1. Difference between HTTP1.1 vs HTTP2

HTTP 1.1

* The Hypertext Transfer Protocol, or HTTP, is an application protocol that has been the de facto standard for communication on the World Wide Web since its invention in 1989.
* 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. The server sends a resource like an HTML page back to the client.
* For example, let’s say you are visiting a website at the domain www.example.com. When you navigate to this URL, the web browser on your computer sends an HTTP request in the form of a text-based message, similar to the one shown here:

Eg: GET /index.html HTTP/1.1

Host: [www.example.com](http://www.example.com)

This request uses the get method, which asks for data from the host server listed after Host:. In response to this request, the example.com web server returns an HTML page to the requesting client, in addition to any images, stylesheets, or other resources called for in the HTML.

* The resources are returned to the client in the first call for data. The requests and responses will go back and forth between the server and client until the web browser has received all the resources necessary to render the contents of the HTML page on your screen.
* This exchange of request packets and responses as a single application layer of the internet protocol are in transfer layer.

HTTP 2:

* HTTP/2 began as the SPDY protocol, developed primarily at Google with the intention of reducing web page load latency by using techniques such as compression, multiplexing, and prioritization.
* This protocol served as a template for HTTP/2 when the Hypertext Transfer Protocol working group httpbis of the [IETF (Internet Engineering Task Force)](https://www.ietf.org/) put the standard together, culminating in the publication of HTTP/2 in May 2015
* From the beginning many browser are supported the standardization effort, including Chrome, Opera, Internet explorer, and safari. Due to this significant adoption rate of the protocol since 2015. Are high rates in few of new sites.
* one of the most significant features that distinguishes HTTP1.1 and HTTP/2 is the binary framing layer, which can be thought of as a part of the application layer in the internet protocol stack.
* HTTP2 is its ability to use the binary framing layer to exhibit greater control over finer detail. The same is true when it comes to header compression. HTTP2 can split headers from their data, resulting in a header frame and a data frame. The HTTP2-specific compression program [HPACK](https://tools.ietf.org/html/draft-ietf-httpbis-header-compression-12) can then compress this header frame.
* A common method of optimizing web applications is to use compression algorithms to reduce the size of HTTP messages that travel between the client and the server. HTTP1.1 and HTTP2 both use this strategy, but there are implementation problems in the former that prohibit compressing the entire message.

Header for HTTP 1.1 AND 2

* method: GET
* scheme: https
* host: example.com
* path: /academy
* accept: /image/jpeg
* user-agent: Mozilla/5.0 ...