

Building Web Applications with HTML5, CSS3, and Javascript:

An Introduction to HTML5

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pinboard.in #tag

pinboard.in/u:jasonclark/t:lita-html5/

twitter #hashtag

#litahtml5

Overview

- New Features and Functions
- Demos
- Getting Started
- Questions

Javascript APIs

Desktop programming for the web

Minification + Optimization

- Removing unnecessary characters and spacing from code to reduce size, and optimizing the code to improve load times

Minify

<http://www.minifyjavascript.com/>

Optimize

<http://www.jshint.com/>

Selector APIs

- Find elements by matching against a group of selectors (tags or attributes in DOM).

```
querySelector()  
querySelectorAll()
```

```
var list = document.querySelectorAll  
('li.old, li.new');
```

Geolocation

- w3c API
- accurate
- supported in Firefox 3.6, Safari 4

```
navigator.geolocation.getCurrentPosition();
```


File API, Drag & Drop API

- Creating, reading, & uploading of files
- Drag & drop API in combination with a draggable attribute

History API

- Preserve the state of the page
- Enabling back button in client-side scripts

Fullscreen API

- Remove browser chrome
- “Turn off the lights”

```
function launchFullScreen(element) {  
    if(element.requestFullScreen) {  
        element.requestFullScreen();  
    }  
}
```

```
<button onclick="launchFullscreen  
    (document.documentElement);">Go  
Fullscreen</button>
```

Device APIs

- Allows access to video and audio input, e.g., from a webcam or microphone.

```
getUserMedia ( )
```

Page Visibility API

- Check the active state of the page
- React to changes in use of a page
 - Stop polling for data
 - Pause a video

`document.hidden`

`document.visibilityState`

`visibilitychange` Event

Notifications API

- Display notifications to the user for given event or interactions
- New emails, tweets or calendar events...

```
if (window.webkitNotifications)
```

Storage APIs

- Keep files
- Store keys/values
- Local databases

sessionStorage

- mega COOKIE
- Stores key/value pairs while page is open


localStorage

- mega COOKIE
- Stores key/value pairs that persist after page and browser are closed



Failed to open page



+  http://www.apple.com/startpage/



Q Google



You are not connected to the Internet.

Safari can't open the page "http://www.apple.com/startpage/" because your computer isn't connected to the Internet.

Network Diagnostics can help you solve network connection problems.

[Network Diagnostics...](#)

Offline Storage – Cache Manifest

- Work without a connection
 1. Create cache manifest file
 2. Set server to allow for manifest file type
 3. Link to manifest file in HTML <head>

```
CACHE MANIFEST
#store the files below
index.html
styles.css
images/logo.png
Scripts/global.js
```

Offline Storage - IndexedDB

My browser can haz database!

- Simple key/value store within browser
- Up to 5 MB of data storage
 - W3C discontinued Web SQL Database spec

Demos & Examples

It's your call....



html5-demos.appspot.com/static/getusermedia/photobooth.html



Don't Pay for It! Get Related Pages fr + Wonder Show Meta Info Twitter Reactions LibSpy - Forces CatS .epub (i)

▶ What's this?

CSS Filters Photobooth



Click the video to see different CSS filters

Snapshot

html5-demos.appspot.com/static/getusermedia/photobooth.html

Demos

- Other possible examples:
 - geolocation
 - localStorage
 - IndexedDB

Resources

- WHATWG HTML5 for Developers
 - <http://developers.whatwg.org/>
- HTML5: Mozilla Developer Network
 - <https://developer.mozilla.org/en-US/docs/HTML/HTML5>
- Dive into HTML5
 - <http://diveintohtml5.info/>

Assignment 3

- Take your HTML5 Javascript template
 - <http://www.lib.montana.edu/~jason/files/html5-mobile-feed/template.js>
- 1. Add section page views
- 2. Add feed parse/display for second page view
- 3. Add geolocation showing coordinates on one of the other page views

Questions?

twitter.com/jaclark

www.lib.montana.edu/~jason/talks.php

Episode IV

A NEW HOPE

It is a period of civil war.
Rebel spaceships, striking
from a hidden base, have won
their first victory against
the evil Galactic Empire.

During the battle, Rebel
forces managed to steal secret
plans to the Empire's