

ZEN-class Assignment 1

1. Difference between HTTP1.1 vs HTTP2

1.1 HTTP1.1:

- Released in 1997.
- Uses GET Method to ask data from Host server.
- Transfers data in plain Text messages.
- Developed by Timothy Berners-Lee.

1.2 HTTP 2:

- Released in 2015.
- Also uses Get Method to ask data from Host server.
- Transfers data in Binary format.
- Developed by HTTP Working Group (also called httpbis, where "bis" means "twice") of the [Internet Engineering Task Force](#) (IETF).

2. HTTP version history

2.1 HTTP 0.9: The One-Line Protocol(1991)

- Client request is a single ASCII character string.
- Server response is an ASCII character stream.
- Server response is a hypertext markup language (HTML).
- Connection is terminated after the document transfer is complete.

2.2 HTTP/1.0: Rapid Growth and Informational RFC(1991-1995)

- Request may consist of multiple newline separated header fields.
- Response object has its own set of newline separated header fields.
- Response object is not limited to hypertext.
- The connection between server and client is closed after every request.

2.3 HTTP/1.1: Internet Standard(1995-1999)

- Request for HTML file, with encoding, charset, and cookie metadata.
- Chunked response for original HTML request.
- Inform server that the connection will not be reused.

2.4 HTTP/2: Improving Transport Performance(2012-2015)

- Makes multiple HTTP requests at the same time.
- Receives multiple responses from server at same time.

3. List 5 differences between Browser JS vs Node Js.

3.1 Browser JS:

- Uses JavaScript as their programming language.
- Runs in Web Browsers.
- It is basically used on the client-side.
- Javascript can run in any browser engine as like JS core in safari and Spidermonkey in Firefox.

3.2 Node JS:

- Uses JavaScript as their programming language.
- It is an interpreter or running environment for JavaScript and it can be run outside the browser.
- It is mostly used on the server-side.
- Nodejs can only run in V8 engine of google chrome.

4. What happens when you type a URI in a Browser?

- [URL](#) stands for Uniform Resource Locator.
- URL is the address of the website which you can find in the address bar of your web browser.
- It is a reference to a resource on the internet, be it images, hypertext pages, audio/video files, etc.
- when we enter a URL, Browser checks cache for DNS entry to find the corresponding [IP address](#) of website.
- If not found in cache, ISP's (Internet Service Provider) DNS server initiates a DNS query to find IP address of server that hosts the domain name.
- The requests are sent using small data packets that contain information content of request and IP address it is destined for.
- Browser initiates a [TCP \(Transfer Control Protocol\)](#) connection with the server.
- Browser sends an [HTTP](#) request to the web server. GET or POST request.
- Server on the host computer handles that request and sends back a response. It assembles a response in some format like JSON, [XML](#) and HTML.
- Server sends out an HTTP response along with the status of response.
- Browser displays [HTML](#) content.

