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Task1

Q1)Difference between http 1.1 and http 2

Ans) HTTP 1.1 keeps all requests and responses in plain text format, HTTP 2 uses the binary framing layer to encapsulate all messages in binary format.

Q2)HTTP version history

The initial version of HTTP had no version number; it has been later called 0.9 to differentiate it from the later versions. HTTP/0.9 is extremely simple: requests consist of a single line and start with the only possible method GET followed by the path to the resource

HTTP 1.0

HTTP/0.9 was very limited and both browsers and servers quickly extended it to be more versatile:

Versioning information is now sent within each request (HTTP/1.0 is appended to the GET line)

A status code line is also sent at the beginning of the response, allowing the browser itself to understand the success or failure of the request and to adapt its behavior in consequence (like in updating or using its local cache in a specific way)

HTTP/1.1 clarified ambiguities and introduced numerous improvements:

* A connection can be reused, saving the time to reopen it numerous times to display the resources embedded into the single original document retrieved.
* Pipelining has been added, allowing to send a second request before the answer for the first one is fully transmitted, lowering the latency of the communication.
* Chunked responses are now also supported.
* Additional cache control mechanisms have been introduced.
* Content negotiation, including language, encoding, or type, has been introduced, and al

HTTP 2

The HTTP/2 protocol has several prime differences from the HTTP/1.1 version:

* It is a binary protocol rather than text. It can no longer be read and created manually. Despite this hurdle, improved optimization techniques can now be implemented.
* It is a multiplexed protocol. Parallel requests can be handled over the same connection, removing the order and blocking constraints of the HTTP/1.x protocol.
* It compresses headers. As these are often similar among a set of requests, this removes duplication and overhead of data transmitted.

Q3)Difference between node js and traditional js

The major difference between both environments is that one is subject to rigorous security policies and restrictions (browser) while the other isin't. The browser is also an untrustable environment for security-related operations such as enforcing security permissions. node.js is a javascript runtime based on chrome’s javascript engine called V8 whereas browser js runs on almost every browser. Node js supports all major OSes, which is a great thing because it means applications written for node.js run on all platforms. Once installed, you will be able to start node.js with the command line, if started without arguments it will open in REPL mode where you can type javascript and it will be instantly evaluated, like in the console of a browser.The normal js is mainly used for client side activities whereas node js can be used for client side and server side acvtivities as well

Q4)what happens once you type in a url

1. The browser looks up the IP address for the domain name via DNS
2. The browser sends a HTTP request to the server
3. The server sends back a HTTP response
4. The browser begins rendering the HTML
5. The browser sends requests for additional objects embedded in HTML (images, css, JavaScript) and repeats steps 3-5.
6. Once the page is loaded, the browser sends further async requests as needed.

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