**Write a blog on the Difference between HTTP1.1 vs HTTP2**

**Introduction**

* HTTP stands for hypertext transfer protocol
* It is used in client-server communication.
* By using HTTP user sends the request to the server & the server sends the response to the user.
* There are several stages of development of HTTP but we will focus mainly on HTTP/1.1 which was created in 1997 & the new one is HTTP/2 which was created in 2015.

**HTTP/1.1**

* It depends on the transport layer to avoid buffer overflow, each new TCP connection requires a separate flow control mechanism
* Let’s assume the situation when you make a request to the server for the web page & the server responds to you by requesting a web page.
* Before sending the request and the response there is a TCP connection established between client & server.
* Again, you request the server for an image img.jpg & the server responds as an image img.jpg.

**Drawbacks of HTTP/1.1**

* The first problem is that HTTP/1.1 transfers all the requests & responses in plain text.
* The second one is head-of-line blocking in which the TCP connection is blocked all other requests until the response does not receive.
* All the information related to the header file is repeated in every request.

**HTTP/2:**

* HTTP/2 was developed over the SPDY protocol.
* HTTP/2 works on the binary framing layer instead of textual which converts all the messages in binary format.
* It works on fully multiplexed that is one TCP connection is used for multiple requests. HTTP/2 uses HPACK which is used to split data from the header. it compresses the header.
* The server sends all the other files like CSS & JS without the request of the client using the PUSH frame.

**Difference between HTTP1.1 vs HTTP2**

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| **HTTP1.1** | **HTTP2** |
| It works in the textual format. | It works on the binary protocol. |
| There is head-of-line blocking that blocks all the requests behind it until it gets all the 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 a PUSH frame by the server that collects all multiple pages |
| It compresses data by itself. | It uses HPACK for data compression. |

**HPACK Compression**

HPACK stands for Header Compression for HTTP/2. It's a compression format for representing HTTP header fields in HTTP/2 that eliminates redundant information in HTTP header packets. This speeds up web performance by eliminating a few bytes from every HTTP packet.