Learning Objectives

LO1: Understand the goals and desires of developing HTTP for the client and server and how it accomplishes this communication
LO2: Describe the difference between HTTP/1.1, HTTP/2, and HTTP/3 and why they were developed
LO3: Provide examples of a client and server implementation using a loopback address
LO4: Compare and contrast TCP and UDP
LO5: Participate and complete the HTTP review document

HTTP2/3 Review Questions

1. Match each advantage implemented in HTTP/2 with its corresponding visual.
    - _____ Multiplexed Streams
    - _____ Stateful Header Compression
    - _____ Stream Prioritization
    - _____ Server Push Capabilities
2. Write the protocol (**TCP** or **UDP**) that each HTTP version is built upon.
    - _____ HTTP 1.1
    - _____ HTTP 2
    - _____ HTTP 3
3. What modern trend is the new QUIC protocol designed to optimize around:
    - A) Multiprocessor systems
    - B) Faster internet connections
    - C) Mobile devices switching networks frequently
    - D) Devices with larger screens
4. In HTTP 3, encryption happens in _____
    - A) Transport layer
    - B) Application layer
    - C) Data link layer
    - D) Physical layer
5. In HTTP 1.1 and HTTP 2, encryption happens in _____
    - A) Transport layer
    - B) Application layer
    - C) Data link layer
    - D) Physical layer
6. When was HTTP/3 published?
    - A) 1992
    - B) 2002
    - C) 2012
    - D) 2022

True/False

7. ____ HTTP 3 is built on TCP, just like HTTP 1.1 and HTTP2
8. ____ HTTP 2 adds stateful header compression
9. ____ The server can push data to clients in HTTP 2
10. ____ In HTTP 2, all streams have equal prioritization
11. ____ All HTTP versions have encryption by default
12. ____ As of November 2022, about 26% percent of websites use HTTP/3

Short answer

13. Name 3 use-cases/situations where HTTP 3 would be better suited/optimized than

14. Explain why encryption by default in HTTP 3 is beneficial to everyday internet users.

Answer Key

1. 1, 2, 3, 4
2. TCP, TCP, UDP
3. C
4. A
5. B
6. D
7. F
8. T
9. T
10. F
11. F
12. T
13. Short
    a. HTTP 2.
    b. Mobile phone
    c. Laptop
    d. Cars
    e. Security critical communications
    f. Connecting to sites previously connected to
14. Without encryption, data is sent to/from the server in plain text by default. This means if you send a password or confidential information to the website you're connecting to, someone in the middle of the data path can intercept and read/modify that data.