**TASK-1**

1. **Difference Between HTTP/1.1 HTTP/2**

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| **Difference** | **HTTP/1.1** | **HTTP/2** | |
| **Protocol Type** | Text Based protocol that is in the readable form. | It’s a binary protocol, Needed to be converted back from binary in order to read | |
| **Performance Optimization** | Concantenating,Inlining,  Domain Sharding are some of optimization | Removes the need for unnecessary optimization hacks. | |
| **Status Code** | Introduced a warning header field to carry additional information about status of message | | Underlying semantics of HTTP such as headers,status codes remains same. |

**2. HTTP version history**

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| --- | --- |
| **Version** | **Year** |
| HTTP/0.9 | 1991 |
| HTTPS | 1994 |
| HTTP/1.0 | 1996 |
| HTTP/1.1 | 1997 |
| HTTP/2 | 2015 |

**3.Difference between JS(console) and NODEJS**

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| **JS (console)** | **NODEJS** | |
| JS is a programming language that is used for writing scripts on the websites. | NodeJS is a javascript runtime environment | |
| Javascript can only be run in the browsers. | NodeJS code can be run outside the browsers. | |
| It’s basically used on the client-side. | It’s mostly used on the server-side. | |
| **JS (console)** | | | **NODEJS** | |
| Javascript is used in frontend development. | | | NodeJS is used in server-side development. | |
| Javascript can run in any browser engine as like JScore in safari and spidermonkey in firefox. | | | NodeJS can only run in V8 engine of google chrome. | |

**4. What happens when URL is typed in address bar**

URL (uniform resource locator)

* Browsers checks cache for DNS entry to find the corresponding IP address of website.
* If not found in cache, ISP’s DNS server initiates a DNS query to find IP address of server that hosts the domain name.
* Browsers initiates a TCP connection with server.
* Browsers sends an HTTP request to the web server. GET or POST request.
* Server on the host computer handles that request and sends back a response.It assembles a response in some format like JSON,XML& HTML .
* Server sends out an HTTP response along with the status of response.
* Browsers displays HTML content.