

# Building Web Applications with HTML5, CSS3, and Javascript:

## An Introduction to HTML5

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pinboard.in #tag

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

twitter #hashtag

#cildc #html5

# Overview

- Revolution or Evolution?
- New Features and Functions
- Demos
- Getting Started
- Questions

# Hello, My Name is...

- Background, Position
- HTML, Programming experience?
- Experience with CSS3?
- What do you want to learn most?

# Terms: HTML, CSS, API

Does everybody know what these elements are?

## CSS

- style rules for HTML documents

## HTML

- markup tags that structure docs
- browsers read them and display according to rules

## API (application programming interface)

- set of routines, protocols, and tools for building software applications

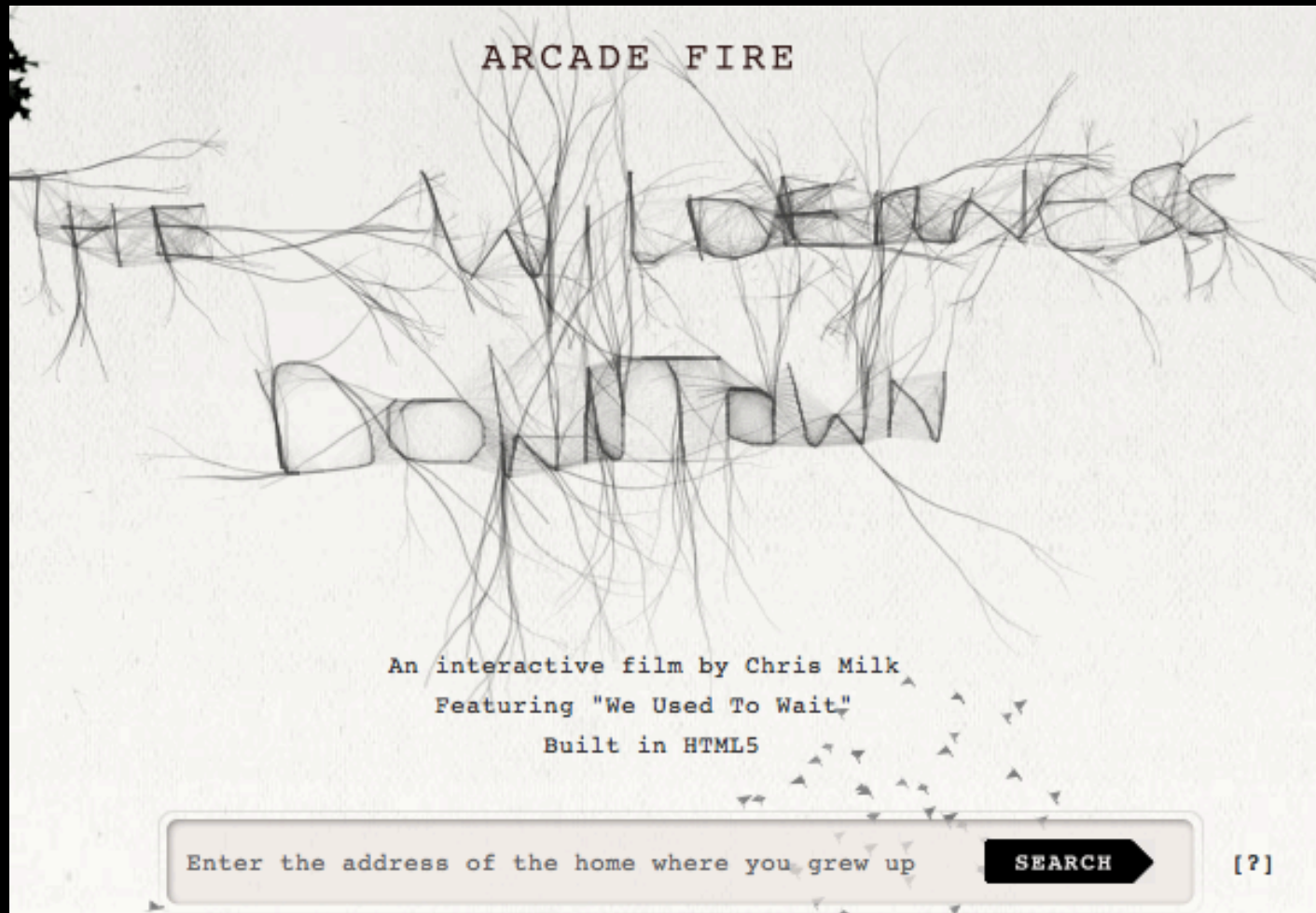


# Links and Anchors

A link is the connection between one piece of hypertext and another.

```
1 <title>Hypertext Links</title>
2 <h1>Links and Anchors</h1>
3 A link is the connection between one piece of
4 <a href=WhatIs.html>hypertext</a> and another.
```

# Chrome Experiments



Arcade Fire - The Wilderness Downtown  
<http://www.chromeexperiments.com/arcadefire/>



# HTML5 Working Examples

HTML5 Mobile Feed Widget

[www.lib.montana.edu/~jason/files/html5-mobile-feed/](http://www.lib.montana.edu/~jason/files/html5-mobile-feed/)

BookMeUp

[www.lib.montana.edu/~jason/files/bookme/](http://www.lib.montana.edu/~jason/files/bookme/)

- Learn more by viewing source

OR

- Downloading from [jasonclark.info](http://jasonclark.info) or [github.com/jasonclark](https://github.com/jasonclark)

# HTML5 as "umbrella" Term

- Changes to HTML spec
- Additions to CSS spec
- New Javascript APIs

# Evolution into HTML5

Reacting to how the web is used

# A Minimal HTML5 Document

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>title</title>
  <link rel="stylesheet"
  href="style.css">
  <script src="script.js"></script>
</head>
<body>
  <!-- page content -->
</body>
</html>
```

# Semantic & Functional Markup

- header
- footer
- nav
- section
- article
- figure
- aside
- mark
- menu
- contenteditable attribute

# Microdata

Markup for making HTML machine-readable

- `itemscope`
- `itemtype`
- `itemprop`

# Microdata – Book Example

```
<dl itemscope
  itemtype="http://vocab.example.net/book"
  itemid="urn:isbn:0226500667"
<dt>Title</dt>
<dd itemprop="title">A River Runs Through It
  and Other Stories</dd>
<dt>Author</dt>
<dd itemprop="author">Norman Maclean</dd>
<dt>Publication date</dt>
<dd itemprop="pubdate">October 1, 2001</dd>
</dl>
```

# Link Relations

Explain why you're pointing to another page.  
"I'm pointing to this other page because..."

```
<link rel="stylesheet" href="template.css"/>
```

```
rel=alternate
```

```
rel=archives
```

```
rel=author
```

```
rel=external
```

```
rel=icon
```

```
rel=license
```

```
rel=prefetch
```

```
rel=search
```

```
rel=sidebar
```

```
rel=tag
```

```
...
```



# Native Video and Audio

- simple markup
- no plugin!
- limited vid formats: .ogv, .mp4, webm

```
<video width="320" height="240" controls="controls">  
  <source src="film.mp4" type="video/mp4" />  
  Your browser doesn't support the video tag.  
</video>
```

# Canvas

Draw into HTML elements via scripting  
(usually JavaScript)

draw graphs, make photo compositions, create animations or even  
do real-time video processing

```
<canvas id="canvas"></canvas>
```

# Forms <form>

- field types - email, date
- validation
- regular expressions
- still need to watch for security/hacks

# <form> Markup

```
<input type="email" required>
```

```
<input type="date">
```

```
<input type="url">
```

```
<input type="email" required autofocus>
```

# Data URIs

## Embed small files inline in documents

```

```

```
data:[<mime type>][;charset=<charset>]
  [;base64],<encoded data>
```

# HTML5 right now? IE?

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8" />
<title>HTML5 right now</title>
<!--[if IE]>
<script src="http://html5shiv.googlecode.com/svn/trunk/
  html5.js"></script>
<![endif]-->
<style>
article, aside, figure, footer, header, hgroup, menu, nav,
  section {display:block;}
</style>
</head>
<body>
<!-- ready to roll with HTML5 now -->
</body>
</html>
```

# Demos & Examples

It's your call....

**DCL eReader** [My Account](#) [Log Out](#)

[Return To Catalog](#)

Pride and Prejudice by Jane Austen

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Hide TOC

### Chapter 1

It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.

However little known the feelings or views of such a man may be on his first entering a neighbourhood, this truth is so well fixed in the minds of the surrounding families, that he is considered the rightful property of some one or other of their daughters.

"My dear Mr. Bennet," said his lady to him one day, "have you heard that Netherfield Park is let at last?"

Mr. Bennet replied that he had not.

"But it is," returned she; "for Mrs. Long has just been here, and she told me all about it."

Mr. Bennet made no answer.

"Do you not want to know who has taken it?" cried his wife impatiently.

"You want to tell me, and I have no objection to hearing it."

This was invitation enough.

"Why, my dear, you must know, Mrs. Long says that Netherfield is taken by a young man of large fortune from the north of England; that he came down on Monday in a chaise and four to see the

Hide Controls

[catalog.douglascountylibraries.org/EcontentRecord/19339/Viewer?item=3439864](http://catalog.douglascountylibraries.org/EcontentRecord/19339/Viewer?item=3439864)



# Demos

- YouTube HTML5 demo
  - <http://www.youtube.com/html5>
- 24 ways CSS3 demo
  - <http://24ways.org/>
- HTML5 Demos
  - <http://html5demos.com/>
- Other possible examples:
  - geolocation
  - localStorage

# What Type of Support?

- see "When can I use..."
  - <http://a.deveria.com/caniuse/>
- Mobile browsers leading the way
- Modernizr
  - <http://www.modernizr.com/>
- HTML5 enabling script
  - <http://remysharp.com/2009/01/07/html5-enabling-script/>

# Resources

- HTML5 Tag Reference (W3Schools)
  - [w3schools.com/html5/html5\\_reference.asp](http://w3schools.com/html5/html5_reference.asp)
- Cross Browser Support Tables
  - [www.findmebyip.com/litmus/](http://www.findmebyip.com/litmus/)
- HTML5 Doctor
  - [html5doctor.com/](http://html5doctor.com/)
- CSS3 Previews (CSS3.info)
  - [www.css3.info/preview/](http://www.css3.info/preview/)
- HTML5 & CSS3 Cheat Sheets
  - [webresourcesdepot.com/html-5-and-css3-cheat-sheets-collection/](http://webresourcesdepot.com/html-5-and-css3-cheat-sheets-collection/)

# Resources (cont.)

- HTML5 Boilerplate
  - <http://html5boilerplate.com/>
- HTML5rocks
  - [html5rocks.com](http://html5rocks.com)
- HTML5 Please
  - [html5please.com/#use](http://html5please.com/#use)

# Assignment 1

- Using HTML5 Class Template
  - <http://www.lib.montana.edu/~jason/files/html5-mobile-feed/template.html>
- 1. Add header, nav, section, aside, footer
- 2. Add content (dummy text) into each new tag
- 3. Add microdata to page

# Questions?

[twitter.com/jaclark](https://twitter.com/jaclark)

[www.lib.montana.edu/~jason/talks.php](http://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.