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**FULL STACK DEVELOPMENT COURSE**

**DAY 1 TASK**

1. **Write a blog on difference between HTTP 1.1 vs HTTP 2:**

**HTTP 1.1:**

**Ans:** In HTTP 1.1, blocking occurs because when a client opens a TCP connection, it sends multiple requests with the same Connection without waiting for a response. After all the HTTP 1.1 protocol creates persistent connections by default without specifying the Connection keep alive header that allows multiple requests to be sent over the same TCP connection using the pipeline technique. However, the pipeline improves the loading time performance of the webpage but also creates a HOL blocking issue because processing one request or response takes a longer time which causes a delay in retransmitting other requests and responses.

**HTTP 2:**

HTTP/2 fixes HOL blocking issues using the binary framing layer technique that improves the connection efficiency and allows multiple connections to increase the flexibility of transmitting information to the desired destination. In the next section, we will learn more about the binary framing layer technique and its advantages. The binary framing layer converts requests/responses into binary and breaks them into smaller chunks to form a bidirectional communication stream. HTTP/2 establishes a single TCP connection between the client and the server, and during the Connection, there are multiple streams of data transfers between two machines.

1. **Write a blog about objects and its internal representation in java script?**

**OBJECTS AND ITS INTERNAL REPRESENTATION IN JAVA SCRIPT:**

Objects, in JavaScript, is it’s most important data-type and forms the building blocks for modern JavaScript. These objects are quite different from JavaScript’s primitive data-types(Number, String, Boolean, null, undefined and symbol) in the sense that while these primitive data-types all store a single value each (depending on their types).

Objects are more complex and each object may contain any combination of these primitive data-types as well as reference data-types.  
An object, is a reference data type. Variables that are assigned a reference value are given a reference or a pointer to that value. That reference or pointer points to the location in memory where the object is stored. The variables don’t actually store the value.

Loosely speaking, objects in JavaScript may be defined as an unordered collection of related data, of primitive or reference types, in the form of “key: value” pairs. These keys can be variables or functions and are called properties and methods, respectively, in the context of an object.

For Eg. If your object is a student, it will have properties like name, age, address, id, etc and methods like updateAddress, updateNam, etc.

1. **Read about IP address, Port, HTTP methods, MAC address:**

* **IP address:**

All the computers of the world on the Internet network communicate with each other with underground or underwater cables or wirelessly. If I want to download a file from the internet or load a web page or literally do anything related to the internet, my computer must have an address so that other computers can find and locate mine in order to deliver that particular file or webpage that I am requesting. In technical terms, that address is called **IP Address or Internet Protocol Address**.

* **Ports:**

A port number is a way to identify a specific process to which an internet or other network message is to be forwarded when it arrives at a [server](https://www.techtarget.com/whatis/definition/server). All network-connected devices come equipped with standardized ports that have an assigned number. These numbers are reserved for certain [protocols](https://www.techtarget.com/searchnetworking/definition/protocol) and their associated function. Hypertext Transfer Protocol ([HTTP](https://www.techtarget.com/whatis/definition/HTTP-Hypertext-Transfer-Protocol)) messages, for example, always go to [port 80](https://www.techtarget.com/searchnetworking/definition/port-80) one of the most commonly used ports.

* **HTTP Methods:**

1. GET
2. POST
3. PUT
4. HEAD
5. DELETE
6. PATCH
7. OPTIONS
8. CONNECT
9. TRACE

* **MAC Address:**

A MAC address is a unique identifier assigned to a network interface controller for use as a network address in communications within a network segment. This use is common in most IEEE 802 networking technologies, including Ethernet, Wi-Fi, and Bluetooth.