web design 101
web design 101

have you installed?

- a text editor
- Cyberduck (or another FTP client)
- a web inspector for your browser

details on web.mit.edu/2.744/www
what’s in a webpage?
what’s in a webpage?
what’s in a webpage?

- **hypertext markup language (HTML)** contains text and links to other pages
- **cascading style sheets (CSS)** defines the look and feel of your site
- **javascript (JS)** adds interactivity to your site
design guidelines

enhancing usability and readability
sketch then code
sketch then code

some content may be “below the fold”
sketch then code

add navigation arrows
design for the screen

1997

today
design for the screen

responsive design
design for the screen

80%

20%
provide context
tell the user where he/she is
don’t reinvent the wheel
modify existing layouts and templates

getbootstrap.com

foundation.zurb.com

verynicesites.com
organize content systematically
\[
\frac{1}{12} = \text{lcd} \left( \frac{1}{1} \frac{1}{2} \frac{1}{3} \frac{1}{4} \frac{1}{6} \right)
\]

...why 12?

can achieve many different layouts
HTML basics
HTML structure

```
<lunch>
  <hamburger>
    <bun/>
    <lettuce/>
    <tomato/>
    <cheese/>
    <patty/>
    <bun/>
  </hamburger>
</lunch>
```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Page</title>
  </head>
  <body>
    <p>Hello World!</p>
  </body>
</html>
HTML tags

tag structure

open tag  

<tag attr="value"> 

content...

close tag  

</tag>
HTML tags

Tag structure

<patty cooked="med">yum.</patty>
HTML tags

- paragraph: `<p>`
- headings: `<h1>`...`<h6>`
- link / anchor: `<a>`
- lists: `<ul>`,`<ol>`,`<li>`
- tables: `<table>`,`<tr>`,`<td>`
- images, videos: `<img/>`,`<video>`

view all the tags at: [http://www.w3schools.com/tags/](http://www.w3schools.com/tags/)
HTML tags

text formatting

<b>,<strong> - bold
<i>,<em> - italics
<sup>,<sub> - super/subscript

view all the tags at: http://www.w3schools.com/tags/
HTML tags

organization

<div> - container
<section> - section
<article> - article
<br/> - line break
<hr/> - horizontal rule

view all the tags at: http://www.w3schools.com/tags/
adding style
**CSS basics**

inline styling

```html
<p style="font-size:14px;">...</p>
```

**pros**
- highly specific

**cons**
- highly specific
- hard to maintain
- HTML/CSS coupled
**CSS basics**

**block styling**

```html
<style>
p  {
  font-size: 14px;
}
</style>
```

**pros**

- affects *all* matched elements

**cons**

- HTML/CSS coupled
CSS basics
separate file

```css
p {
  font-size: 14px;
}
```

**pros**
- write once for whole site
- HTML & CSS decoupled

**cons**
- harder to control
CSS basics
rule syntax

selector {
    property: value;
    property: value;
    ...
}

## CSS basics properties

<table>
<thead>
<tr>
<th>Typography</th>
<th>Colors</th>
<th>Positioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>font-size</td>
<td>color</td>
<td>position</td>
</tr>
<tr>
<td>font-weight</td>
<td>background-color</td>
<td>width, height</td>
</tr>
<tr>
<td>font-family</td>
<td>background-image</td>
<td>margin</td>
</tr>
<tr>
<td>line-height</td>
<td>line-height</td>
<td>padding</td>
</tr>
<tr>
<td>text-align</td>
<td>text-align</td>
<td>border</td>
</tr>
</tbody>
</table>

---

[view all](http://htmldog.com/reference/cssproperties/)

[view all](http://www.w3schools.com/cssref/)
CSS basics
selectors

<table>
<thead>
<tr>
<th>HTML element</th>
<th>CSS rule</th>
</tr>
</thead>
</table>
| <p>                   | p {
|                       |   font-size: 14px;
|                       | }                               |
| <p class="bp">       | .bp {
|                       |   color: gray;
|                       | }                               |
| <p id="headline">    | #headline {
|                       |   font-size: 20px;
|                       | }                               |
## CSS basics
### cascading selectors

<table>
<thead>
<tr>
<th>HTML element</th>
<th>CSS rule</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;div class=&quot;intro&quot;&gt;</code>&lt;br&gt;<code>&lt;h1&gt;...&lt;/h1&gt;</code>&lt;br&gt;<code>&lt;/div&gt;</code></td>
<td><code>.intro h1 {</code>&lt;br&gt;<code>  font-size:18px;</code>&lt;br&gt;<code>}</code></td>
</tr>
</tbody>
</table>

**style h1 inside every element with class="intro"**
CSS basics
box model

references
http://htmldog.com/reference/cssproperties/
http://www.w3schools.com/cssref/
The Beauty of CSS Design

A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example HTML file and CSS file.
CSS Zen Garden

csszengarden.com

CSS ZEN GARMENTS

A DEMONSTRATION OF WHAT CAN BE ACCOMPLISHED THROUGH CSS-BASED DESIGN. SELECT ANY STYLE SHEET FROM THE LIST TO LOAD IT INTO THIS PAGE.

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

We must clear the mind of the past. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, W3P, and the major browser creators.
2.744 Zen Garden

The Beauty of CSS Design

A exploration of what can be accomplished using CSS-based design.

View the base html file and css file

The Road to Enlightenment

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The 2.744 Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the time-honored techniques in new and invigorating fashion. Become one with the web.

So What is This About?

There is a continuing need to show the power of CSS. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on one you will load the style sheet into this very page. The HTML remains the same, the only thing that has changed is the external CSS file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. Designers and coders alike have contributed to the beauty of the web; we can always push it further.

Instructions

1. Update the <meta> tags and <title> tag in index.html and instructions.html.
2. Mix in some other fonts using Adobe Edge Web Fonts
3. Make your CSS responsive so that the layout changes on smaller screens (e.g. cell phones).
4. Add some interactivity using Javascript by modifying js/app.js.

View Designs By

- Sherry Ren
- Ethan Cong

View Designs By

- Matthew Mettitz
- Chase Cline
- Audrey Bosquet
- James Christian
- Richard Mullen
- Daniel Bloch

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what’s next?

for class Thursday, February 27
no official class

tutorial: building your storyboard site?

2.744 Product Design