

Web Application Development

WEB STORAGE API



Cookies

- Before HTML5, cookies were the main mechanism for storing information in the browser. But cookies have several limitations, most notably they are:
 - Not able to hold much data.
 - Sent to the server every time you request a page from that domain.
 - Not considered secure.

Web Storage

- To address these limitations, HTML5 introduced a **storage object**.

Web storage (or HTML5 storage) lets you store data in the browser.

The data it stores can only be accessed by the domain that set the data. For example, google.com can't access local storage from facebook.com.



Commonly, browsers store 5MB of data per domain in a storage object. If the site tries to store more data than this, then the browser usually prompts the user asking if this is allowed.



There are two types of storage: local and session storage.

They are implemented using the `localStorage` and `sessionStorage` objects.



Both local and session storage have the same methods to get and set data, but each lasts a different amount of time.



LOCAL

SESSION

Stored when tab closed

Y

N

All open windows / tabs
can access the data

Y

N



Storage API Methods

Method	Description
setItem(key, value)	Creates a new key/value pair
getItem(key)	Gets the value for the specified key
removeItem(key)	Removes the key/value pair for the specified key
clear()	Clears all information from that storage object

Storage API Property

Property	Description
length	Number of keys

This property is useful for checking the number of keys store and can be used to iterate through each of those keys retrieving the values

Accessing the storage API:

```
localStorage.setItem(key, value)  
sessionStorage.setItem(key, value)
```

```
localStorage.getItem(key)  
sessionStorage.getItem(key)
```



Local Storage Example

```
localStorage.setItem('age', '65');
```

```
// age var is assigned the value 65.
```

```
var age = localStorage.getItem('age');
```

```
var items = localStorage.length // returns 1.
```

Session Storage Example

```
sessionStorage.setItem('age', '65');
```

```
// age var is assigned the value 65.
```

```
var age = sessionStorage.getItem('age');
```

```
var items = sessionStorage.length // returns 1.
```

JSON

- The storage objects are commonly used to store JSON-formatted data.
- The JSON object's:
 - `parse()` method is used to turn the the JSON formatted data into a JavaScript object.
 - `stringify()` method is used to transform javascript objects into JSON-formatted strings.

Notes on Browsers

- Beware, it appears that IE and the storage object only work if deployed on a web server.
- Chrome, does not seem to have this dependency, and will work locally on the device without a web server.
- The exercises for this lab, should be interesting!!, but its recommended you use Chrome.