HTTP

Hypertext Transfer Protocol (HTTP) is a protocol for transmitting hypermedia documents, such as HTML. It was designed for communication between web browsers and web servers, but it can also be used for other purposes. HTTP follows a classical client-server model, with a client opening a connection to make a request, then waiting until it receives a response. HTTP is a stateless protocol, meaning that the server does not keep any data (state) between two requests.

# Version of HTTP:

HTTP has four versions namely HTTP/0.9, HTTP/1.0, HTTP/1.1, HTTP/2.H0. Here we are going to talk about HTTP/1.1 & HTTP/2.0.

### HTTP 1.1:

Developed by Timothy Berners-Lee in 1989 as a communication standard for the World Wide Web, HTTP is a top-level application protocol that exchanges information between a client computer and a local or remote web server. In this process, a client sends a text-based request to a server by calling a method like GET or POST. In response, the server sends a resource like an HTML page back to the client.

### HTTP 2.0:

HTTP 2.0 began as a SPDY protocol with a sole purpose of reducing web page load latency by using techniques such as compression, multiplexing, and prioritization.

# Differences between HTTP 1.1 & HTTP 2.0

HTTP/1.1 loads resources one after the other, so if one resource cannot be loaded, it blocks all the other resources behind it. In contrast, HTTP/2 is able to send multiple streams of data at once so that no one resource blocks any other resource. HTTP/2 does this by splitting data into binary-code messages and numbering these messages so that the client knows which stream each binary message belongs to.

Typically, a server only serves content to a client device if the client asks for it. However, this approach is not always practical for modern web pages, which often involve several dozen separate resources that the client must request. HTTP/2 solves this problem by allowing a server to "push" content to a client before the client asks for it.

Small files load more quickly than large ones. To speed up web performance, both HTTP/1.1 and HTTP/2 compress HTTP messages to make them smaller. However, HTTP/2 uses a more advanced compression method called HPACK that reduces the information in HTTP header packets. This eliminates a few bytes from every HTTP packet. Given the volume of HTTP packets involved in loading even a single webpage, those bytes add up quickly, resulting in faster loading.