HTTP Version Evolution:-

HTTP/0.9: The initial version of HTTP, introduced in 1991, was a simple protocol used for transferring hypertext documents. It supported only a single method, GET, and did not include headers or status codes.

HTTP/1.0: Introduced in 1996, HTTP/1.0 expanded upon HTTP/0.9 by adding support for additional methods (POST, HEAD), status codes, headers for requests and responses, and more flexible message formats. However, each request/response required a separate TCP connection, leading to performance issues due to high overhead.

HTTP/1.1: Released in 1997, HTTP/1.1 addressed the performance limitations of HTTP/1.0 by introducing several enhancements, including persistent connections (keep-alive), pipelining (multiple requests on a single connection without waiting for responses), chunked transfer encoding (support for streaming data), and host headers (multiple domains on a single IP address). These improvements significantly improved the efficiency and speed of web communication.

HTTP/2: Introduced in 2015, HTTP/2 was a major overhaul of the protocol aimed at further improving performance and addressing the needs of modern web applications. It introduced features such as multiplexing (multiple requests and responses over a single connection), header compression (HPACK), server push (proactively pushing resources to clients), and prioritization (prioritizing requests to optimize resource loading). HTTP/2 was based on Google's SPDY protocol and aimed to reduce latency, improve security, and optimize resource utilization.

HTTP/3: Still in the process of standardization as of early 2022, HTTP/3 represents another significant evolution of the protocol. It is based on the QUIC (Quick UDP Internet Connections) protocol, which operates over UDP rather than TCP. HTTP/3 aims to further reduce latency and improve performance by addressing issues related to head-of-line blocking and connection setup times inherent in TCP-based protocols like HTTP/1.x and HTTP/2.