# open.michigan

UNIVERSITY OF MICHIGAN

# CSS
# Cascading Style Sheets

Charles Severance

www.dr-chuck.com

http://en.wikipedia.org/wiki/Cascading_Style_Sheets

# The big picture...
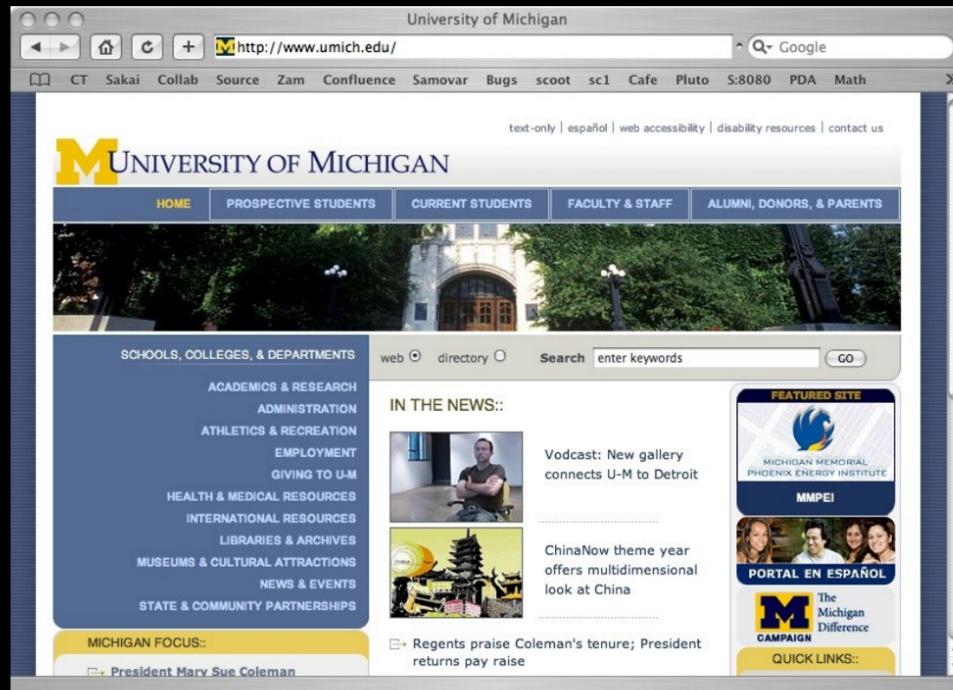


In the modern era of web design we represent content and meaning in HTML and formatting and layout in CSS.

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>University of Michigan</title>
....

@import "/CSS/graphical.css"/**/;
p.text strong, .verbose, .verbose p, .verbose h2{text-indent:-876em;position:absolute}
p.text strong a{text-decoration:none}
p.text em{font-weight:bold;font-style:normal}
div.alert{background:#eee;border:1px solid red;padding:.5em;margin:0 25%}
a img{border:none}
.hot br, .quick br, dl.feature2 img{display:none}
div#main label, legend{font-weight:bold}

Source: http://www.umich.edu

HTML has evolved a *lot* over the years - as computers and networks have gotten faster.

1995

2007
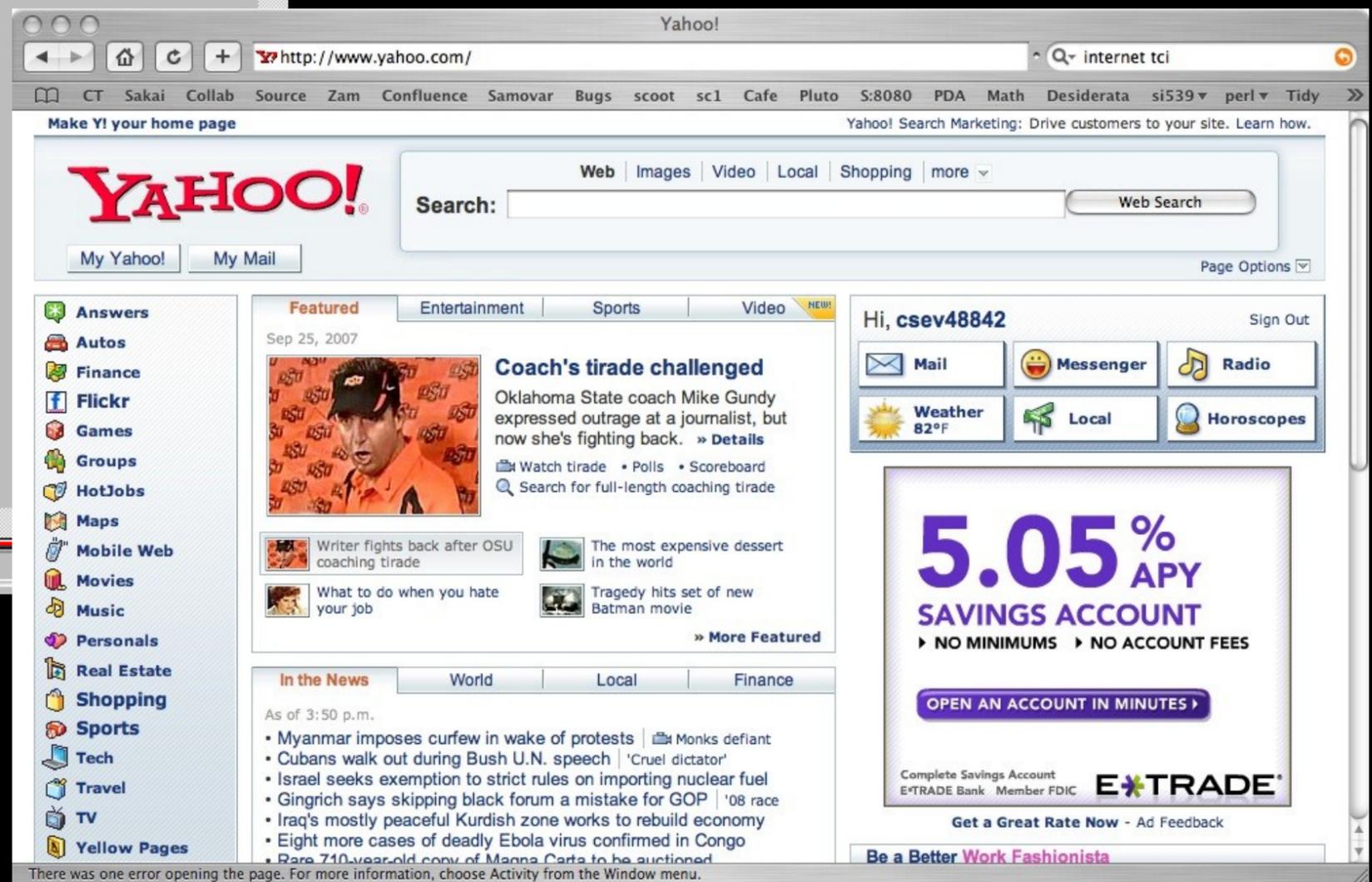
Source: www.yahoo.com

# CSS Allows Separation of effort / specialization

## Developer

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0
Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>University of Michigan</title>
....
```

## Designer

```
@import "/CSS/graphical.css"/**/;
p.text strong, .verbose, .verbose p, .verbose h2{text-indent:-
876em;position:absolute}
p.text strong a{text-decoration:none}
p.text em{font-weight:bold;font-style:normal}
div.alert{background:#eee;border:1px solid
...
```

Everyone needs to know some HTML and some CSS and some programming - but to be truly skilled at a professional level requires deep understanding and specialization.

# Tranforming the look and feel of a page using a CSS style sheet.
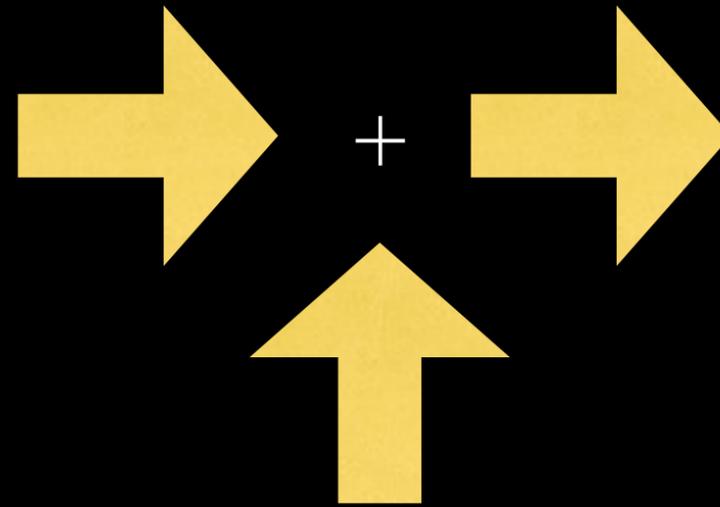


```
body {
    font-family: arial, san-serif;
}
a, a:link
{
color: #0000cc;
}

...
```

# Applying Basic Styles

# The Browser has "default styling" for all tags.

```
<h1><a href="index.htm">
                    </a></h1>

<ul>
 <li><a href="sites.htm">        </a></li>
 <li><a href="topics.htm" >         </a></li>
</ul>
<h2>                          </h2>
<p>




</p>
```
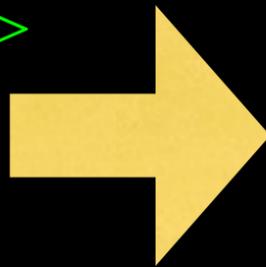
# We will apply CSS to the tags in the document.
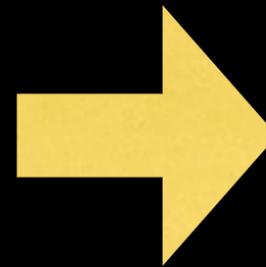


# With no changes to the HTML.

# Lots of CSS properties to play with

background-color, border-width, border-color, margin-top, padding, font-family, top, left, right, float,  font-size, background-image, text-align, text-decoration, font-style, font-weight, vertical-align, visibility, overflow, ....

We can set these properties on any HTML tag in a document.

# CSS CHEAT SHEET

## SYNTAX

**Syntax**

selector {property: value;}

**External Style Sheet**

<link rel="stylesheet" type="text/css" href="style.css" />

**Internal Style**

<style type="text/css">
selector {property: value;}
</style>

**Inline Style**

<tag style="property: value">

## GENERAL

| | |
|---|---|
| Class | String preceded by a period |
| ID | String preceded by a hash mark |
| div | Formats structure or block of text |
| span | Inline formatting |
| color | Foreground color |
| cursor | Appearance of the cursor |
| display | block; inline; list-item; none |
| overflow | How content overflowing its box is handled |
| | visible, hidden, scroll, auto |
| visibility | visible, hidden |

## FONT

| | |
|---|---|
| font-style | Italic, normal |
| font-variant | normal, small-caps |
| font-weight | bold, normal, lighter, bolder, integer (100-900) |
| font-size | Size of the font |
| font-family | Specific font(s) to be used |

## TEXT

| | |
|---|---|
| letter-spacing | Space between letters |
| line-height | Vertical distance between baselines |

## BOX MODEL

| | |
|---|---|
| Height / Width / Margin Border Padding | height; width; margin-top; margin-right; margin-bottom; margin-left; padding-top; padding-right; padding-bottom; padding-left; |

## BORDER

| | |
|---|---|
| border-width | Width of the border |
| border-style | dashed; dotted; double; groove; inset; outset; ridge; solid; none |
| border-color | Color of the border |

## POSITION

| | |
|---|---|
| clear | Any floating elements around the element? |
| | both, left, right, none |
| float | Floats to a specified side |
| | left, right, none |
| left | The left position of an element |
| | auto, length values (pt, in, cm, px) |
| top | The top position of an element |
| | auto, length values (pt, in, cm, px) |
| position | static, relative, absolute |
| z-index | Element above or below overlapping elements? |
| | auto, integer (higher numbers on top) |

## BACKGROUND

| | |
|---|---|
| background-color | Background color |
| background-image | Background image |

Source: http://www.lesliefranke.com/files/reference/csscheatsheet.html

# Anatomy of a CSS Rule

selector - which part of the
document does this rule apply
to

body
  font-family: arial, sans-serif;
  font-size: 100%;        }

property - which
aspect of CSS are
we changing

value - What are we
setting the property to.

# Multiple tags with same styling

```
h1, h2, h3 {
    color: yellow;
    background-color: black;
}
```

Making a noticeable background color is a fun way to debug / identify blocks.

# Three ways to add style rules

- Inline Style - Add style information to a tag

- Embedded Style - Add style information to the document at the beginning

- External Style Sheet - Put all of your style in an external file

  - Preferred - because two people can work independently

```html
<h1>
<img src="appengine.jpg" width="142" height="109"
    alt="Google App Engine Logo"
    style="float:right"/>
 Google App Engine: About</h1>
<p>
Welcome to the site dedicated to
learning the Google Application Engine.
We hope you find
www.appenginelearn.com useful.
</p>
```

Inline Styles

# Embedded Style

```
<html xmlns="http://www.w3.org/1999/xhtml"> <head>
  <title>Learning the Google App Engine</title>  <style
type="text/css">
    body {
        font-family: arial, sans-serif;
    }
  </style>
</head>
<body>
    <h1><a href="index.htm">
      AppEngineLearn</a></h1>
    <ul>
      <li><a href="sites.htm">Sites</a></li>
<li><a href="topics.htm" >Topics</a></li>      </ul>
```
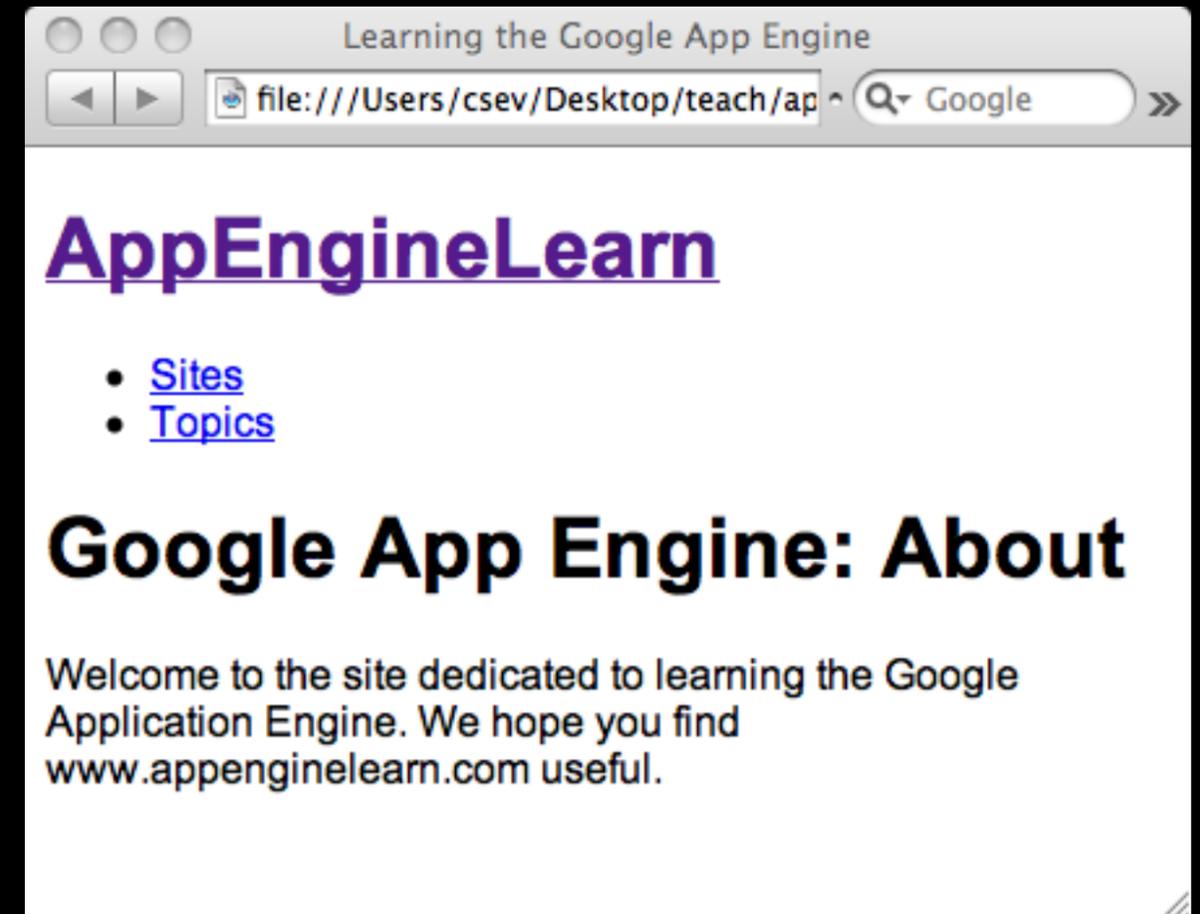
```
<html xmlns="http://www.w3.org/1999/xhtml">
 <head>
  <title>Learning the Google App Engine</title>
  <link type="text/css" rel="stylesheet" href="glike.css">
</head>
 <body>
   <h1><a href="index.htm">
    AppEngineLearn</a></h1>
   <ul>
    <li><a href="sites.htm">Sites</a></li>
    <li><a href="topics.htm" >Topics</a></li>
   </ul>
```

glike.css:

```
body {
   font-family: arial, sans-serif;
}
```

```html
<head>
  <title>Learning the Google App Engine</title>
  <link type="text/css" rel="stylesheet" href="glike.css">
</head>
```

```
csev$ ls -l
total 32
-rw-r--r--  1 csev  staff    44 Jan 28 13:14 glike.css
-rw-r--r--  1 csev  staff   680 Feb 17 08:25 index.htm
-rw-r--r--  1 csev  staff   886 Feb 17 08:00 sites.htm
-rw-r--r--  1 csev  staff   681 Feb 17 08:01 topics.htm
csev$
```

We put the CSS file in the same directory so the link works.

# Fonts

- Default fonts are ugly and they have Serifs - which make them harder to read on a screen

- So the first thing I usually want to do is override the font in my document

- And I want to do this everywhere.



Header One

Paragraph about ugly default fonts.



Figure 3.5. Highlighting the serifs of a serif font (Georgia)

serif

# Fonts

```
body {
 font-family: "Trebuchet MS", Helvetica, Arial, sans-serif;
 font-size: x-large;
}
```

Fallback fonts: serif, sans-serif, monospace, cursive and fantasy.

# Font Factors

font-size:
xx-small
x-small
small
medium
large
x-large
xx-large

font-weight: bold or normal

font-style: normal or italic

text-decoration: none, underline, overline, or line-through

# Color Names

- W3C has listed 16 color names that will validate with an HTML validator.

- The color names are: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

**Color Values**

HTML colors can be defined as a hexadecimal notation for the combination of Red, Green, and Blue color values (RGB).

The lowest value that can be given to one light source is 0 (hex #00) and the highest value is 255 (hex #FF).

The table below shows the result of combining Red, Green, and Blue light sources:.

| Color | Color HEX | Color RGB |
|---|---|---|
|  | #000000 | rgb(0,0,0) |
|  | #FF0000 | rgb(255,0,0) |
|  | #00FF00 | rgb(0,255,0) |
|  | #0000FF | rgb(0,0,255) |
|  | #FFFF00 | rgb(255,255,0) |
|  | #00FFFF | rgb(0,255,255) |
|  | #FF00FF | rgb(255,0,255) |
|  | #C0C0C0 | rgb(192,192,192) |
|  | #FFFFFF | rgb(255,255,255) |

**W3C Standard Color Names**

W3C has listed 16 color names that will validate with an HTML validator.

The color names are: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

http://www.w3schools.com/html/html_colors.asp

# Colors by the number...

Three Numbers, Red, Green , and Blue - each from 00 - FF (Hexidecimal)

#e2edff

#edf = #eeddff

#ffffff  = white
#000000 = black
#ff0000 = red
#00ff00 = green
#0000ff = blue

| Color Name | Color HEX | Color |
|---|---|---|
| AliceBlue | #F0F8FF | |
| AntiqueWhite | #FAEBD7 | |
| Aqua | #00FFFF | |
| Aquamarine | #7FFFD4 | |
| Azure | #F0FFFF | |
| Beige | #F5F5DC | |
| Bisque | #FFE4C4 | |
| Black | #000000 | |
| BlanchedAlmond | #FFEBCD | |
| Blue | #0000FF | |
| BlueViolet | #8A2BE2 | |
| Brown | #A52A2A | |

Colors

RGB Sliders

Red        170
Green      77
Blue       255

Opacity    100 %
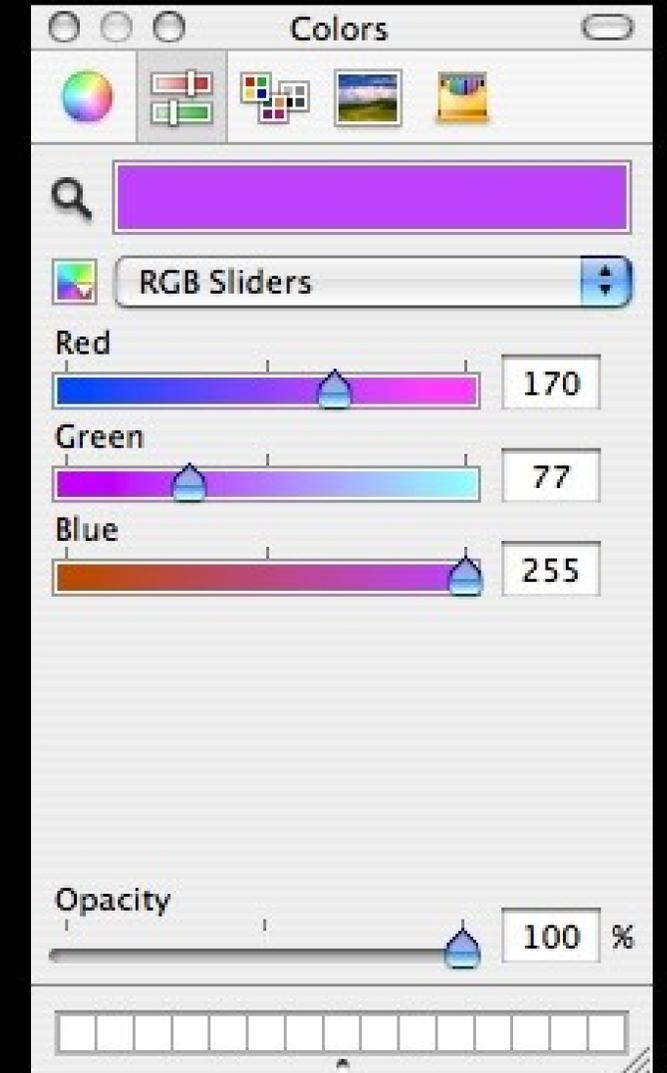
Web-safe colors

Source: http://www.w3schools.com/css/css_colornames.asp

# Default Styling for Links



Post-Click:

Hello there my name is Chuck.

Go ahead and click on here.

Downright Ugly!

# Styling Links

```css
a {
 font-weight: bold;
}
a:link {
  color: black;
}
a:visited {
 color: gray;
}
a:hover {
 text-decoration: none;
 color: white;
 background-color: navy;
}
a:active {
 color: aqua;
 background-color: navy;
}
```

link - before a visit

visited - after it has been visited

hover - when your mouse is over it
but you have not clicked

active - you have clicked it and you
have not yet seen the new page

Browser default styling for links is
downright ugly!

# CSS Tags and Attributes

- As CSS was introduced they introduced two new tags that are pretty much there to serve as handles for styling

    - `<div>` - A block tag (breaks justification)

    - `<span>` - An inline tag that does not break justification

- There are two attributes with special meaning to CSS

    - id= - Marks a unique block within the document for styling (use only once)

    - class= - Marks a non-unique tag within the document for styling (multi-use)

# div as Container

```
<div>
   <p>This is a paragraph inside a div.</p>
   <p>So is this.</p>
</div>
```

The id attribute on the tag allows us to uniquely mark a div in a document. The id tag is also useful for screen readers.

```
<div id="header">
   <ul>
   <li><a href="sites.htm">Sites</a></li>        <li><a href="topics.htm" >Topics</a></li>
   </ul>
</div>
```

"div" stands for "division" as it allows us to divide our page into parts or sections and then do something different with each "section".

# Styling a block with "id"

Everything within block

```
#footer {
    font-style: italic;
    font-family: Times, serif;
}
```

or

Paragraphs within block

```
#footer p {
    font-style: italic;
    font-family: Times, serif;
}
```

```
<div id="footer">
<p>Please send any comments to csev@umich.edu</p>
</div>
```

id= identifies a *particular* block - only one in a document

# Nested divs

```
<div id="outer">
 <div id="nested1">
   <p>A paragraph inside the first nested div.</p>
 </div>
 <div id="nested2">
   <p>A paragraph inside the second nested div.</p>
 </div>
</div>  <!-- End of the outer div -->
```

Adding divs give us a "handle" to  apply styling (CSS) to a block of text.

# Paragraphs and Divs

<p>This is a paragraph.</p>
<div>This looks like a paragraph, but it's actually a div.</div>
<p>This is another paragraph.</p>
<div>This is another div.</div>



This is a paragraph.

This looks like a paragraph, but it's actually a div.

This is another paragraph.

This is another div.

Think

This is a paragraph.

This looks like a paragraph, but it's actually a div.

This is another paragraph.

This is another div.

# Styling with class=

```css
.fun {
  color: #339999;
  font-family: Georgia, Times, serif;
  letter-spacing: 0.05em;
}
```

class can be used many times in a document.

```html
<p class="fun">A man walks into a bar; you would've thought he'd  see it coming!</p>
<p>Have a nice day.<p>
<p class="fun">More fun stuff</p>
```

# Span (Invisible tag)

&lt;p&gt;&lt;span class="fun"&gt;Bubble Under&lt;/span&gt; is a group of diving enthusiasts based in the south-west UK who meet up for diving trips in the summer months when the weather is good and the bacon rolls are flowing. We arrange weekends away as small groups to cut the costs of accommodation and travel and to ensure that everyone gets a trustworthy dive buddy.&lt;/p&gt;

Sometimes you want to style something smaller than a whole block - then use span.  Do not use span if you are applying something to a whole block - just put your styling on the enclosing block tag.

```
<body>
 <div id="header">
   <h1><a href="index.htm"class="selected">SI502</a></h1>
   <ul class="toolbar">
    <li><a href="books.htm">Books</a></li>
    <li><a href="topics.htm" >Topics</a></li>
   </ul>

 </div>
 <div id="bodycontent">
   <h1>Networked Computing: About</h1>
   <p>
   This course is a survey course covering a broad
    range of technology topics at a high level.
   The course is aimed at students with no prior
    technical skills other than the general use of
    a computer.   Really!
   </p>
 </div>
</body>
```

When building HTML, we use id and class to add little "handles" in the HTML to make it so we can "style" areas of the document.

Pick div id's to indicate meaning.

# CSS CHEAT SHEET

## Shorthand*

background
border
border-bottom
border-left
border-right
border-top
font
list-style
margin
padding

## Comments

/* Comment */

## Pseudo Selectors

:hover
:active
:focus
:link
:visited
:first-line
:first-letter

## Media Types

all
braille
embossed
handheld
print
projection
screen
speech
tty
tv

## Units

Length %
em
pt

## SYNTAX

**Syntax**

selector {property: value;}

**External Style Sheet**

<link rel="stylesheet" type="text/css" href="style.css" />

**Internal Style**

<style type="text/css">
selector {property: value;}
</style>

**Inline Style**

<tag style="property: value">

## GENERAL

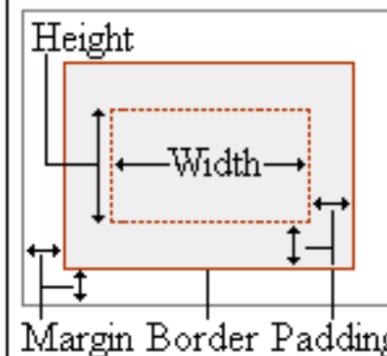| | |
|---|---|
| Class | String preceded by a period |
| ID | String preceded by a hash mark |
| div | Formats structure or block of text |
| span | Inline formatting |
| color | Foreground color |
| cursor | Appearance of the cursor |
| display | block; inline; list-item; none |
| overflow | How content overflowing its box is handled |
| | visible, hidden, scroll, auto |
| visibility | visible, hidden |

## FONT

| | |
|---|---|
| font-style | Italic, normal |
| font-variant | normal, small-caps |
| font-weight | bold, normal, lighter, bolder, integer (100-900) |
| font-size | Size of the font |
| font-family | Specific font(s) to be used |

## TEXT

| | |
|---|---|
| letter-spacing | Space between letters |
| line-height | Vertical distance between baselines |

## BOX MODEL

Height
Width
Margin Border Padding

height; width; margin-top; margin-right; margin-bottom; margin-left; padding-top; padding-right; padding-bottom; padding-left;

## BORDER

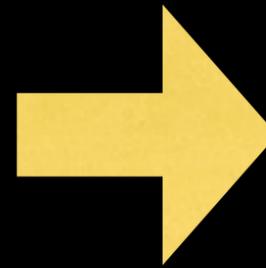| | |
|---|---|
| border-width | Width of the border |
| border-style | dashed; dotted; double; groove; inset; outset; ridge; solid; none |
| border-color | Color of the border |

## POSITION

| | |
|---|---|
| clear | Any floating elements around the element? |
| | both, left, right, none |
| float | Floats to a specified side |
| | left, right, none |
| left | The left position of an element |
| | auto, length values (pt, in, cm, px) |
| top | The top position of an element |
| | auto, length values (pt, in, cm, px) |
| position | static, relative, absolute |
| z-index | Element above or below overlapping elements? |
| | auto, integer (higher numbers on top) |

## BACKGROUND

| | |
|---|---|
| background-color | Background color |
| background-image | Background image |

http://www.lesliefranke.com/files/reference/csscheatsheet.html

A Running Example…

Transform from ugly to fancy with CSS
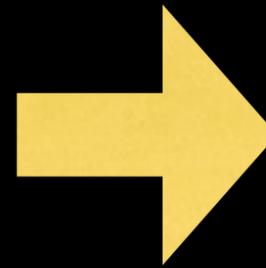
First: Just work with the tags and fix fonts / colors

```
<head>
  <title>Learning the Google App Engine</title>
  <link type="text/css" rel="stylesheet" href="glike.css">
</head>
```

```css
body {
    font-family: arial, sans-serif;
}
a {
    color: blue;
}
h1 a {
    text-decoration: none;
    color: black;
}
```

# Block Layout

# Quick Advertisement - Firefox

- You pretty much need to use Firefox for serious website development

- Important plugins:

  - Web Developer - Chris Pedrick

  - FireBug - Joe Hewitt

http://addons.mozilla.org/

http://www.dr-chuck.com/

Google

Latest Headlines | Sakai | dr-chuck.com | NWA | Chuck's Media | Sakai Based Service:... | iPhone Navigation | Personal Learning an...

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**Outline menu:**
- Outline Frames
- Outline Headings
- Outline Links ▶
- Outline Tables ▶
- Outline Block Level Elements
- ✓ Outline Deprecated Elements
- Outline Positioned Elements ▶
- Outline Current Element
- Outline Custom Elements...
- ✓ Show Element Names When Outlining

`<font>` `<font>` This site contains a bunch of stuff including software, television shows and other miscellaneous material. This also includes a number of activities and sites ... with my good friend Richard Wiggins.

`<font>` Recent Video: `<font>` John Merlin Williams Goes Street Racing on his Ducati 750
`<font>` Recent Video: `<font>` Dr. Chuck Goes Motocross Racing on his Simple RF476

`<center>` `<font>` `<font>` Now Playing on Netfact TV

Charles Severance

`<font>` Quick Links

Chuck's TV and Media
Chuck's Talks
Chuck's Book
Chuck's Columns
Resume and Bio
Blog (26-Nov 11:44)
Chuck's Papers

UM School of Information
Sakai Planet Blog

`<center>`

More of dr-chuck's photos

www.flickr.com

Teaching
SI 182 - Building Applications for Information Environments
SI 539 - Design of Complex Web Sites (Rails)
SI 543 - Introductory Programming (Java) (Login)
See also www.rubylearn.com and my raw course podcasts

Web/Multimedia sites
A Film About Brent and His ATV
How to install a hardwood floor in 4 minutes!
Dr. Chuck goes motocross racing (2007)
Dr. Chuck goes stock car racing (2002)
Audition Tape which we sent to TechTV which was rejected :(.
Making a Simple Cartoon Three short animations from Chuck and Brent.
Nuthin' But Net A Television show
NewsTalk 870 - Rich and I were on the radio once per month from the mid 90's through 2004.
More Multimedia Projects...

Software Tools
PHP image software for v300 and Treo-600 SMS
ClipBoard-2000 - Distance Education Software
Sync-O-Matic 2000 - Distance Education Software
Other software Tools

Projects
Practical Home Networking - A book that Chuck and Rich almost got written. (Version 1,

Sakai Video Report: Sakai and uPortal at UNISA - Johan van den Berg

Produced: June 6. 2006 This video was taped while are the Sakai meeing in Vancouver. Johan discusses their upcoming project to integrate uPortal and Sakai to produce the UNISA campus portal. Johan attended both the Sakai and JA-Sig meetings and descibed the UNISA approach to both cmmunities. Details: 3 minutes, Windows Media 300 kbps.

`<font>` This is a randomly selected show

Done

# Two kinds of elements

- Inline - affects how text looks

  - strong, span

- Block - Containers that can be laid out

  - Paragraphs, etc

- CSS can change a tag from inline to block

```
#navigation li {
  display: inline;
}
```

# Inline Elements

- Flowed with other text

- span, em, strong, cite, a

- Inline tags can be nested as long as they match

  - `<span class="important"><cite>Stuff</cite></span>`

- Block can contain inline - but inline cannot contain block

# Block Level Elements

- Starts on its own line - ends justification and starts a new block

- Can be a container for other elements

- h1 - h6, p, div, blockquote, ul, ol, form

- Blocks can contain other blocks

```
<div id="content">
 <p>One </p>
 <p>Two</p>
</div>
```

http://www.dr-chuck.com/

Google

Sakai    dr-chuck.com    NWA    Chuck's Media    iPhone Navigation    I3k    CT    SI 182    Sakai Based Service : ...

Disable ▾    Cookies ▾    CSS ▾    Forms ▾    Images ▾    Information ▾    Miscellaneous ▾    Outline ▾    Resize ▾    Tools ▾    View Source ▾    Optio

This site contains a bunch of stuff including software, television shows and other miscellaneous material. This also includes a number of activities and done with my good friend Richard Wiggins.

**New Video:** Dr. Chuck' Ruby Lecture from Universidad Polite (www.upv.es).
**Recent Video:** Dr. Chuck Goes Motocross Racing on his Suz

Outline Frames
Outline Headings
Outline Links                          ▸
Outline Tables                         ▸
✓ Outline Block Level Elements
Outline Deprecated Elements
Outline Positioned Elements            ▸

Outline Current Element
Outline Custom Elements...

✓ Show Element Names When Outlining

Charles Severance

Quick Links

Chuck's TV and Media
Chuck's Talks
Chuck's Book
Chuck's Columns
Resume and Bio
Blog (29-Jan 12:10)
Chuck's Papers

UM School of Information
Sakai Planet Blog

< div >

< p > Chuck's Twitter
< ul >

Good week - the MLK holiday and code weekend ended up with about 30 hours working on Sakai - got some stuff done and more stuff started. 1 day ago
Iphone make slow motion grocery shopping survivable. 1 day ago

< p > Teaching
SI 182 - Building Applications for Information Environments
SI 539 - Design of Complex Web Sites (Rails)
SI 543 - Introductory Programming (Java) (Login)
See also www.rubylearn.com and my raw course podcasts

Web/Multimedia sites
A Film About Brent and His ATV
How to install a hardwood floor in 4 minutes!
Dr. Chuck goes motocross racing (2007)
Dr. Chuck goes stock car racing (2002)
Audition Tape which we sent to TechTV which was rejected :(.
Making a Simple Cartoon Three short animations from Chuck and Brent.
Nuthin' But Net A Television show
NewsTalk 870 - Rich and I were on the radio once per month from the mid 90's through 2004.
More Multimedia Projects...

Software Tools
PHP image software for v300 and Treo-600 SMS
ClipBoard-2000 - Distance Education Software
Sync-O-Matic 2000 - Distance Education Software
Other software Tools

Projects
Practical Home Networking - A book that Chuck and Rich almost got written. (Version

SI182 is a new undergraduate programming course focused on learning how to program to analyze data. The course will be taught in Python. For more information see www.si182.com.

< p > This is a randomly selected show from our library of shows - more shows will be added as they are digitized. You can view the entire collection here.

Done

Source: www.dr-chuck.com
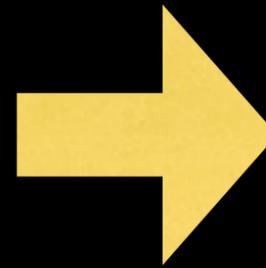
Now we will move things around, add background and borders, etc.
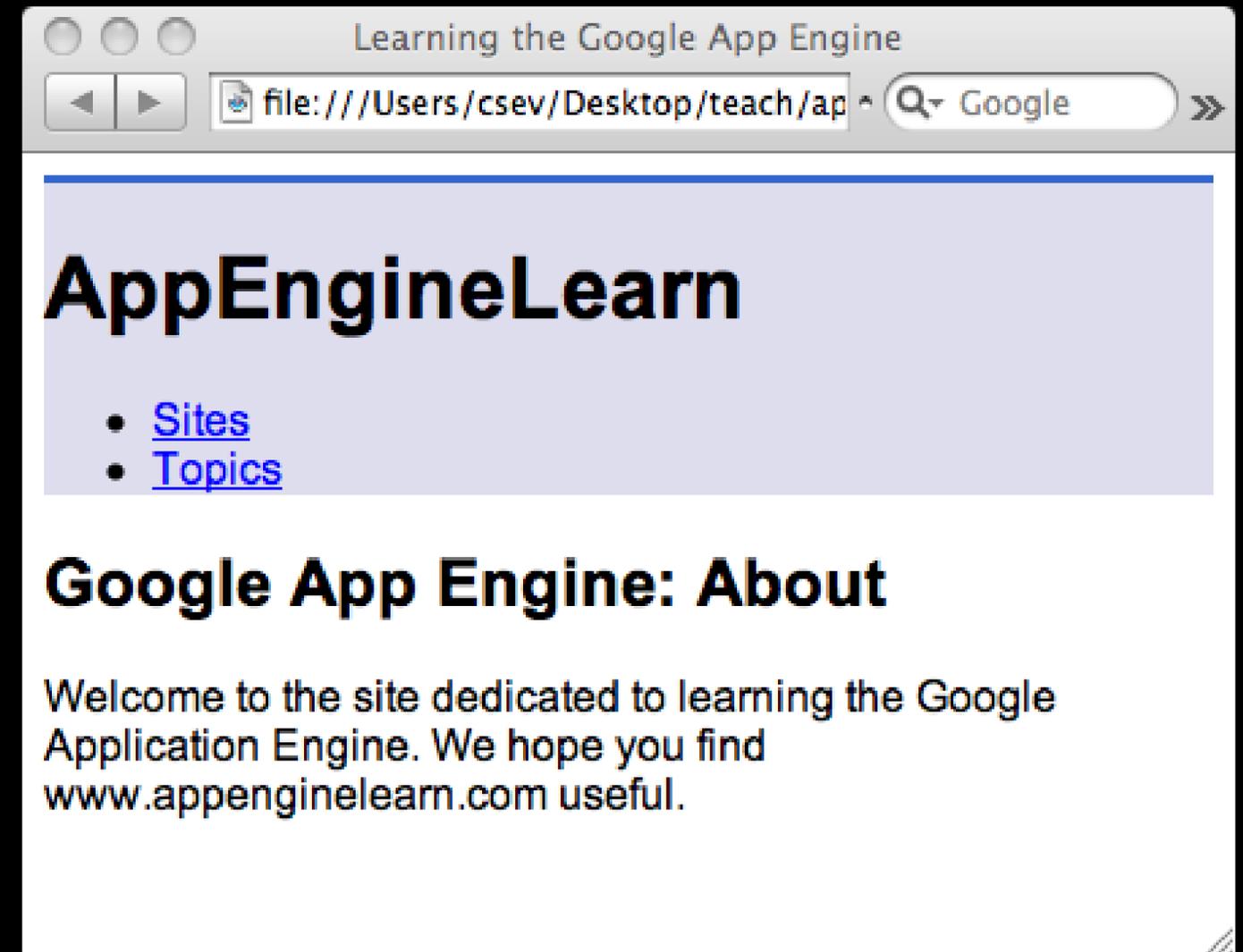
```
<body>
  <div id="header">
    <h1><a href="index.htm">AppEngineLearn</a></h1>
    <ul>
      <li><a href="sites.htm">Sites</a></li>
      <li><a href="topics.htm" >Topics</a></li>
    </ul>
  </div>
  <div id="content">
    <h2>Google App Engine: About</h2>
    <p>
    Welcome to the site dedicated to
    learning the Google Application Engine.
    We hope you find www.appenginelearn.com useful.
    </p>
  </div>
</body>
```

Mark our major blocks with divs and id atributes.

```css
body {
    font-family: arial, sans-serif;
}
#header {
    background-color: #dde;
    border-top: 3px solid #36c;
}
a{
    color: blue;
}
#header h1 a {
    text-decoration: none;
    color: black;
}
```

```
<body>
  <div id="header">
   <h1><a href="index.htm">AppEngineLearn</a></h1>
   <ul>
    <li><a href="sites.htm">Sites</a></li>
    <li><a href="topics.htm" >Topics</a></li>
   </ul>
  </div>
  <div id="content">
   <h2>Google App Engine: About</h2>
   <p>
   Welcome to the site dedicated to
   learning the Google Application Engine.
   We hope you find www.appenginelearn.com useful.
   </p>
  </div>
</body>
```
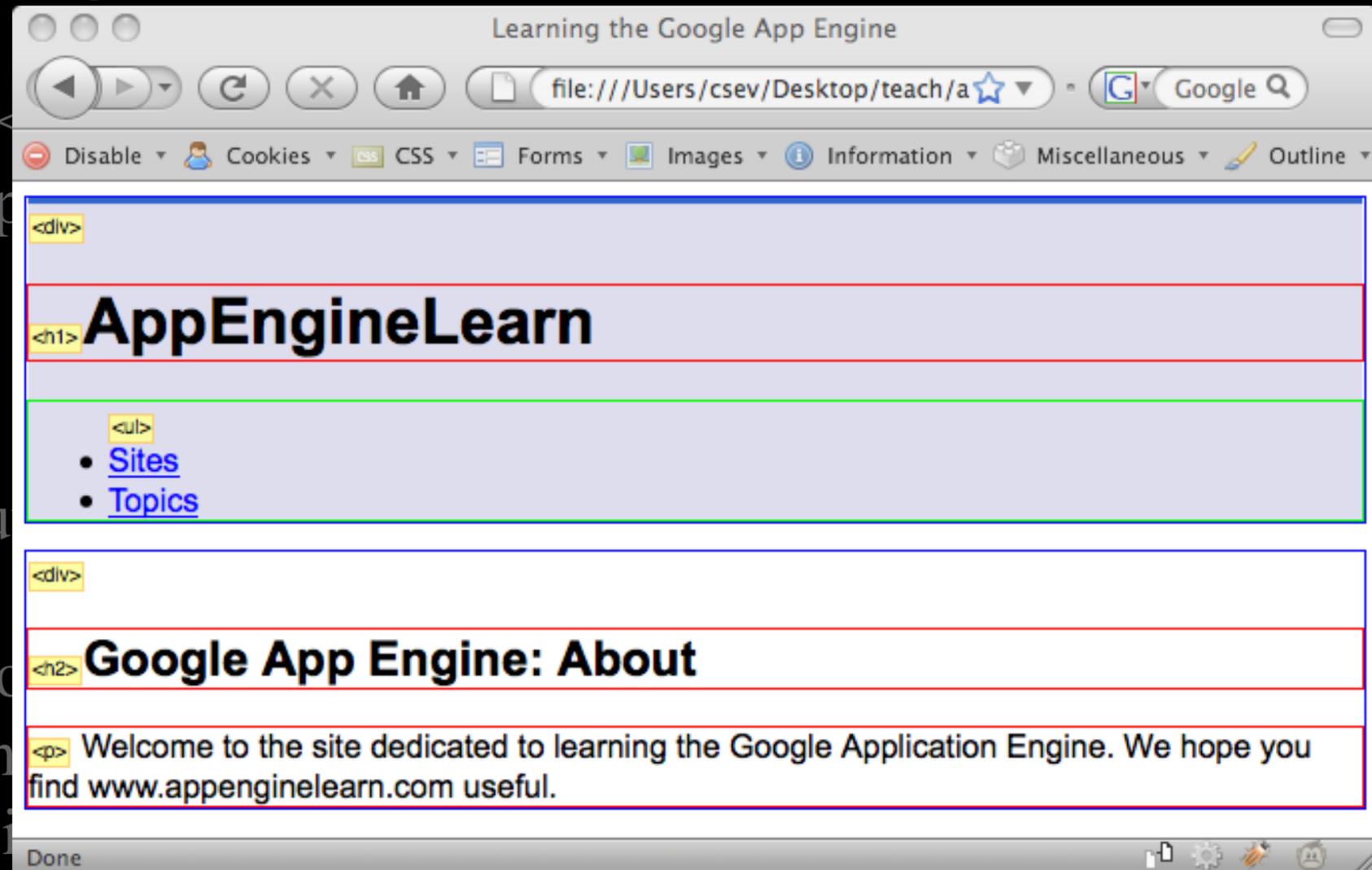


Next we will move these blocks around.

```css
#header {
    background-color: #dde;
    border-top: 3px solid #36c;
    height: 100%;
    overflow:hidden;
}
#header h1 {
    font-size: 20px;
    float: left;
    vertical-align: middle;
}
#header li {
    font-size: 14px;
    display: inline;
}
#header ul {
    list-style: none;
    float:right;
    vertical-align: middle;
}
```
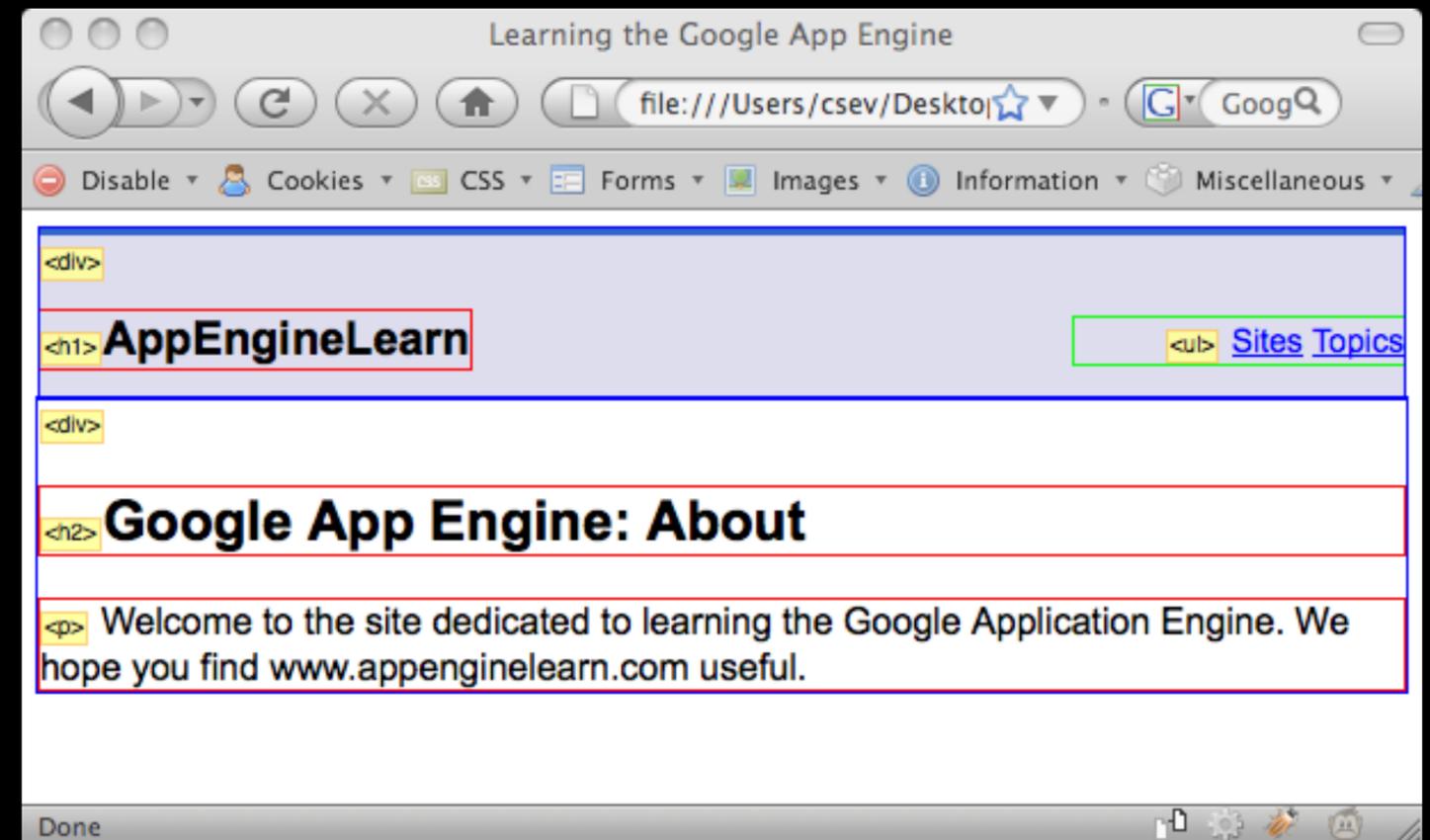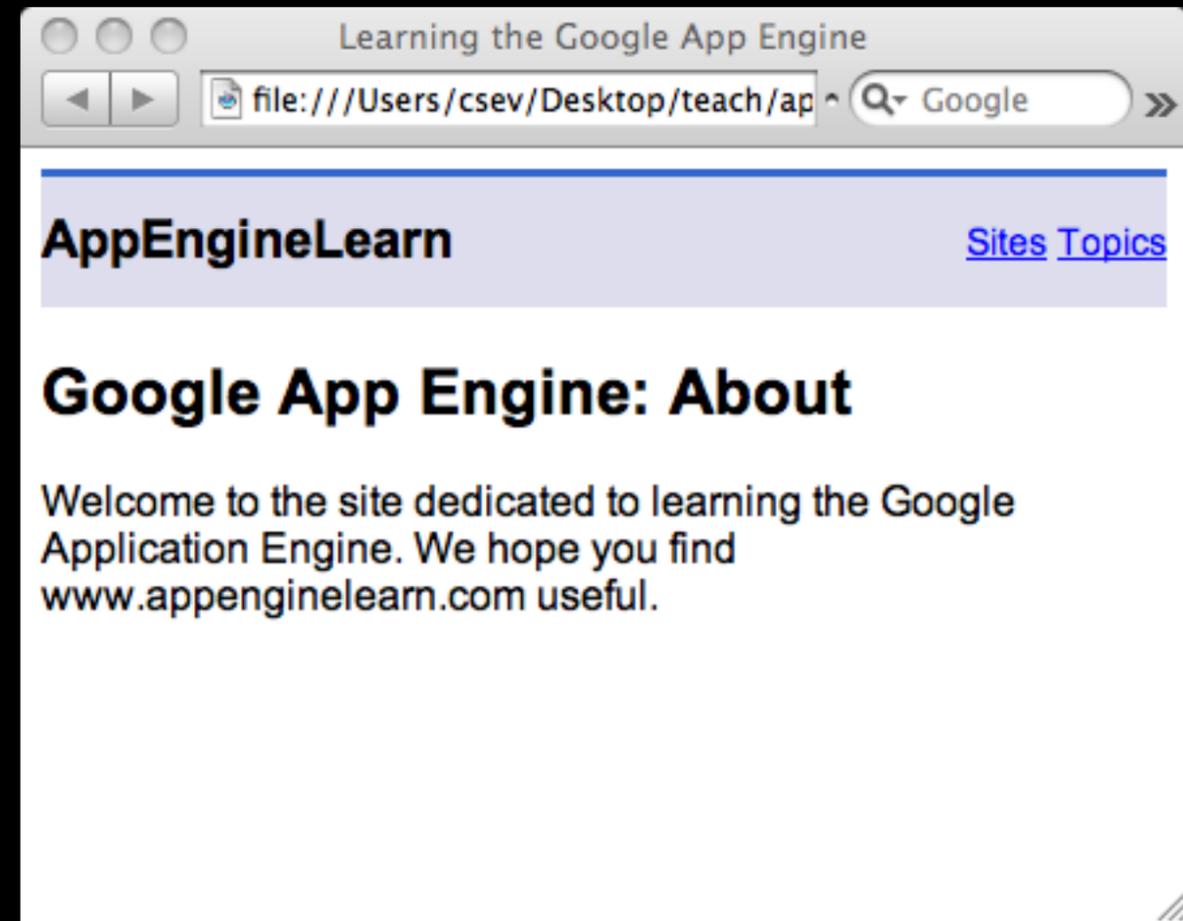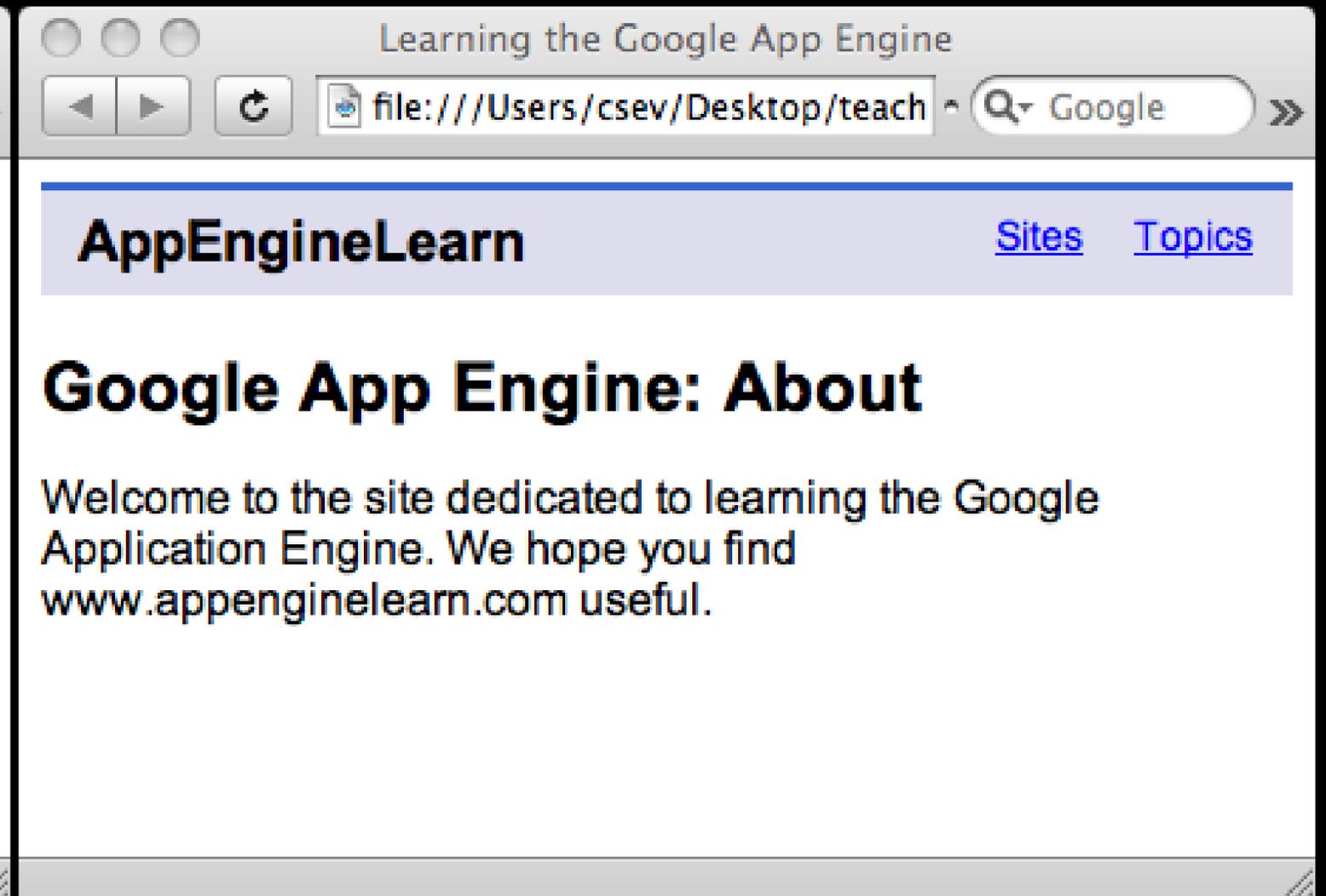
Now lets do some "tweaking"

# CSS Box Model

- **height** and **width** properties size the block element

- **margin** properties define the space around the block element

- **border** properties define the borders around a a block element

- **padding** properties define the space between the element border and the element content

- **background** properties allow you to control the background color of an element, set an image as the background, repeat a background image vertically or horizontally, and position an image on a page

http://reference.sitepoint.com/css/boxmodel

```css
.trapped {
  height: 100px;
  width: 200px;
  margin: 20px;
  border: 5px solid yellow;
  background:red;
  padding: 20px;
  font-family:Arial;
  color:orange;
  font-size:20px;
}
```
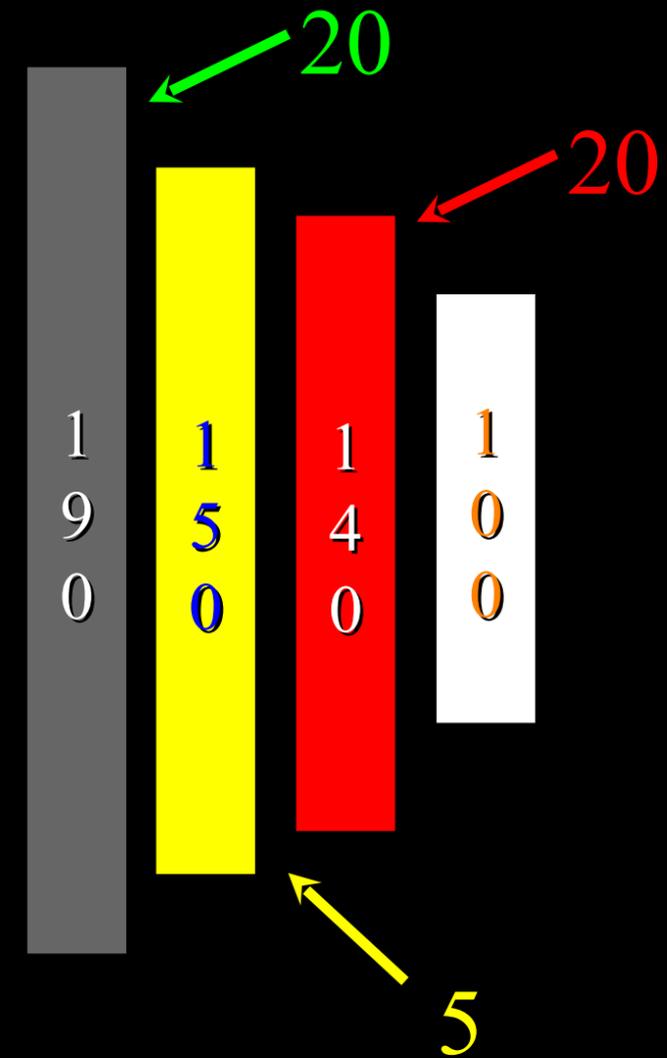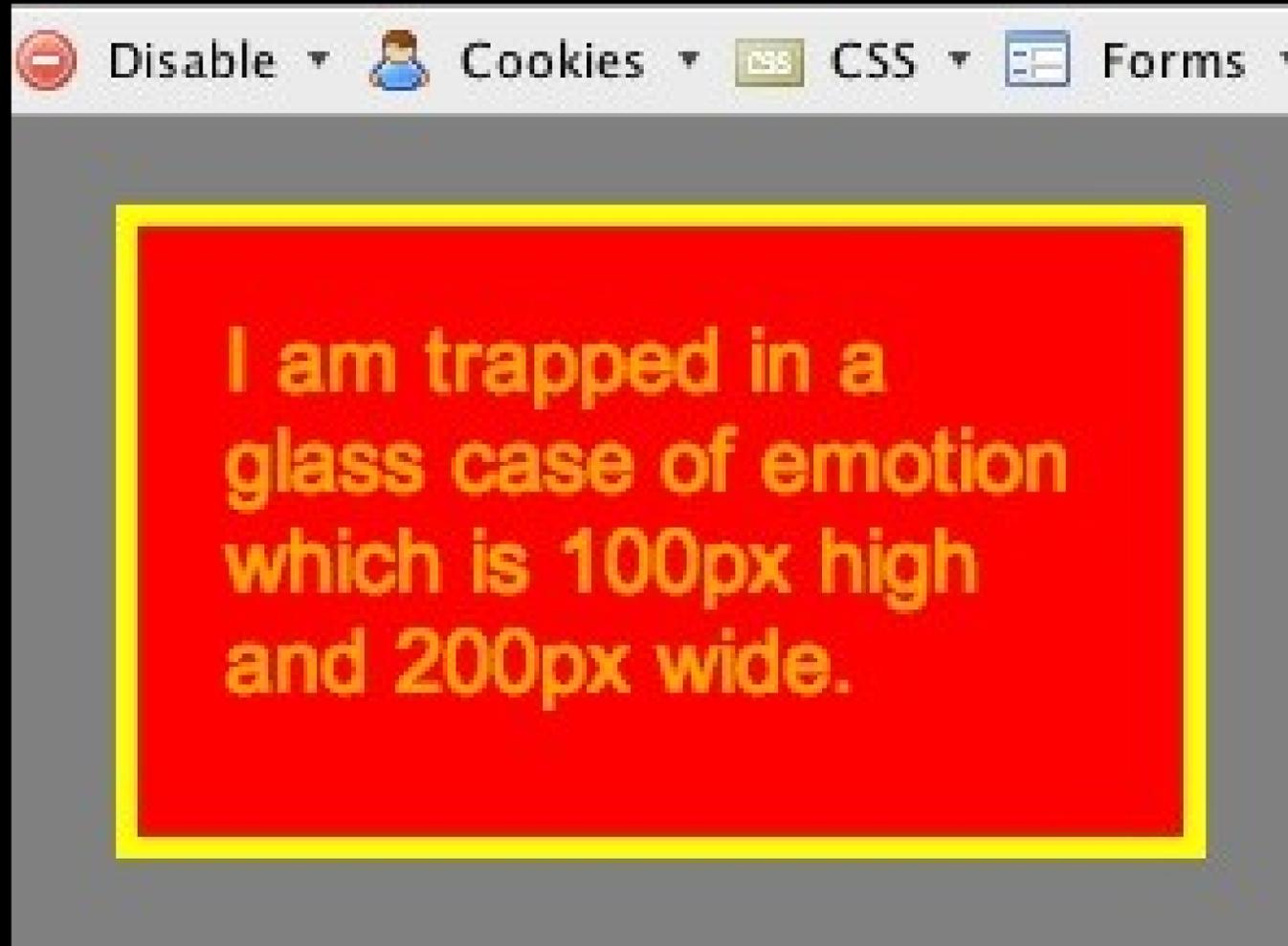
```html
<p class="trapped">
I am trapped in a glass case of emotion
 which is 100px high and 200px wide.
</p>
```

Disable ▾   Cookies ▾   CSS ▾   Forms ▾

I am trapped in a
glass case of emotion
which is 100px high
and 200px wide.

20

20

190    150    140    100

5

The Box Model

```css
.trapped {
  height: 50px;
  width: 50px;
}
.trapped2 {
  height: 50px;
  width: 50px;
  border: 5px solid yellow;
  padding: 10px;
}
```

```html
<p class="trapped">
One</p>
<p class="trapped2">
Two</p>
```
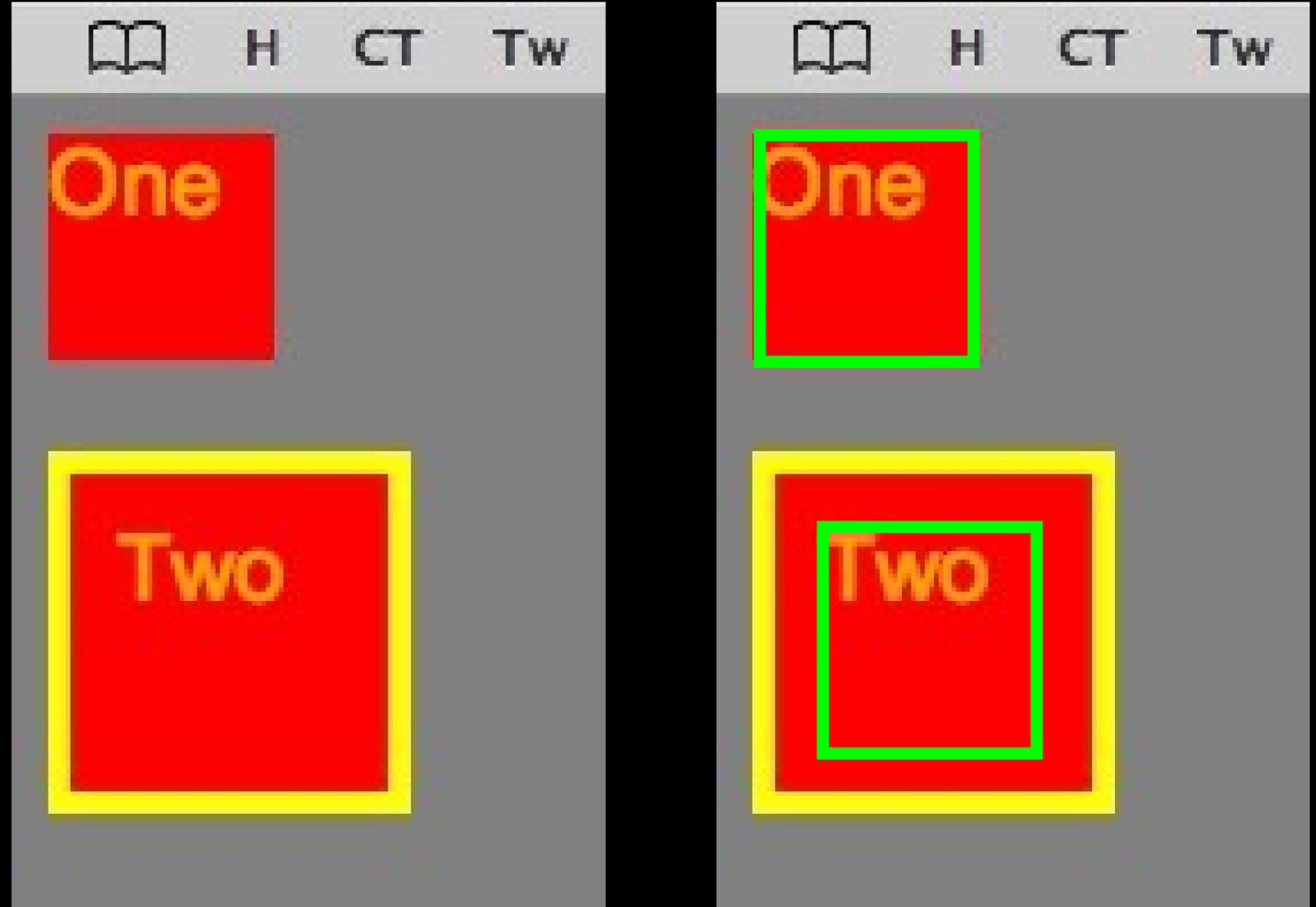


Border, padding, and margin are additive.

```css
#header {
    background-color: #dde;
    border-top: 3px solid #36c;
    height: 100%;
    overflow:hidden;
    padding: 7px;
    margin-top: 5px;
}
#header h1 {
    font-size: 20px;
    float: left;
    vertical-align: middle;
    margin: 0;
    padding: 0 0 0 .3em;
}
```

```css
#header li {
    font-size: 14px;
    display: inline;
    padding: .5em;
}
#header ul {
    list-style: none;
    text-align: right;
    float:right;
    vertical-align: middle;
    margin: 0;
    padding: 0;
}
```

top, right, bottom, left
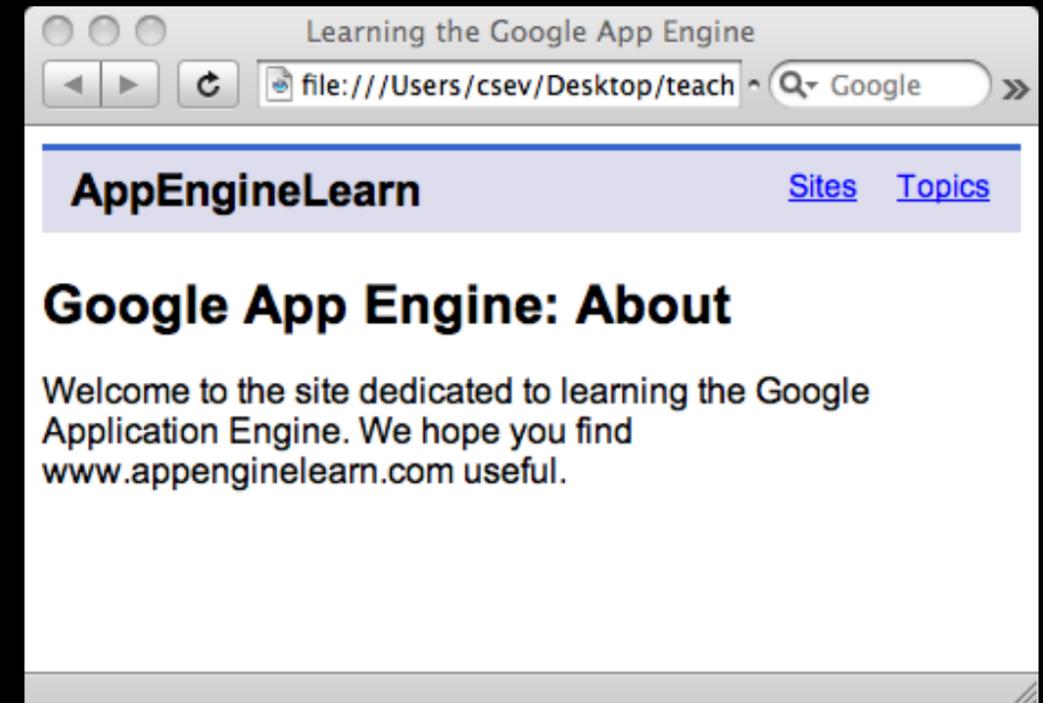
```
<div id="header">
  <h1><a href="index.htm">AppEngineLearn</a></h1>
  <ul>
   <li><a href="sites.htm" class="selected">Sites</a></li>
   <li><a href="topics.htm" >Topics</a></li>
  </ul>
</div>
```
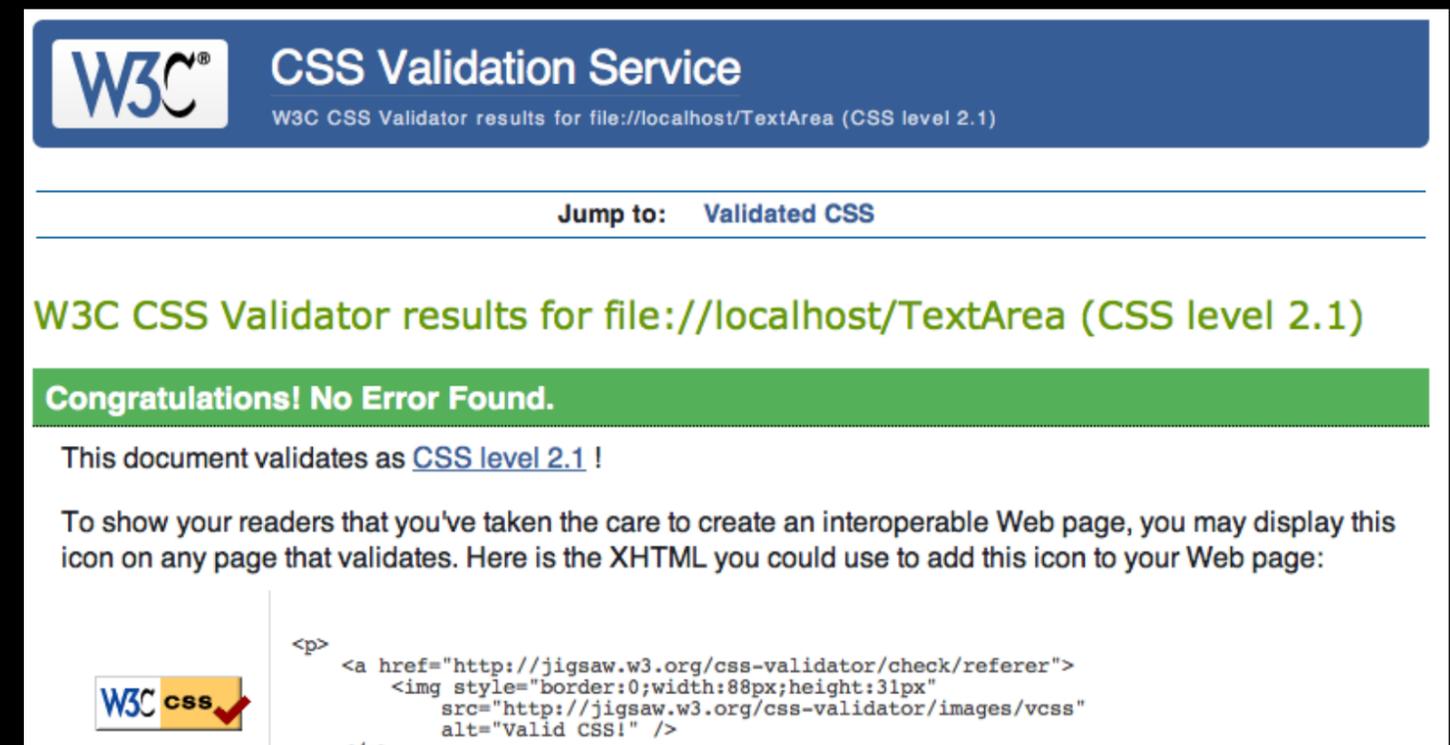
```
#header li a.selected {
    color: black;
    text-decoration: none;
}
```

```
<div id="header">
  <h1><a href="index.htm">AppEngineLearn</a></h1>
  <ul>
   <li><a href="sites.htm">Sites</a></li>
   <li><a href="topics.htm" class="selected">Topics</a></li>
  </ul>
</div>
```
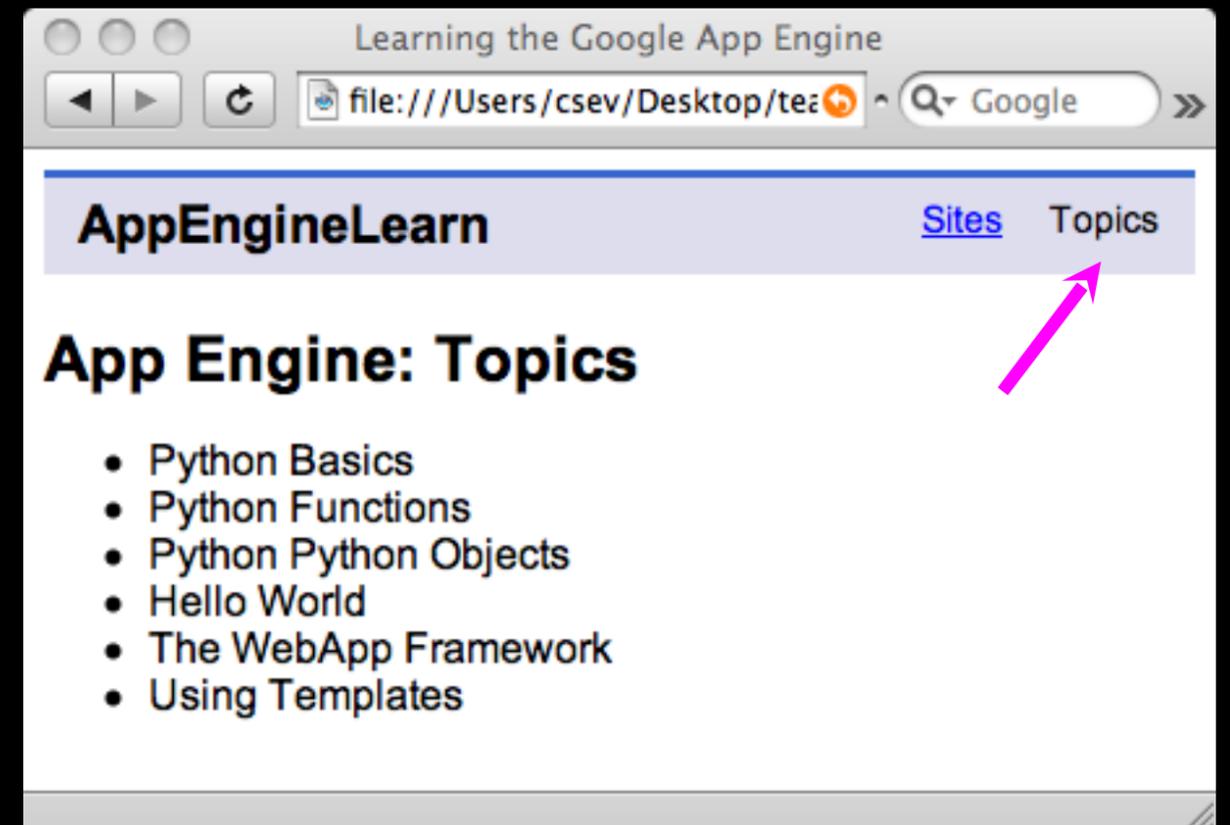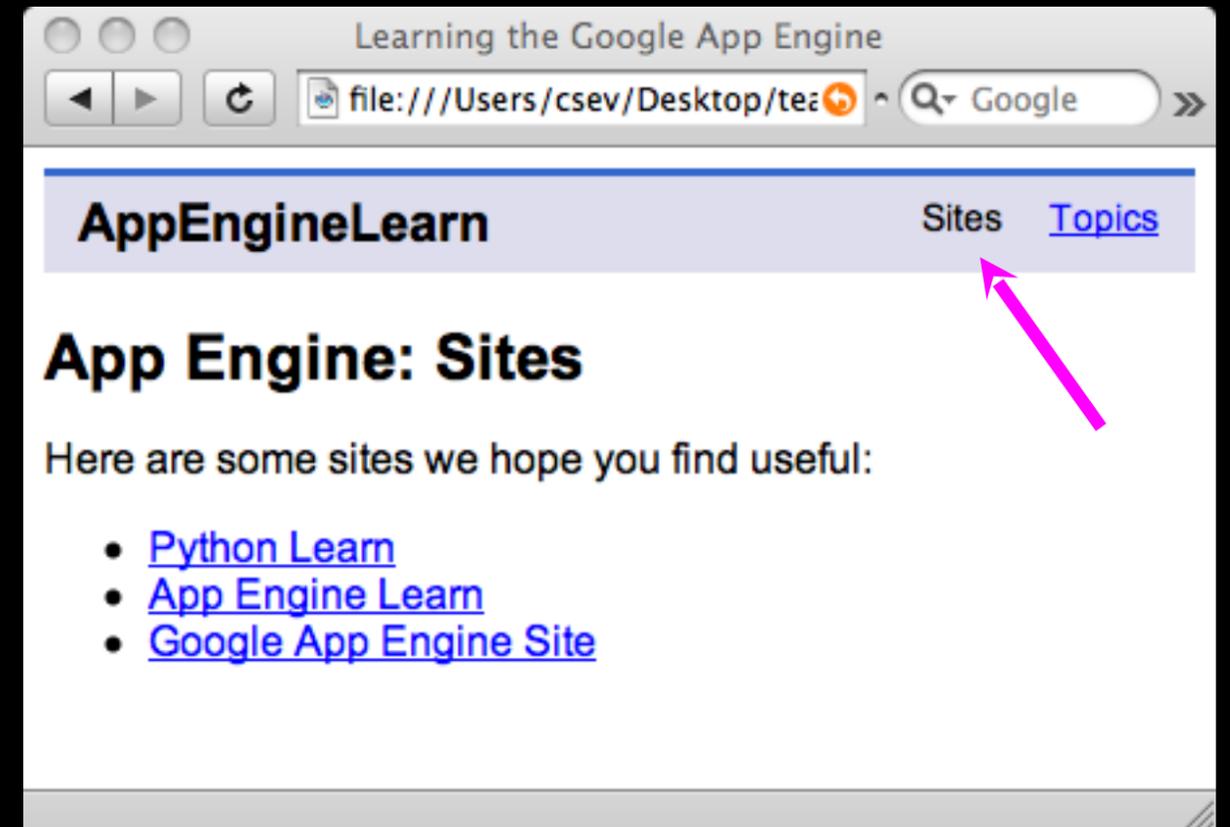
# Tranforming the look and feel of a page using a CSS style sheet.
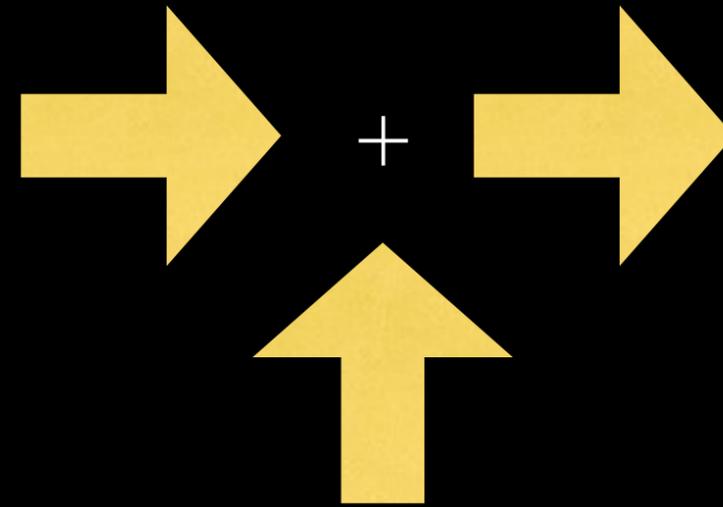


```
body {
    font-family: arial, san-serif;
}
a, a:link
{
color: #0000cc;
}

...
```

# CSS Validation

- You can validate your CSS to make sure it has no syntax errors

- Browsers will generally quietly ignore bad CSS syntax

- http://jigsaw.w3.org/css-validator

- The validator can save you time and sanity



Source: W3C http://validator.w3.org/check

# Zen Garden



- A social site where CSS designers show their "stuff"

- The HTML never changes - only the CSS

- Inspiration for us designers

Source: http://www.csszengarden.com/
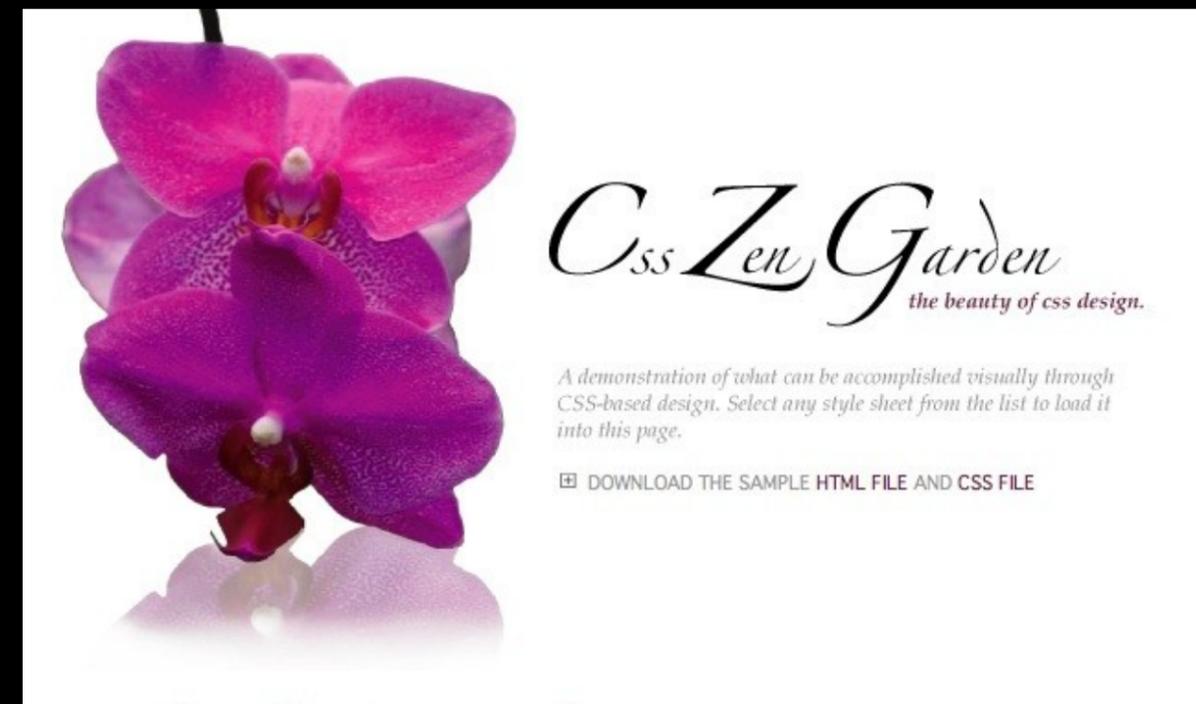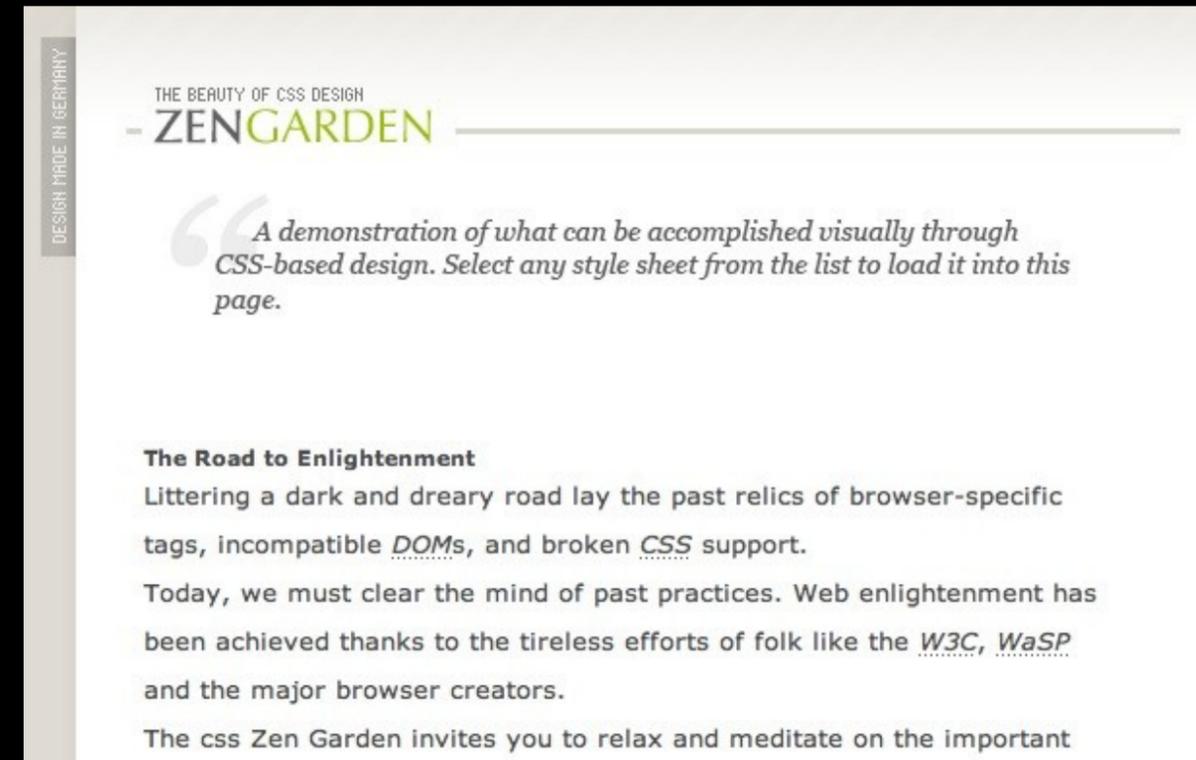
# Summary

- CSS Layout is its own art and science

- CSS Basics are well established and well supported in all modern browsers

- The box model is pretty straightforward - and allows nice design within the standards with reasonable effort levels.

- Site layout and markup is further evolving - mostly to make it increasingly possible to support desktop like experiences on the web.

- These innovations will naturally cause incompatibilities - which make things interesting and frustrating at times.