

Assignment - 1

1 Compare evolution of world wide web from 1.0 to 3.0

→

web 1.0	web 2.0	web 3.0
- Mostly Read only	widly Read write.	Portable and Personal
- Company focus	Community focus	Individual focus
- Home pages	Blogs	live streams
- owing content	sharing content	consolidating content
- web forms	web application	smart application
- Directories	Tagging	User behaviour
- Page views	cost per click	user engagement
- Banner advertising	interactive Advertising	Behaviour Advertising
- HTML 2	XML/RSS	RDF/RDF S/OWL

web 1.0 :-

web 1.0 refer to the first stages of the ~~web~~ www evolution earlier there were only a few content creators in web 1.0 with a huge majority of user who are consumer of content Personal web pages were common, consisting mainly of static pages hosted on ISP run web servers or free web hosting services.

In web 1.0 advertisement on website while surfing the internet are banned. web 1.0 is CDN that enables the showcase of the piece of information on the website It can be used as personal website . It cost the user as per pages viewed. It has directories that enable users to retrieve a particular piece of information . The era of web 1.0 was roughly from 1991 to 2004

web 2.0 :-

2004 when the word 2.0 become famous due to first web 2.0 conference held by Tim O'Reilly and Dale Dougherty the term was coined by Darcy DiNucci in 1999.

web 2.0 refers to worldwide website which highlight user generated content, usability and interoperability for end user. web 2.0 is also called the participative social web. It does not refer to modification to any technical specification but to modifying the way pages are designed and used.

web 3.0:-

It refers to the evolution of web utilization and interaction which including altering the web into a database, with the integration of DLT and that data can help to make smart contract based on the need of individual. It enables the up gradation of back end of web after long time of focusing on front end. web 3.0 is a term that is used to describe many evolution of web usage and interaction among several path.

2 Discuss HTTP, Explain HTTP request and HTTP response mechanism over the Internet.

→ HTTP stand for Hyper Text Transfer Protocol.

www is about communication between web client and servers.

Communication between client computer and web server is done by sending HTTP requests and receiving HTTP responses.

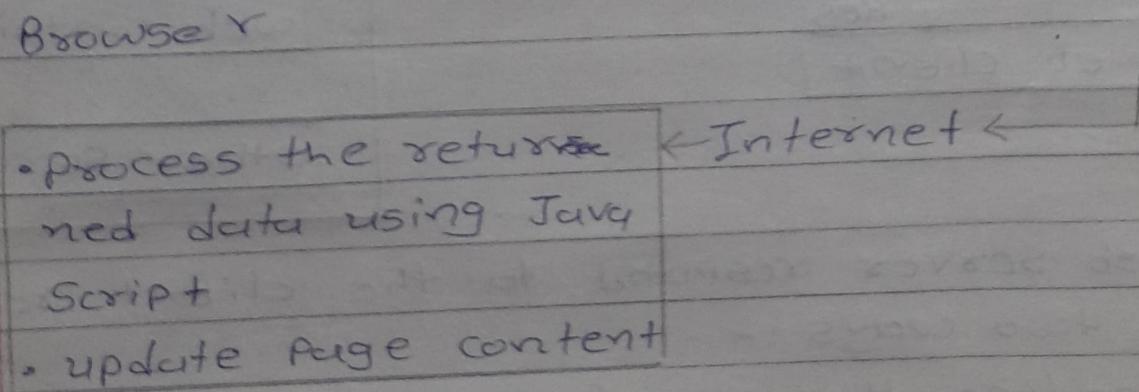
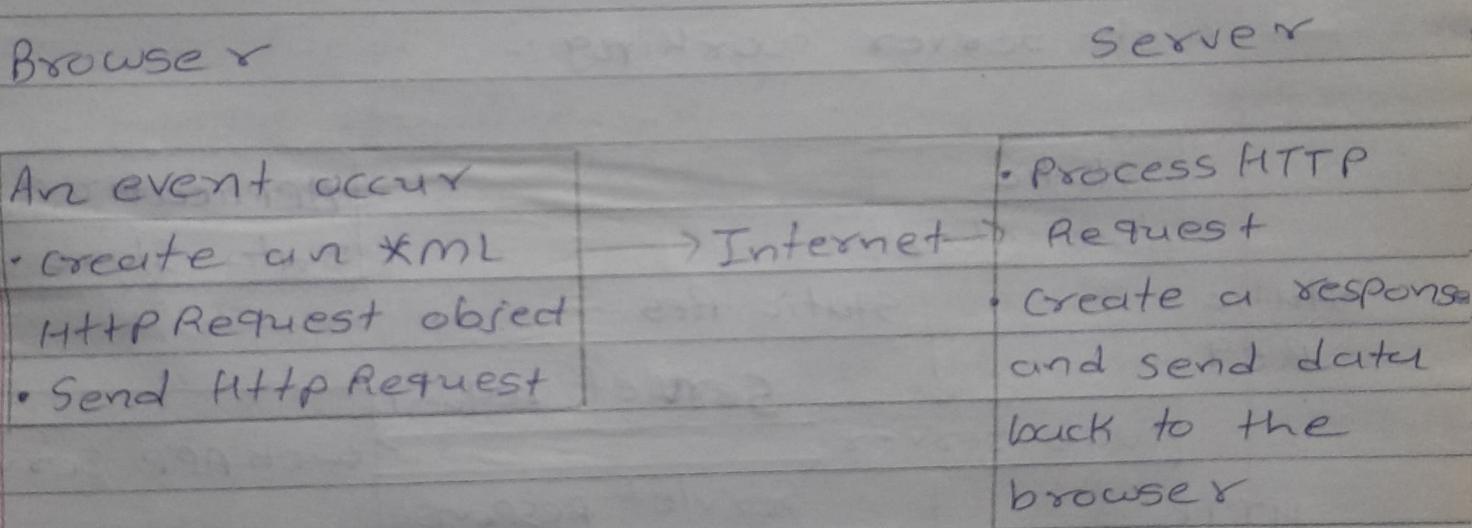
HTTP Request / Response:-

1. A client send an HTTP request to the web
2. A web server receives the request
3. The server run an application to process the request
4. The server on HTTP response to the browser
5. The client receives the response

HTTP Request circle:-

1. The browser request an HTML page.
The Server return an HTML file
2. The browser request a style sheet. The Server return SCSS file.

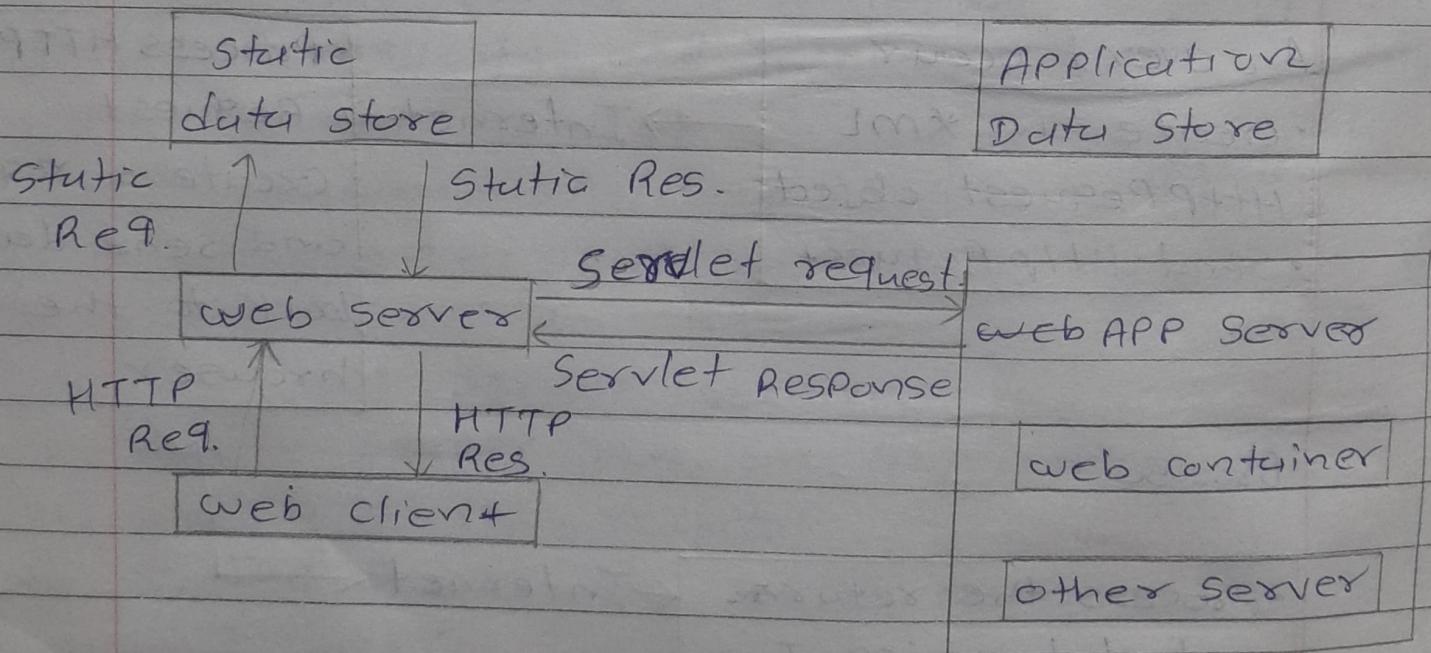
- 3 The browser request and JPOR image. The server a JPOR file.
 - 4 The browser request Javascript code. The SERVER return a JS file.
 - 5 The browser request data. The server return data.



3 write a short note on web server.

→ web server is a computer where the web content is stored. Basically web server is used to host the web site but there exists other web servers also such as gaming, storage, FTP, Email etc.

web server working :-



web server respond to the client request in two ways !-

- Sending the **WEB file** to the client associated with the request URL.
- Generating response by invoking a script and communicating with database.

Architecture :-

web Server Architecture follows the following two approaches:-

1. Concurrent Approach

2. Single Process Event Driven Approach

Concurrent Approach:-

Concurrent approach allows the web server to handle multiple client request at the same time.

Multi Processing:-

In this single process initiates several single threaded child processes and distribute incoming request to these child processes. Each of the child processes are responsible for handling single request.

Multi threaded:-

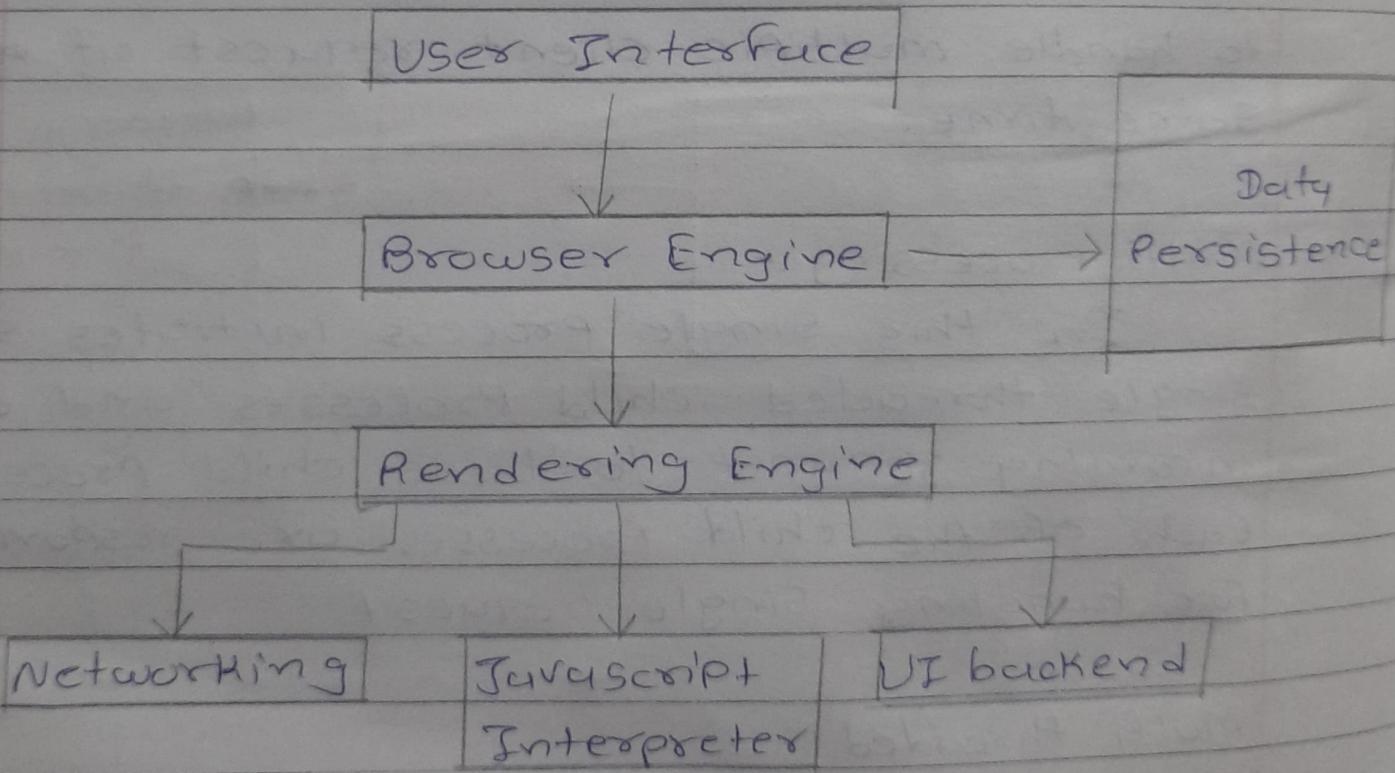
Unlike Multi process, it creates multiple single threaded process.

Hybrid:-

If its combination of above two approach In this approach multiple process are

created and each process initiates on multiple thread. Each of the thread handles one connection. Using multiple thread in single process, result in less load on system resources.

4 Explain the Architecture of web browser.



I. User Interface :-

It is the space where interaction between user and browser occurs. most of the browser have common input for interface.

2. Browser Engine :-

It is piece of code that communicates the input of user interface with the rendering engine. It provides methods to initiate the loading of a URL and other manipulating the rendering engine other high level browsing action.

3. Rendering Engine :-

It is the part thoroughly responsible for displaying the requested content on the screen representation of given URL. This engine interprets the HTML, XML and java script that comprises a given URL and generates layout that is displayed in the UI.

4. Networking :-

It provides functionality to handle URL using the common Internet Protocol of HTTP and FTP. Thus it is the fraction of the code written in browser responsible to send various network calls. The network component may implement cache of retrieved document to minimize network traffic.

5. JavaScript Interpreter:- It is the component that execute the JavaScript code that is embedded in a website. Result of the execution is passed to RE for display. RE may disable various action based on user defined properties.

6. UI Backend :-

This is used for drawing basic widget like combo boxes, windows etc on the browser. underneath it uses operating system user interface methods.

7. Data storages :-

It is small database created on the local drive of the computer where the browser is installed. This database stores various file / manage user data like bookmarks, cookies etc.

5 What is CORS? write code to implement simple cross origin resources sharing and wildcards.

→ CORS is mechanism by which data or any other resources of site could be shared intentionally to a third party website when there is a need generally access to resources that are residing in third party site is restricted by the browser client for security purposes.

⇒ Client side code to make an HTTP call would look like below.

```
function httpGetAction(urlLink)
{
    var xhttp = new XMLHttpRequest();
    xhttp.open("GET", urlLink, false);
    xhttp.send();
    return xhttp.responseText;
}
```

6 Discuss SEO.

→ SEO means search engine optimization and is the process used to optimize a website's technical configuration, content relevance and link popularity so its pages can become easily findable, more relevant and popular toward user search queries and as a consequence search engines rank them better.

Search Engine recommend SEO efforts that benefit both the user search experience and page's ranking, by featuring content that fulfills user search needs. This included the use of relevant keyword in titles, meta description and headlines, featuring descriptive URLs with keywords rather than string of number and schema markup to specify the page's content meaning, among other SEO best practices.

SEO is the practice of orienting your website to rank higher on search engine result page so that you receive more traffic. The aim is typically to

rank on the first pages of google result for search term that mean the most to your target audience. So SEO is as much about understanding the wants and needs of your audience as it is about the technical nature of how to configure your websites.