**HTML 5 Web Storage**

**Web Storage**

* Web storage – a new JavaScript-only API introduced in HTML5
  + Stored per domain using key-value pairs
  + Managed by the browser
  + Uses client machines file storage; reading/writing using single threaded I/Os
  + File size limit (recommendation by W3C 5 MB)
  + localStorage object
    - For storing data that persists on the client machine between sessions
    - The data can be overwritten or cleared only by the application itself or by the user performing a manual clear down of the local storage area
  + SessionStorage object
    - Won’t persist data between browser sessions
    - If the user closes the browser, the data is cleared immediately
* W3C recommends a limit of 5MB, but browsers are allowed to store more per domain.
* Should not be used for mission-critical application functions
* Using asynchronous communications via JavaScript to push the info to the server
* Two types of global web storage objects (key-value collections):
  + localStorage object on the global window object
    - // window.localStorage
    - //localStorage.setItem(“bar”, foo);
    - // var foo = localStorage.getItem(“bar”);
    - // removeItem()
    - // clear()
  + sessionStorage object on the global window object
    - //window.sessionStorage
* Window localStorage, MDN, Introduction to Web Storage, <https://msdn.microsoft.com/en-us/library/bg142799(v=vs.85).aspx>

**Web Applications Using Web Storage**

* Improving Performance of Mobile Web Applications
* Twitter social networking
* Offline-Enabled Cloud SaaS (Software as a Service)
  + Gmail Mobile

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HTML5 Web Storage Examples

Listing13.08.html

<form ... >

<h1>Web Storage Writer</h1>

<script language="javascript" type="text/javascript">

if (typeof (localStorage) === "undefined" || typeof (sessionStorage) === "undefined") {

alert("Web Storage is not supported on this browser...");

}

else {

sessionStorage.setItem("TodaysDate", new Date());

sessionStorage.FavoriteArtist = "Matisse";

localStorage.UserName = "Ricardo";

document.write("web storage modified");

}

</script>

<p><a href="Listing13.09.html">Go to web storage reader</a></p>

</form>

Favorite Twitter Searches, <http://test.deitel.com/iw3htp5/ch11/fig11_20-22/FavoriteTwitterSearches.html>

<!DOCTYPE html>

<!-- Fig. 12.19: FavoriteTwitterSearchs.html -->

<!-- Favorite Twitter Searches web application. -->

<html>

<head>

<title>Twitter Searches</title>

<link rel = "stylesheet" type = "text/css" href = "style.css">

<script src = "FavoriteTwitterSearches.js"></script>

</head>

<body onload = "loadSearches()">

<h1>Favorite Twitter Searches</h1>

<p id = "welcomeMessage"></p>

<form action = "#">

<p><input id = "query" type = "text"

placeholder = "Entery Twitter search query">

<a href = "https://dev.twitter.com/docs/using-search">

Twitter search operators</a></p>

<p><input id = "tag" type = "text" placeholder = "Tag your query">

<input type = "button" value = "Save"

onclick = "saveSearch()">

<input type = "button" value = "Clear All Saved Searches"

onclick = "clearAllSearches()"></p>

</form>

<h1>Previously Tagged Searches</h1>

<div id = "searches"></div>

</body>

</html>

<!--

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-->

// Fig. 11.19: FavoriteTwitterSearchs.js

// Storing and retrieving key-value pairs using

// HTML5 localStorage and sessionStorage

var tags; // array of tags for queries

// loads previously saved searches and displays them in the page

function loadSearches()

{

if ( !window.sessionStorage.getItem( "herePreviously" ) )

{

sessionStorage.setItem( "herePreviously", "true" );

document.getElementById( "welcomeMessage" ).innerHTML =

"Welcome to the Favorite Twitter Searches App";

} // end if

var length = localStorage.length; // number of key-value pairs

tags = []; // create empty array

// load all keys

for (var i = 0; i < length; ++i)

{

tags[i] = localStorage.key(i);

} // end for

tags.sort(); // sort the keys

var markup = "<ul>"; // used to store search link markup

var url = "http://search.twitter.com/search?q=";

// build list of links

for (var tag in tags)

{

var query = url + localStorage.getItem(tags[tag]);

markup += "<li><span><a href = '" + query + "'>" + tags[tag] +

"</a></span>" +

"<input id = '" + tags[tag] + "' type = 'button' " +

"value = 'Edit' onclick = 'editTag(id)'>" +

"<input id = '" + tags[tag] + "' type = 'button' " +

"value = 'Delete' onclick = 'deleteTag(id)'>";

} // end for

markup += "</ul>";

document.getElementById("searches").innerHTML = markup;

} // end function loadSearches

// deletes all key-value pairs from localStorage

function clearAllSearches()

{

localStorage.clear();

loadSearches(); // reload searches

} // end function clearAllSearches

// saves a newly tagged search into localStorage

function saveSearch()

{

var query = document.getElementById("query");

var tag = document.getElementById("tag");

localStorage.setItem(tag.value, query.value);

tag.value = ""; // clear tag input

query.value = ""; // clear query input

loadSearches(); // reload searches

} // end function saveSearch

// deletes a specific key-value pair from localStorage

function deleteTag( tag )

{

localStorage.removeItem( tag );

loadSearches(); // reload searches

} // end function deleteTag

// display existing tagged query for editing

function editTag( tag )

{

document.getElementById("query").value = localStorage[ tag ];

document.getElementById("tag").value = tag;

loadSearches(); // reload searches

} // end function editTag

// register event handlers then load searches

function start()

{

var saveButton = document.getElementById( "saveButton" );

saveButton.addEventListener( "click", saveSearch, false );

var clearButton = document.getElementById( "clearButton" );

clearButton.addEventListener( "click", clearAllSearches, false );

loadSearches(); // load the previously saved searches

} // end function start

window.addEventListener( "load", start, false );

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