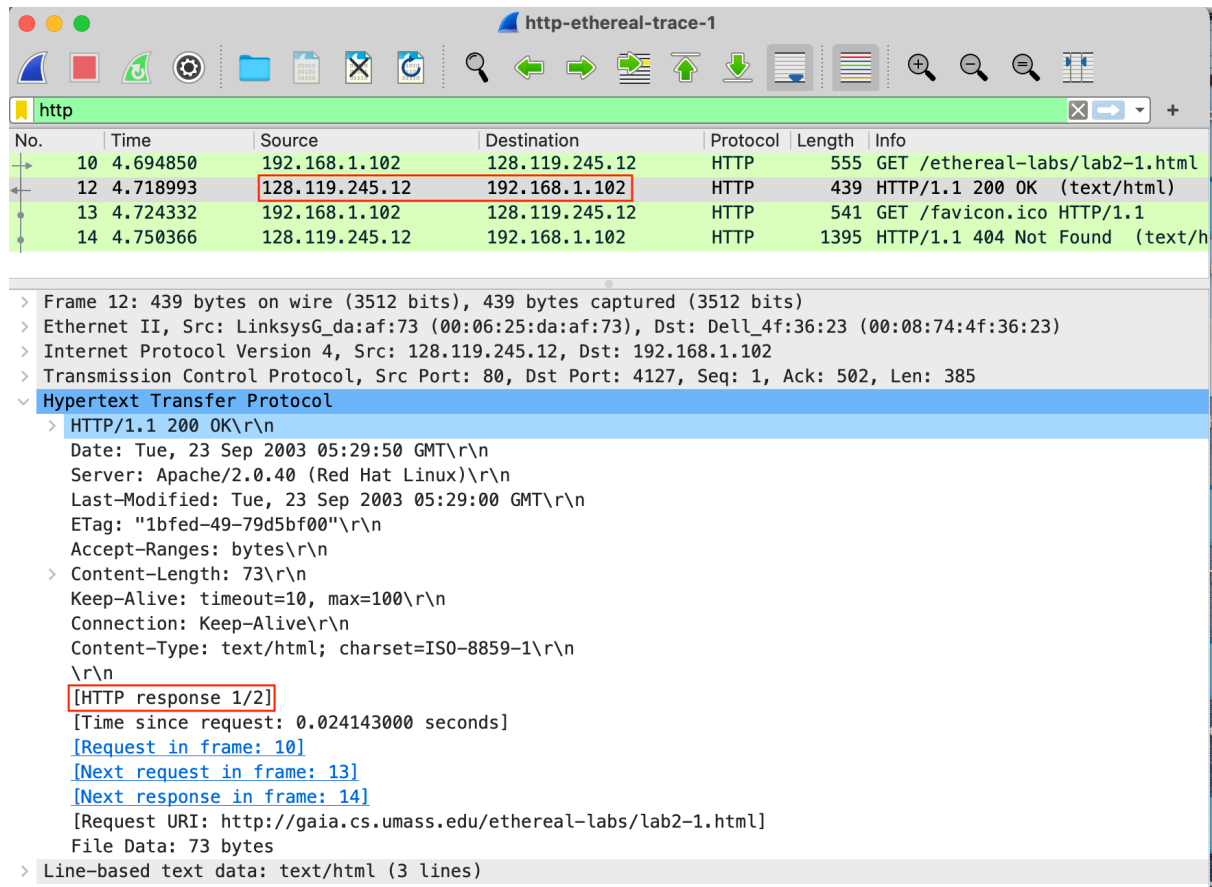
Q4 What is the IP address of the source and destination in HTTP Response packet?

IP address source --> 128.119.245.12
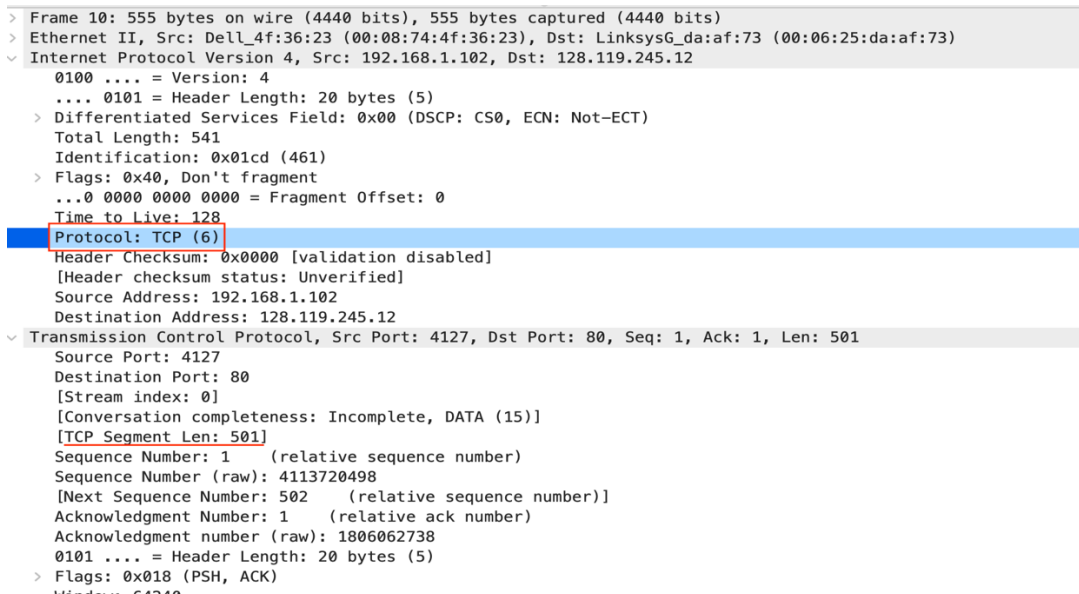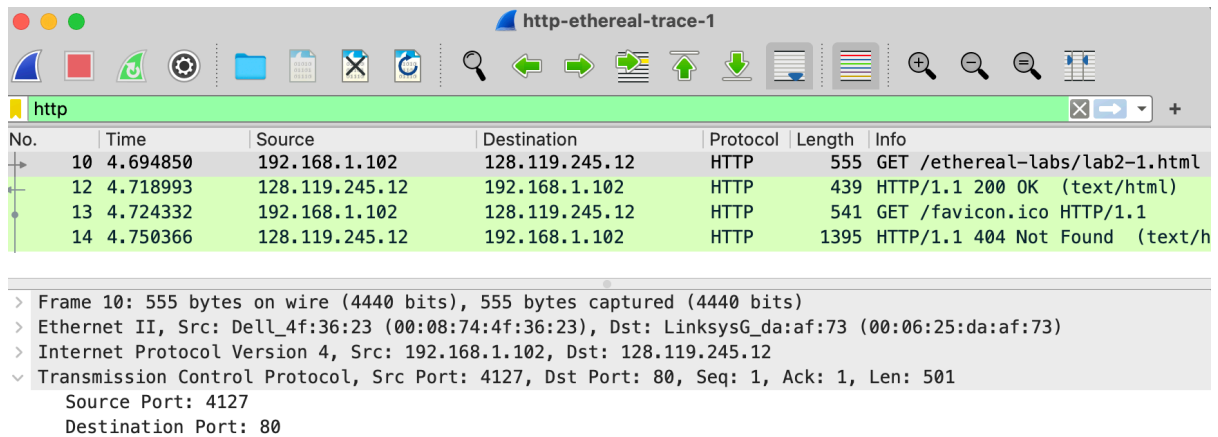IP address destination --> 192.168.1.102

Q5 What is the transport layer protocol used in this HTTP conversation?

TCP is used in this HTTP conversation

Q6 What is the Port number of the source and destination in HTTP Request packet?

Source port: 4127
Destination port: 80

Request packet

Q7 What is the Port number of the source and destination in HTTP Response packet?

Source port: 80
Destination port: 4127

Response packet

Q8 What is the status code returned from the server to the browser for the request of "http://gaia.cs.umass.edu/ethereal-labs/lab2-1.html" ?

Status code is 200
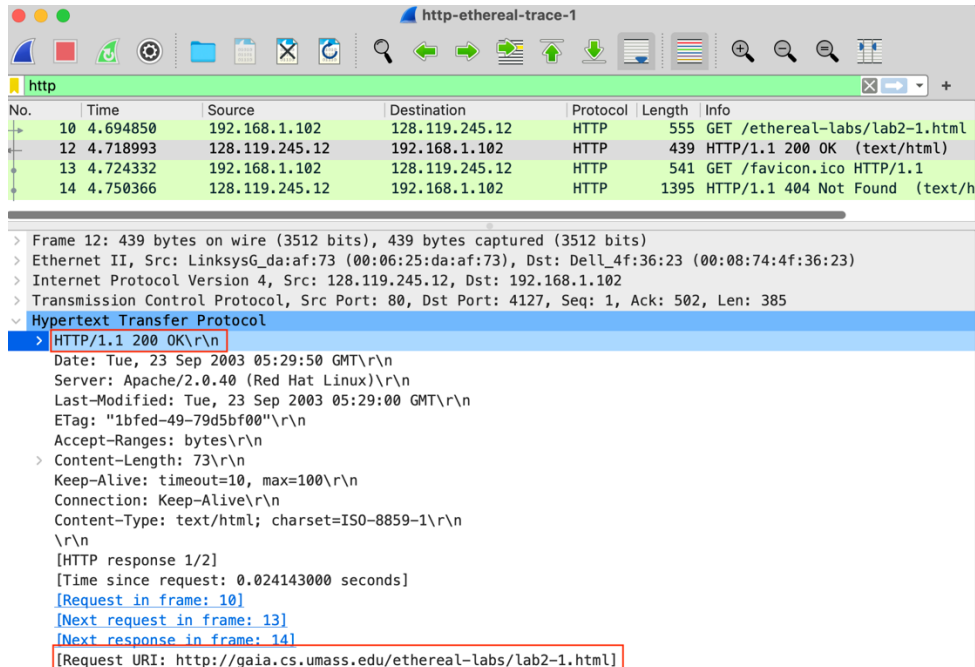
Q9 What is the status code returned from the server to the browser for the request of "http://gaia.cs.umass.edu/favicon.ico" ?

Status code is 404
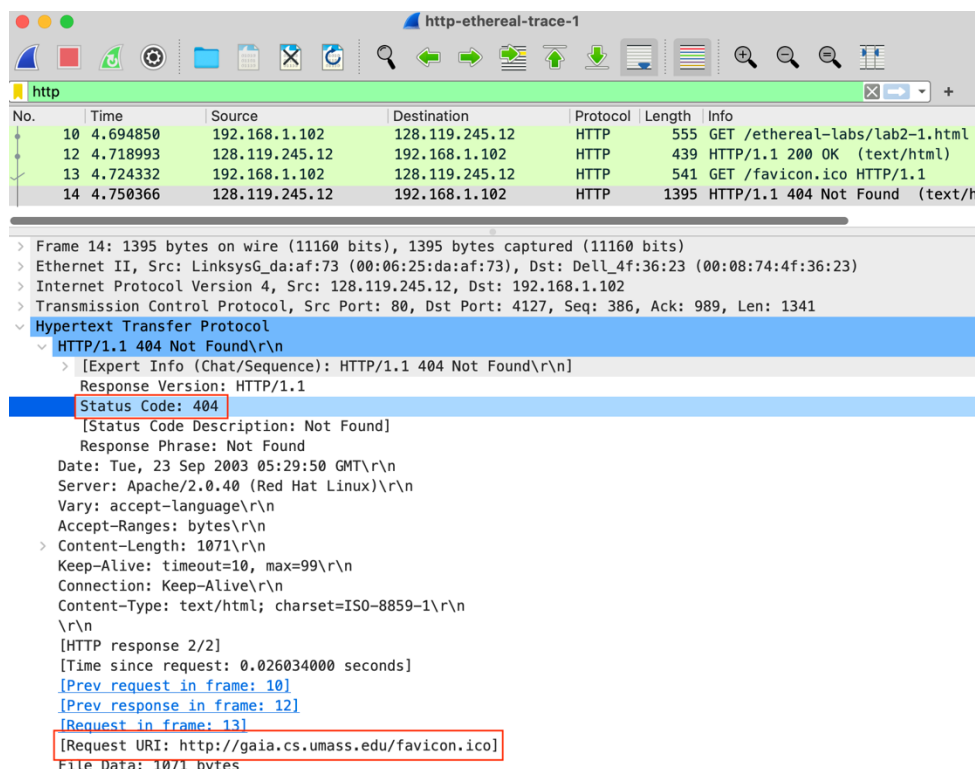
Q10 When was the HTML file that you are retrieving
("http://gaia.cs.umass.edu/ethereal-labs/lab2-1.html") last modified at the server?

Last Modified: Tue, 23 Sep 2003 05:29:00 GMT

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http                                                                    ☒ ➡ ▾

No.      Time        Source            Destination        Protocol  Length  Info
   10  4.694850    192.168.1.102     128.119.245.12     HTTP       555  GET /ethereal-labs/lab2-1.h
   12  4.718993    128.119.245.12    192.168.1.102      HTTP       439  HTTP/1.1 200 OK  (text/html
   13  4.724332    192.168.1.102     128.119.245.12     HTTP       541  GET /favicon.ico HTTP/1.1
   14  4.750366    128.119.245.12    192.168.1.102      HTTP      1395  HTTP/1.1 404 Not Found  (te

> Frame 12: 439 bytes on wire (3512 bits), 439 bytes captured (3512 bits)
> Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)
> Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.102
> Transmission Control Protocol, Src Port: 80, Dst Port: 4127, Seq: 1, Ack: 502, Len: 385
∨ Hypertext Transfer Protocol
  ∨ HTTP/1.1 200 OK\r\n
    > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Response Version: HTTP/1.1
      Status Code: 200
      [Status Code Description: OK]
      Response Phrase: OK
    Date: Tue, 23 Sep 2003 05:29:50 GMT\r\n
    Server: Apache/2.0.40 (Red Hat Linux)\r\n
    Last-Modified: Tue, 23 Sep 2003 05:29:00 GMT\r\n
    ETag: "1bfed-49-79d5bf00"\r\n
    Accept-Ranges: bytes\r\n
  > Content-Length: 73\r\n
    Keep-Alive: timeout=10, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=ISO-8859-1\r\n
    \r\n
    [HTTP response 1/2]
    [Time since request: 0.024143000 seconds]
    [Request in frame: 10]
    [Next request in frame: 13]
    [Next response in frame: 14]
    [Request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-1.html]
```
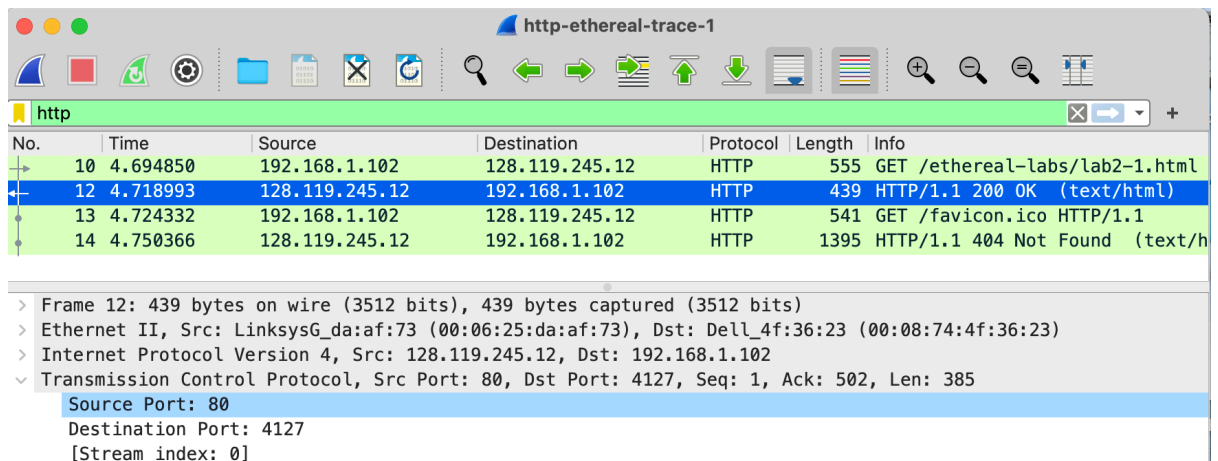
Q11 What is the difference between the two response packets in the capture?

We have different length of packets, file data, status code, header checksum and identification id for the response packets.

Packet No.	Length	File data	Status code	Header checksum	Identification
1	439	73 bytes	200	0x53c2	0xb6fa
2	1395	1071 bytes	404	0x5005	0xb6fb

Packet 1

Packet 2

Frame 14: 1395 bytes on wire (11160 bits), 1395 bytes captured (11160 bits)
Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.102
Transmission Control Protocol, Src Port: 80, Dst Port: 4127, Seq: 386, Ack: 989, Len: 1341
Hypertext Transfer Protocol
HTTP/1.1 404 Not Found\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 404 Not Found\r\n]
Response Version: HTTP/1.1
Status Code: 404
[Status Code Description: Not Found]
Response Phrase: Not Found
Date: Tue, 23 Sep 2003 05:29:50 GMT\r\n
Server: Apache/2.0.40 (Red Hat Linux)\r\n
Vary: accept-language\r\n
Accept-Ranges: bytes\r\n
Content-Length: 1071\r\n
Keep-Alive: timeout=10, max=99\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=ISO-8859-1\r\n
\r\n
[HTTP response 2/2]
[Time since request: 0.026034000 seconds]
[Prev request in frame: 10]
[Prev response in frame: 12]
[Request in frame: 13]
[Request URI: http://gaia.cs.umass.edu/favicon.ico]
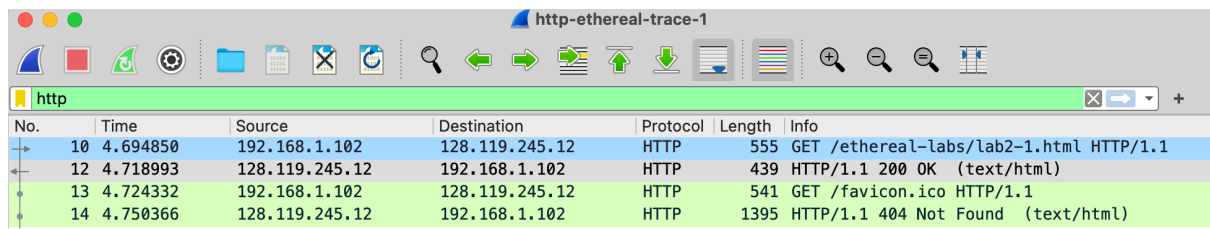File Data: 1071 bytes
Line-based text data: text/html (54 lines)

0040 30 34 20 4e 6f 74 20 46 6f 75 6e 64 0d 0a 44 61   04 Not F ound··Da

HTTP Response Reason Phrase (http.response.phrase), 9 bytes   Packets: 17 · Displayed: 4 (23.5%)   Profile: Default

Frame 14: 1395 bytes on wire (11160 bits), 1395 bytes captured (11160 bits)
Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.102
0100 .... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
Total Length: 1381
Identification: 0xb6fb (46843)
Flags: 0x40, Don't fragment
...0 0000 0000 0000 = Fragment Offset: 0
Time to Live: 55
Protocol: TCP (6)
Header Checksum: 0x5005 [validation disabled]
[Header checksum status: Unverified]
Source Address: 128.119.245.12
Destination Address: 192.168.1.102
Transmission Control Protocol, Src Port: 80, Dst Port: 4127, Seq: 386, Ack: 989, Len: 1341
Hypertext Transfer Protocol
Line-based text data: text/html (54 lines)

Q12 How long did it take for the HTTP request-response to complete?

No.	Time	Source	Destination	Protocol	Length	Info
10	4.694850	192.168.1.102	128.119.245.12	HTTP	555	GET /ethereal-labs/lab2-1.html HTTP/1.1
12	4.718993	128.119.245.12	192.168.1.102	HTTP	439	HTTP/1.1 200 OK (text/html)
13	4.724332	192.168.1.102	128.119.245.12	HTTP	541	GET /favicon.ico HTTP/1.1
14	4.750366	128.119.245.12	192.168.1.102	HTTP	1395	HTTP/1.1 404 Not Found (text/html)

Start time = 4.694850
End time = 4.750366

Total time = End − Start = 0.055516 sec