**Q1. Difference between HTTP1.1 vs HTTP2**

HTTP 1.1:

1. HTTP is a top-level application protocol that exchanges information between a client computer and a local or remote web server.

2. In this process, a client sends a text-based request to a server by calling a method like "GET" or "POST".

3. HTTP 1.1 transfers plain text messages because conversion of messages into binary isn't allowed.

4. The data is transferred entirely in one go.

HTTP 2.0:

1. HTTP/2.0 began as the SPDY protocol, developed by Google in order to reduce the web page load latency by using techniques such as compression, multiplexing, and prioritization.

2. Conversion of messages into Binary is allowed and thus opening different delivery model possibilities.

3. In HTTP/2, the binary framing layer encodes requests/responses and cuts them up into smaller packets of information which allows flexibility in data transfer.

**Q2. HTTP version history**

HTTP means "Hyper Text Transfer Protocol" which is one of the basic protocols of World Wide Web devloped by Tim Berners Lee in 1989. Till now HTTP has been developed in several phases they are:

1. HTTP 0.9 (1991):

Basic operation like GET, POST and HEAD were supported. This protocal was used to access basic websites with multiple pages hyperlinked to each other.

2. HTTP 1.0 (1996):

Along with the above operations, basic operation like PUT, DELETE, LINK and UNLINK methods were supported.

3. HTTP 1.1 (1997):

By 1997, Internet and the websites were becoming more dynamic and heavy hence, this change gave rise rise to protocols like CORS, Keep alive.

Keep alive option enables re-suing of same TCP connection for multiple HTTP requests.

In this protocol there was only single TCP connection between Client and Server which was a disadvantage.

4. HTTP 2.0 (2015):

In this protocol, Header data can be separated from the request data and can be zipped. HPACK also reuses the header data which is repeated in every request anf thus reduces the request size.

Another new feature of HTTP/2 is the ability of the server to send multiple responses for a single client request.

**Q3. List 5 difference between Browser JS(console) vs Nodejs**

Both the browser and Node.js use JavaScript as their programming language.

Node JS and Browser JS, both executes JavaScript, but Node JS does that in server side and browser JS in client side.

Frontend developer uses Browser JS where as Node js can be used by both Fronend and Backend developer.

In browser JS we mostly work and interact with DOM, Api's and that's not the case with Node JS.

The major difference is in Node JS we control the environment. Compared to the browser environment, where we don't get the option to choose what browser our visitors will use.

Another difference is that Node.js uses the CommonJS module system, while in the browser we are starting to see the ES Modules standard being implemented.

**Q4. What happens when you type a URL in the address bar in the browser?**

When we type any URL in the address bar first, the browser check Cache memory if the site is available the respective page gets displayed. If not , this URL gets converted into a unique pre-assigned IP address (numeric form).

Once the browser receives the correct IP address, it will build a connection with the server that matches the IP address to transfer information. TCP is the most common protocol used for many types of HTTP requests.

Once the TCP connection is established, then the transmission of the data begins. The browser will send a GET request asking for the entered URL.