Local Storage:

Basically jo local storage hota hai ye browser mein data store kr k rakhta hai. Chahay browser band b ho jaye tu humara data rahega ham aisa b kah sktay hain k browser ka database hota hai local storage.

Tu ye local storage jo hai wo ye hai k apkay k browser k andar jo data store karna or iss tarah store karna k humaray browser ko band honay prr b wo data delete nahi hoga. Tu ye hai local storage.

Session Storage:

On the other hand session storage is bit different or wo iss tarah k for eg ham nay koi data save kr liyaa session storage mein orr ham nay tab ko remove kr liyaa tu wo data chala jayega.

Ye humara data temporarily store karta hai. Matlab k jab b humara tab close huaa bss humara data chala jaye ga.

Cookies :

Cookies can handle less data. Local storage and session storage can handle upto data of 5MB while in cookies it works with in some kbs of data. Like upto 4kb

Tu bss ye hai k ye b data store krta hai. Bss jo data hota hai wo humaray browser ki cookies name ki property mein save hota. Ye cookies concept jo hai wo kam data ya light data k liye hota hai

Explanation:

localStorage:

tu jab b ham iss tarah likhengay k (localStorage) matlab k s capital ho tu hum baat kar rahay hain browser ki data base say. Orr iss mein kuch store kiss tarah karna hai Iss mein do teen hi cheezain hain or wo ye hain k

1. How to store
2. How to fetch data
3. How to remove data
4. How to update

Tu sab say pahlay store kaisay karna hai wo ye hai k

Storing Something in localStorage:

localStorage.setItem(“age”, “30”)

iss mein ham nay 2 cheeezain deni hai k kiss name say store karna hai, orr us mein save krna kiaa hai. Jaisay k ham nay ooper llikhaa hai k age k name say store krni hai orr uss mein value kia dalni hao tu uss mein ham nay 30 daal li. Tu ye save ho jaye gi humaray browser k local storage mein. Tu iss ko ham check kaisay kr sktay hain wo aisay k ham jab console mein jayein and wahan par localStorage likhein tu wo humein sari cheezain de dega jo k save hue hue hon localStorage mein

ab agar ham yahan say iss page ko refresh karein orr dobara dhekein ye localStorage tu ye jo data hai wo abi b hoga matlab delete nai hua hoga. Refresh nahi agar tab, ya balkay poora browser ko hii off kar dein orr phirr dhekein hm console mein uss data ko tu wo phirr b rahega.

Tu localStorage mein ham jo b kuch ko save kar lein tu wo wahan prr save rahegi jab tak ham uss ko khud remove na kar lein.

Getting Something from localStorage:

localStorage.getItem(“name”)

yahan par ham nay siraf uss cheez ka name diyaa hai jiss ko ham get karna chahtay hain. Jaisay k for eg ham nay koi “name” ki key say kuch save kiyaa tha ab ham uss ko get krna chahtay han tu uss ki key ham nay lik dii.

Removing something from localStorage:

localStorage.remove(“name”)

is mein b simply ham nay siraf localStorage.remove dena hai orr uss mein andar uss ki key deni hai jiss ko ham nay remove karna hai jaisay k hm nay “name” diya hai tu ye remove ho jaye ga orr agar hm dobara iss ko check karengay tu ye humein show nai hoga.

Updating something in localstorage:

Ye updation ham simple ye b setItem say hi kartay hain magar iss mein tareeka ye hai k jaisay pahlay say koi aik key hai jo pahlay say hi localstorage mein pari huee hai orr uss ki value “abc” hai ab agar ham nay dobara useee key say dobara setitem likh diyaa or value mein kuch orr dall diyaa tu ye update ho jaye ga matlab key wohi rahegi orr jo value hai uss mein kuch orr daall dega. Like

localStorage.setItem(“name”, “bonanza”);

tu mainly setitem ye karta hai k agar ham koiii value ko store karna chahein localstorage mein tu agar uss key say pahlay say koi value na ho tu wo bana dega orr agar uss name say wo key pahlay say available ho tu uss ko override kar deta hai.

Session Storage :

Jiss tarah jiss sense mein ham localstorage mein cheezain use kartay hain wohi isse tarah yahan par b use hongi jaisay setItem,getItem,removeItem.

For setting some item from session storage.

sessionStorage.setItem("name", "session");

session storage mein bss siraf ye hai k reload say kuch nai hota matlab k storage say value nai jati magar agar ham nay tab ko close kr diya tu phirr chali jati hai storage say value.

For getting something from session storage:

sessionStorage.getItem("name")

for removing something :

sessionStorage.removeItem("name");

for updating :

sessionStorage.setItem("name", "sessionstorage")

sessionStorage.clear();

ye jo clear hai ye full har cheez ko clear kar deta hai matlab session storage mein kuch orr b properties hoti hain jo console mein show ho rai hoti hain ye uss ko b clear kr deta hai

Cookies:

Browser mein chota data store krnay k liye ham cookies ka use krtay hain. Cookies zyada data store nai kr skti nearly 4Kb tk store kr skti hai.

Cookies mein jo b data store hota hai wo agar ham page reload karein tu wo automatically server par jaye ga.

document.cookie="email=alikhan@gmail.com";

iss tareekay say ham cookie ko save kr sktay hian. Tu browser mein humari cookie save ho jaye gi.

Hm simple way mein cookie ko read nai kr sktay ye maloom kr sktay hian k cookie parhii huee hai magar ye maloom nai kr sktay k kiaa hai tu iss k liye ham nay aik extension use ki hai named “edit this cookie” tu ye jo extension hai ye jab ham open karengay browser mein tu ye humein cookie ko show krwa skta haii k ye kiaa likhaa huaaa hai. Tu ye ye b bata dega k cookie ka name kiaa hai orr uss ki value kiaa hai.

document.cookie = "age=30";

ye simply age ko save kr dega cookie mein or “edit this cookie” extension mein ye b show hona start ho jaye gi.

Ham agar simply ye likhein k document.cookie tu ye humein ye show krdega k kia kia cookies hain

And ye jo edit this cookie ki extension mein hai iss mein delete ka option b hai tu agar hm delete krna chahein tu delete be kr sktay hain.

Important :

Ye aik important point hai k localStorage mein kabi kabar koi ye sochta hai k mein for eg mere pass aik “friends” ki key hai orr mein 4 ya 5 friends k name ko stroe karna chahta hun tu koi sochta hai k uss mein mein array ka use kr loonga tu ye agar ham karengay tu ye properly store nai karega.

Tu main point ye haii k jo b store karna hai ham nay siraf key ko b string mein store karna hai orr value ko b string store karna hai. Local storage mein hm objects, array etc store nai kr sktay simple tareekay say.

Tu ab agar ye problem hai k agar hm nay kuch save krna hai jo k uss mein values zyda hain matlab array ko store krna hai tu uss k liye aik orr way hai orr wo ye hai k ham nay use karna JSON.stringify()

Ye jo json.stringify ye krta hai k ye jo b kuch ho uss ko string mein convert kr deta hai tu ab ham agar chahtay hain k koi data hai jo k hm nay array form mein store krwana hai localStorage mein tu ham nay json.stringify ka use. Orr agar ham wapis get karna chahein wapis b tu wo phirr b humein string form mein hii milega. Tu jab humein wapis data string form mein hi milega tu humein uss ko natural form mein laanay k liyee hum use karengay JSON.parse(). Tu simply ham ny simply uss array ko uthana hai orr json.parse mein daal dena hai

krna hai kuch iss tarah.

localStorage.setItem("friends", JSON.stringify(["abc", "def", "ghi", "jkl"]));

tu ab for eg humein iss ko wapis nikalna hai tu hum uss ko json.parse ka use karengay orr wahan iss array ka name likh lengay jiss ko wapis natural form mein lena hai jaisay k

let fr = JSON.parse(localStorage.getItem("friends"));

console.log(fr)

tu ye humein array ki form mein wapis data de dega. Matlab orr kuch khaas nai hai magar siraf ye baat hai k localStorage mein jo b jaye ga matlab add hoga tu wo string mein hi hoga agar humein kuch orr cheezain add krni hai jaisay array,object etc anything tu humein pahlay uss ko string banana parega so for that we use json.stringify and jab ham wapis wo data letay hain tu wo dobara string form mein hota tu uss ko wapis natural form mein lenay k liye ham use karengay json.parse(“nameOfArray”)

Practice :

Ye aik code hai jiss say hm ye maloom kr sktay hain k abi jo laptop ya computer ka theme konsa hai matlab k light ya black hai jo b hai.

window.matchMedia('(prefers-color-scheme:dark)');

tu ye jo property hai ye humein aik khaas object nikaal kr deta hai jiiss ka name hai “matches” jis mein ye save hota hai “true” ya “false” matlab k han abi laptop ka theme dark hai ya nai ya light hai ya nai tu hm aisay b likh sktay hain k

window.matchMedia("(prefers-color-scheme:dark)").matches;

tu ye humein true ya false dedega. Matlab k humara dark mode chal raha hai ya nai true ya false dega.

Tu bss practice k liye ham nay siraf isss ko if condition mein daal diya. Like

if (window.matchMedia("(prefers-color-scheme:dark)").matches) {

  document.querySelector("body").classList.add("dark");

}

Tu yahan tk siraf ye huaa hai k ye check karega k agar jo pc hai uss ka dark mode on nai hai tu wo iss ko on krwa dega matlab hm nay body ko selec krwaya hai query selector say orr wahan say dark likh diyaa hai jiss ki waja say body ka color dark ho gya. Ye ham nay css mein likhaa hai here is css

:root {

  --bg-light: #ffffff;

  --text-light: #1a1a1a;

  --bg-dark: #1e1e1e;

  --text-dark: #f5f5f5;

}

body.light {

  background-color: var(--bg-light);

  color: var(--text-light);

}

body.dark {

  background-color: var(--bg-dark);

  color: var(--bg-dark);

her is html

  <body>

    <div class="container">

      <h1>Theme preference</h1>

      <button id="toggletheme">Toggle Theme</button>

    </div>

    <script type="module" src="practice.js"></script>

  </body>

So basically this is whole code

function setLightOrDark() {

  if (window.matchMedia("(prefers-color-scheme:dark)").matches) {

    document.querySelector("body").classList.add("dark");

    document.querySelector("body").classList.remove("light");

  } else {

    document.querySelector("body").classList.add("light");

    document.querySelector("body").classList.remove("dark");

  }

}

setLightOrDark();

window

  .matchMedia("(prefers-color-scheme:dark)")

  .addEventListener("change", function () {

    setLightOrDark();

  });

So basically iss mein huaa ye hai k ham nay simply aik function bana liyaa hai jo k check karay ga k theme jo hai wo dark hai ya nai. Orr uss k neechay ye likh diyaa hai k light ko remove kr do

Or else condition mein ye likha hai k agar dark nai hai tu light kr do or dark ko remove kr do. Orr uss k neechay ham nay iss function ko chala liyaa hai. Tu ye iss mein problem ye hai k ye tu jab khud chaleyengay tu ye chalega tu ham chahtay hain k jab hum pc ka theme change karein tu ye automatically change ho jaye to dark or light tu iss k liye ham nay use window.matchMedia pr event listener laga liyaa hai orr uss mein ham nay use function ko put kr diyaa hai jo k dark and light ko dhekega. Matlab k event listener mein ham nay “change” ki property lagai haiiii matlab k jab kuch change ho tub uss ko dhaikoo.

Iss k neechay ham nay code ko orr b optimize kr diyaaa hai like code given below

function setLightOrDark() {

  if (window.matchMedia("(prefers-color-scheme:dark)").matches) {

    document.querySelector("body").classList.add("dark");

    document.querySelector("body").classList.remove("light");

  } else {

    document.querySelector("body").classList.add("light");

    document.querySelector("body").classList.remove("dark");

  }

}

if (localStorage.getItem("theme")) {

  document.querySelector("body").classList.add(localStorage.getItem("theme"));

} else {

  setLightOrDark();

}

window

  .matchMedia("(prefers-color-scheme:dark)")

  .addEventListener("change", function () {

    setLightOrDark();

  });

let btn = document.querySelector("button");

btn.addEventListener("click", function () {

  if (document.querySelector("body").classList.contains("dark")) {

    document.querySelector("body").classList.remove("dark");

    document.querySelector("body").classList.add("light");

    localStorage.setItem("theme", "light");

  } else {

    document.querySelector("body").classList.remove("light");

    document.querySelector("body").classList.add("dark");

    localStorage.setItem("theme", "dark");

  }

});

Confusions:

The main one question is that why only we can store strings in localStorage. So the basic ans is that it is built like that. Matlab k jiss nay iss nay iss ko banaya haii use nay kaha hai k local storage mein strings hi store hongi. Tu agar humein koi cheez string k ilawa store krwani hai tu ham nay uss ko pahlay string mein convert krna hai JSON.stringify use kr k phir agar dobara get krna hai tu humein use karna hai JSON.parse use kr k