TASK-1

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

HTTP stands for hypertext transfer protocol and it is the foundation of almost all web apps. HTTP is the way that computers and servers use to send and receive information.

In 1997 the first form of HTTP that could be used was made. This first form of HTTP was called HTTP/1.1 because it was made in several steps. On the web, this form is still used. In 2015 HTTP/2 a new form of HTTP was made.

1. HTTP/2 fixes a few problems that the people who made HTTP/1.1 didn't think of. In particular HTTP/2 is faster and uses less bandwidth than HTTP/1.1.

2. HTTP/1.1 loads resources one after the other, so if one resource can't be loaded it stops all the resources behind it. HTTP/2 on the other hand can use a single TCP link to send multiple streams of data at once without blocking any other resources.

3.HTTP/2 does this by breaking up data into binary-code messages and numbering these messages so that the client knows which stream each binary message goes to.

4. A server usually only sends information to a client device if the client device asks for it. But this method doesn't always work for current websites, which often have dozens of different resources that the client needs to request. This problem is solved by HTTP/2, which lets a server "push" information to a client before the client asks for it. The server also sends a message telling the client what pushed content to expect, like if Bob had sent Alice a Table of Contents for his book before sending the whole thing.

5.Large files take longer to load than small ones. Both HTTP/1.1 and HTTP/2 compress HTTP data to make them smaller. This is done to speed up how fast the web works.

6. But HTTP/2 uses a more advanced way of compression called HPACK, which gets rid of duplicate information in HTTP header packets. This takes a few bytes out of each HTTP message. When you think about how many HTTP frames it takes to load even a single web page, those bytes add up quickly, which makes loading faster.

7. Prioritisation is a term for the order in which information is loaded. Prioritisation changes how long it takes for a page to load. For example, if some resources, like big JavaScript files, have to load first, they might stop the rest of the page from running. If these files that block rendering load last, more of the page can load at once.

8. In HTTP/2, developers have through hands-on control over how things are prioritised. This lets them maximise how fast people think a page loads and how fast it actually loads, which wasn't possible with HTTP/1.1. Weighted prioritisation is a function of HTTP/2. This lets developers choose which data on a page will always load first.

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

First of all, I would like to stress that you should never mix up JavaScript objects and objects in other languages. They are very different on the inside. So, people from other languages like Java or C++ make the biggest mistake when they compare JavaScript objects to those from other languages.

As for the point,

In simple terms. "A JavaScript object is a group of named values that have a state and a way of acting (properties and methods)."

For Example: Person, car, pen, bike, PC, washing machine, etc.

Take cars as an example:

Cars all have the same properties, but the values of those qualities are different from one car to the next. All cars have the same ways of doing things, but those ways are done at different times.

Let’s have an example of my favourite Mercedes car and list out its properties (Features):

1. Make: Mercedes
2. Model: C-Class
3. Colour: black
4. Fuel: Diesel
5. Weight: 850kg
6. Mileage: 8Kmpl
7. Rating: 4.5

**1)object:**

The following code assigns a simple value (Mercedes) to variable named car:

Var car = “Mercedes”;

Objects are variables too. But objects can contain many values.

The following code assigns many values (Mercedes, C-class, White and so on) to variable named Car:

var car = "Mercedes," "C-Class," "White," "Diesel," Weight: "850kg", Mileage: "8Kmpl", and Rating: 4.5;

The values are written as name:value pairs (name and value separated by a colon).

Syntax:

var <object-name> = {key1: value1, key2: value2,... keyN: valueN};

So, conclusion and definition for JS objects is “JavaScript objects are containers for named values”.

## **2)Object Properties:**

The name: values pairs (in JavaScript objects) are called properties:

var car = {Make: “Mercedes”, Model: “C-Class”, Colour: “White”, Fuel: Diesel, Weight: 850kg, Mileage: 8Kmpl, Rating: 4.5};

Let's look at what the above passage says about property and property value:

|  |  |
| --- | --- |
| Properties: | Property value: |
| Make | Mercedes |
| Model | C -class |
| Colour | White |
| Fuel | Diesel |
| Weight | 850kg |
| Mileage | 8kmpl |
| Rating | 4.5 |

The object properties can be different primitive values, other objects and functions.

Properties can usually be changed, added, and deleted, but some are read only.

**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”]    // Car["Make"]

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

## **3)Object Methods:**

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

Ex:

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.”.