**Task** **-1**

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1. Difference between HTTP1.1 Vs HTTP2?

* **Prioritization:** In HTTP/2, developers have hands-on, detailed control over prioritization. This allows them to maximize perceived and actual page load speed to a degree that was not possible in HTTP/1.1
* **Multiplexing**: 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](https://www.cloudflare.com/learning/ddos/glossary/tcp-ip/) connection to send multiple streams of data at once so that no one resource blocks any other resource
* **Server push**: Typically, a server only serves content to a client device if the client asks for it. However, this approach is not always practical for modern webpages, which often involve several dozen separate resources that the client must request. HTTP/2 solves this problem by allowing a server to "push" content to a client before the client asks for it
* **Header compression**: Small files load more quickly than large ones. To speed up web performance, both HTTP/1.1 and HTTP/2 compress HTTP messages to make them smaller. However, HTTP/2 uses a more advanced compression method called HPACK that eliminates redundant information in HTTP header packets. This eliminates a few bytes from every HTTP packet. Given the volume of HTTP packets involved in loading even a single webpage, those bytes add up quickly, resulting in faster loading.

1. HTTP version History?

Invented by Tim Berners-Lee at CERN in the years 1989–1991, HTTP (Hypertext Transfer Protocol) is the underlying communication protocol of World Wide Web. **HTTP functions as a request–response protocol in the client–server computing model.** HTTP standards are developed by the [Internet Engineering Task Force](https://en.wikipedia.org/wiki/Internet_Engineering_Task_Force) (IETF) and the [World Wide Web Consortium](https://en.wikipedia.org/wiki/World_Wide_Web_Consortium) (W3C), culminating in the publication of a series of [Requests for Comments](https://en.wikipedia.org/wiki/Requests_for_Comments) (RFCs). HTTP has four versions — HTTP/0.9, HTTP/1.0, HTTP/1.1, and HTTP/2.0. Today the version in common use is HTTP/1.1 and the future will be HTTP/2.0

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| **Year** | **HTTP Version** |
| 1991 | 0.9 |
| 1996 | 1.0 |
| 1997 | 1.1 |
| 2015 | [2.0](https://en.wikipedia.org/wiki/HTTP/2) |
| 2018 | [3.0](https://en.wikipedia.org/wiki/HTTP/3) |

1. List 5 difference between Browser JS(console) vs Nodejs?

* In browser “window” is a predefined global object which has functions and attributes, whereas Nodejs doesn’t have it.
* In browser “location” is another predefined object, whereas Nodejs doesn’t have it.
* In browser “require” is not predefined object, whereas Nodejs has it.
* In browser module is not required, where as in Nodejs you have to keep your code inside the module.
* In browser “document” is a predefined object, where as Nodejs doesn’t have it.

1. What happens when you type a URL in the address bar in the browser?

* 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.