Web Storage API

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Web Storage API

- Web Storage API
  - Provides mechanisms by which browsers can store key/value pairs, in a much more intuitive fashion than using cookies
  - Browsers can persist information using the Web Storage API
    - Supported by all modern browsers
  - The two mechanisms within Web Storage are:
    - Session Storage
    - Local Storage

Web Storage API

- Storage objects
  - are simple key-value stores, similar to objects, but they stay intact through page loads
  - The keys and the values are always **strings**
  - Can be accessed using
    - getItem()
      - A getter method for accessing a value
      - Takes the key of the data item as an argument, and returns the data value
    - setItem()
      - A setter method for storing a value
      - Takes the key of the data item to create/modify, and the value to store in it
    - removeItem – removes a specific value

The sessionStorage Object

- sessionStorage maintains a separate storage area for each given origin that's available for the duration of the page session (as long as the browser is open, including page reloads and restores)
  - Stores data only for a session, meaning that the data is stored until the browser (or tab) is closed
  - Data is never transferred to the server
  - Storage limit is larger than a cookie (at most 5MB)

The sessionStorage Object

- Example

```
// Save data to sessionStorage
sessionStorage.setItem("key", "value");

// Get saved data from sessionStorage
let data =
sessionStorage.getItem("key");
```

The localStorage Object

- **localStorage** does the same thing, but persists even when the browser is closed and reopened
- Stores data with no expiration date, and gets cleared only through JavaScript, or clearing the Browser cache / Locally Stored Data

The localStorage Object

- Storage only supports storing and retrieving strings
- To save other data types, you have to convert them to strings
- For plain objects and arrays, you can use JSON.stringify() and JSON.parse()

```
const person = { name: "Alex" };
localStorage.setItem("user", person);
console.log(localStorage.getItem("user"));
      // "[object Object]"; not useful!
localStorage.setItem("user",JSON.stringify(person));
console.log(JSON.parse(localStorage.getItem("user")));
// { name: "Alex" }
```

Local Storage

- Advantages of using Web Storage API
  - The storage limit is larger (at least 5MB)
  - Information is never transferred to the server
  - Storage is per origin (per domain and protocol)
    - All pages, from one origin, can store and access the same data

References

- https://developer.mozilla.org/en-US/docs/Web/API/Web_Storage_API