



You don't know...
HTML-CSS-JS
Rich Dudley

about:me



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Technology Triumvirate



Document Object Model (DOM)

- A web page is an object of type document
- HTML Elements = Properties
- JavaScript = Methods
- CSS = View Attributes



HTML5 “Manifesto”

- New features are DOM based
- Markup replaces scripting
- Device independence
- Standardized



STANDARDS

The nice thing about standards is there are so many of them to choose from.



HTML5 Compliance

“HTML5 is not yet an official standard, and no browsers have full HTML5 support.”

“But all major browsers (Safari, Chrome, Firefox, Opera, Internet Explorer) continue to add new HTML5 features to their latest versions.”

http://www.w3schools.com/html5/html5_intro.asp



New Semantic Elements

Tag	Description
<article>	Defines an article
<aside>	Defines content aside from the page content
<bdl>	Isolates a part of text that might be formatted in a different direction from other text outside it
<<command>	Defines a command button that a user can invoke
<details>	Defines additional details that the user can view or hide
<summary>	Defines a visible heading for a <details> element
<figure>	Specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.
<figcaption>	Defines a caption for a <figure> element
<footer>	Defines a footer for a document or section
<header>	Specifies an introduction, or a group of navigation elements for a document
<hgroup>	Groups a set of <h1> to <h6> elements when a heading has multiple levels
<mark>	Defines marked/highlighted text
<meter>	Defines a scalar measurement within a known range (a gauge)
<nav>	Defines navigation links
<progress>	Represents the progress of a task
<ruby>	Defines a ruby annotation (for East Asian typography)
<rt>	Defines an explanation/pronunciation of characters (for East Asian typography)
<rp>	Defines what to show in browsers that do not support ruby annotations
<section>	Defines a section in a document
<time>	Defines a date/time
<wbr>	Defines a possible line-break

http://www.w3schools.com/html5/html5_new_elements.asp



More HTML5 Additions

- Media Controls
- Geolocation
- Web Storage
- IndexedDB
- Web Workers
- Drag and Drop
- Custom “data-” attributes



Viewport

- A meta tag to provide scaling hints
- `<meta name="viewport" content="width=320">`



- <http://c1.ms/8e>



Compatibility Charts

Summary

Calculation of support for currently selected criteria

	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Opera Mobile	Android Browser
3 versions back	6.0: 9%	7.0: 85%	14.0: 87%	3.2: 36%	11.0: 58%	3.2: 45%		10.0: 39%	2.1: 41%
2 versions back	7.0: 13%	8.0: 85%	15.0: 88%	4.0: 51%	11.1: 63%	4.0-4.1: 53%		11.0: 58%	2.2: 45%
Previous version	8.0: 23%	9.0: 85%	16.0: 89%	5.0: 65%	11.5: 66%	4.2-4.3: 58%		11.1: 65%	2.3: 47% 3.0: 64%
Current	9.0: 50%	10.0: 86%	17.0: 89%	5.1: 74%	11.6: 70%	5.0: 74%	5.0-6.0: 28%	11.5: 66%	4.0: 69%
Near future	10.0: 80%	11.0: 86%	18.0: 88%	6.0: 76%	12.0: 74%				
Farther future		12.0: 86%	19.0: 88%						

<http://caniuse.com/>



Polyfills

- Polyfills = JavaScript libraries which add functionality through scripting
- <https://github.com/Modernizr/Modernizr/wiki/HTML5-Cross-browser-Polyfills>
- Use modernizr script loader



Audience Test

- “The problem with jokes about CSS is that everybody interprets them differently.”
- @DanTup



CSS 3

- What you have is what you see
- Adding transforms, gradients, reflections, transitions, etc.
- Vendor prefixes for browser specific attributes
- Selectors used by jQuery also



Selectors

- `<label class="MyLabel" />`
`.MyLabel {color:blue;}`
- `<label id="MyLabel" />`
`#MyLabel {color:blue;}`
- `<label id="MyLabel" />`
`label {color:blue;}`
- http://www.w3schools.com/cssref/css_selectors.asp



CSS Media Queries



```
@media screen and (max-width: 980px) {
  #pagewrap {
    width: 95%;
  }
  #content {
    width: 60%;
    padding: 3% 4%;
  }
}
```

```
@media screen and (max-width: 480px) {
  html {
    -webkit-text-size-adjust: none;
  }
  #main-nav a {
    font-size: 90%;
    padding: 10px 8px;
  }
}
```

<http://c1.ms/8f>



But the reverse is true...



JS

!=



JavaScript is...

- An implementation of ECMA Script
- Mature--NN2 in 1995, IE3 in 1996
- Functional
- Prototype based
- Object oriented
- Derived from C
- Also different in every browser



jQuery

- Makes JavaScript easy
- Same code in every browser
- Uses CSS selectors to find elements
- Simplifies Ajax requests
- Core, with plugins



jQuery Syntax

```
jQuery('p').addClass('sidebar');  
$('p').addClass('sidebar');
```

- jQuery function, or its alias
- Selector
- Action (the magic!)
- Parameters



jQuery Plugins

- There is usually a better way
- Think of page bloat!
- Official repository at <http://plugins.jquery.com/>

- Easing
- Autocomplete
- Form Validation
- jQuery UI



jQuery UI

- Easily apply animation effects
- Widget factory
 - Turns HTML into interactive UI
 - As easy to use as jQuery
 - Pre-themed with CSS
 - Functions in every browser
 - Falls back to semantic HTML markup
 - Custom builds
- Themeroles



Debugging

- Fiddler
- “F12” Developer Tools (IE, Chrome)
- Firebug (FireFox, Chrome)

- “How to Debug your jQuery Code”
<http://msdn.microsoft.com/en-us/scriptjunkie/ee819093>



Best Practices

- Use external JS and CSS files
- Test on a variety of browsers and lame machines (VMs are helpful)
- Use plugins if they benefit you
- RTFM - docs are great!
- Participate in the community

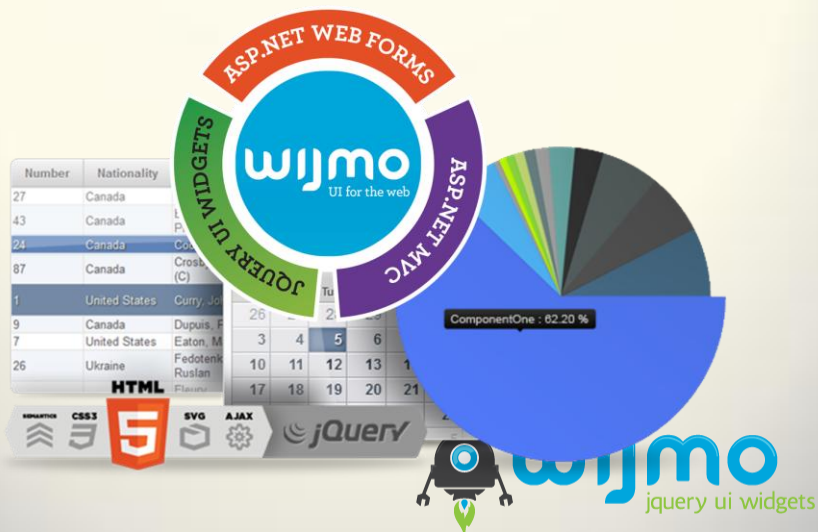


Resources

- <http://w3schools.com/>
- <http://www.html5rocks.com/en/>
- <http://html5please.us/>
- <http://caniuse.com/>
- <http://jquery.com/>
- <http://jqueryui.com/>
- <http://tutsplus.com/course/30-days-to-learn-jquery/>



Wijmo jQuery UI Widgets



“the clear leader and champion”



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