**Web Storage APII**

Web Storage is an API as storage object allows to user to store data client side or server side to access later as amount of time.

There are three types of storage mechanism are below:

**Types**

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**1) Local storage:**

**Definition-**

when we hit any URL in browser then which web pages renders on browser then our local-machine (computer) does store all web page's amount of data in user's computer browser.This works on client side to store data for long time So this mechanism know as localstorage or part of web storage.

And this is alternative way of cookies as well as better way to store data for long time without any time or date expiration period.

**Example-**

when we make SPA (angular js) and in case we need to store data client side, not on server side so in that scenario we use "LOCAL STORAGE" mechanism.

**Advantage-**

1. So faster because in this mechanism request of user doesn't go on server side numbers of time as repeatedly form of the HTTP. So when we need to amount of data then it pick-up from local machine.
2. No expiration time or date. So we can use our accessed data after amount of time period also such as one day, one week, one month or one year also until we detect data from browser history or any storage methods.

**Disadvantage-**

This is not secure.

**Syntax-**

myStorage = window.localStorage

**2) Cookies:**

**Definition-**

HTML5 cookies is also known as web storage options this mechanism also use to store data on user's computer browser and also serve a similar functionality as web storage API, but it's much secure.it is designed to eliminate the security issues and expand more security for app.

When user visit the web pages then after login user wants to remind of personal credential by browser then in case cookie has more useful for “HOW TO REMEMBER USER NAME / PASSWORD” on PC and cookies works in form of key pair as shown below.

Cookie contain the values in the form of string.

**Key**  **key values**

 

Username = niklesh

password=123456

**Syntax-**

document.cookie = "username = niklesh";

VarmyStorage = document.cookie;

We can create date and time with passing multiple key values and by default cookies has expire when browser is closed.

document.cookie = "username = niklesh; expires=sunday, 10 feb 2019 10:30:00";

**Methods to use Cookies technic**

**// to set or save data of Cookies  
setCookie()**

**// to get saved data from cookies  
getcookie()**

**// to check cookies if already have  
checkCookie()**

**3) Session Storage:**

**Definition-**

HTML5 Session Storage mechanism is also part of the web storage options use to store data on browser and also serve a similar functionality as web storage API, but it has expiration time period to manage whole data to security purpose.It explored to take more secure of personal credential like payment gateway, social platforms.

Even,it will be disappear during switch the browser tab, that means work as single window.

**Example:**

When we use any social app or payment gateway app then we have to login firstly then we move forward by login in the inner site of application to interact such as payment transaction so in case we have to interact with page continue as soon user don't interact with web page or screen it will be automatically logout.

So this entire process happens with using session technique as mention time in the form of few byte sec or min.

**Advantage:**

Due to limited expiration time of amount nobody other user can use or accessed data after amount of time period so we are safe from thief activity.

**Syntax-**

Var myStorage = window.sessionStorage

**Methods to use local and session storage technic**

To use local and session storage functionality as technic we need to call predefined functions with pair of key and key’s value are below to all storage local/session.

**// to set or save data of Storage**

**setItem()**

**Syntax  setItem(“key”,”key\_value”)**

**Example  setitem(“firstname”,”niks”)**

**// to get saved data from Storage**

**getItem()**

***Note:* We need to pass only one parameter as “KEY” not a KEY\_VALUE in getitem() to get data.**

**Syntax  getItem(“key”)**

**Example  getItem(“firstname”)**

**// to remove saved data from Storage  
removeItem()**

**Syntax  removeItem(“key”,”key\_value”)**

**Example  removeItem(“firstname”,”niks”)**

**// to remove all saved data from Storage  
clear()**

**Syntax  clear();**

**Example  clear();**

**Difference between local storage and cookies**

***LocalStorage V/S cookies***

* When we work on client side like (ng-app) & while working of this type of js app we need to store data on client side, not server side. In that case we use local storage.

In case of cookies, if we need to send data to server, you should use cookies.

* It is faster rather than cookies because it never send data to server side with using HTTP request. Hence it has fast service.

Cookie send data to the server even on every single HTTP request so it can slow due to server request.

* It’s capacity is 5MB/Domain.

Cookies has 4096 bytes ( 4KB).

* LocalStorage data never expire until we use any method or clear history of browser.

It expires by time, date or session.

4) Cache:

**Issues user can face while storage operation**

During play with storage API of HTML5, we can face number of issues or bugs are following so we need to remind below steps:

Issue-1)

*Uncaught SecurityError: Failed to read the 'localStorage' property from 'Window': Access is denied for this document*.

Solution:

step-1) Go to browser setting and click on advance bottom side of screen.

Step-2) in the “**Privacy and security**” section choose on “ **Content settings**” then “**Cookies**”

step-3) you will get one “Block third-party cookies” checkbox checked so please unchecked and close your browser once and reopen with link.

step-4) enjoy your storage operation. :)

Reference link:

https://www.chromium.org/for-testers/bug-reporting-guidelines/uncaught-securityerror-failed-to-read-the-localstorage-property-from-window-access-is-denied-for-this-document