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

|  |  |
| --- | --- |
| **HTTP/1.1** | **HTTP/2** |
| It works on the textual format. | It works on the binary protocol. |
| There is head of line blocking that blocks all the requests behind it until it doesn’t get its all resources. | It allows multiplexing so one TCP connection is required for multiple requests. |
| It uses requests resource Inlining for use getting multiple pages | It uses PUSH frame by server that collects all multiple pages |
| It compresses data by itself. | It uses HPACK for data compression. |

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

Objects and its internal representation in javascript

Objects are important data types in javascript. Objects are different than primitive datatypes (i.e. number, string, boolean, etc.). Primitive data types contain one value but Objects can hold many values in form of Key: value pair. These keys can be variables or functions and are called properties and methods, respectively, in the context of an object.

Every object has some property associated with some value. These values can be accessed using these properties associated with them.

var myCar = new Object();

myCar.make = 'Suzuki';

myCar.model = 'Altros';

myCar.year = 1978;

myCar.wheels = 2;

After creating myCar object, the value inside the object can be accessed using keys.

i.e.

myCar.year

Output: 1978

These values can be accessed using brackets notation also.

myCar[year]

Output: 1978

The syntax for adding a property to an object is :

ObjectName.ObjectProperty = propertyValue;

The syntax for deleting a property from an object is:

delete ObjectName.ObjectProperty;

The syntax to access a property from an object is:

objectName.property   
 //or  
objectName["property”]   
 //or  
objectName[expression]

So, conclusion and simple definition for Java Script properties is “Properties are the values associated with a JavaScript object”.

Object methods

An object method is an object property containing a function definition.

i.e.,

Let’s assume to start the car there will be a mechanical functionality.

function(){return ignition.on}

and so similar is to stop/brake/headlights on & off, etc.  
So, conclusion and simple definition for Java Script Object methods is “Methods are actions that can be performed on objects.”

Create JavaScript Object with Object Literal

One of easiest way to create a javascript object is object literal, simply define the property and values inside curly braces as shown below

let bike = {name: 'SuperSport', maker:'Ducati', engine:'937cc'};

Create JavaScript Object with Constructor

Constructor is nothing but a function and with help of new keyword, constructor function allows to create multiple objects of same flavor as shown below

function Vehicle(name, maker) {  
 this.name = name;  
 this.maker = maker;  
}  
let car1 = new Vehicle(’Fiesta’, 'Ford’);  
let car2 = new Vehicle(’Santa Fe’, 'Hyundai’)  
console.log(car1.name); //Output: Fiesta  
console.log(car2.name); //Output: Santa Fe

Using the JavaScript Keyword new

The following example also creates a new JavaScript object with four properties:

var person = new Object();  
person.firstName = “John”;  
person.lastName = “Doe”;  
person.age = 50;  
person.eyeColor = “blue”;

Using the Object.create method

Objects can also be created using the Object.create() method. This method can be very useful, because it allows you to choose the prototype object for the object you want to create, without having to define a constructor function.

// Animal properties and method encapsulation  
var Animal = {  
 type: 'Invertebrates', // Default value of properties  
 displayType: function() { // Method which will display type of Animal  
 console.log(this.type);  
 }  
};  
// Create new animal type called animal1   
var animal1 = Object.create(Animal);  
animal1.displayType(); // Output:Invertebrates  
// Create new animal type called Fishes  
var fish = Object.create(Animal);  
fish.type = 'Fishes';  
fish.displayType();   
// Output:Fishes

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

**IP address and port:** Together, they uniquely identify a specific application or service running on a device on the network.

**IP address and MAC address:** An IP address is assigned to a logical network interface, while a MAC address is assigned to the physical NIC hardware. A device can have multiple MAC addresses but only one primary IP address for each network interface.

**HTTP methods and ports:** Specific HTTP methods are often associated with specific ports. For example, GET and POST requests for web pages typically use port 80 (HTTP) or 443 (HTTPS).