

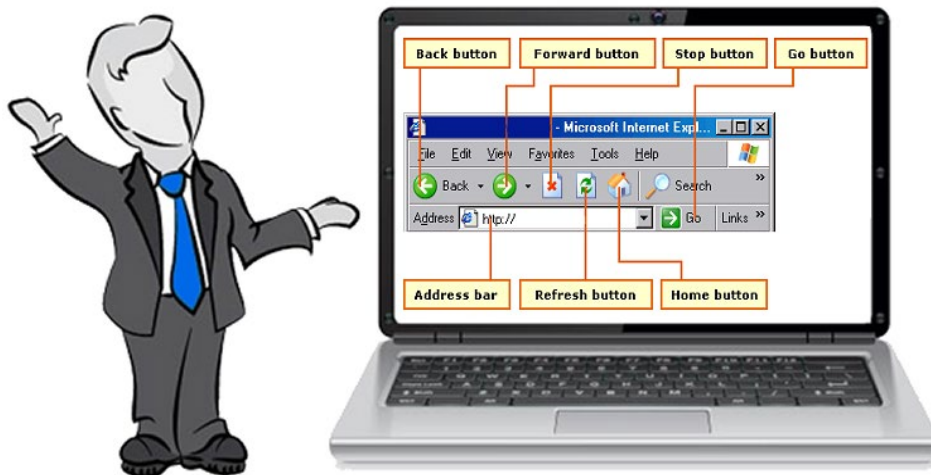
Practical -1

Aim: Demonstration of Web Browsers: Different components, Checking SSL Certificates, Inspect Elements, Browser Console, view Source etc.

➤ Components of a Web Browser :

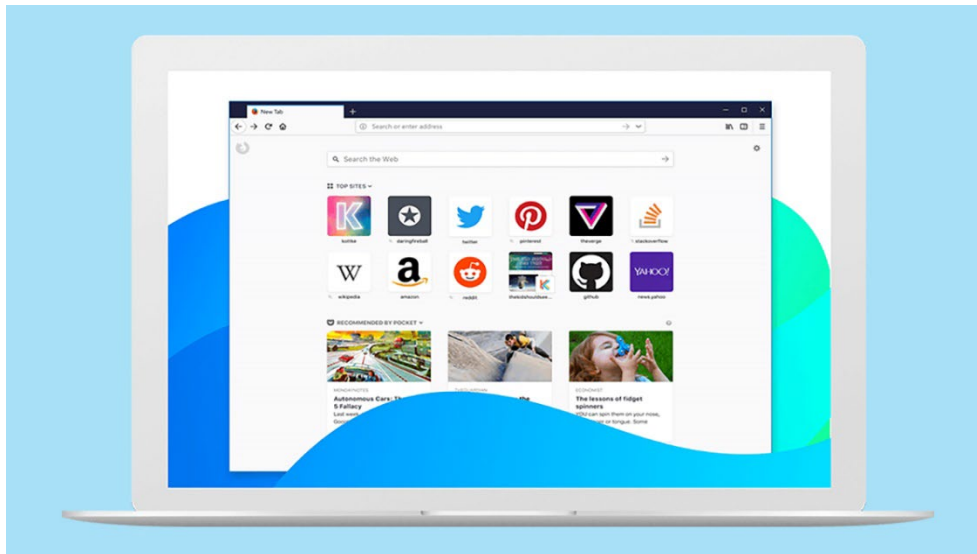
1. User Interface

- It is an environment allowing users to use certain features like search bar, refresh button, menu, bookmarks, etc.



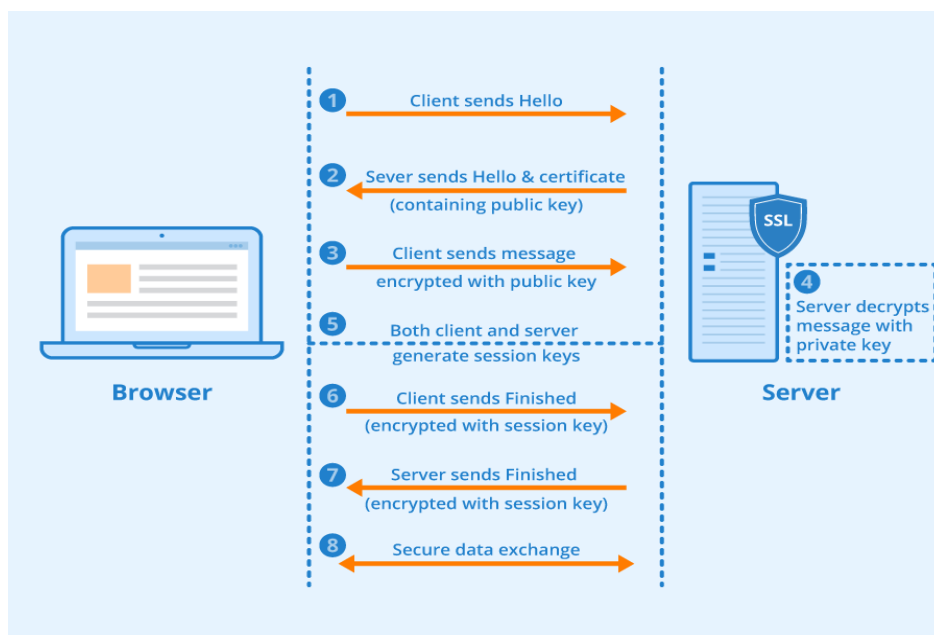
2. Browser Engine

- The bridge connects the interface and the engine. It monitors the rendition engine while manipulating the inputs coming from multiple user interfaces.



3. Networking


- The protocol provides an URL and manages all sorts of safety, privacy and communication. In addition, the store network traffic gets saved in retrieved documents.



4. Data Storage

- The cookies store information as the data store is an uniform layer that the browsers use. Storage processes like IndexedDB, WebSQL, localStorage, etc

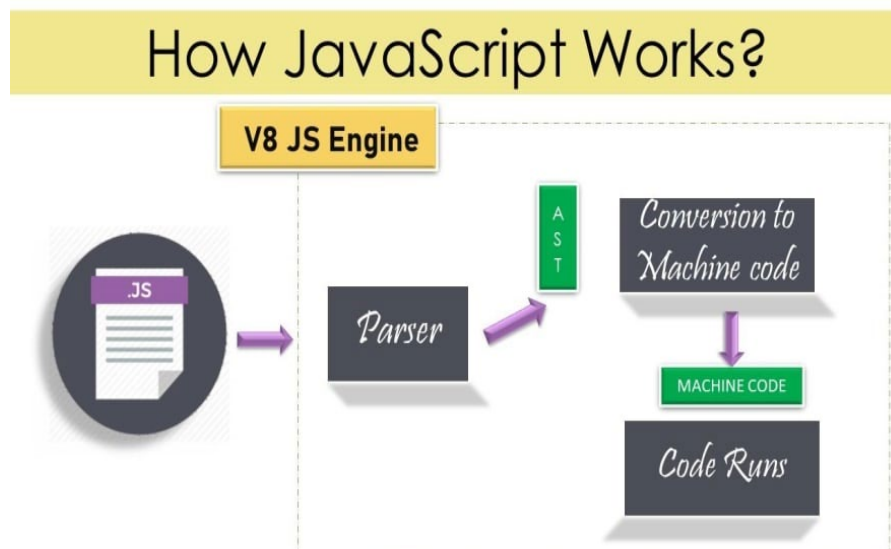
works well on browsers.



Criteria	Local Storage	Session Storage	Cookies
Storage Capacity	5-10 mb	5-10 mb	4 kb
Auto Expiry	No	Yes	Yes
Server Side Accessibility	No	No	Yes
Data Transfer HTTP Request	No	No	Yes
Data Persistence	Till manually deleted	Till browser tab is closed	As per expiry TTL set

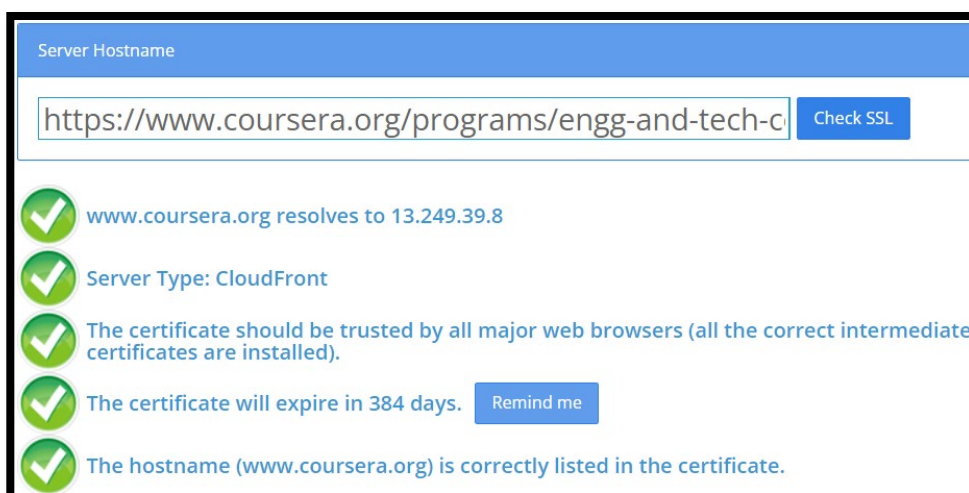
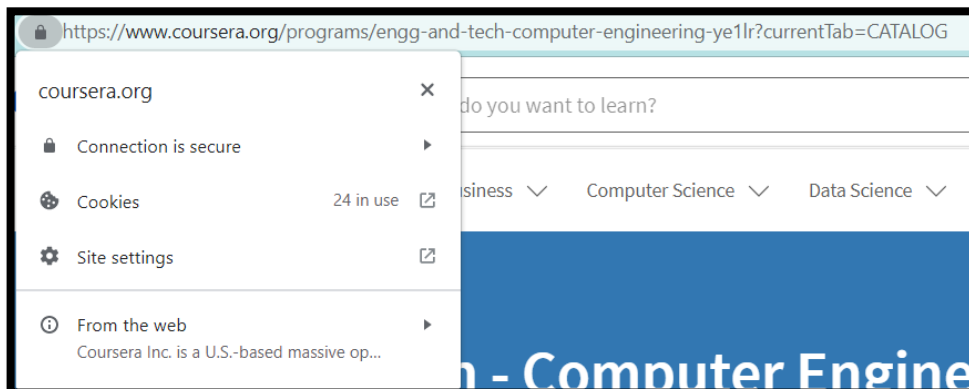
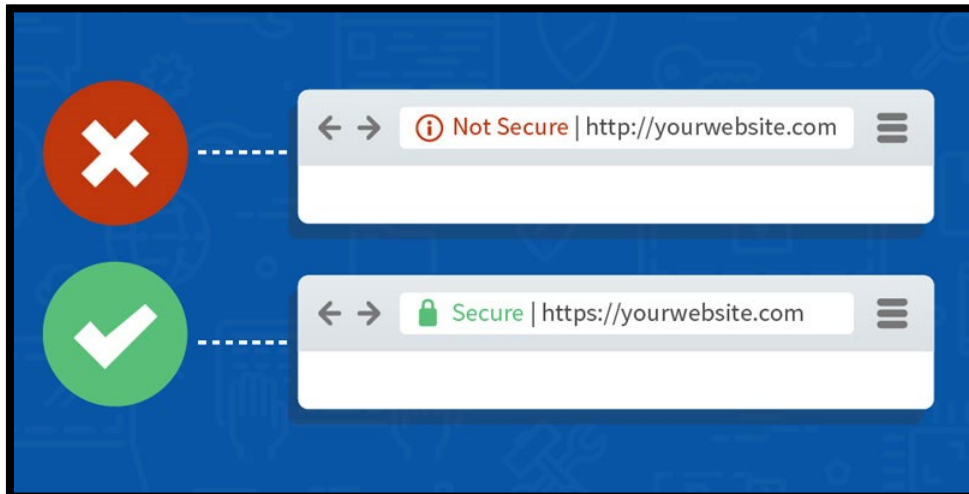
5. JavaScript Interpreter

- It allows conversion of JavaScript code in a document and the executes it. Then the engine shows the translation on the screen to the users.



➤ **Checking SSL Certificates :**

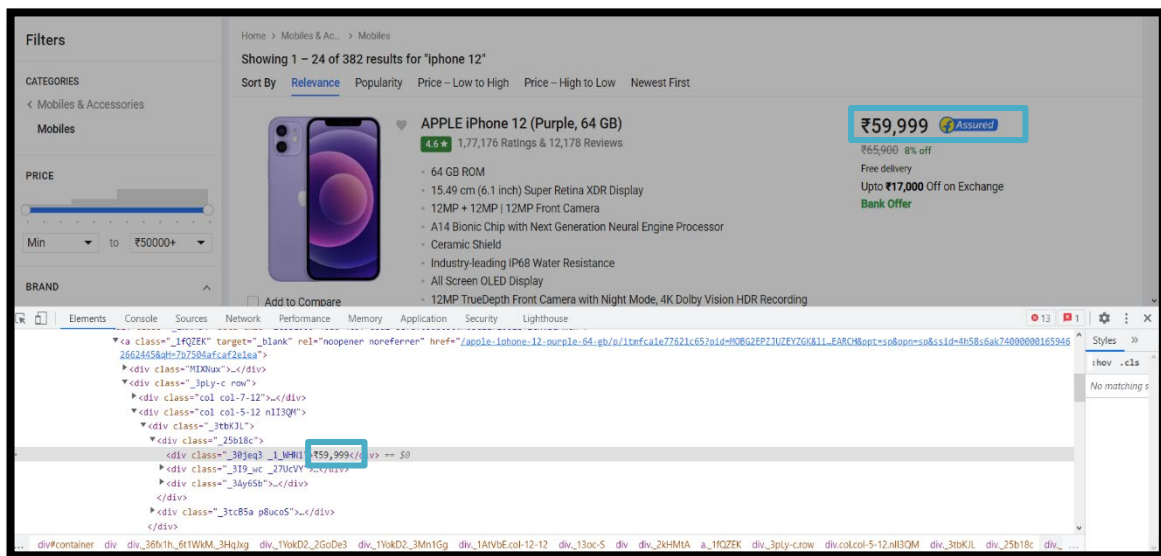
- An SSL certificate is a digital certificate that authenticates a website's identity and enables an encrypted connection. SSL stands for Secure Sockets Layer, a security protocol that creates an encrypted link between a web server and a web browser.



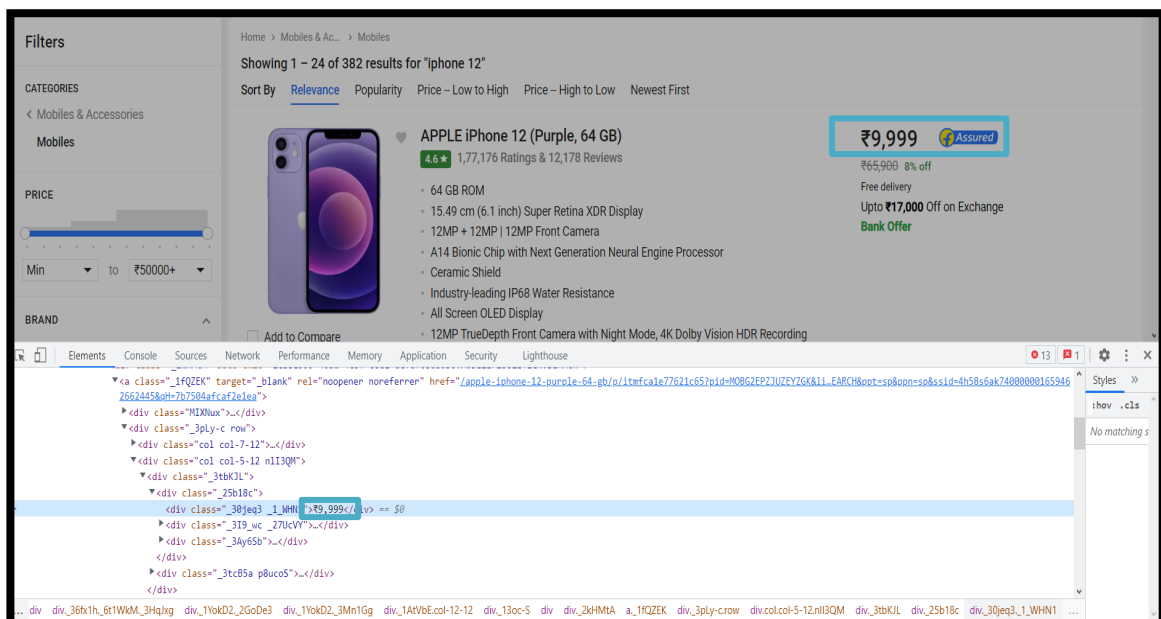
➤ Checking SSL Certificates :

- Inspect element is a feature of modern web browsers that enables anyone to view and edit a website's source code, including its HTML, CSS, JavaScript, and media files. When the source code is modified with the inspect tool, the changes are shown live inside the browser window.

❖ Before using Inspect Element feature :

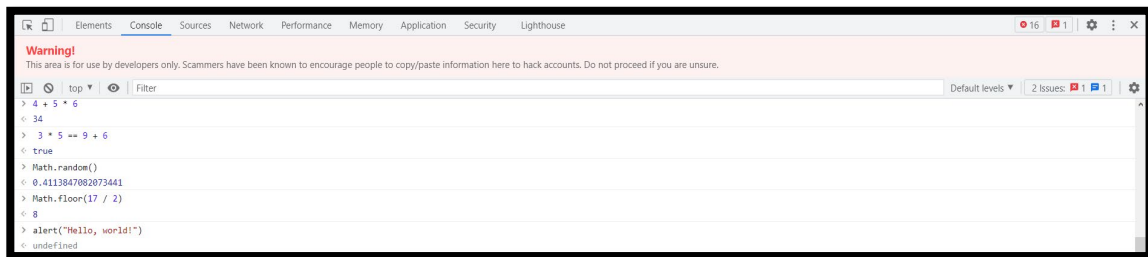


❖ After using Inspect Element feature :



➤ Browser Console :

- The Browser Console is like the Web Console, but applied to the whole browser rather than a single content tab. So it logs the same sorts of information as the Web Console - network requests, JavaScript, CSS, and security errors and warnings, and messages explicitly logged by JavaScript code.



➤ View Source :

