**HTTP** stands for **Hypertext Transfer Protocol**. It is the foundation of the World Wide Web and is used by browsers to load web pages. It is the method of computers and servers used to request and send information.

The first usable version of HTTP was created in 1997. Because it went through several stages of development, this first version of HTTP was called HTTP/1.1. This version is still in use on the web. In 2015, a new version of HTTP called HTTP/2 was created.

HTTP/2 solves several problems that the creators of HTTP/1.1 did not anticipate. In particular, HTTP/2 is much faster and more efficient than HTTP/1.1.

**Multiplexing:** 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 use a single TCP connection 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.

**Server push:** 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 webpages, 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. The server also sends a message letting the client know what pushed content to expect.

**Header compression:** 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 eliminates redundant 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.

**Prioritization:** Prioritization refers to the order in which pieces of content are loaded. Prioritization affects a webpage's load time. For example, certain resources, like large JavaScript files, may block the rest of the page from loading if they have to load first. More of the page can load at once if these render-blocking resources load last. In HTTP/2, developers have hands-on, detailed control over prioritization. This allows them to maximize perceived and actual page load speed to a degree that was not possible in HTTP/1.1. HTTP/2 offers a feature called weighted prioritization. This allows developers to decide which page resources will load first, every time.

HTTP/2 is merely an extension, with all the core concepts such as HTTP methods, Status Codes, URIs, and Header Fields remaining the same.

Conclusively the key differences HTTP/2 has to HTTP/1.x are as follows:

* It is binary instead of textual
* It is fully multiplexed, instead of ordered and blocking
* It can use one connection for parallelism
* It uses header compression to reduce overhead
* It allows Server Pushing to add responses proactively into the Browser cache.