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

**Answer**:

Transfer protocols:

There are methods or protocols of data transfer from one device to another over the network. HTTP, SMTP, FTP, POP3, etc.

HTTP:   
HTTP stands for Hypertext transfer protocol.

Evolution of data transfer protocols:

As the human requirements had to be satisfied in the world of digital world, the consumption of data increased and the need for faster cleaner data evolved. That gave rise to data from the internet via the HTTP protocol. Alike any other field of technology there has been a significant progress made in the data transfer protocols in terms of speed, scrutiny and security.

HTTP requests are sent by the client to the server and responses are either positive or negative depending upon the input. Such requests can be defined in layman's as a simple search on Google that returns data and what happens in the background is that the data flows from one device to another in packets over the chosen network. HTTP either returns the correct data or returns a response in the way of codes which can be interpreted by humans as informational (1xx), success (2xx), redirection (3xx), client errors (4xx), and server errors (5xx). Common status codes include 200 (OK), 404 (Not Found), and 500 (Internal Server Error).

Two such protocols are HTTP1.1 and HTTP2.0. Lets take a look what sets them apart:

- HTTP1.1 sends data in a single request and waits for the confirmation from the server before sending the next set of request from the client. Each request requires a new connection to be sent in each TCP connection whereas, in HTTP2.0 there is a significant progress made where multiple data requests are sent over a single TCP connection which allows a large amounts of data sent in parallel connections to the server from the client. This reduces the time travel of the data packets returned back to the client from the server.

- In HTTP1.1, the server does not proactively respond to the requests not being made by the client but waits for any such information to be relayed back to the client until a request is sent by the client whereas HTTP2.0 supports server push, allowing servers to proactively push resources to clients before they are requested. This reduces the page load time drastically.

- HTTP1.1 does not compress the header information and the data is presented to the server as plain text and one the contrary, in HTTP2.0 header data is compressed and sent over to the server which allows a quick data movement.

- In HTTP1.1, Important data are not prioritized whereas, in HTTP2.0 important resources of data are prioritized.

- In HTTP1.1, data is transmitted in textual form whereas, HTTP2.0 tramsmits data in binary form which allows a smooth and efficient data tranmission.

- Data is not encrypted in HTTP1.1 protocol whereas, HTTP2.0 supports TLS encryption which allows the data tranmission in a secure format, protecting it from unauthorized access.

To sum it up, the evolution of statistics transfer protocols, specifically HTTP, has been pushed via the want for faster, stable, and secure communication over networks. The transition from HTTP1.1 to HTTP2.0 represents a significant progress in improving the rate, overall performance, and protection of communications, in turn, improving the consumer experience.

**Question: Write a blog about objects and its internal representation in Javascript**

**Answer:**  
In the scope of Javascript, Objects are used to build blocks where data can be organized and stored which is relational. Data here is stored in the key: value pair format. Key is stored as ‘Strings’ and value can be stored in different data types. Loosely speaking, objects in JavaScript may be defined as an unordered collection of related data, of primitive or reference types, in the form of “key: value” pairs.

An Object can be defined as a collection of attributes for a given property. These are declared as any other variables in JavaScript. These can be associated with or compared to real life objects. Let’s understand this using the following example.

A Pen is an Object and can be considered as the ‘Key’. The color, size, price, etc are all attributes of the pen which can be called as ‘Value’. These are basically the characteristics of the Object.

It can be presented as follows:

Obj.pen {

color: red;

size: large;

price: $100

}

Methods can be described as actions of the Objects like move, eat, run, etc. These can also be defined to the value in the pair. Methods will define what the function of an object will be.