The Web Storage API (`localStorage`,`sessionStorage`)

INTRODUCTION

The Web storage API (see therelated W3C specification) introduces "two related mechanisms, similar to HTTP session cookies, for storing structured data on the client side".

Indeed, Web Storage provides two interfaces called`sessionStorage` and `localStorage`, whose main difference is data longevity. This specification defines an API for persistent data storage of key-value pair data in Web clients.

> **With `localStorage` the data will remain until it is deleted, whereas with `sessionStorage` the data is erased when the tab/browser is closed.**

For convenience, we will mainly illustrate the `localStorage`object. Just change "local" by "session" and it should work (this time with a session lifetime).

SIMPLE KEY-VALUE STORES, ONE PER DOMAIN (FOLLOWING THE SAME ORIGIN POLICY)!

key	value
firstName	Bugs
lastName	Bunny
location	Earth

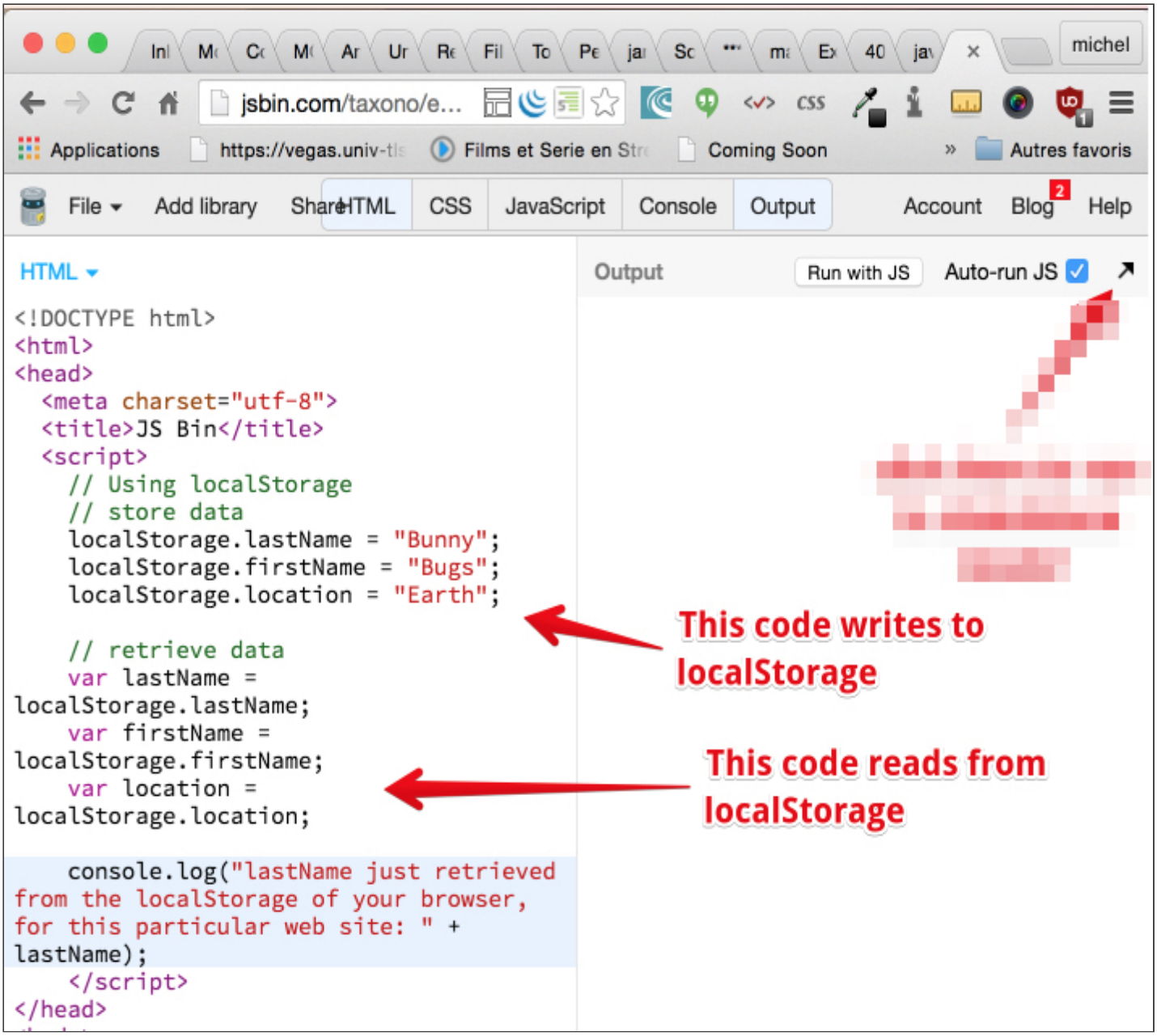
`localStorage` is a simple key-value store, in which the keys and values are strings. There is only one store per domain. This functionality is exposed through the globally available`localStorage` object. The same applies to `sessionStorage`.

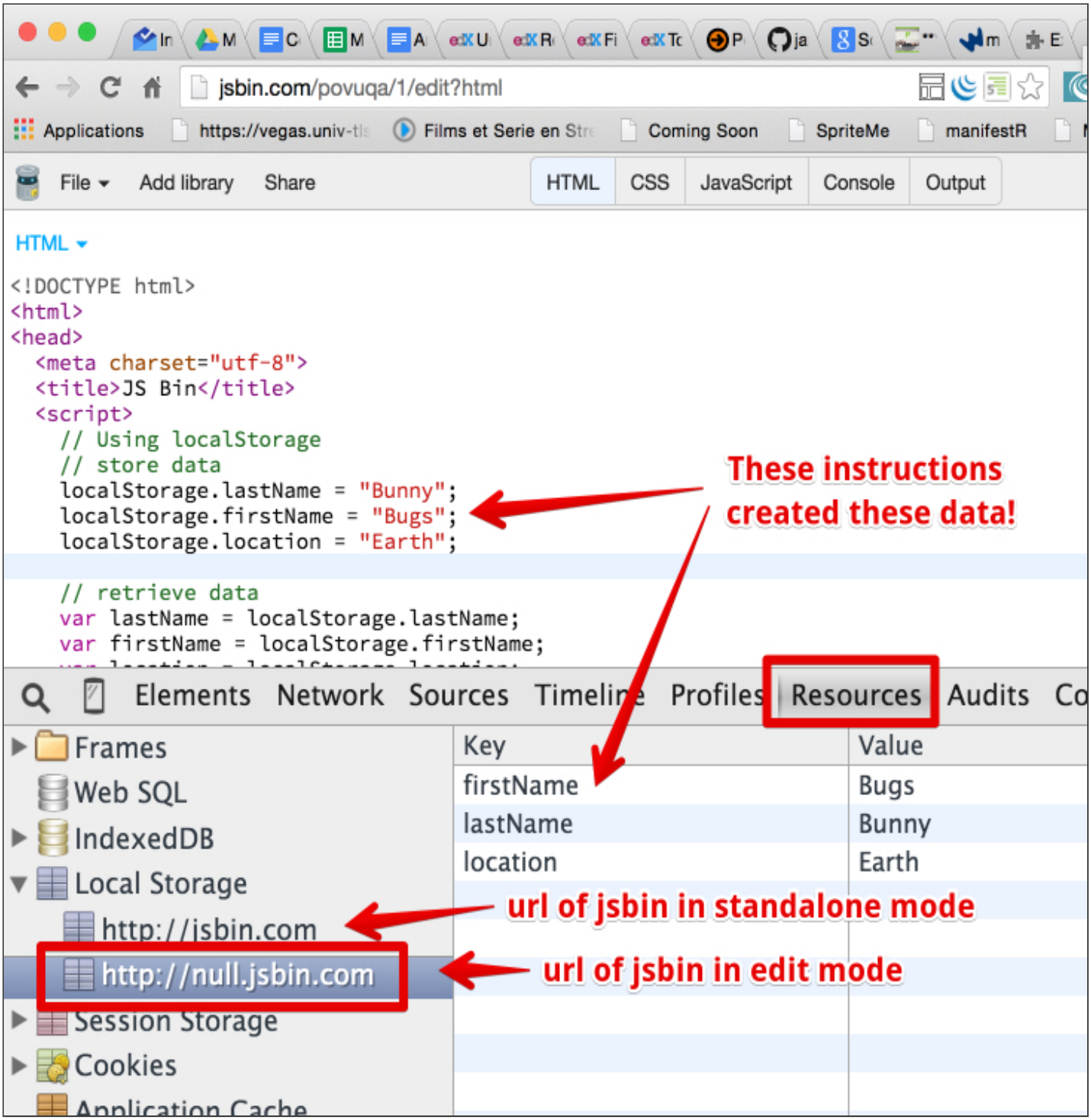
Example:

```
// Using localStorage
// store data
localStorage.lastName = "Bunny";
localStorage.firstName = "Bugs";
localStorage.location = "Earth";
// retrieve data
var lastName = localStorage.lastName;
var firstName = localStorage.firstName;
var location = localStorage.location;
```

This data is located in a store attached to the origin of the page. We created a JS Bin example in which we included the above code.

Once opened in your browser, the JavaScript code is executed. With the browser dev. tools, we can check what has been stored in the `localStorage` for this domain:


jsbin.com/taxono/e...
Applications
Films et Serie en Str
Coming Soon
Autres favoris
File
Add library
Share
HTML
CSS
JavaScript
Console
Output
Account
Blog
Help
HTML
Output
Run with JS
Auto-run JS
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<title>JS Bin</title>
<script>
// Using localStorage
// store data
localStorage.lastName = "Bunny";
localStorage.firstName = "Bugs";
localStorage.location = "Earth";
// retrieve data
var lastName =
localStorage.lastName;
var firstName =
localStorage.firstName;
var location =
localStorage.location;
console.log("lastName just retrieved
from the localStorage of your browser,
for this particular web site: " +
lastName);
</script>
</head>
This code writes to localStorage
This code reads from localStorage



DIFFERENCES WITH COOKIES?

Cookies are also a popular way to store key-value pairs. Web Storage however, is a more powerful technique than cookies. The latter are limited in size (a few KBytes for cookies (compared to several MBytes for Web Storage) and they generate HTTP traffic for each additional request (whether to request a Web

page, an image, a stylesheet, a JavaScript file, etc.).

Objects managed by Web Storage are no longer carried on the network and HTTP, and are easily accessible (read, change and delete) from JavaScript, using the Web Storage API.

DO NOT TRY WITH `FILE://`

> **WARNING!** **`localStorage` and `sessionStorage` are not usable with `file://`, only with `http://` or `https://`**

For security reasons (more on that later), pages loaded with a `file://` type of URL cannot use `localStorage` or `sessionStorage`. You must use `http://` or `https://` URLs and a Web server.

EXTERNAL RESOURCES

- The W3C Web Storage API recommendation (published on 9 June 2015)
- Interesting article on html5rocks that compares the different ways of doing client side persistence with HTML5, including Web Storage.