Practice Question 1

Consider the following snapshot that was captured by Wireshark when the browser sent an HTTP GET message. Answer the following questions:

```
Hypertext Transfer Protocol
  GET / HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n]
    Request Method: GET
    Request URI: /
    Request Version: HTTP/1.1
  Host: www.onu.edu\r\n
  User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:49.0) Gecko/20100101 Firefox/49.0\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
  Cookie: _ga=GA1.2.2086847016.1465683638; _ceg.s=odhxkw; _ceg.u=odhxkw; _ceir=1\r\n
  Connection: keep-alive\r\n
  Upgrade-Insecure-Requests: 1\r\n
  \r\n
```

(i) What is the URL of the document requested by the browser?

(ii) What version of HTTP is the browser running?

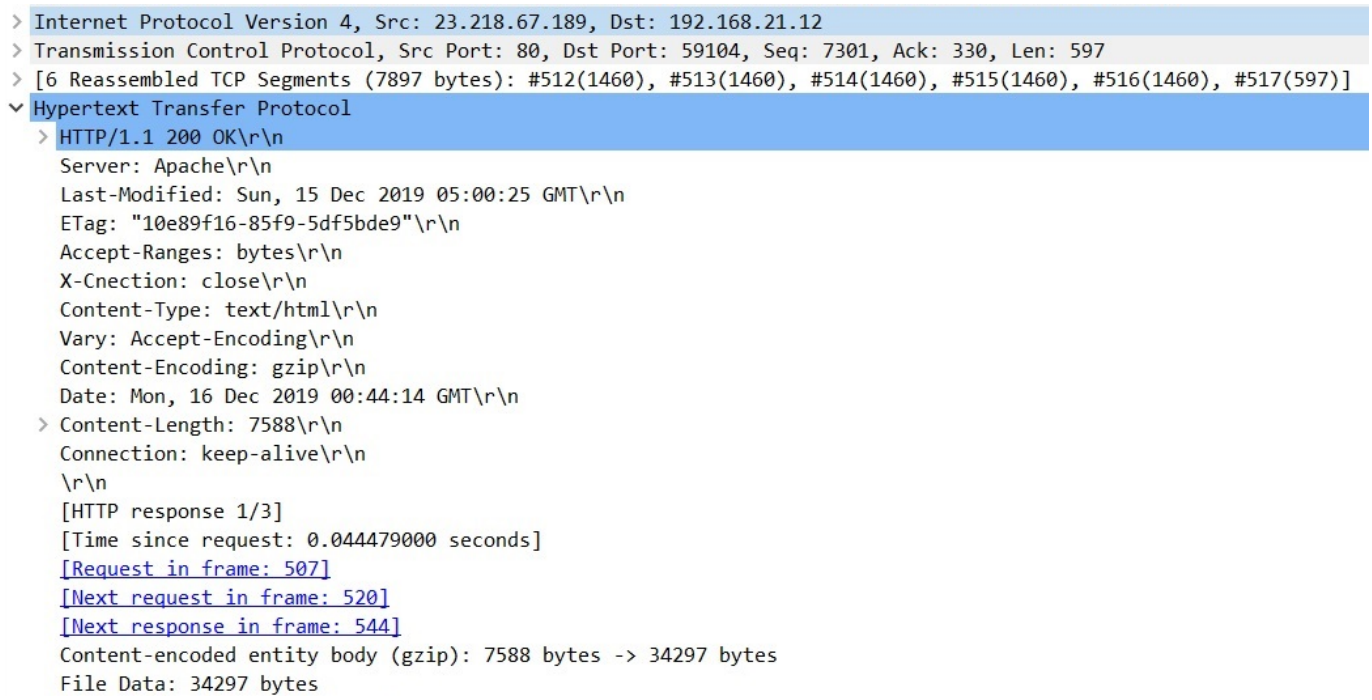
(iii) Does the browser request a non-persistent or a persistent connection? Justify your answer.

(iv) What is the IP address of the host on which the browser is running?

(v) What type of browser does initiate this message? What languages (if any) does this browser indicate that it can accept to the server?

Practice Question 2

Consider the following snapshot of a packet that was captured by Wireshark when both client and server are communicating with each other. Answer the following questions:



(i) From the above snapshot of the packet, can we find who has originated this packet; client or server?

_____

Justify your answer: _____

(ii) Is this packet a HTTP Request or HTTP Response?

_____

(iii) Does this communication a non-persistent or a persistent connection?

_____

(iv) What is the IP address of the client?

_____

(v) What type of browser does initiate this message?

_____

(vi) How many bytes of content are in this packet?

_____

(vii) What does “HTTP/1.1 200 OK” in this packet specify?

_____

Practice Question 1 Solution

Consider the following snapshot that were captured by Wireshark when the browser sent an HTTP GET message. Answer the following questions:

```
Hypertext Transfer Protocol
  GET / HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n]
    Request Method: GET
    Request URI: /
    Request Version: HTTP/1.1
  Host: www.onu.edu\r\n
  User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:49.0) Gecko/20100101 Firefox/49.0\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
  Cookie: _ga=GA1.2.2086847016.1465683638; _ceg.s=odhxkw; _ceg.u=odhxkw; _ceir=1\r\n
  Connection: keep-alive\r\n
  Upgrade-Insecure-Requests: 1\r\n
  \r\n
```

(i) What is the URL of the document requested by the browser?

www.onu.edu

(ii) What version of HTTP is the browser running?

HTTP version 1.1

(iii) Does the browser request a non-persistent or a persistent connection? Justify your answer.

The browser is requesting a persistent connection, as indicated by the connection: keep-alive

(iv) What is the IP address of the host on which the browser is running?

The IP Address information is not contained in an HTTP message. It is included in the TCP segment.

(v) What type of browser does initiate this message? What languages (if any) does this browser indicate that it can accept to the server?

Mozilla/5.0 was used. The browser type information is needed by the server to send different versions of the same object to different types of browsers.

Practice Question 2 Solution

Consider the following snapshot of a packet that was captured by Wireshark when both client and server are communicating with each other. Answer the following questions:

```
> Internet Protocol Version 4, Src: 23.218.67.189, Dst: 192.168.21.12
> Transmission Control Protocol, Src Port: 80, Dst Port: 59104, Seq: 7301, Ack: 330, Len: 597
> [6 Reassembled TCP Segments (7897 bytes): #512(1460), #513(1460), #514(1460), #515(1460), #516(1460), #517(597)]
v Hypertext Transfer Protocol
  > HTTP/1.1 200 OK\r\n
    Server: Apache\r\n
    Last-Modified: Sun, 15 Dec 2019 05:00:25 GMT\r\n
    ETag: "10e89f16-85f9-5df5bde9"\r\n
    Accept-Ranges: bytes\r\n
    X-Cnection: close\r\n
    Content-Type: text/html\r\n
    Vary: Accept-Encoding\r\n
    Content-Encoding: gzip\r\n
    Date: Mon, 16 Dec 2019 00:44:14 GMT\r\n
  > Content-Length: 7588\r\n
    Connection: keep-alive\r\n
    \r\n
    [HTTP response 1/3]
    [Time since request: 0.044479000 seconds]
    [Request in frame: 507]
    [Next request in frame: 520]
    [Next response in frame: 544]
    Content-encoded entity body (gzip): 7588 bytes -> 34297 bytes
    File Data: 34297 bytes
```

(i) From the above snapshot of the packet, can we find who has originated this packet; client or server?

Server

Justify your answer: It shows "Server" Apache

(ii) Is this packet a HTTP Request or HTTP Response?

HTTP Response

(iii) Does this communication a non-persistent or a persistent connection?

Persistent connection

(iv) What is the IP address of the client?

192.168.21.12

(v) What type of browser does initiate this message?

Packet is coming webserver, so no browser information.

(vi) What is the size of this packet?

597 Bytes

(vii) What does "HTTP/1.1 200 OK" in this packet specify?

Request Succeeded.