References

List of CSS Properties

CSS 3 Selectors
   http://www.w3.org/TR/css3-selectors/

Zen garden - examples
   http://www.csszengarden.com/

Course Intro
HTML 5 Demos

http://www.youtube.com/watch?v=S5aJAAaGZIlvk

http://bodybrowser.googlelabs.com/ (WebGL)
Course Issues

http://www.eli.sdsu.edu/courses/index.html

Crashing
Course Web Site
Wiki
Screen Casts
Prerequisites
Grading
<table>
<thead>
<tr>
<th>Topics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS</td>
<td></td>
</tr>
<tr>
<td>Javascript</td>
<td></td>
</tr>
<tr>
<td>html5</td>
<td></td>
</tr>
<tr>
<td>Exam</td>
<td>5 weeks</td>
</tr>
<tr>
<td>jQuery mobile</td>
<td></td>
</tr>
<tr>
<td>Phonegap</td>
<td></td>
</tr>
<tr>
<td>Exam</td>
<td>5 weeks</td>
</tr>
<tr>
<td>Android</td>
<td></td>
</tr>
<tr>
<td>Exam</td>
<td>5 weeks</td>
</tr>
</tbody>
</table>
What do you need to know

Java - for Android development

HTML basics

There will lots of material and not much time
## Grading

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>55%</td>
</tr>
<tr>
<td>CSS, JavaScript, HTML5 Exam Feb 22</td>
<td>15%</td>
</tr>
<tr>
<td>jQuery Mobile, Phongap Exam Apr 5</td>
<td>15%</td>
</tr>
<tr>
<td>Android Exam May 19</td>
<td>15%</td>
</tr>
</tbody>
</table>
Twitterrific

Estimated development cost - $250,000

Avi Bryant
Desk just moved from the side of the office with fridges to the side with kettles. Changing my iced vs. hot tea drinking habits accordingly.

Brian Foote
It's quite a bit like #oopsia was. RT @marick: So: what kind of conference is #splashcon #oopsia. Who's it for? Who's it compete with?

Brian Foote
You could always refactor legacy C code. RT @adrianh: Nothing like cleaning up dog sick to ruin your appetite. Bah.

Brian Foote
W/ virtual shelf space unlimited, peer review increasingly seems a medieval anachronism RT @wallingf: What does this do to academic pub cred?

Brian Foote
The Lakota Sioux dubbed Pierce "Dances with Photons" #splashcon #oopsia
Mobile Market World Wide

6.9 Billion people - world population

5.2 Billion active mobile phone subscriptions
3.7 Billion unique phone users
4 Billion people have access to mobile phones
4.2 Billion mobile phones in use

96% of phones have web browser (html or WAP)
72% of phones have web browser

16% of phones are smart
### Handset sales world 2010 - Estimate

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nokia</td>
<td>32%</td>
</tr>
<tr>
<td>Samsung</td>
<td>21%</td>
</tr>
<tr>
<td>LG</td>
<td>9%</td>
</tr>
<tr>
<td>Apple</td>
<td>4%</td>
</tr>
<tr>
<td>RIM</td>
<td>4%</td>
</tr>
<tr>
<td>ZTE</td>
<td>4%</td>
</tr>
</tbody>
</table>

## SmartPhone OS market share 2010 - Estimate

<table>
<thead>
<tr>
<th>OS</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nokia Symbian</td>
<td>39%</td>
</tr>
<tr>
<td>Google Android</td>
<td>21%</td>
</tr>
<tr>
<td>Apple iOS</td>
<td>15%</td>
</tr>
<tr>
<td>RIM Blackberry</td>
<td>15%</td>
</tr>
<tr>
<td>Microsoft Windows Mobile Phone 7</td>
<td>4%</td>
</tr>
<tr>
<td>Samsung Bada</td>
<td>2%</td>
</tr>
</tbody>
</table>

It is hard to get a good estimate of iOS market share. Some estimates only include iPhone, others include iPhone and iPod touch and still others include iPhone, iPod touch and iPad. I believe the above estimate only includes iPhones, but am not sure. Other estimates have put iOS slightly ahead of Android for the year.
Development Language

Symbian - C++

iOS - Objective C

Android - Java

Blackberry - Java

Samsung Bada - C++
Goals

Web Apps for mobile devices

Cross-platform native mobile apps
Web Pages on iPhone

Normal

Optimized for Mobile
Web Pages on iPhone

Using iPhone UI components

iPhone User Guide

iPhone at a Glance

Getting Started

Basics

Syncing & File Sharing

Phone

Mail

Safari

iPod

Messages

Calendar
Optimized Website for iPad

ABNewPersonViewController Class Reference

Inherits from
UIViewController : UIResponder : NSObject

Conforms to
NSCoding (UIViewController)
NSObject (NSObject)

Framework
/System/Library/Frameworks/AddressBookUI.framework

Availability
Available in iOS 2.0 and later.

Declared in
ABNewPersonViewController.h

Related sample code
QuickContacts

Overview

The ABNewPersonViewController class (whose instances are known as new-person view controllers) implements the view controller used to create a contact.

New-person view controllers are modal view controllers that manage a set of view controllers used to create a contact (ABPersonRef) and edit its properties.

Important: New-person view controllers must be used with a navigation controller in order
Web Apps for mobile devices

HTML5
- Local storage
- Off-line apps
- New tags for cleaner pages
- Canvas - 2D graphics
- Audio & video without plugins
- Websockets - cleaner ajax

CSS
- Mobile look & feel

Javascript
- Behavior

jQuery Mobile
- Javascript library
- Mobile widgets & behavior
Cross-platform native mobile apps

Mobile SDK supports web view in native app
   iPhone, Android, Blackberry, Symbian, Palm

Make entire app in web views

Wrap in native app

Same code base for all platforms
Cross-platform Development Systems

Titanium Appcelerator (HTML5, CSS3 and Javascript)
   http://www.appcelerator.com/

PhoneGap (HTML5, CSS3 and Javascript)
   http://www.phonegap.com/

RhoMobile (Ruby)
   http://rhomobile.com/

WidgetPad (HTML5, CSS3 and Javascript)
   http://widgetpad.com/

MoSync (C/C++)
   http://www.mosync.com/
Cross-platform Development Systems

Whoop (WYSIWYG web editor)
http://www.whoop.com/

Vaayoo (drag & drop, wizards)
http://www.vaayoo.com/

appMobi (develop in Chrome web browser)
http://www.appmobi.com/

Number of game oriented platforms exist
Plan

CSS basics
Javascript basics
HTML 5 features
Mobile web pages with jQuery
Cross platform apps with PhoneGap
Android
HTML Overview
# HTML Apps

<table>
<thead>
<tr>
<th>Content</th>
<th>Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML</td>
<td>CSS</td>
</tr>
<tr>
<td>Behavior</td>
<td>Javascript</td>
</tr>
</tbody>
</table>
Content

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>SamplePage</title>
  </head>
  <body>
    <header>About Cats</header>
    <article>Cats have fur!</article>
    <footer>The End</footer>
  </body>
</html>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8" />
<title>SamplePage</title>
<link rel="Stylesheet" href="Sample.css" type="text/css" media="screen" />
</head>
<body>
<header>About Cats</header>
<article>Cats have fur!</article>
<footer>The End</footer>
</body>
</html>
Behavior

```html
<html>
<head>
<script type="text/javascript">
function show_alert()
{
    alert("I am an alert box!");
}
</script>
</head>
<body>
<input type="button" onclick="show_alert()" value="Show alert box" />
</body>
</html>
```

Example from http://www.w3schools.com/js/js_popup.asp
CSS Basics
Cascading Style Sheets - CSS

List of CSS Properties

CSS 3 Selectors
   http://www.w3.org/TR/css3-selectors/

Zen garden - examples
   http://www.csszengarden.com/
Zen Garden - Walk in the Garden

Download the sample html file and css file

The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become
A demonstration of what can be accomplished visually through CSS-based design. Select any stylesheet from the list to load it into this page.

Under the Sea
by Eric Stoltz

Make 'em Proud
by Michael McAghon and Scotty Reifsnider

Orchid Beauty
by Kevin Addison

Oceanscape
by Justin Gray

CSS Co., Ltd.
by Benjamin Klemm

Sakura
by Tatsuya Uchida

Kyoto Forest
by John Poltowski

A Walk in the Garden
by Simon Van Hauweemeiren

The Road to Enlightenment

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So What is This About

There is clearly a need for CSS to be taken seriously by graphic

Participation

Graphic artists only please. You are modifying this page, so
Embedding a Style Sheet

```html
<!DOCTYPE html>
<html xml:lang="en">
<head>
    <title>Sample</title>
    <style type="text/css" media="all">
        <!--
        p.code
        {
            margin: 0 .5in 0 .5in;
            padding: 5px;
        }
        -->
    </style>
</head>
<body>
    <p>A Smalltalk example</p>
    <p class="code">1000 factorial printString size</p>
</body>
</html>
```

Don't do this in production code or code that you turn in for assignments. It makes in very hard to modify websites with more than one page.
Linking CSS to a Web page

Link to External Style Sheet
Embedding a Style Sheet
Importing a Style Sheet
Inlining a Style Sheet
<!DOCTYPE>
<html xml:lang="en">
<head>
    <title>Sample</title>
    <link rel="Stylesheet" href="simple.css" type="text/css" media="screen" />
    <link rel="Stylesheet" href="small.css" type="text/css" media="handheld" />
    <link rel="Stylesheet" href="print.css" type="text/css" media="print" />
</head>
## Media Types

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td></td>
</tr>
<tr>
<td>braille</td>
<td>Braille tactile feedback devices</td>
</tr>
<tr>
<td>embossed</td>
<td>Paged braille printers</td>
</tr>
<tr>
<td>handheld</td>
<td>Handheld devices</td>
</tr>
<tr>
<td>print</td>
<td>Documents viewed in print preview mode &amp; sent to printer</td>
</tr>
<tr>
<td>projection</td>
<td>Projected presentations</td>
</tr>
<tr>
<td>screen</td>
<td>Computer screens</td>
</tr>
<tr>
<td>speech</td>
<td>Speech synthesizers</td>
</tr>
<tr>
<td>tty</td>
<td>Fixed-pitch character grid</td>
</tr>
<tr>
<td>tv</td>
<td>Television-type devices</td>
</tr>
</tbody>
</table>
Different CSS based on size

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8" />
    <title>SizeDetect</title>
    <link rel="Stylesheet" href="phone.css" type="text/css" media="screen and (max-device-width: 320px)"/>
    <link rel="Stylesheet" href="ipad.css" type="text/css" media="screen and (min-device-width: 768px) and (max-device-width: 768px)"/>
</head>
<body>
<p>Red = phone, Blue = iPad, Black = desktop</p>
</body>
</html>
```

This uses feature of CSS3 so is not supported by all browsers. Also does not work well with multiple sizes and ranges. We will see a better way with JavaScript.
Linking Styles to Html – Selectors

Selector  Property  Value

h1 { font-family: sans-serif }

http://www.w3.org/TR/css3-selectors/
### All Selectors CSS1-CSS3

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>E:first-child</td>
<td>E:enabled</td>
</tr>
<tr>
<td>E</td>
<td>E:last-child</td>
<td>E:disabled</td>
</tr>
<tr>
<td>E[foo]</td>
<td>E:first-of-type</td>
<td>E:unchecked</td>
</tr>
<tr>
<td>E[foo=&quot;bar&quot;]</td>
<td>E:last-of-type</td>
<td>E::first-line</td>
</tr>
<tr>
<td>E[foo~=&quot;bar&quot;]</td>
<td>E:only-child</td>
<td>E::first-letter</td>
</tr>
<tr>
<td>E[foo^=&quot;bar&quot;]</td>
<td>E:only-of-type</td>
<td>E::before</td>
</tr>
<tr>
<td>E[foo$=&quot;bar&quot;]</td>
<td>E:empty</td>
<td>E::after</td>
</tr>
<tr>
<td>E[foo*=&quot;bar&quot;]</td>
<td>E:link</td>
<td>E.warning</td>
</tr>
<tr>
<td>E[foo</td>
<td>=&quot;en&quot;]</td>
<td>E:visited</td>
</tr>
<tr>
<td>E:root</td>
<td>E:active</td>
<td>E:not(s)</td>
</tr>
<tr>
<td>E:nth-child(n)</td>
<td>E:hover</td>
<td>E F</td>
</tr>
<tr>
<td>E:nth-last-child(n)</td>
<td>E:focus</td>
<td>E &gt; F</td>
</tr>
<tr>
<td>E:nth-of-type(n)</td>
<td>E:target</td>
<td>E + F</td>
</tr>
<tr>
<td>E:nth-last-of-type(n)</td>
<td>E:lang(fr)</td>
<td>E ~ F</td>
</tr>
</tbody>
</table>
All CSS Properties


264 CSS properties
Multiple Declarations

h1
{
  font-style: normal;
  font-weight: bolder;
  text-align: center;
  font-size: medium;
}
Grouping Selectors

```css
h1 {
    font-style: normal;
    text-align: center;
}

h2 {
    font-style: normal;
    text-align: center;
}

h1, h2 {
    font-style: normal;
    text-align: center;
}
```
Descendant Selectors - h1 em

Match em inside of h1

```html
<h1>Hello</h1>
<p>This <em>is a test</em></p>
<h1><em>This</em> <span>headline is <em>very important</em></span></h1>
```

```html
<h1>Hello</h1>
<p>This <em>is a test</em></p>
<h1><em>This</em> <span>headline is <em>very important</em></span></h1>
```
Child Selectors - h1 > em

Match em directly inside h1

h1 { color: red }
em { color: green }
h1 > em { color: blue }

Hello
This is a test
This headline is very important

<h1>Hello</h1>
<p>This <em>is a test</em></p>
<h1><em>This</em> <span>headline is <em>very important</em></span></h1>
Universal Selector - *  
match any tag

h1 { color: red }
em { color: green }
h1 > * { color: blue }

Hello

This is a test

This headline is very important

<h1>Hello</h1>
<p>This <em>is a test</em></p>
<h1><em>This</em> <span>headline is <em>very important</em></span></h1>
Adjacent Sibling Selector - h1 + p match p immediately after h1

h1 { color: red }
em { color: green }
h1 + p { color: blue }

<p>Before</p>
<h1>Hello</h1>
<p>Middle</p>
<p>Later</p>
<h1>Goodbye</h1>
<p>End</p>
Attribute Selector

```html
<div name="sam">1</div>
<p name="sam" >2</p>
<p>3</p>
<a href="index.html" name="pete">4</a>
<p name="sam roger pete" >5</p>
```

```css
[name] { color: lightblue}
```

All tags with name attribute

```css
a[name] { color: lightblue}
```

All a tags with name attribute
Attribute Selector

```
<div name="sam">1</div>
<p name="sam">2</p>
<p>3</p>
<a href="index.html" name="pete">4</a>
<p name="sam roger pete">5</p>
```

```
[name=pete] {color: lightblue}
```

All tags with name attribute with value equal to "pete"

```
[name~=pete] {color: lightblue; }
```

All tags with name attribute with values containing "pete" in whitespace list
In case you were wondering

<table>
<thead>
<tr>
<th>Expression</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E[foo]</td>
<td>an E element with a &quot;foo&quot; attribute</td>
</tr>
<tr>
<td>E[foo=&quot;bar&quot;]</td>
<td>an E element whose &quot;foo&quot; attribute value is exactly equal to &quot;bar&quot;</td>
</tr>
<tr>
<td>E[foo~=&quot;bar&quot;]</td>
<td>an E element whose &quot;foo&quot; attribute value is a list of whitespace-separated values, one of which is exactly equal to &quot;bar&quot;</td>
</tr>
<tr>
<td>E[foo^=&quot;bar&quot;]</td>
<td>an E element whose &quot;foo&quot; attribute value begins exactly with the string &quot;bar&quot;</td>
</tr>
<tr>
<td>E[foo$=&quot;bar&quot;]</td>
<td>an E element whose &quot;foo&quot; attribute value ends exactly with the string &quot;bar&quot;</td>
</tr>
<tr>
<td>E[foo*=&quot;bar&quot;]</td>
<td>an E element whose &quot;foo&quot; attribute value contains the substring &quot;bar&quot;</td>
</tr>
<tr>
<td>E[foo</td>
<td>=&quot;en&quot;]</td>
</tr>
</tbody>
</table>
Class

<p class="sam">1</p>
<p class="sam">2</p>
<p class="pete">3</p>
<a class="pete sam">4</a>
<p name="roger sam pete">5</p>

All tags with class sam

All p tags with class sam

All tags with class sam & pete

Thursday, January 20, 2011
ID

Two elements in same page can not have same id

\(<div id="sam">1</div>\)
\(<p id="pete">2</p>\)

#sam { color: lightblue }

Match the one element
with id = sam

p#sam { color: lightblue }

Match the one p element
with id = sam
Multiple id same value - illegal

```
<div id="sam">1</div>
<p id="sam">2</p>
<p id="sam">3</p>
<a id="pete sam">4</a>
<p id="roger sam pete">5</p>
```

#sam { color: lightblue }

Safari, Firefox, Chrome
Opera for mac

This is not legal

Don't count on this working in all browsers
Strict verses Lax Rendering

Strict

Uses don't like it when pages don't show

Lax

Developers don't know when they have errors in a page

Other browsers may not handle that error
Span - inline HTML tag

<p>
  <span class="firstwords">The first few words</span> of a paragraph could be in small-caps. Style may also be inlined, such as to change the style of a word like <span style="font-family: Arial"> Arial</span>.<br/>
</p>

Used to use add style text not in normal tags
Div

<div class="note">
  <h1>Divisions</h1>
  <p>
    Since DIV may contain other block-level containers, it is useful for marking large sections of a document, such as this note.
  </p>
  <p>
    The closing tag is required.
  </p>
</div>
Divs & HTML 5

```html
<div id="navbar">
  <ul>
    <li><a href="/">Home</a></li>
    <li><a href="/blah">Next</a></li>
  </ul>
</div>
```

With HTML 5 Tag

```html
<navbar>
  <ul>
    <li><a href="/">Home</a></li>
    <li><a href="/blah">Next</a></li>
  </ul>
</navbar>
```
Web developers dilemma

Cool useful new HTML, CSS features

Not supported in old browsers

Many people do not update browsers