DAY 1 TASK 1

1. Write a blog on Difference between HTTP1.1 vs HTTP2

* HTTP stands for Hyper Text Transfer Protocol
* In **Multiplexing** HTTP/1.1 uses multiple TCP connection to send multiple streams of data, it blocks all the other resources behind it. In contrast, HTTP/2 is able to use a single TCP connection to send multiple streams of data at once so that no one resource blocks any other resource.
* HTTP/2 is much compatible and more efficient than HTTP/1.1.
* In HTTP/1.1 **serverpush** a server only serves content to a client device if the client asks for it. But in HTTP/2 it goes for a “push” before the client asks for it.

1. Write a blog about objects and its internal representation in Javascript

**Understanding Objects in JavaScript:**

At its core, JavaScript is an object-oriented language. Objects in JavaScript are collections of key-value pairs, where each key is a string (or a symbol) and each value can be of any data type, including other objects. This flexibility makes JavaScript objects incredibly versatile, allowing developers to model real-world entities and relationships seamlessly.

**Internal Representation of Objects:**

To comprehend the internal representation of objects in JavaScript, it's essential to grasp how they are stored in memory. When you create an object in JavaScript, the engine allocates memory for it and stores the object's properties and methods. Each property is stored as a key-value pair, and methods are essentially functions associated with the object.

**Conclusion:**

Objects lie at the heart of JavaScript, providing a powerful means to structure and organize data. Understanding the internal representation of objects, including memory allocation, key-value pairs, and prototype-based inheritance, is crucial for developers aiming to build scalable and maintainable applications. As you continue your JavaScript journey, keep exploring the nuances of objects, and unlock the full potential of this dynamic and versatile programming language.

1. codekata practice

Javascript code to delete the duplicate passport number in an array

const readline = require("readline");

const inp = readline.createInterface({

input: process.stdin

});

const userInput = [];

inp.on("line", (data) => {

userInput.push(data);

});

inp.on("close", () => {

const length = +userInput[0]; // Convert the length to a number

const passportNumbers = userInput[1].split(" "); // Convert the string of passport numbers to an array

const uniquePassportNumbersSet = newSet(passportNumbers);

const uniquePassportNumbersArray =Array.from(uniquePassportNumbersSet);

console.log(uniquePassportNumbersArray.join(" "));

});

4.) Read about IP address, port, HTTP methods, MAC address

IP Address:

An IP (Internet Protocol) address is a numerical label assigned to each device connected to a computer network that uses the Internet Protocol for communication. IP addresses serve two main purposes: host or network interface identification and location addressing. They provide a unique identifier to devices on a network, allowing data to be routed correctly between them.

Port:

A port is a communication endpoint in a computer's operating system that is used to identify a specific process to which a message or data packet is sent. Ports allow multiple applications to use the same IP address on a device while distinguishing between them. There are well-known ports assigned by the Internet Assigned Numbers Authority (IANA) for specific services, such as HTTP using port 80 and HTTPS using port 443. Ports are essential for enabling communication between different applications and services within a computer network.

HTTP Methods:

Most used HTTP methods include:

GET: Requests data from a specified resource.

POST: Submits data to be processed to a specified resource.

PUT: Updates a specified resource with new data.

DELETE: Requests the removal of a specified resource.

And also other methods

HEAD: Similar to GET but only returns the headers, not the actual data.

OPTIONS: Describes the communication options for the target resource.

PATCH: Applies partial modifications to a resource.

MAC Address:

A Media Access Control (MAC) address is a unique identifier assigned to a network interface controller (NIC) for use as a network address in communications within a network segment. MAC addresses are typically assigned by the manufacturer of the network interface and are embedded in the hardware. They are crucial for the functioning of the Data Link Layer of the OSI model, as they help in identifying devices on a local network. MAC addresses are usually displayed as six pairs of hexadecimal digits separated by colons or hyphens (e.g., 00:1A:2B:3C:4D:5E).