Task: 1

1. Difference between HTTP/1.1 and HTTP/2?

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| For every TCP connection there is only one request and response. But HTTP/1.1 supports connection reuse | Uses multiplexing, over a single TCP connection. It is done using streams and it also provide feature called server push. |
| Introduces a warning header field to carry additional information about status of message(24 status code) and its error reporting is quicker and efficient | Headers and status code of HTTP remains same. |
| It uses digest authentication and NTML authentication | Security concern from previous version will continue to be seen in HTTP/2. However it is better equipped to deal with them |
| It has additional header like cache-control | Does not change much in terms of caching with server push. If the client find resource present already in cache it cancel the push stream |
| Text Based protocol that is in the readable format | It is a binary protocol |

Q)HTTP Version History?

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| --- | --- | --- |
| 1991 | 0.9 | Online Protocol |
| 1996 | 1.0 | Building Extensibility |
| 1997 | 1.1 | Standardized Protocol |
| 2015 | 2.0 | Protocol for greater performance |
| Draft(2020) | 3.0 | HTTP over UIC |

Q)Difference between BrowserJS and NodeJS?

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| JS is a programming language that is used for writing scripts on the website | Node JS is a java script runtime environment |
| It can be run only in browser | Node JS can be run-outside browser |
| It is basically used on client side | It is basically used on server side |
| JS is cable enough to add HTML and play with DOM | Node JS does not have capability to add HTML tags |
| JS can run in any browser engine like JSCore in Safari, SpiderMonkey in FireFox. | Node JS can only run in v8 engine of google chrome |

Q)What happens when an URL is typed on address-bar of the browser?

1. Browser checks cache for DNS entry to find he corresponding IP address of the website. It looks for the following cache, If not found in one I continues checking to next until found. - Browser cache, -OS Cache, Router Cache, ISP Cache.
2. If not found in cache, ISP’s DNS server initiates a DNS query to find IP address. The request are send in small pockets that continues information content of request & IP address.
3. Browser initiates the TCP connection with server using Synchronize(SYN) and acknowledge (ACK) message.
4. Browser sends a HTTP request to server. GET or POST request.
5. Server on the host computer handles the request and sends back response in some format like JSON,XML and HTML.
6. Server sends out an HTTP response along with status response.
7. Browser display HTML content.
8. Finally done.