**“\*DAY 1 – TASK - ASSIGNMENT\*”**

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

HTTP/1.1 loads resources one after the other, so if one resource cannot be loaded, 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.

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

## Objects and its internal representation in JavaScript

Objects are one of the most important data types in JavaScript. They are used to represent real-world entities, such as people, cars, and animals. Objects can also be used to represent abstract concepts, such as a shopping cart or a to-do list.

Objects are made up of properties and methods. Properties are like attributes of an object. For example, a person object might have properties for name, age, and gender. Methods are like functions that are attached to an object. For example, a person object might have a method for speaking or walking.

Objects are created using curly braces ({ }). The properties of an object are listed inside the curly braces, separated by commas. For example, the following code creates a person object with three properties:

const person = {  
 name: "John Doe",  
 age: 30,  
 gender: "male"  
};

Use code with caution.

[Learn more](https://support.google.com/legal/answer/13505487?hl=en-IN)

The properties of an object can be accessed using dot notation. For example, the following code gets the value of the name property of the person object:

const name = person.name;

Use code with caution.

[Learn more](https://support.google.com/legal/answer/13505487?hl=en-IN)

Methods are also accessed using dot notation. For example, the following code calls the speak method of the person object:

person.speak();

Use code with caution.

[Learn more](https://support.google.com/legal/answer/13505487?hl=en-IN)

Objects are a powerful data type that can be used to represent a wide variety of data. They are also very flexible and can be easily modified.

### Internal representation of objects in JavaScript

Objects are stored in memory as hash tables. A hash table is a data structure that stores data in key-value pairs. The keys in a hash table are strings, and the values can be any type of data.

When an object is created, JavaScript creates a new hash table to store the object's properties. The keys in the hash table are the names of the object's properties, and the values are the values of the properties.

JavaScript also stores a hidden property on every object called [[Prototype]]. The [[Prototype]] property is a pointer to another object. This object is called the object's prototype.

The prototype object contains a set of properties and methods that are shared by all objects of the same type. For example, all objects of the String type have a prototype object that contains properties for length and charAt.

When a property is accessed on an object, JavaScript first checks to see if the property exists on the object itself. If the property does not exist on the object itself, JavaScript then checks to see if the property exists on the object's prototype. If the property exists on the prototype, JavaScript then returns the value of the property from the prototype.

This process is called property delegation. Property delegation allows objects to inherit properties from their prototypes. This is a powerful feature that allows JavaScript code to be more reusable and maintainable.

### Conclusion

Objects are a powerful and flexible data type that is essential for writing JavaScript code. By understanding how objects are created and stored in memory, you can write more efficient and effective JavaScript code.

1. **codekata practice**

CodeKata is a series of programs curated by the veterans in IT & Software industry. It hosts coding problems asked by top MNCs like Microsoft, Walmart, Samsung & so on. Practising on Codekata will take your coding skills to next level. We will recommend your profile to recruiting companies based on your performance in codekata. You can be a better programmer & crack coding interviews upon practising on CodeKata.

1. **Read about IP address, port, HTTP methods, MAC address**

The physical address -- which is also called a media access control, or MAC, address -- identifies a device to other devices on the same local network. The internet address -- or IP address -- identifies the device globally. A network packet needs both addresses to get to its destination.

IP stands for "Internet Protocol," which is the set of rules governing the format of data sent via the internet or local network. In essence, IP addresses are the identifier that allows information to be sent between devices on a network: they contain location information and make devices accessible for communication.

A port is a virtual point where network connections start and end. Ports are software-based and managed by a computer's operating system. Each port is associated with a specific process or service.

The Hypertext Transfer Protocol (HTTP) is the foundation of the World Wide Web, and is used to load webpages using hypertext links. HTTP is an application layer protocol designed to transfer information between networked devices and runs on top of other layers of the network protocol stack.

* GET. The GET method is used to retrieve data on a server. ...
* POST. The POST method is used to create new resources. ...
* PUT. The PUT method is used to replace an existing resource with an updated version. ...
* PATCH. The PATCH method is used to update an existing resource. ...
* DELETE.

A MAC (Media Access Control) address, sometimes referred to as a hardware or physical address, is a unique, 12-character alphanumeric attribute that is used to identify individual electronic devices on a network.

There are three types of MAC addresses: Unicast, Multicast, and Broadcast. The way to identify which address type you are viewing is simply look at the first byte. A unicast address's first byte will be even, like 02, 04, 06, etc.