

CS 1520 Recitation Week 9

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Plan for Today

Storage Discussion

Regex Discussion

Ungraded Quiz

Using the Web Storage API

The Web Storage API provides mechanisms by which browsers can securely store key/value pairs, in a much more intuitive fashion than using cookies.

Storage objects are simple key-value stores, similar to objects, but they stay intact through page loads. **The keys and the values are always strings.**

Question: What happens if the key is an integer ?

You can access these values like an object, or with the `Storage.getItem()` and `Storage.setItem()` methods.

Types

sessionStorage maintains a separate storage area for each given origin that's available for the duration of the page session (as long as the browser is open, including page reloads and restores).

localStorage does the same thing, but persists even when the browser is closed and reopened.

Question

Would you use Web Storage to store playback progress time for a user on a media web application like YouTube? Why or Why not?

Browser Support!

Newer versions of most browsers support Web Storage.

Although!!! You need to be sure.

Question: How would you check ?

```
function storageAvailable(type) {  
    try {  
        var storage = window[type],  
            x = '__storage_test__';  
        storage.setItem(x, x);  
        storage.removeItem(x);  
        return true;  
    }  
    catch(e) {  
        //Print Not supported!  
        //Other reasons possible ? YES!  
        //Get error codes as e.code  
        //Get error names as e.name  
    }  
}
```

window[type] ? What is this ?

Getting values from storage

The `Storage.getItem()` method is used to get a data item from storage.

```
function setStyles() {  
    var currentColor = localStorage.getItem('bgcolor');  
    var currentFont = localStorage.getItem('font');  
    var currentImage = localStorage.getItem('image');  
  
    document.getElementById('bgcolor').value = currentColor;  
    document.getElementById('font').value = currentFont;  
    document.getElementById('image').value = currentImage;  
  
    htmlElem.style.backgroundColor = '#' + currentColor;  
    pElem.style.fontFamily = currentFont;  
    imgElem.setAttribute('src', currentImage);  
}
```


Setting values in storage

`Storage.setItem()` is used both to create new data items, and (if the data item already exists) update existing values. This takes two arguments — the key of the data item to create/modify, and the value to store in it.

```
function populateStorage() {  
  localStorage.setItem('bgcolor', document.getElementById('bgcolor').value);  
  localStorage.setItem('font', document.getElementById('font').value);  
  localStorage.setItem('image', document.getElementById('image').value);  
  
  setStyles();  
}
```

Deleting data records

Web Storage also provides a couple of simple methods to remove data.

`Storage.removeItem()` takes a single argument — the key of the data item you want to remove — and removes it from the storage object for that domain.

`Storage.clear()` takes no arguments, and simply empties the entire storage object for that domain.

Regex

Literal notation

```
let re = /ab+c/;
```

Constructor function

```
let re = new RegExp('ab+c');
```

Javascript REGEX reference

https://www.w3schools.com/js/js_regex.asp

<https://regexr.com/>

Quiz – Ungraded

<https://people.cs.pitt.edu/~pranut/TA/CS1520-Summer20/week5/Quiz2.pdf>