HTML5
Web Storage API
Fundamentals

Week 2 – Full-Stack DPP Course

Welcome

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Part 1 Outline

- The HTML5 Web Storage API
- Web Storage Before HTML5
- What HTML5 Could Achieve
- HTML5 Web Storage
- Using the Web Storage
- HTML5 Web Storage API
- Tracking Changes

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Part 1 Learning Objectives

- Learners would have a good understanding of:
  - What is HTML5 Web Storage
  - Why cookies were not a good solution
  - What can be achieved with HTML5 Web Storage
  - Advantages of HTML5 Web Storage
  - Local and Session Storage
  - How to use the HTML5 Web Storage and syntax
  - The main HTML5 Web Storage objects
  - How to utilise HTML5 Web Storage events

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Before HTML5

What we use to have in terms of client side storage options:

Web Apps only had Cookies

Not a good solution

- Sent over the line with every request
- Not secure
- Limited to 4KB
- 20 cookies per domain
- Can be disabled by the user

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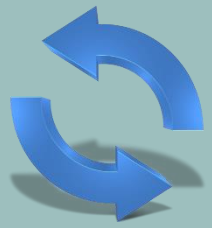
HTML5 Could Achieve

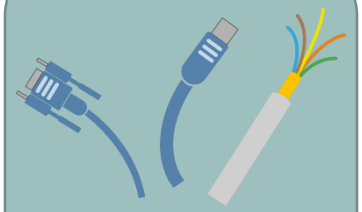
What do we really need in terms of storage:

More Space

Client-Side Storage



Not Deleted on Refresh



Not Sent Over the Wire

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HTML5 Web Storage

- Also known as local storage or DOM storage.
- Supports persistent storage on the client
  - Better than cookies
  - Has a real API to use
  - Key/values pair
  - Data is on device and not transferred with every request
  - Created per domain
  - Supported on all major browsers
  - Limited to 5MB on most browsers

HTML5 Web Storage

- Web storage is implemented in two different objects.

local storage

- Stores the data even after browser close
- Data It is shared with the browser window and tabs
- One instance of local storage is created per domain

session storage

- Deleted after browser or tab close
- Not shared between browser or tab windows

Using Web Storage

Web storage is a JavaScript API, so local and session storage can be accessed through code.

```
<script>
//Check browser support
if (typeof(storage) != "undefined") {
        localStorage.setItem("firstName", "Alfred");
        document.getElementById("message").innerHTML =
        localStorage.getItem("firstName");
} else {
        document.getElementById("message").innerHTML = "Sorry
Web  Storage not supported!";
}
</script>
```

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Web Storage API

What else is supported in the API for Web Storage?

setItem	localStorage.setItem(“firstName”, “Alfred”);
getItem	var firstName = localStorage.setItem(“firstName”);
removeItem	localStorage.removeItem(“firstName”);
clear	localStorage.setItem(“firstName”, “Alfred”);
length	var storageSize = localStorage.length;

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Tracking Changes

Is possible to be notified about changes using the storage event.

- Called on setItem, removeItem and clear
- Only when something did change

Attributes

- key
- oldValue
- newValue
- url
- storageArea

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Tracking Changes cont.

```
window.addEventListener("storage", logMyChanges, false);
```

```
function logMyChanges ( e ) {
   console.log( e.key );
    console.log( e.oldValue );
    console.log( e.newValue );
}
```

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Hands-on Practice

Let's practice with two examples.

w3schools

The case study

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Resources

- Sample code from the case study
- Use the links below to view Web Storage examples, sample code and video tutorial.

HTML5 Web Storage API - w3schools

HTML5 Web Storage API - MDN

Web Storage Support Test

Pluralsight Tutorial

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Download Files

Login into your VLE, look for HTML5 and CSS3 folder.
Inside the folder click on HTML5 Web Storage API.

or

Access my GitHub account and download the
HTML5 Web Storage API folder.

GitHub Account