**What is HTTP?**

HTTP (Hypertext Transfer Protocol) is a fundamental protocol of the Internet. It enables data transfer between a client (such as a web browser) and a server.

HTTP is the backbone of data communication for the World Wide Web, allowing seamless browsing and interaction with web content.

**Difference between HTTP1.1 vs HTTP2**

| **HTTP 1.1** | **HTTP 2** |
| --- | --- |
| It works on the textual format | It works on the binary protocol |
| There is head of line blocking that blocks all the requests behind it until it doesn’t get its all resources | It allows multiplexing so one TCP connection is required for multiple requests |
| It uses requests resource Inlining for use getting multiple pages | It uses PUSH frame by server that collects all multiple pages |
| It compresses data by itself | It uses HPACK for data compression |

1. Binary Framing Layer:
   * HTTP/1.1 uses plain text for its messages.
   * HTTP/2 uses a binary framing layer to encapsulate messages, while still maintaining HTTP semantics (verbs, methods, headers).
2. Multiplexing:
   * HTTP/1.1 loads a single request per TCP connection.
   * HTTP/2 multiplexes multiple streams over a single (usually TLS-encrypted) TCP connection.
3. Network Efficiency:
   * HTTP/1.1 can suffer from head-of-line blocking due to its single-request-per-connection model
   * HTTP/2 reduces network delay by using multiplexing, making it faster and more reliable.