

HTML 5

Web Storage

HTML



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<https://github.com/swacademy/HTML5>

What is Web Storage ?

- In HTML5, web pages can store data locally within the user's browser.
- Earlier, this was done with cookies.
- However, Web Storage is more secure and faster.
- The data is not included with every server request, but used ONLY when asked for.

What is Web Storage ?

- It is also possible to store large amounts of data, without affecting the website's performance.
- The data is stored in key/value pairs, and a web page can only access data stored by itself.

Cookies

- Are overly complicated.

```
document.cookie = "foo=bar; path=/";
```

- Is a session-based cookie.

- If I want to store something for longer...

```
document.cookie = "foo=bar; path=/; expires=Tues,  
13 Sept 2014 12:00:00";
```

- To delete a cookie, I need to set the value to blank:

```
document.cookie = "foo=; path=/";
```

- Typically has a limit of 4KB.

Cookies vs. Web Storage

- With Cookies, IE6 supports only 20 cookies per domain and a maximum size of 4KB per cookie.
- Web Storage doesn't have a limit per domain and limits per domain are upwards of 5MB.

Cookies vs. Web Storage (Cont.)

- With Cookies, IE6 supports only 20 cookies per domain and a maximum size of 4KB per cookie.
- Web Storage doesn't have a limit per domain and limits per domain are upwards of 5MB.

Lab1 : Check Web Browsers for localStorage and sessionStorage

■ Web Browsers

- Edge, Firefox, Google Chrome, Opera, Safari

■ Text Editors

- Visual Studio Code, Notepad++ or Editplus, etc...

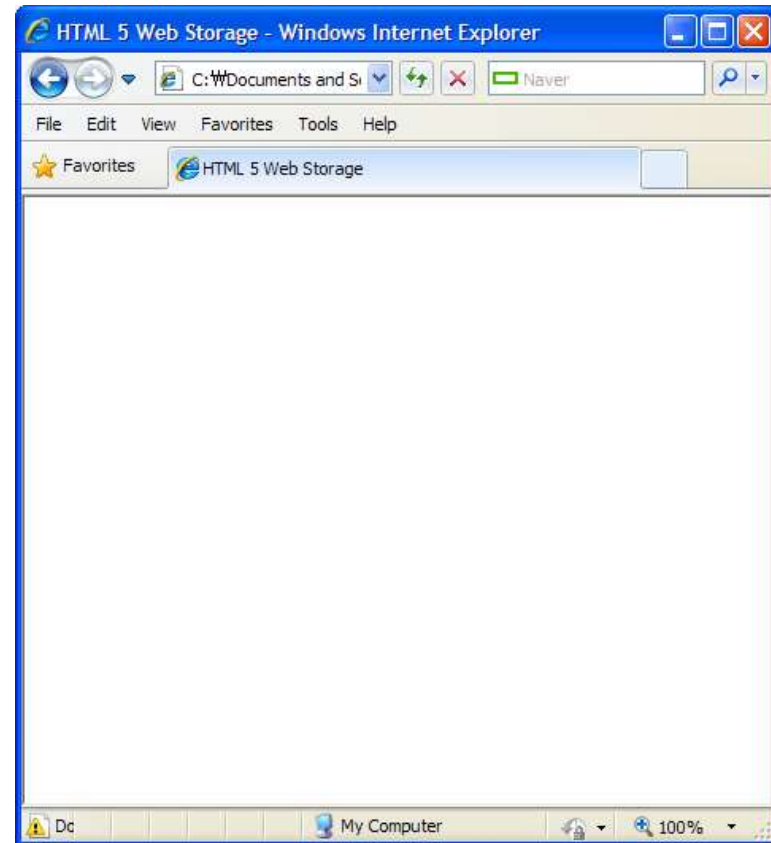
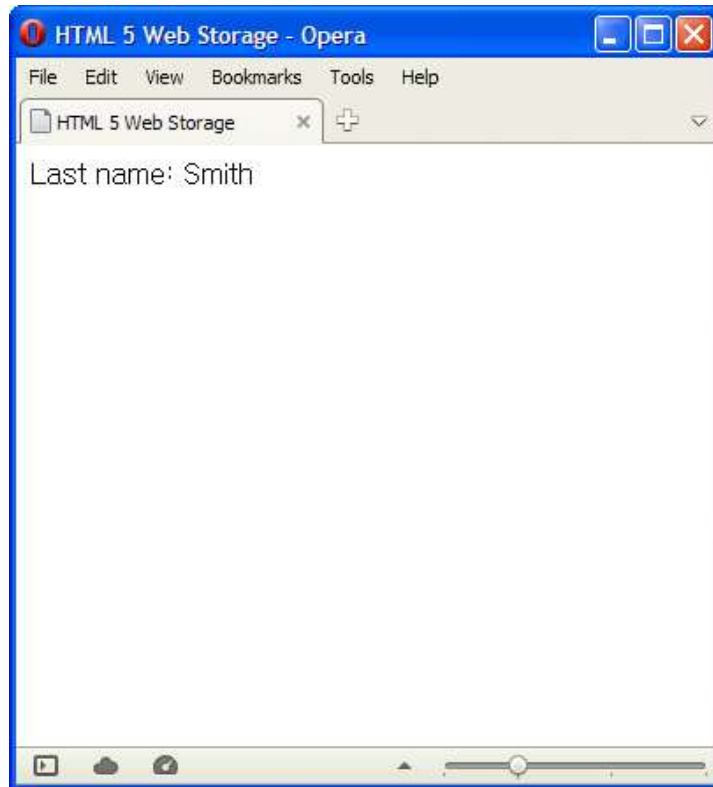
■ Files

- checkstorage.html

Lab1 : checkstorage.html

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title> HTML 5 Web Storage </title>
5      <meta charset="utf-8">
6      <script type="text/javascript">
7          function getData(){
8              if(typeof(Storage)!="undefined") {
9                  localStorage.lastname="Smith";
10                 document.getElementById("result").innerHTML=
11                     "Last name: " + localStorage.lastname;
12             } else {
13                 document.getElementById("result").innerHTML=
14                     "Sorry, your browser does not support web storage...";
15             }
16         }
17     </script>
18 </head>
19 <body onload="getData()">
20     <div id="result"></div>
21 </body>
22 </html>
```


Lab1 : Result



localStorage and sessionStorage

- There are two new objects for storing data on the client:
 - **localStorage** - stores data with no expiration date
 - **sessionStorage** - stores data for one session

The `localStorage` Object

- Stores the data with no expiration date.
- The data will not be deleted when the browser is closed, and will be available the next day, week, or year.
- Is based around the domain and spans all windows that are open on that domain.
- If you set some data on local storage it immediately becomes available on any other window on the same domain.

The `localStorage` Object (Cont.)

- You can close your browser, reboot your machine, come back to it days later, and the data will still be there.

Lab2 : localStorage

■ Web Browsers

- Edge, Firefox, Google Chrome, Opera, Safari

■ Text Editors

- Visual Studio Code, Notepad++ or Editplus, etc...

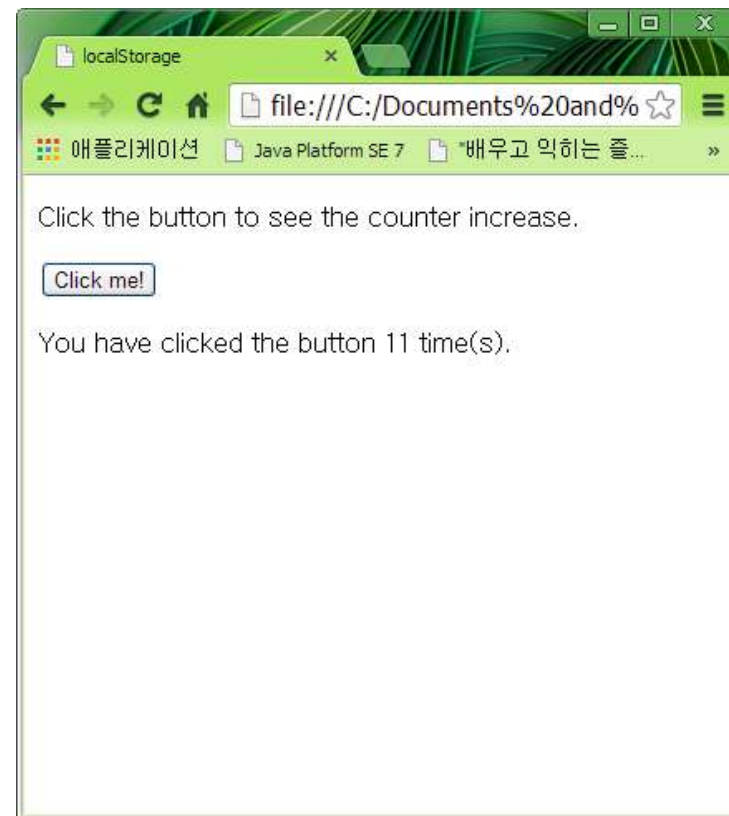
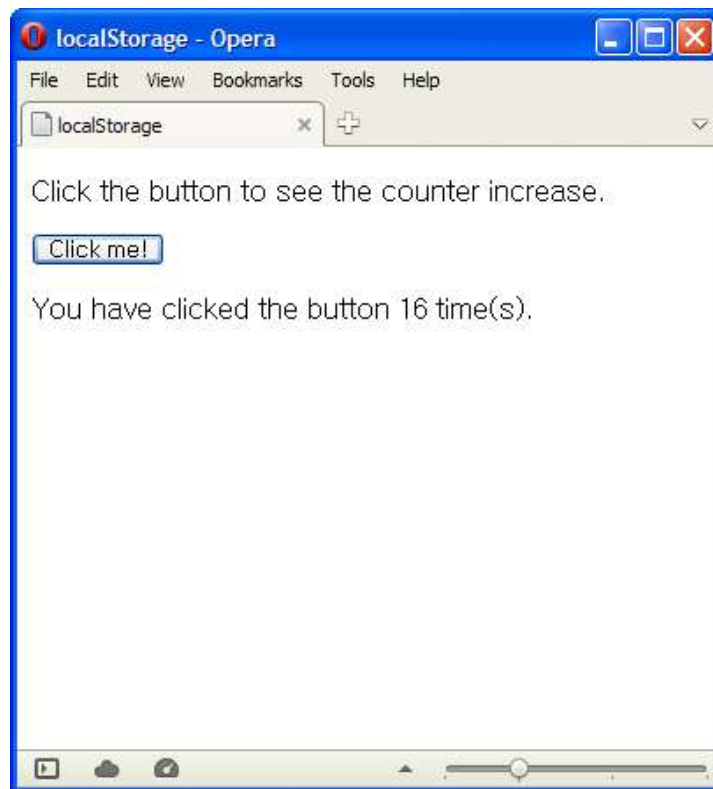
■ Files

- localStorage.html

Lab2 : localStorage.html

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4    <title>localStorage </title>
5    <script type="text/javascript">
6      function clickCounter() {
7        if(typeof(Storage)!="undefined") {
8          if (localStorage.clickcount) {
9            localStorage.clickcount=Number(localStorage.clickcount)+1;
10         } else {
11           localStorage.clickcount=1;
12         }
13         document.getElementById("result").innerHTML=
14           "You have clicked the button " +
15           localStorage.clickcount + " time(s).";
16       } else {
17         document.getElementById("result").innerHTML=
18           "Sorry, your browser does not support web storage...";
19       }
20     }
21   </script>
22 </head>
23 <body>
24   <p>Click the button to see the counter increase.</p>
25   <p>
26     <button onclick="clickCounter()" type="button">Click me!</button></p>
27   <div id="result"></div>
28 </body>
29 </html>
```

Lab2 : Result



The `sessionStorage` Object

- Is equal to the `localStorage` object, **except** that it stores the data for only one session.
- The data is deleted when the user closes the browser window.
- If you opened another window on the same domain, it wouldn't have access to that session data.

Lab3 : sessionStorage

■ Web Browsers

- IE10, Firefox, Google Chrome, Opera, Safari

■ Text Editors

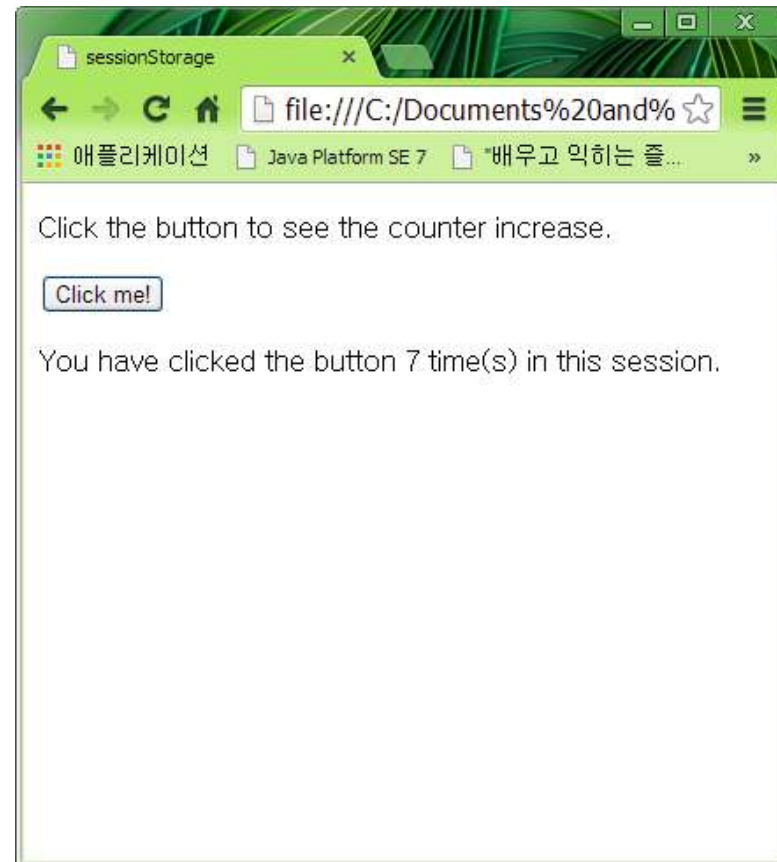
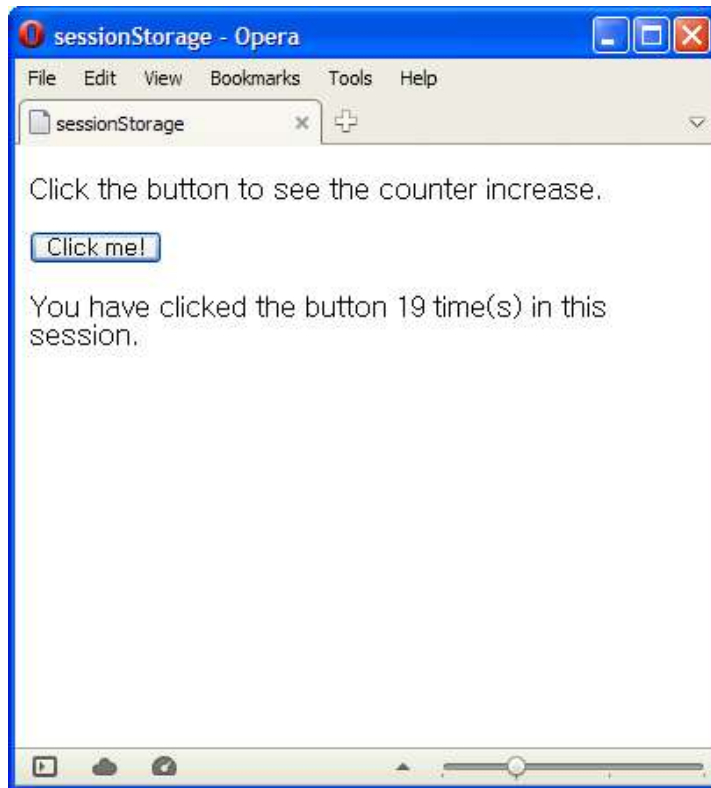
- Visual Studio Code, Notepad++ or Editplus, etc...

■ Files

- `sessionstorage.html`

```
<head>
  <title>sessionStorage </title>
  <script>
    function clickCounter() {
      if(typeof(Storage)!=="undefined") {
        if (sessionStorage.clickcount) {
          sessionStorage.clickcount=Number(sessionStorage.clickcount)+1;
        } else {
          sessionStorage.clickcount=1;
        }
        document.getElementById("result").innerHTML=
          "You have clicked the button " + sessionStorage.clickcount +
          " time(s) in this session.";
      } else {
        document.getElementById("result").innerHTML=
          "Sorry, your browser does not support web storage...";
      }
    }
  </script>
</head>
<body>
  <p>Click the button to see the counter increase.</p>
  <p><button onclick="clickCounter()" type="button">Click me!</button></p>
  <div id="result"></div>
```

Lab3 : Result



An Overview of the API

- readonly attribute unsigned long length
- getter DOMString key(in unsigned long index)
- getter any getItem(in DOMString key);
- setter creator void setItem(
 in DOMString key, in any data);
- deleter void removeItem(in DOMString key);
- void clear();

An Overview of the API (Cont.)

```
sessionStorage.setItem('twitter', '@rem');  
alert( sessionStorage.getItem('twitter') ); // shows @rem
```

```
sessionStorage.setItem('cost', 12);  
alert(sessionStorage.getItem('cost'));  
// shows 12
```

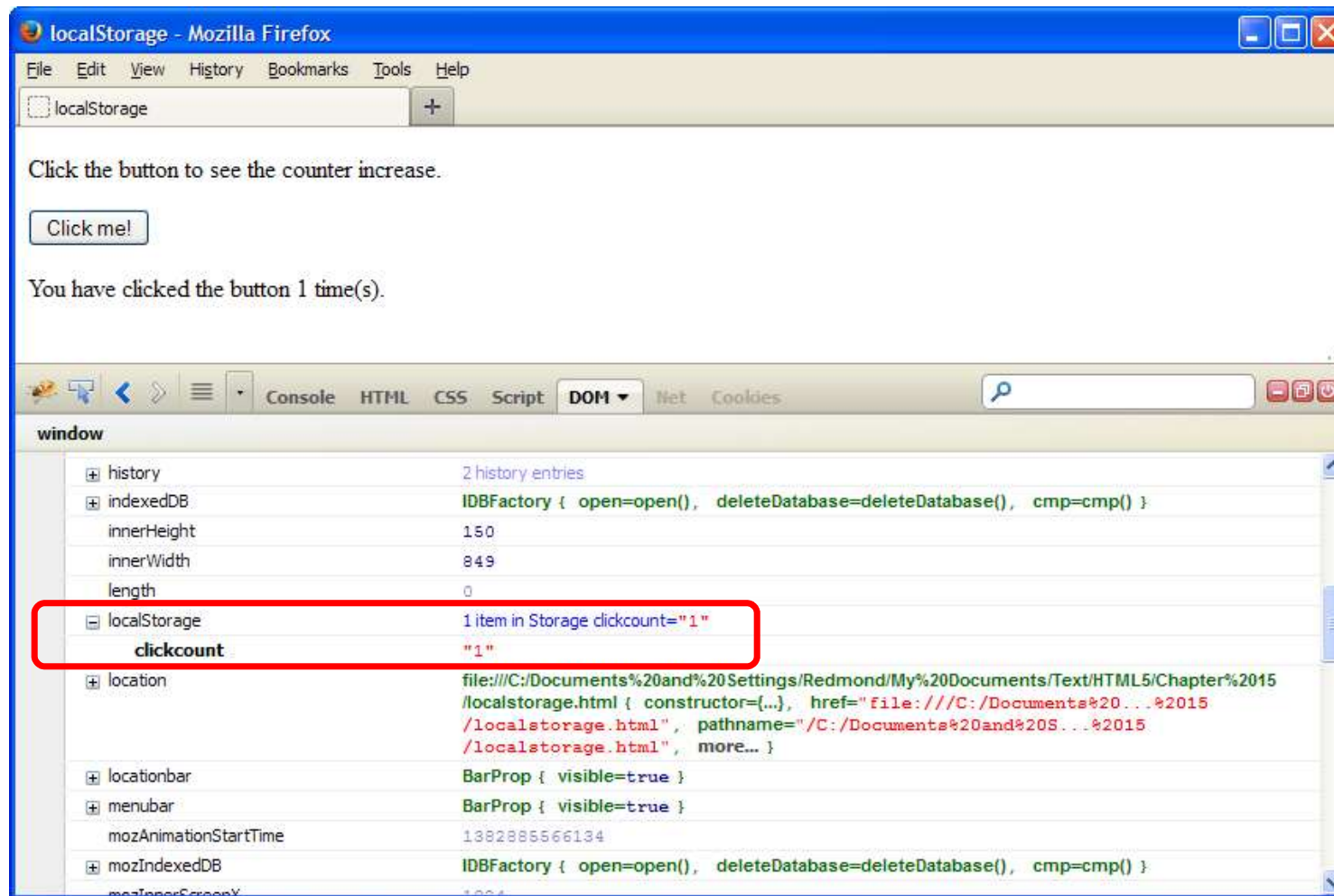
An Overview of the API (Cont.)

```
for (var i=0;i<sessionStorage.length;i++) {  
    alert( sessionStorage.key(i) + '=' +  
    sessionStorage.getItem(  
        sessionStorage.key(i) ) );  
}
```

An Overview of the API (Cont.)

```
sessionStorage.setItem('bruce' ,  
    "Think he's a professor of synergies");  
sessionStorage.setItem('remy' ,  
    "Think Bruce is a loony professor  
    of synergies");  
alert( sessionStorage.length ); // shows 2  
sessionStorage.removeItem('bruce');  
alert( sessionStorage.length ); // show 1  
sessionStorage.clear();  
alert( sessionStorage.length ); // shows 0
```

WebKit's Developer Tools



WebKit's Developer Tools

