МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАВЧАЛЬНО-НАУКОВИЙ КОМПЛЕКС
«ІНСТИТУТ ПРИКЛАДНОГО СИСТЕМНОГО АНАЛІЗУ»
НАЦІОНАЛЬНОГО ТЕХНІЧНОГО УНІВЕРСИТЕТУ УКРАЇНИ
«КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»
КАФЕДРА МАТЕМАТИЧНИХ МЕТОДІВ СИСТЕМНОГО АНАЛІЗУ

Практична робота №2
з курсу «Комп'ютерні мережі»

Виконала: студентка 3 курсу
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Київ – 2020р.
Пакети для відповідей 1-7 та 8-11:

No.   Time   Source   Destination   Protocol Length Info
    88 4.072678   192.168.0.159   128.119.245.12   HTTP   469   GET
/wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 88: 469 bytes on wire (3752 bits), 469 bytes captured (3752 bits) on interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 49731, Dst Port: 80, Seq: 1, Ack: 1, Len: 403
Hypertext Transfer Protocol
    GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
    Host: gaia.cs.umass.edu\r\n
    User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0) Gecko/20100101 Firefox/75.0\r\n
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\n
    Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
    Accept-Encoding: gzip, deflate\r\n
    Connection: keep-alive\r\n
    Upgrade-Insecure-Requests: 1\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
    [HTTP request 1/2]
    [Response in frame: 102]
    [Next request in frame: 104]

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No.   Time   Source   Destination   Protocol Length Info
    102 4.192596   128.119.245.12   192.168.0.159   HTTP   552
HTTP/1.1 200 OK (text/html)

Frame 102: 552 bytes on wire (4416 bits), 552 bytes captured (4416 bits) on interface en1, id 0
Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49731, Seq: 1, Ack: 404, Len: 486
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n

Date: Mon, 18 May 2020 09:37:43 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
Last-Modified: Mon, 18 May 2020 05:59:01 GMT\r\n
ETag: "80-5a5e5dc0f39f4"\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
\r\n
[HTTP response 1/2]
[Time since request: 0.119918000 seconds]
[Request in frame: 88]
[Next request in frame: 104]
[Next response in frame: 107]
[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
File Data: 128 bytes
Line-based text data: text/html (4 lines)
<html>\n
Congratulations. You've downloaded the file \n
http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html!\n
</html>\n

No.	Time	Source	Destination	Protocol	Length	Info
103	5.986085	192.168.0.159	128.119.245.12	HTTP	580	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 103: 580 bytes on wire (4640 bits), 580 bytes captured (4640 bits) on interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 49732, Dst Port: 80, Seq: 1, Ack: 1, Len: 514
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0) Gecko/20100101 Firefox/75.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\n
Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n

Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
Upgrade-Insecure-Requests: 1\r\n
If-Modified-Since: Mon, 18 May 2020 05:59:01 GMT\r\n
If-None-Match: "80-5a5e5dc0f39f4"\r\n
Cache-Control: max-age=0\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
[HTTP request 1/1]
[Response in frame: 107]

No.	Time	Source	Destination	Protocol	Length	Info
107	6.102814	128.119.245.12	192.168.0.159	HTTP	305	HTTP/1.1 304 Not Modified

Frame 107: 305 bytes on wire (2440 bits), 305 bytes captured (2440 bits) on interface en1, id 0
Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49732, Seq: 1, Ack: 515, Len: 239
Hypertext Transfer Protocol
HTTP/1.1 304 Not Modified\r\n
Date: Mon, 18 May 2020 09:38:14 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
Connection: Keep-Alive\r\n
Keep-Alive: timeout=5, max=100\r\n
ETag: "80-5a5e5dc0f39f4"\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.116729000 seconds]
[Request in frame: 103]
[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]

Пакети для відповідей 12-15:

No.	Time	Source	Destination	Protocol	Length	Info
130	4.821846	192.168.0.159	66.6.101.171	HTTP	671	GET /dyn/str_strip/000000000/00000000/0000000/000000/70000/7000 HTTP/1.1

Frame 130: 671 bytes on wire (5368 bits), 671 bytes captured (5368 bits) on interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 66.6.101.171
Transmission Control Protocol, Src Port: 49856, Dst Port: 80, Seq: 1, Ack: 1, Len: 605
Hypertext Transfer Protocol
    GET   /dyn/str_strip/000000000/00000000/0000000/000000/70000/7000 HTTP/1.1\r\n
    Host: www.dilbert.com\r\n
    User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0) Gecko/20100101 Firefox/75.0\r\n
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\n
    Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
    Accept-Encoding: gzip, deflate\r\n
    Connection: keep-alive\r\n
    Cookie: _ga=GA1.2.111453643.1588590188;   __qca=P0-961883290-1588590188641;
__gads=ID=113df00721e873cc:T=1588590189:S=ALNI_MbPB-gdPDviPBfXEUU2GI1UIjEVpg; _gid=GA1.2.1287125075.1589794857\r\n
    Upgrade-Insecure-Requests: 1\r\n
    \r\n
    [Full   request   URI: http://www.dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/70000/7000]
    [HTTP request 1/1]
    [Response in frame: 145]
_____

No.   Time   Source   Destination   Protocol Length Info
  145 4.963826   66.6.101.171   192.168.0.159   HTTP   253   HTTP/1.1 301 Moved Permanently

Frame 145: 253 bytes on wire (2024 bits), 253 bytes captured (2024 bits) on interface en1, id 0
Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 66.6.101.171, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49856, Seq: 1, Ack: 606, Len: 187
Hypertext Transfer Protocol
    HTTP/1.1 301 Moved Permanently\r\n
    Content-Type: text/html\r\n

Content-length: 0\r\n
Connection: Close\r\n
Location:
https://dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/70000/7
000\r\n
 \r\n
[HTTP response 1/1]
[Time since request: 0.141980000 seconds]
[Request in frame: 130]
[Request   URI:
http://www.dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/700
00/7000]

Пакети для відповідей 16-17:

No.   Time   Source   Destination   Protocol Length Info
   268 16.398037   192.168.0.159   128.119.245.12   HTTP   469   GET
/wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1

Frame 268: 469 bytes on wire (3752 bits), 469 bytes captured (3752 bits) on
interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4
(ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 49916, Dst Port: 80, Seq: 1, Ack: 1, Len:
403
Hypertext Transfer Protocol
   GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1\r\n
   Host: gaia.cs.umass.edu\r\n
   User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0)
Gecko/20100101 Firefox/75.0\r\n
   Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\
n
   Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
   Accept-Encoding: gzip, deflate\r\n
   Connection: keep-alive\r\n
   Upgrade-Insecure-Requests: 1\r\n
   \r\n
   [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-
file4.html]
   [HTTP request 1/3]
   [Response in frame: 273]
   [Next request in frame: 275]

No.   Time   Source   Destination   Protocol Length Info

273 16.520807   128.119.245.12   192.168.0.159   HTTP   1139 HTTP/1.1 200 OK (text/html)

Frame 273: 1139 bytes on wire (9112 bits), 1139 bytes captured (9112 bits) on interface en1, id 0
Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49916, Seq: 1, Ack: 404, Len: 1073
Hypertext Transfer Protocol
   HTTP/1.1 200 OK\r\n
   Date: Mon, 18 May 2020 09:51:33 GMT\r\n
   Server: Apache/2.4.6   (CentOS)   OpenSSL/1.0.2k-fips   PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
   Last-Modified: Mon, 18 May 2020 05:59:01 GMT\r\n
   ETag: "2ca-5a5e5dc0eefbc"\r\n
   Accept-Ranges: bytes\r\n
   Content-Length: 714\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 1/3]
   [Time since request: 0.122770000 seconds]
   [Request in frame: 268]
   [Next request in frame: 275]
   [Next response in frame: 281]
   [Request   URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html]
   File Data: 714 bytes
Line-based text data: text/html (17 lines)
   <html>\n
   <head>\n
   <title>Lab2-4 file: Embedded URLs</title>\n
   <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">\n
   </head>\n
   \n
   <body bgcolor="#FFFFFF" text="#000000">\n
   \n
   <p>\n
   <img   src="http://gaia.cs.umass.edu/pearson.png"   WIDTH="70" HEIGHT="41" > </p>\n
   <p>This little HTML file is being served by gaia.cs.umass.edu. \n
   It contains two embedded images.
 The image above, also served from the

\n
    gaia.cs.umass.edu web site, is the logo of our publisher, Pearson.
\n
    The image of our 5th edition book cover below is stored at, and served from,
the www server caite.cs.umass.edu:</p>\n
    <p   align="left"><img
src="http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg"   width="168"
height="220"></p>\n
    </body>\n
    </html>\n

No.   Time   Source   Destination   Protocol Length Info
    275 16.553389   192.168.0.159   128.119.245.12   HTTP   426   GET
/pearson.png HTTP/1.1

Frame 275: 426 bytes on wire (3408 bits), 426 bytes captured (3408 bits) on
interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4
(ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 49916, Dst Port: 80, Seq: 404, Ack: 1074,
Len: 360
Hypertext Transfer Protocol
    GET /pearson.png HTTP/1.1\r\n
    Host: gaia.cs.umass.edu\r\n
    User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0)
Gecko/20100101 Firefox/75.0\r\n
    Accept: image/webp,*/*\r\n
    Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
    Accept-Encoding: gzip, deflate\r\n
    Connection: keep-alive\r\n
    Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-
file4.html\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/pearson.png]
    [HTTP request 2/3]
    [Prev request in frame: 268]
    [Response in frame: 281]
    [Next request in frame: 285]

No.   Time   Source   Destination   Protocol Length Info
    281 16.672360   128.119.245.12   192.168.0.159   HTTP   781
HTTP/1.1 200 OK (PNG)

Frame 281: 781 bytes on wire (6248 bits), 781 bytes captured (6248 bits) on

interface en1, id 0

Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159

Transmission Control Protocol, Src Port: 80, Dst Port: 49916, Seq: 3970, Ack: 764, Len: 715

[3 Reassembled TCP Segments (3611 bytes): #279(1448), #280(1448), #281(715)]

Hypertext Transfer Protocol

   HTTP/1.1 200 OK\r\n

   Date: Mon, 18 May 2020 09:51:33 GMT\r\n

   Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n

   Last-Modified: Sat, 06 Aug 2016 10:08:14 GMT\r\n

   ETag: "cc3-539645c7f1ee7"\r\n

   Accept-Ranges: bytes\r\n

   Content-Length: 3267\r\n

   Keep-Alive: timeout=5, max=99\r\n

   Connection: Keep-Alive\r\n

   Content-Type: image/png\r\n

   \r\n

   [HTTP response 2/3]

   [Time since request: 0.118971000 seconds]

   [Prev request in frame: 268]

   [Prev response in frame: 273]

   [Request in frame: 275]

   [Next request in frame: 285]

   [Next response in frame: 289]

   [Request URI: http://gaia.cs.umass.edu/pearson.png]

   File Data: 3267 bytes

Portable Network Graphics

No.	Time	Source	Destination	Protocol	Length	Info
285	16.776153	192.168.0.159	128.119.245.12	HTTP	350	GET /favicon.ico HTTP/1.1

Frame 285: 350 bytes on wire (2800 bits), 350 bytes captured (2800 bits) on interface en1, id 0

Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4)

Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 49916, Dst Port: 80, Seq: 764, Ack: 4685, Len: 284

Hypertext Transfer Protocol

   GET /favicon.ico HTTP/1.1\r\n

   Host: gaia.cs.umass.edu\r\n

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0) Gecko/20100101 Firefox/75.0\r\n
　　Accept: image/webp,*/*\r\n
　　Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
　　Accept-Encoding: gzip, deflate\r\n
　　Connection: keep-alive\r\n
　　\r\n
　　[Full request URI: http://gaia.cs.umass.edu/favicon.ico]
　　[HTTP request 3/3]
　　[Prev request in frame: 275]
　　[Response in frame: 289]

No.　Time　　　　Source　　　　　Destination　　　Protocol Length Info
　　288 16.784789　　192.168.0.159　　　128.119.245.12　　HTTP　440　GET /~kurose/cover_5th_ed.jpg HTTP/1.1

Frame 288: 440 bytes on wire (3520 bits), 440 bytes captured (3520 bits) on interface en1, id 0
Ethernet II, Src: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f), Dst: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4)
Internet Protocol Version 4, Src: 192.168.0.159, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 49918, Dst Port: 80, Seq: 1, Ack: 1, Len: 374
Hypertext Transfer Protocol
　　GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n
　　Host: manic.cs.umass.edu\r\n
　　User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.13; rv:75.0) Gecko/20100101 Firefox/75.0\r\n
　　Accept: image/webp,*/*\r\n
　　Accept-Language: uk-UA,uk;q=0.8,en-US;q=0.5,en;q=0.3\r\n
　　Accept-Encoding: gzip, deflate\r\n
　　Connection: keep-alive\r\n
　　Referer:　　　　　http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
　　\r\n
　　[Full request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]
　　[HTTP request 1/1]
　　[Response in frame: 413]

No.　Time　　　　Source　　　　　Destination　　　Protocol Length Info
　　289 16.894158　　128.119.245.12　　　192.168.0.159　　　HTTP　550　HTTP/1.1 404 Not Found (text/html)

Frame 289: 550 bytes on wire (4400 bits), 550 bytes captured (4400 bits) on interface en1, id 0

Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49916, Seq: 4685, Ack: 1048, Len: 484
Hypertext Transfer Protocol
    HTTP/1.1 404 Not Found\r\n
    Date: Mon, 18 May 2020 09:51:33 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
    Content-Length: 209\r\n
    Keep-Alive: timeout=5, max=98\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=iso-8859-1\r\n
    \r\n
    [HTTP response 3/3]
    [Time since request: 0.118005000 seconds]
    [Prev request in frame: 275]
    [Prev response in frame: 281]
    [Request in frame: 285]
    [Request URI: http://gaia.cs.umass.edu/favicon.ico]
    File Data: 209 bytes
Line-based text data: text/html (7 lines)
    <!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">\n
    <html><head>\n
    <title>404 Not Found</title>\n
    </head><body>\n
    <h1>Not Found</h1>\n
    <p>The requested URL /favicon.ico was not found on this server.</p>\n
    </body></html>\n

No. Time   Source   Destination   Protocol Length Info
    413 17.265699   128.119.245.12   192.168.0.159   HTTP   1472 HTTP/1.1 200 OK (JPEG JFIF image)

Frame 413: 1472 bytes on wire (11776 bits), 1472 bytes captured (11776 bits) on interface en1, id 0
Ethernet II, Src: Tp-LinkT_fe:8e:b4 (ec:08:6b:fe:8e:b4), Dst: Apple_d7:ab:7f (20:c9:d0:d7:ab:7f)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.159
Transmission Control Protocol, Src Port: 80, Dst Port: 49918, Seq: 99913, Ack: 375, Len: 1406
[70 Reassembled TCP Segments (101318 bytes): #292(1448), #293(1448), #295(1448), #297(1448), #298(1448), #300(1448), #302(1448), #303(1448), #306(1448), #307(1448), #310(1448), #311(1448), #312(1448), #315(1448),

#317(1448), #318(1448), #32]
Hypertext Transfer Protocol
   HTTP/1.1 200 OK\r\n
   Date: Mon, 18 May 2020 09:51:33 GMT\r\n
   Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
   Last-Modified: Tue, 15 Sep 2009 18:23:27 GMT\r\n
   ETag: "18a68-473a1e0e6e5c0"\r\n
   Accept-Ranges: bytes\r\n
   Content-Length: 100968\r\n
   Keep-Alive: timeout=5, max=100\r\n
   Connection: Keep-Alive\r\n
   Content-Type: image/jpeg\r\n
   \r\n
   [HTTP response 1/1]
   [Time since request: 0.480910000 seconds]
   [Request in frame: 288]
   [Request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]
   File Data: 100968 bytes
JPEG File Interchange Format

Контрольні запитання:

1.Яку версію протоколу HTTP використовує ваш браузер (1.0 чи 1.1)? Яку версіюпротоколу використовує сервер?
Обидва використовують версію 1.1

2.Які мови (якщо вказано) браузер може прийняти від сервера?
    Американську англійську мову
    Accept-Language: en-US,en;q=0.5\r\n

3.Які IP-адреси вашого комп'ютера та цільового веб-сервера?
Мого компютера: 172.16.42.56
Веб-сервера: 128.119.245.12

4.Який статусний код сервер повернув у відповіді вашому браузеру?
200

5.Коли на сервері в останній раз був модифікований файл, який запитується браузером?

Mon, 18 May 2020 05:59:01 GMT\r\n

6.Скільки байт контенту повертається сервером?
128

7.Переглядаючи нерозібраний байтовий потік пакету, чи бачите ви деякі заголовки в потоці, які не відображаються у вікні деталей пакету? Якщо так, назвіть один з них.
Не помітила

8.Перевірте вміст першого запиту HTTP GET від вашого браузера до сервера. Чи є в ньому заголовок IF-MODIFIED-SINCE?
Ні, немає

9.Перевірте вміст першої відповіді сервера. Чи повернув сервер вміст файлу безпосередньо у відповіді?
Так

10.Перевірте вміст другого запиту HTTP GET. Чи є в ньому заголовок IF-MODIFIED-SINCE? Якщо так, яке значення йому відповідає?
Mon, 18 May 2020 05:59:01 GMT\r\n

11.Який код та опис статусу другої відповіді сервера? Чи повернув сервер вміст файлу безпосередньо у відповіді?
304 Not Modified, ні

12.Скільки повідомлень HTTP GET було відправлено вашим браузером?
Одне

13.Скільки пакетів TCP було необхідно для доставки однієї відповіді HTTP-сервера?
14

14.Який код та опис статусу був у відповіді сервера?
200 OK

15.Чи зустрічаються у даних пакетів-продовжень протоколу TCP стрічки з кодом та описом статусу відповіді, або ж якісь заголовки протоколу HTTP?
Так, таким чином починається перший пакет протоколу TCP

16.Скільки запитів HTTP GET було відправлено вашим браузером? Якими були цільові IP-адреси запитів?
6 запитів.
128.119.245.12

23.0.37.195
128.119.240.90
128.119.240.90
128.119.245.12
128.119.245.12

17.**Чи можете ви встановити, чи були ресурси отримані паралельно чи послідовно? Яким чином?**

Послідовно, за часом надходження відповідей та адресами.