**DAY TASK-01**

**1)Write a blog on difference between HTTP1.1 vs HTTP2**

Ans:

* HTTP stands for Hypertext Markup Language. It is the protocol for transferring hypertext information on WWW (World Wide Web). HTTP is the foundation to build web pages with the help of HTML, CSS& JavaScript.
* Using HTTP, in a website, the web browser(client) communicates with the web server to find information, images, videos etc.
* The client sends request to server in the form of text messages whereas the server sends back the response for the request given by client.
* Therefore, the exchange of request and response takes place in a single connection in HTTP.
* HTTP can transfer data in various formats (plain text, hypertext, audio, video, etc.).
* HTTP is Connectionless Protocol i.e. the client begins with request, waits for the response by the server and after that disconnects.
* HTTP uses Uniform Resource Locator (URL).
* A URL specifies the method (protocol), host computer, port, and path to the resource.

The difference between HTTP/1.1 vs HTTP2:

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| --- | --- | --- | --- |
| SI.NO |  | HTTP/1.1 | HTTP/2 |
| 1 | Data Format | All request & response in text format. | Request &Response in binary framing layer. |
| 2 | Multiplexing | It processes request and response in sequence manner (order by order) in single connection. | It processes multiple requests & responses in single connection. |
| 3 | Header Compression | Header sends with each request & response which forms increased data transfer. | It compresses headers and provide efficient communication. |
| 4 | Server Pushing | Response is being provided for the respected request send by the client. | Response is provided with addition resources before the request send by the client. |

**2) Write a blog about objects and its internal representation in JavaScript**

Ans:

JavaScript datatypes includes two types as:

1. Primitive Datatypes
2. Complex Datatypes

Primitive Datatype include Numbers, Strings, Boolean, Null, Undefined & Symbols

Complex Datatype include Arrays & **Objects.**

OBJECTS:

* Object is the unordered collection of related data which includes Properties & Methods. It is the most important datatype in JavaScript.
* Properties-like variables, defining its characteristics.
* Methods-allowing to perform actions.
* Objects are reference datatypes.
* Objects use key-value pair to organize information.

INTERNAL REPRESENTATION:

JavaScript engines represent objects using various data structures. One common representation is the hash table, where keys (property names) are hashed to optimize property access. The hash table allows for quick lookup of properties, making object access efficient.

For example:

const student = {

name: 'Alice',

age: 20

};

Where name & age are properties.

Properties can be accessed through dot notation or bracket notation.

Examples:

console.log(student.name); // Alice

console.log(student['age']); // 20