# 1 . Difference between HTTP1.1 vs HTTP2.

# **HTTP stands for Hypertext Transfer Protocol.** It is the foundation of the World Wide Web and is used by browsers to load web pages.

# HTTP 1.1 - Version 1.1 was released in 1997 and became the Internet Standard. This version added many performance enhancements, such as keepalive connections, caching mechanisms, request pipelining, transfer encodings, and byte range requests. This new version was better and removed many of the ambiguities found in HTTP/1.0.

# HTTP 2 - HTTP/2 is the next version of HTTP and is based on Google’s SPDY Protocol (originally designed to speed up the serving of web pages). It was released in 2015 by the Internet Engineering Task Force (IETF). It is important to note that HTTP/2 is not a replacement for HTTP. It is merely an extension, with all the core concepts such as HTTP methods, Status Codes, URIs, and Header Fields remaining the same.

# The key differences HTTP/2 has to HTTP/1.1 are as follows:

# It is binary, instead of textual

# It is fully multiplexed, instead of ordered and blocking

# It can use one connection for parallelism

# It uses header compression to reduce overhead

# It allows Server Pushing to add responses proactively into the Browser cache.

# 2. HTTP version history.

# HTTP was created by Tim Berners-Lee to allow communication between a server and a client.

# The version history of HTTP is explained below:

# HTTP 0.9 - Time Berners-Lee released the first documented version of HTTP in 1991. It consisted of a single line containing a GET method and the path of the requested document. The response was just as simple, returning a single hypertext document without headers or any other metadata.

# HTTP 1.0 - Version 1.0 received official recognition in 1996, and coincided with the rapid evolution of the HTML specification, and the “web browser.” The main addition was “request headers” and “response headers.” Also, the new response headers allowed multiple file types, such as HTML, plain text, images, and more.

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# HTTP 2.0 - Released in February 2015 by the Internet Engineering Task Force (IETF) focussed on improving the performance of HTTP.

# HTTP 3 - HTTP/3 is an evolution of the QUIC (Quick UDP Internet Connections) protocol from Google, [first suggested](https://mailarchive.ietf.org/arch/msg/quic/RLRs4nB1lwFCZ_7k0iuz0ZBa35s) by Mark Nottingham in October 2018. HTTP/3 is due to be released in 2019 (hopefully). QUIC is similar to TCP+TLS+HTTP2 but is implemented on top of UDP. UDP stands for User Datagram Protocol. UDP is essentially TCP without all the error checking.

# 3. List 5 differences between Browser JS vs Node JS.

# JavaScript is a [Scripting language](https://www.geeksforgeeks.org/introduction-to-scripting-languages/). It is mostly abbreviated as JS. It can be said that JavaScript is the updated version of the ECMA script. JavaScript is a high-level programming language that uses the concept of Oops but it is based on prototype inheritance.

# NodeJS is a cross-platform and opensource JavaScript runtime environment that allows the JavaScript to be run on the server-side. Nodejs allows JavaScript code to run outside the browser. Nodejs comes with a lot of modules and mostly used in web development.

# Difference between JavaScript and Nodejs:

|  |  |
| --- | --- |
| JS | Nodejs |
| JavaScript is a programming language that is used for writing scripts on the website. | NodeJS is a JavaScript runtime environment. |
| JavaScript can only be run in the browsers. | Nodejs code can be run outside the browser. |
| It is basically used on the client-side. | It is mostly used on the server-side. |
| JavaScript is capable enough to add HTML and play with the DOM. | Nodejs does not have capability to add HTML tags. |
| JavaScript can run in any browser engine as like JS core in safari and Spider monkey in Firefox. | Nodejs can only run in V8 engine of google chrome. |

# 4. what happens when you type a URL in the address bar in the browser?

# When you enter a URL into a web browser

# The browser looks up the IP address for the domain name via DNS

# The browser sends a HTTP request to the server

# The server sends back a HTTP response

# The browser begins rendering the HTML

# The browser sends requests for additional objects embedded in HTML (images, css, JavaScript) and repeats steps 3-5.

# Once the page is loaded, the browser sends further async requests as needed.