

# CSCI E-75: Cascading Style Sheets (CSS)

April 21, 2008

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Harvard University  
Division of Continuing Education  
Extension School

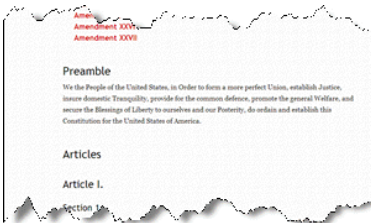
# The Power of Stylesheets

- United States Constitution (no external stylesheet)



W3C Core Styles applied to the US Constitution.

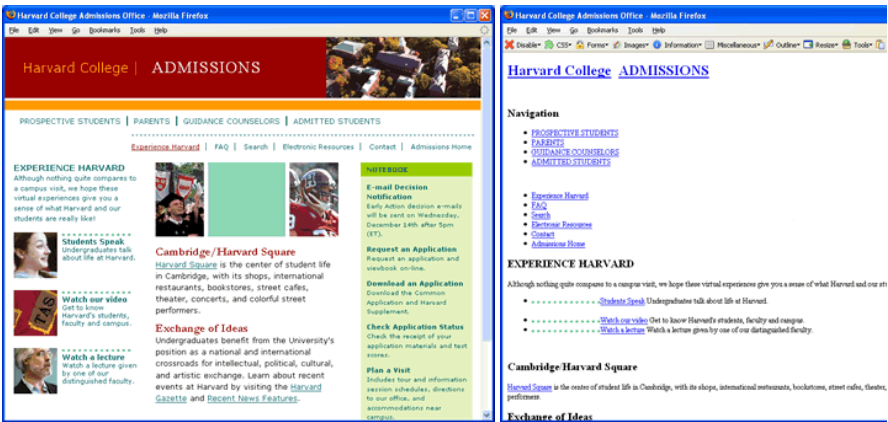
- Chocolate Stylesheet
- Midnight Stylesheet
- Modernist Stylesheet
- Oldstyle Stylesheet
- Steely Stylesheet
- Swiss Stylesheet
- Traditional Stylesheet
- Ultramarine Stylesheet



# Harvard College Admissions

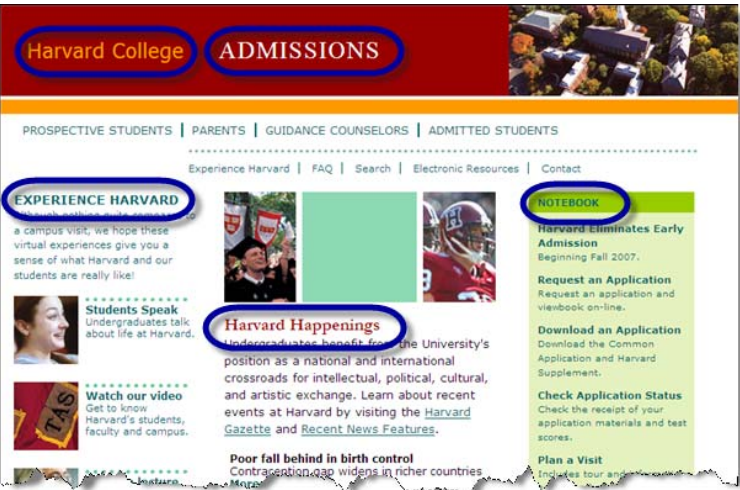
## Harvard College Admissions

With CSS disabled:



## Headings

Heading elements (h1,h2,etc.) combined with CSS are very powerful. Headings can remain headings in markup and CSS can style them as desired.



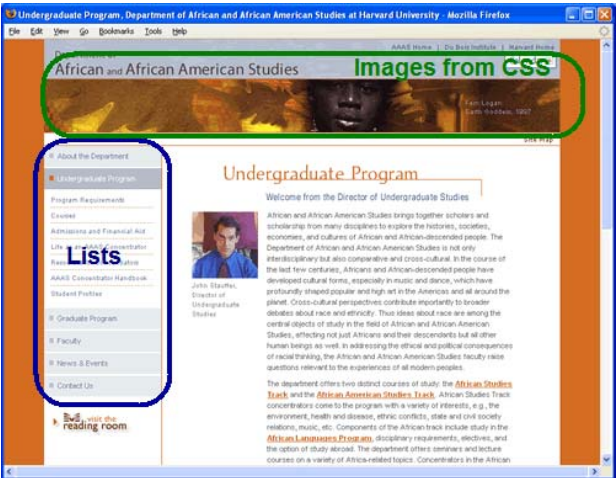
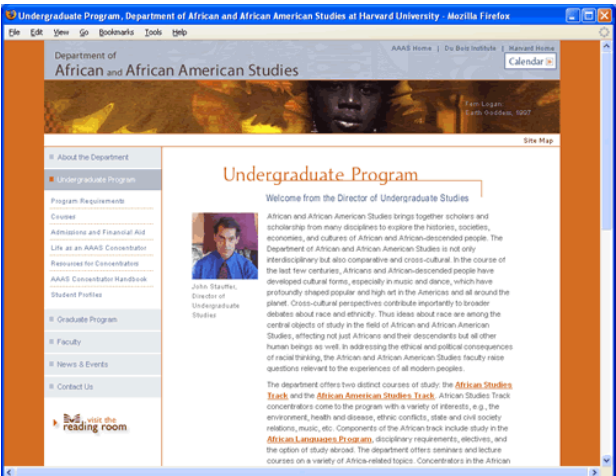
## Lists

Lists combined with CSS are very powerful. Lists can remain lists in markup (navigation, content items, etc.) and CSS can style them as desired.



# Department of African and African American Studies

Department of African and African American Studies



With CSS disabled:





# Designing with Stylesheets: CSS Zen Garden

css Zen Garden: The Beauty in CSS Design. A demonstration of what can be accomplished visually through CSS-based design.

css Zen Garden: The Beauty in CSS Design

The Beauty of CSS Design

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

Download the sample [html file](#) and [css file](#).

**The Road to Enlightenment**

Litering 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, WHATWG, 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 inspiring fashions. Become one with the web.

**So What is This About?**

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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. To date, most examples of neat tricks and hacks have been demonstrated by structurists and coders. Designers have yet to make their mark. This needs to change.

**Participation**

Graphic artists only please. You are modifying this page, so strong CSS skills are necessary, but the example files are commented well enough that even CSS novices can use them as starting points. Please see the [CSS Resource Guide](#) for advanced tutorials and tips on working with CSS.

You may modify the style sheet in any way you wish, but not the HTML. This may seem daunting at first if you've never worked this way before, but follow the listed links to learn more, and use the sample files as a guide.

Download the sample [html file](#) and [css file](#) to work on a copy locally. Once you have completed your masterpiece (and please, don't submit half-finished work) upload your .css file to a web server under your control. [Send us a link](#) to the file and if we choose to use it, we will update the associated image. Final submissions will be placed on our server.

**Benefits**

Why participate? For recognition, inspiration, and a resource we can all refer to when making the case for CSS-based design. This is simply

```
<body id="css-zen-garden">
<div id="container">
  <div id="intro">
    <div id="pageheader">
      <p>css Zen Garden</p>
    </div>
    <p>The Beauty of CSS Design</p>
    <p>A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.</p>
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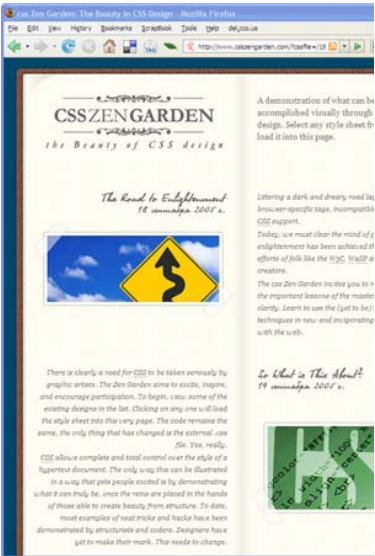
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```



## XHTML: a simple example with CSS

- No CSS: simple.html
- With CSS:
  - simple-style.html
  - simple-style.css

### My Schools

- [Harvard University](#)
- [University of Kansas](#)



### My Schools

Harvard University



University of Kansas



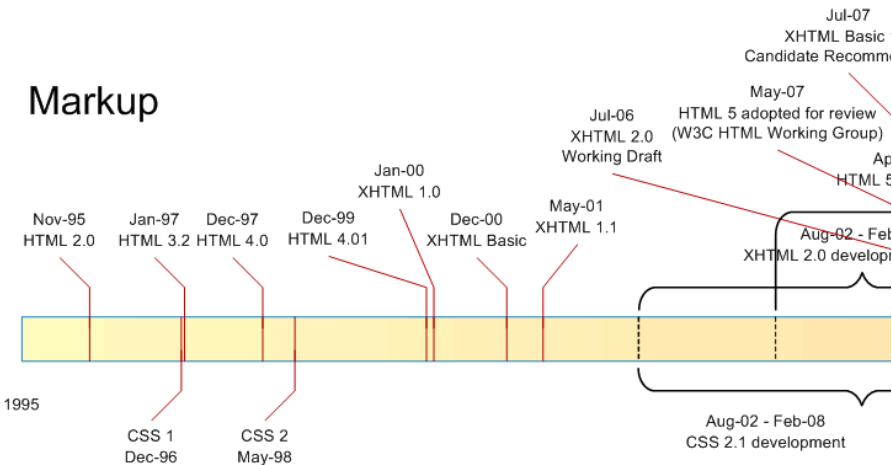
```
view plain print ?
1.  <?xml version="1.0"?>
2.  <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
3.    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
4.  <html>
5.  <head>
6.    <title>
7.      My Schools
8.    </title>
9.    <!-- this is the reference to the CSS -->
10.   <link rel="stylesheet" href="simple-style.css" type="text/css"/>
11.  </head>
12.  <body>
13.    ...
14.  </body>
15. </html>
16.
```

And here is the stylesheet (simple-style.css):

view plain print ?

```
1. body {  
2.   margin-left: 10%;  
3.   margin-top: 1em;  
4.   margin-right: 10%;  
5.   background: #ff9;  
6. }  
7. h1 {  
8.   font-family: Arial, sans-serif;  
9.   color: #600;  
10.  border-bottom: thin dotted black;  
11. }  
12. ul {  
13.   list-style-type: none;  
14. }  
15. li {  
16.   margin-top: 1em;  
17.   font-size: 1.25em;  
18. }  
19. img {  
20.   border: thin solid black;  
21. }  
22. a {  
23.   text-decoration: none;  
24. }  
25. a:link, a:visited {  
26.   color: blue;  
27. }  
28. a:hover {  
29.   color: white;  
30.   text-decoration: underline;  
31.   background: blue;  
32. }  
33.
```

CSS Recommendations from the W3C



Style

- CSS 1, December 1996; Revised January 1999)
- CSS 2, May 1998
- CSS 2.1, Candidate Recommendation, July 2007
- CSS Current Work (CSS Mobile Profile, Print Profile, TV Profile, CSS3)

CSS Validator

W3C CSS Validation Service  
<http://jigsaw.w3.org/css-validator/>



# CSS Resources



www.alistapart.com



www.simplebits.com

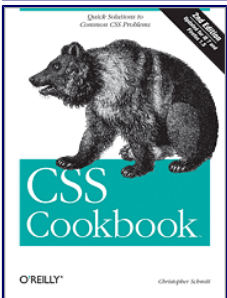
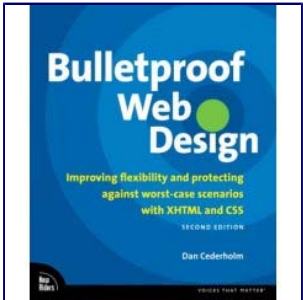
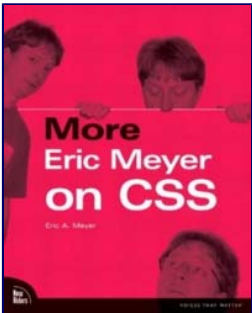
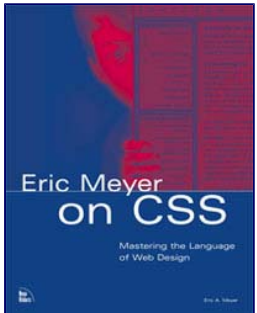
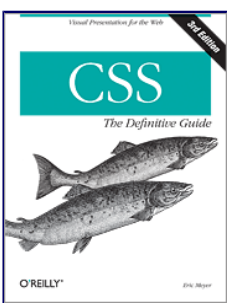
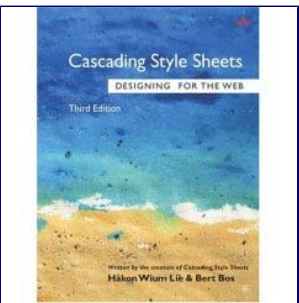


meyerweb.com/eric/css/



www.westciv.com/style\_master/house

## Books



- Cascading Style Sheets : Designing for the Web (3rd Edition) by Hakon Wium Lie and Bert Bos
- Cascading Style Sheets: The Definitive Guide, 3rd Edition by Eric Meyer
- Eric Meyer on CSS and More Eric Meyer on CSS
- Bulletproof Web Design, 2nd edition, by Dan Cederholm
- Web Standards Solutions: The Markup and Style Handbook by Dan Cederholm
- CSS Cookbook by Christopher Schmitt

## Specifications / Resources

- W3C Cascading Style Sheets
- Cascading Style Sheets, Level 1
- Cascading Style Sheets 2.1
- W3C CSS Validation Service



## Binding Styles to Markup

Three ways to bind CSS rules to XHTML/HTML markup:

- styl e attribute in element
- styl e element in XHTML/HTML head
- External CSS document, through the l i nk element in XHTML/HTML head

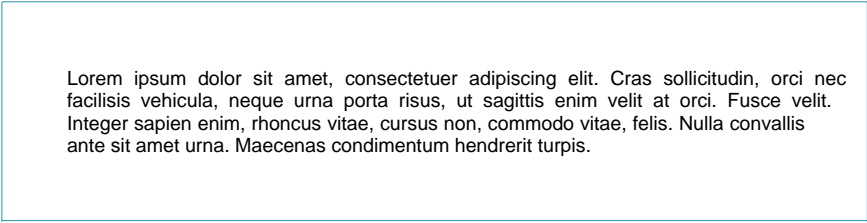
## style attribute

### Example 10.1

Example 10.1 Source:

```
view plain print ?
1. <p style="color: black; background-color: teal; padding: 1em; font-family: helvetica, sans-serif;">
2.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
3.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
4.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis
5.   ante sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

Example 10.1 Rendered:



## style element

### Example 10.2

Example 10.2 Source:

```
view plain print ?
1. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
2.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
4.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. p {
2.   color: black;
3.   background-color: teal;
4.   padding: 1em;
5.   font-family: helvetica, sans-serif;
6.   text-align: justify;
7.   margin: 2em;
8. }
```

Example 10.2 Rendered:

- With Styles
- Without Styles

## link element

The **link** element can reference an external stylesheet.

### Example 10.3

Example 10.3 Source:

```
view plain print ?
1. <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
2.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
4.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

In **example3.css**

```
view plain print ?
1. p {
2.   color: black;
3.   background-color: teal;
4.   padding: 1em;
5.   font-family: helvetica, sans-serif;
6.   text-align: justify;
7.   margin: 2em;
8. }
```

In **head** element:

```
view plain print ?
1. <link rel="stylesheet" type="text/css" href="example3.css"/>
```

Example 10.3 Rendered:

- With Styles
- Without Styles

# Anatomy of a CSS Rule

## Example 10.4

Example 10.4 Source:

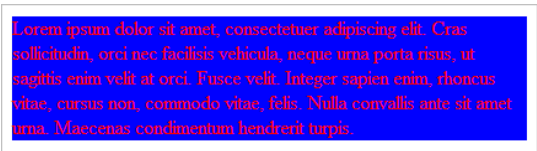
```
view plain print ?
1. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
2.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
4.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. p {
2.   color: red;
3.   background-color: blue;
4. }
```

Example 10.4 Rendered:

- With Styles
- Without Styles



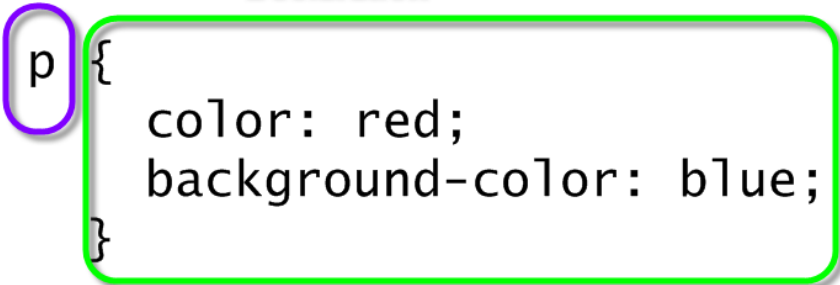
CSS Rule

```
p {
  color: red;
  background-color: blue;
}
```

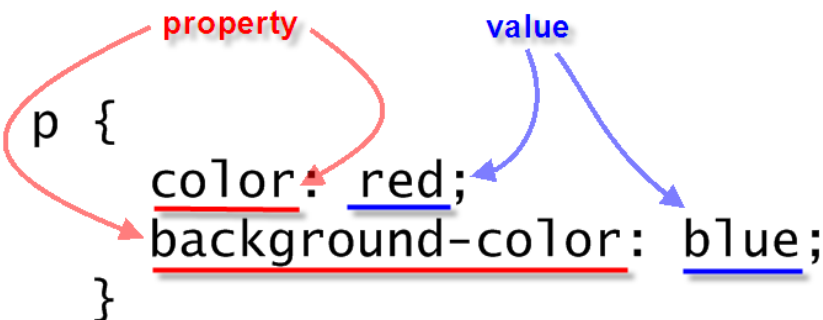
Selector and Declarations

Selector

Declaration



## Properties and Values



# Combining Rules

Rules can be combined. The following two sets of style rules would produce identical results. Rules can be listed separately:

```
view plain print ?
1. p {color: black;}
2. p {background-color: teal;}
3. p {padding: 1em;}
4. p {margin: 1em;}
5. p {font-family: helvetica, sans-serif;}
6. p {text-align: justify;}
```

Or, rules can be grouped. Property:Value pairs need to be separated by a semicolon.

```
view plain print ?
1. p {
2.   color: black;
3.   background-color: teal;
4.   padding: 1em;
5.   margin: 1em;
6.   font-family: helvetica, sans-serif;
7.   text-align: justify;
8. }
```

# Combining Selectors

Selectors can be combined into comma-separated groups.

```
view plain print ?
1. h1 { color: maroon; }
2. h2 { color: maroon; }
3. h3 { color: maroon; }
4. h4 { color: maroon; }
5. h5 { color: maroon; }
6. h6 { color: maroon; }
```

We combine the selectors so that a single declaration applies to multiple selectors.

```
view plain print ?
1. h1, h2, h3, h4, h5, h6 { color: maroon; }
```

## class selectors

The **class** and **id** attributes of XHTML elements can be used in conjunction with styles.

### Example 10.5

*Example 10.5 Source:*

```
view plain print ?
1. <div>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci
2. nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.</div>
3. <div class="withstyle">Fusce velit. Integer sapien enim, rhoncus vitae, cursus non,
4. commodo vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum
5. hendrerit turpis.</div>
6. <div class="warn">Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
7. sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim
8. velit at orci.</div>
9. <div>Lorem ipsum dolor sit amet,
10. <span class="warn">consectetur adipiscing elit</span>. Cras sollicitudin, orci nec
11. facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.</div>
12. <div id="legalese">Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
13. sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim
14. velit at orci.</div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. div {
2.   margin: 0.5em;
3.   padding: 0.5em;
4.   font-family: times;
5.   color: black;
6.   background-color: white;
7. }
8. div.withstyle {
9.   margin: 0.5em;
10.  padding: 0.5em;
11.  font-family: sans-serif;
12.  color: navy;
13.  background-color: olive;
14. }
15. .warn {
16.   color: red;
17.   background-color: yellow;
18.   font-weight: bold;
19. }
20. #legalese {
21.   font-size: 0.6em;
22.   color: #cccccc;
23. }
```

*Example 10.5 Rendered:*

- With Styles
- Without Styles

## id selectors

### Example 10.6

*Example 10.6 Source:*

```
view plain print ?
1. <div id="header"><h1>Lorem ipsum dolor</h1></div>
2. <div id="main">
3.   <!-- main content -->
4.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
5.   sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim
6.   velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo
7.   vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit
8.   turpis. </div>
9. <div id="footer">Nulla turpis erat, faucibus commodo, iaculis id, aliquet quis, lectus.
10. Pellentesque habitant morbi tristique senectus et netus et malesuada
11. fames ac turpis egestas.</div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. #main {
2.   font-family: Times, serif;
3. }
4. #header {
5.   font-family: arial, helvetica, sans-serif;
6.   background-color: #900;
7.   color: #fff;
8.   text-align: center;
9. }
10. #footer {
11.   font-family: arial, helvetica, sans-serif;
12.   padding: 1em;
13.   margin-top: 1em;
14.   color: #999;
15.   border-top: thin solid #999;
16.   text-align: center;
17.   font-size: 80%;
18. }
```

*Example 10.6 Rendered:*

- With Styles
- Without Styles



## Contextual Selectors

### Example 10.7

Example 10.7 Source:

view plain print ?

```
1. <div> <em>Emphasized text</em> outside of <strong>li</strong> appear "normal".
2.   <ul>
3.     <li><em>Emphasized text</em> within <strong>li</strong> have a different
4.       style.</li>
5.   </ul> </div>
```

In **style** element (`<style type="text/css">`) within **head** element:

view plain print ?

```
1. li em { color: red; background-color: navy; }
```

Example 10.7 Rendered:

- With Styles
  - Without Styles
- 

## Selectors

- element
- descendant
  - ul li
- class
  - p.abstract
  - .warn
- id
  - #main
  - #head
- child
  - body > p
  - ul > li
- attribute
  - input[type=text]
  - input[type=radio]
- wildcard (\*)

Properties are typically inherited by children elements.

*Example 10.8 Source:*

```

1. <div> Lorem ipsum dolor sit amet, <em>consectetur adipiscing elit</em>. Cras
2. sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim vel
3. at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, fe
4. Nulla convallis ante sit amet urna. Maecenas condimentum henderit turpis.</div>
5. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
6. facilisis vehicula, neque urna porta risus, ut sagittis enim vel at orci. Fusce velit
7. Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis a
8. sit amet urna. Maecenas condimentum henderit turpis.</p>

```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. body { color: navy; }
2. em { color: red; }
3. div { color: green; }
```

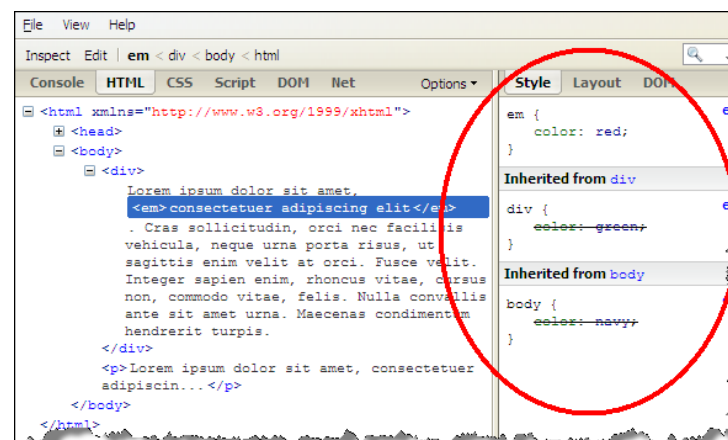
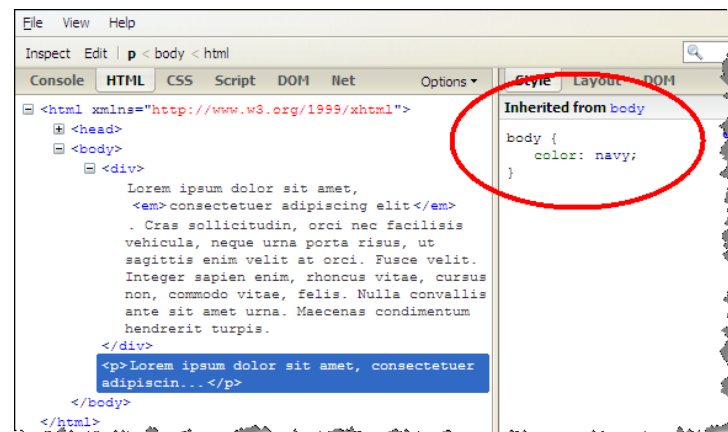
*Example 10.8 Rendered:*

- With Styles
- Without Styles

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
html xmlns="http://www.w3.org/1999/xhtml"
  head
    title
      CSCIE-12, Example: 4.8
    style type="text/css"
      body { color: navy; }
      em { color: red; }
      div { color: green; }
  body
    div
      Lorem ipsum dolor sit amet,
      em
        consectetur adipiscing elit
      . Cras sollicitudin, orci nec facilisis vehicula, neque urna porta
    p
      Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
```

Lorem ipsum dolor sit amet, *consectetuer adipiscing elit*. Cras sollicitudin, orci nec  
 facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit. Integer  
 sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis ante sit amet  
 urna. Maecenas condimentum hendrerit turpis.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis  
 vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit. Integer sapien  
 enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis ante sit amet urna.  
 Maecenas condimentum hendrerit turpis.



Note: [Firebug](#) is a very useful Firefox extension for analyzing CSS properties and values.

# The Cascade

**Suggested reading:** [CSS 2.1: Assigning property values, Cascading, and Inheritance](#)

## Stylesheet Origin

- author's stylesheet
- reader's stylesheet
- UA's stylesheet

## Specificity of Selector

- "id" attributes
- "class" attributes
- element names

## Order

- last occurrence has higher specificity

The Cascade in Action



CSS Rules

```
body { background-color: silver; }
p { background-color: lime; border: medium solid purple; padding: 0.5em; }
#maincontent { background-color: white; }
#maincontent p { background-color: yellow; border: medium solid red; }
#maincontent div.note ul { background-color: white; }
#maincontent div.note ul li { background-color: white; }
#maincontent div.note p { background-color: white; }
#maincontent ul { background-color: white; }
#maincontent ul li { background-color: white; }
p { background-color: lime; border: medium solid purple; padding: 0.5em; }
div.note p { background-color: olive; }
```

Example 10.9

Example 10.9 Source:

```
view plain print ?
1. <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed feugiat nisi at sapien.
2. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. </p>
3. <div id="maincontent" >
4. <p>Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla
5. semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit,
6. nec placerat dolor pede nec nibh.
7. Vestibulum nibh.</p>
8. <div class="note" >
9. <ul>
10. <li>Proin sollicitudin ante vel eros.</li>
11. <li>Nunc tempus.</li>
12. <li>Quisque vitae quam non magna mattis volutpat.</li>
13. </ul>
14. <p>Quisque feugiat tellus ultricies urna. Pellentesque habitant morbi tristique
15. senectus et netus et malesuada fames ac turpis egestas. Nullam tincidunt.</p>
16. </div>
17. <ul>
18. <li>Pellentesque sit amet metus.</li>
19. <li>Sed sollicitudin feugiat massa.</li>
20. <li>Sed magna.</li>
21. </ul>
22. </div>
23. <p>Sed malesuada elit non augue. Vestibulum nec nulla. Aenean orci. Ut sem leo, placerat
24. <div class="note" >
25. <p>Morbi faucibus ornare pede. Aenean bibendum pharetra arcu. Vestibulum a quam. Donec
26. commodo ultricies tortor. Nulla mattis fermentum erat. Aliquam at tortor eget velit
27. egestas aliquet. Nam quam.</p>
28. </div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. body { background-color: silver; }
2. p {
3.   background-color: lime;
4.   border: medium solid purple;
5.   padding: 0.5em;
6. }
7. #maincontent { background-color: white; }
8. #maincontent p {
9.   background-color: yellow;
10.  border: medium solid red;
11. }
12. .note p { background-color: olive }
13. .note { background-color: aqua; }
```

Example 10.9 Rendered:

- With Styles
- Without Styles

# Sample "UA" default stylesheets for HTML 2.0 and HTML 4.0

Take a look at the sample default stylesheets for HTML 2.0 and HTML 4.0 listed in the Appendices of the CSS1 and CSS2 Recommendations.

- [Sample style sheet for HTML 2.0 \[Local copy\]](#)
- [Default style sheet for HTML 4.0 \[Local copy\]](#)

## HTML 4 Sample default CSS

view plain print ?

```
1.  html, address,
2.  blockquote,
3.  body, dd, div,
4.  dl, dt, fieldset, form,
5.  frame, frameset,
6.  h1, h2, h3, h4,
7.  h5, h6, noframes,
8.  ol, p, ul, center,
9.  dir, hr, menu, pre { display: block }
10. li { display: list-item }
11. head { display: none }
12. table { display: table }
13. tr { display: table-row }
14. thead { display: table-header-group }
15. tbody { display: table-row-group }
16. tfoot { display: table-footer-group }
17. col { display: table-column }
18. colgroup { display: table-column-group }
19. td, th { display: table-cell; }
20. caption { display: table-caption }
21. th { font-weight: bolder; text-align: center }
22. caption { text-align: center }
23. body { margin: 8px; line-height: 1.12 }
24. h1 { font-size: 2em; margin: .67em 0 }
25. h2 { font-size: 1.5em; margin: .75em 0 }
26. h3 { font-size: 1.17em; margin: .83em 0 }
27. h4, p,
28. blockquote, ul,
29. fieldset, form,
30. ol, dl, dir,
31. menu { margin: 1.12em 0 }
32. h5 { font-size: .83em; margin: 1.5em 0 }
33. h6 { font-size: .75em; margin: 1.67em 0 }
34. h1, h2, h3, h4,
35. h5, h6, b,
36. strong { font-weight: bolder }
37. blockquote { margin-left: 40px; margin-right: 40px }
38. i, cite, em,
39. var, address { font-style: italic }
40. pre, tt, code,
41. kbd, samp { font-family: monospace }
42. pre { white-space: pre }
43. button, textarea,
44. input, object,
45. select { display:inline-block; }
46. big { font-size: 1.17em }
47. small, sub, sup { font-size: .83em }
48. sub { vertical-align: sub }
49. sup { vertical-align: super }
50. table { border-spacing: 2px; }
51. thead, tbody,
52. tfoot { vertical-align: middle }
53. td, th { vertical-align: inherit }
54. s, strike, del { text-decoration: line-through }
55. hr { border: 1px inset }
56. ol, ul, dir,
57. menu, dd { margin-left: 40px }
58. ol { list-style-type: decimal }
59. ol ul, ul ol,
60. ul ul, ol ol { margin-top: 0; margin-bottom: 0 }
61. u, ins { text-decoration: underline }
62. br:before { content: "\A" }
63. :before, :after { white-space: pre-line }
64. center { text-align: center }
65. abbr, acronym { font-variant: small-caps; letter-spacing: 0.1em }
66. :link, :visited { text-decoration: underline }
67. :focus { outline: thin dotted invert }
68.
69. /* Begin bidirectionality settings (do not change) */
70. BDO[DIR="ltr"] { direction: ltr; unicode-bidi: bidi-override }
71. BDO[DIR="rtl"] { direction: rtl; unicode-bidi: bidi-override }
72.
```



HTML 2 Sample default CSS

view plain print ?

```
1. BODY {
2.   margin: 1em;
3.   font-family: serif;
4.   line-height: 1.1;
5.   background: white;
6.   color: black;
7. }
8.
9. H1, H2, H3, H4, H5, H6, P, UL, OL, DIR, MENU, DIV,
10. DT, DD, ADDRESS, BLOCKQUOTE, PRE, BR, HR, FORM, DL {
11.   display: block }
12.
13. B, STRONG, I, EM, CITE, VAR, TT, CODE, KBD, SAMP,
14. IMG, SPAN { display: inline }
15.
16. LI { display: list-item }
17.
18. H1, H2, H3, H4 { margin-top: 1em; margin-bottom: 1em }
19. H5, H6 { margin-top: 1em }
20. H1 { text-align: center }
21. H1, H2, H4, H6 { font-weight: bold }
22. H3, H5 { font-style: italic }
23.
24. H1 { font-size: xx-large }
25. H2 { font-size: x-large }
26. H3 { font-size: large }
27.
28. B, STRONG { font-weight: bolder } /* relative to the parent */
29. I, CITE, EM, VAR, ADDRESS, BLOCKQUOTE { font-style: italic }
30. PRE, TT, CODE, KBD, SAMP { font-family: monospace }
31.
32. PRE { white-space: pre }
33.
34. ADDRESS { margin-left: 3em }
35. BLOCKQUOTE { margin-left: 3em; margin-right: 3em }
36.
37. UL, DIR { list-style: disc }
38. OL { list-style: decimal }
39. MENU { margin: 0 } /* tight formatting */
40. LI { margin-left: 3em }
41.
42. DT { margin-bottom: 0 }
43. DD { margin-top: 0; margin-left: 3em }
44.
45. HR { border-top: solid } /* 'border-bottom' could also have been used */
46.
47. A:link { color: blue } /* unvisited link */
48. A:visited { color: red } /* visited links */
49. A:active { color: lime } /* active links */
50.
51. /* setting the anchor border around IMG elements
52.    requires contextual selectors */
53.
54. A:link IMG { border: 2px solid blue }
55. A:visited IMG { border: 2px solid red }
56. A:active IMG { border: 2px solid lime }
57.
```

CSS Properties

**CSS Level 1** lists *53 properties*.

- **Font Properites**
  - font-family
  - font-style
  - font-variant
  - font-weight
  - font-size
  - font
- **Color and Background Properties**
  - color
  - background-color
  - background-image
  - background-repeat
  - background-attachment
  - background-position
  - background
- **Text Properties**
  - word-spacing
  - letter-spacing
  - text-decoration
  - vertical-align
  - text-transform
  - text-align
  - text-indent
  - line-height
- **Box Properties**
  - margin-top
  - margin-right
  - margin-bottom
  - margin-left
  - margin
  - padding-top
  - padding-right
  - padding-bottom
  - padding-left
  - padding
  - border-top-width
  - border-right-width
  - border-bottom-width
  - border-left-width
  - border-width
  - border-color

**CSS Level 2.1** lists *98 properties* .

- azimuth
- background-attachment
- background-color
- background-image
- background-position
- background-repeat
- background
- border-collapse
- border-color
- border-spacing
- border-style
- border-top
- border-top-color
- border-top-style
- border-top-width
- border-width
- border
- bottom
- caption-side
- clear
- clip
- color
- content
- counter-increment
- counter-reset
- cue-after
- cue-before
- cue
- cursor
- direction
- display
- elevation
- empty-cells
- float
- font-family
- font-size
- font-style
- font-variant
- font-weight
- font

## font properties

- font-family
- font-style
- font-variant
- font-weight
- font-size
- font

### font-family

#### Example 10.10

Example 10.10 Source:

```
view plain print ?
1. <div style="font-family: garamond, times, serif;" >Garamond, Times, or serif (generic fan
2. <div style="font-family: arial, helvetica, sans-serif;" >Arial, Helvetica or sans-serif (
3. <div style="font-family: courier, monospace;" >Courier or monospace (generic family)</div>
4. <div style="font-family: fantasy;" >Fantasy (generic family)</div>
5. <div style="font-family: cursive;" >Cursive (generic family)</div>
```

Example 10.10 Rendered:

Garamond, Times, or serif (generic family)  
Arial, Helvetica or sans-serif (generic family)  
Courier or monospace (generic family)  
**Fantasy (generic family)**  
Cursive (generic family)

### font-style

#### Example 10.11

Example 10.11 Source:

```
view plain print ?
1. <div style="font-style: normal;" >Normal font-style</div>
2. <div style="font-style: italic;" >Italic font-style</div>
3. <div style="font-style: oblique;" >Oblique font-style</div>
```

Example 10.11 Rendered:

Normal font-style  
*Italic font-style*  
*Oblique font-style*

### font-variant

#### Example 10.12

Example 10.12 Source:

```
view plain print ?
1. <div style="font-variant: small-caps;" >This should be rendered in small-caps.
2. <div style="font-variant: normal;" >Here we revert to "normal".
3. </div>
4. </div>
```

Example 10.12 Rendered:

THIS SHOULD BE RENDERED IN SMALL-CAPS.  
Here we revert to "normal".

### font-weight

values: normal | bold | bolder | lighter | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900

#### Example 10.13

Example 10.13 Source:

```
view plain print ?
1. <div>
2. font-weight can be used to make things <span style="font-weight: bold" >bold</span>.
3. </div>
```

Example 10.13 Rendered:

font-weight can be used to make things **bold**.

font-size

You can specify font-size by:

- relative sizes (UA)
  - xx-small
  - x-small
  - small
  - medium
  - large
  - x-large
  - xx-large
- relative sizes (context)
  - smaller
  - larger
- relative unit (context)
  - percent (%)
  - em unit
- absolute unit
  - pt

Praesent tincidunt, elit porta elementum pharetra, magna odio consequat nisi, eu iaculis mauris massa eu eros.

By Name:

Example 10.14

Example 10.14 Source:

```
view plain print ?
1. <p style="font-size: xx-small;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
2.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
3.   velit at orci.</p>
4. <p style="font-size: x-small;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
5.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
6.   velit at orci.</p>
7. <p style="font-size: small;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
8.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
9.   velit at orci.</p>
10. <p style="font-size: medium;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
11.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
12.   velit at orci.</p>
13. <p style="font-size: large;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
14.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
15.   velit at orci.</p>
16. <p style="font-size: x-large;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
17.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
18.   velit at orci.</p>
19. <p style="font-size: xx-large;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit
20.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
21.   velit at orci.</p>
```

Example 10.14 Rendered:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Relative Names:

Example 10.15

Example 10.15 Source:

```
view plain print ?
1. <div style="font-size: medium" >
2.   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
3.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
4.   velit at orci.</p>
5.   <p style="font-size: smaller;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
6.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
7.   velit at orci.</p>
8.   <p style="font-size: larger" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
9.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
10.  velit at orci.</p>
11. </div>
```

Example 10.15 Rendered:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at ord.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Relative Units:

Example 10.16

Example 10.16 Source:

```
view plain print ?
1. <div style="font-size: medium" >
2.   <p style="font-size: 80%;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
3.     Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
4.     velit at orci.</p>
5.   <p style="font-size: 0.75em;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
6.     Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
7.     velit at orci.</p>
8.   <p style="font-size: 110%;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
9.     Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
10.    velit at orci.</p>
11.   <p style="font-size: 1.5em;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
12.     Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
13.     velit at orci.</p>
14. </div>
```

Example 10.16 Rendered:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Absolute Units:

Example 10.17

Example 10.17 Source:

```
view plain print ?
1. <p style="font-size: 7pt;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
2.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
3.   velit at orci.</p>
4. <p style="font-size: 10pt;" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
5.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
6.   velit at orci.</p>
7. <p style="font-size: 14pt" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
8.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
9.   velit at orci.</p>
10. <p style="font-size: 24pt" >Lorem ipsum dolor sit amet.</p>
```

Example 10.17 Rendered:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci.

Lorem ipsum dolor sit amet.



Relative vs. Absolute

As a general guideline with CSS, relative measurements are better than absolute measurements.

Units for Font Sizes

- **Relative**
  - *Relative Sizes (to UA settings):* xx-small | x-small | small | medium | large | x-large | xx-large
  - *Relative Sizes (to context):* larger | smaller
  - Percentage (%)
  - "em" units
- **Absolute**
  - "pt" sizes (8pt, 10pt, 12pt)

Relative Sizes and Inheritance

Relative size are *relative to parent*. Nested div elements with font-size: 85% and margin-left: 50px have properties of:

- 1st div:
  - 85% font size
  - 20px left margin
- 2nd div:
  - 85% × 85% = 72.25% font size
  - 20px + 20px = 40px left margin
- 3rd div:
  - 85% × 85% × 85% = 61.4% font size
  - 20px + 20px + 20px = 60px left margin
- 4th div:
  - 85% × 85% × 85% × 85% = 52.2% font size
  - 20px + 20px + 20px + 20px = 80px left margin

Donec in turpis id massa dictum laoreet. Lorem ipsum dolor sit amet, iaculis felis id tellus. Mauris vitae mauris pellentesque nisl accumsan d

Base

nested  
divs

>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec nibh quis felis semper vehicula. Nam varius enim vitae dolor. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Nunc mollis.

Ut urna ante, semper ut, malesuada gravida, vulputate id, lacus. Mauris ipsum dolor sit amet, consectetur adipiscing elit. Maecenas adipiscing mattis quis, dui.

Nunc non urna nec lorem porta varius. Sed malesuada elit non augue placerat quis, ultricies ris, lacinia in, ante. Proin leo elit, dignissim Pellentesque non risus quis justo posuere pellentesque. Donec posuere condimentum augue elit sit amet erat. Fusce egestas. Nulla vulputate velit arcu in metus.

Example 10.18  
Example 10.18 Source:

```
view plain print ?
1. <p> Donec in turpis id massa dictum laoreet. Lorem ipsum dolor sit amet, consectetur
2. adipiscing elit. Cras iaculis felis id tellus. Mauris vitae mauris pellentesque nisl
3. accumsan dignissim. </p>
4. <div>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec ultricies
5. vestibulum urna. Phasellus et nibh quis felis semper vehicula. Nam varius enim vitae
6. dolor. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia
7. Curae; Nunc mollis.
8. <div>Ut urna ante, semper ut, malesuada gravida, vulputate id, lacus. Mauris eu justo
9. mattis nibh tempus dapibus. Lorem ipsum dolor sit amet, consectetur adipiscing elit.
10. Maecenas adipiscing. Donec turpis odio, interdum vitae, ultrices vel, mattis quis,
11. dui.
12. <div>Nunc non urna nec lorem porta varius. Sed malesuada elit non augue. Vestibulum r
13. nulla. Aenean orci. Ut sem leo, placerat quis, ultricies nec, lacinia in, ante. Pro
14. leo elit, dignissim nec, tincidunt dictum, mattis et, arcu.
15. <div>Pellentesque non risus quis justo posuere pellentesque. Donec posuere, purus
16. sit amet sollicitudin laoreet, nisl magna ultricies elit, nec condimentum augue
17. elit sit amet erat. Fusce egestas. Nulla vulputate, erat nec tempor mollis, augue
18. metus feugiat urna, id nonummy velit arcu in metus. </div> </div> </div> </div>
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. body {font-size: medium; }
2. div {
3.     font-size: 85%;
4.     margin-left: 50px;
5. }
```

Example 10.18 Rendered:

- With Styles
- Without Styles

font "shorthand" property

In CSS, there are various **shorthand** properties; these allow you to define several properties in a single place.  
[font-style | font-variant | font-weight ]? font-size[/line-height]? font-family

Example 10.19

Example 10.19 Source:

```
view plain print ?
1. <div>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci ne
2.     facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.     Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis a
4.     sit amet urna. Maecenas condimentum hendrerit turpis. </div>
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. body {
2.     font: normal normal normal 12pt/200% arial, helvetica, sans-serif;
3. }
```

Example 10.19 Rendered:

- With Styles
- Without Styles

text properties

- word-spacing
- letter-spacing
- text-decoration
- vertical-align
- text-transform
- text-align
- text-indent
- line-height

Example 10.20  
Example 10.20 Source:

```
1.  <div style="width: 30%;" >
2.  <p style="text-align: left" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
3.    Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis e
4.    velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo
5.    vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit
6.    turpis. </p>
7.  <p style="text-align: right" >Lorem ipsum dolor sit amet, consectetur adipiscing elit.
8.    Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis e
9.    velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo
10.   vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit
11.   turpis. </p>
12.  <p style="text-align: justify" >Lorem ipsum dolor sit amet, consectetur adipiscing
13.    elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut
14.    sagittis enim velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus
15.    commodo vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum
16.    hendrerit turpis. </p>
17.  <p style="text-align: center" >Lorem ipsum dolor sit amet, consectetur adipiscing
18.    elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut
19.    sagittis enim velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus
20.    commodo vitae, felis. Nulla convallis ante sit amet urna. Maecenas condimentum
21.    hendrerit turpis. </p></div>
```

Example 10.20 Rendered:

Lorem ipsum dolor sit amet,
 consectetur adipiscing elit.
 Cras sollicitudin, orci nec
 facilisis vehicula, neque urna
 porta risus, ut sagittis enim
 velit at orci. Fusce velit.
 Integer sapien enim, rhoncus
 vitae, cursus non, commodo
 vitae, felis. Nulla convallis
 ante sit amet urna.
 Maecenas condimentum
 hendrerit turpis.

 Lorem ipsum dolor sit amet,
 consectetur adipiscing elit.

Cras sollicitudin, orci nec
 facilisis vehicula, neque urna
 porta risus, ut sagittis enim
 velit at orci. Fusce velit.
 Integer sapien enim, rhoncus
 vitae, cursus non, commodo
 vitae, felis. Nulla convallis
 ante sit amet urna.
 Maecenas condimentum
 hendrerit turpis.

Lorem ipsum dolor sit amet,
 consectetur adipiscing elit.
 Cras sollicitudin, orci nec
 facilisis vehicula, neque urna
 porta risus, ut sagittis enim
 velit at orci. Fusce velit.
 Integer sapien enim, rhoncus
 vitae, cursus non, commodo
 vitae, felis. Nulla convallis
 ante sit amet urna.
 Maecenas condimentum
 hendrerit turpis.

Lorem ipsum dolor sit amet,
 consectetur adipiscing elit.
 Cras sollicitudin, orci nec
 facilisis vehicula, neque urna
 porta risus, ut sagittis enim
 velit at orci. Fusce velit.
 Integer sapien enim, rhoncus
 vitae, cursus non, commodo
 vitae, felis. Nulla convallis
 ante sit amet urna.
 Maecenas condimentum
 hendrerit turpis.

CSS Units

- **Length**  
em, pt, ex, mm, cm, in, px
- **Percentage**
- **URL**  
url(url goes here)
- **Color**  
name, rgb value

Color Units

Wikipedia Web Colors

Name

As defined in HTML: black, silver, gray, white, maroon, red, purple, fuchsia, green, lime, olive, yellow, navy, blue, teal, aqua

RGB Color Space

256 colors in each channel (Red, Green, Blue). Values can be

- decimal numbers (0 to 255)
- hexadecimal numbers (00 to ff)
- percentages (0 to 100%)

The following are all equivalent ways of defining a shade of crimson:

- #99000
- #900
- rgb(153,0,0)
- rgb(60%,0%,0%)

Example 10.21

Example 10.21 Source:

```
view plain print ?
1. <div style="background-color: #990000; color: white; padding: 0.5em; margin: 0.25em; " >
2.   Lorem ipsum dolor sit amet, consectetur adipiscing elit.
3. </div>
4. <div style="background-color: #900; color: white; padding: 0.5em; ; margin: 0.25em;" >
5.   Lorem ipsum dolor sit amet, consectetur adipiscing elit.
6. </div>
7. <div style="background-color: rgb(153,0,0); color: white; padding: 0.5em; ; margin: 0.25em;" >
8.   Lorem ipsum dolor sit amet, consectetur adipiscing elit.
9. </div>
10. <div style="background-color: rgb(60%,0%,0%); color: white; padding: 0.5em; ; margin: 0.25em;" >
11.   Lorem ipsum dolor sit amet, consectetur adipiscing elit.
12. </div>
```

Example 10.21 Rendered:

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

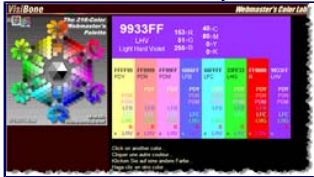
Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Lorem ipsum dolor sit amet, consectetur adipiscing elit.


Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Web Palette / Web Safe Colors

Visibone Color Laboratory



Web Color Cube







Block Model

- margin
- border
- padding
- content

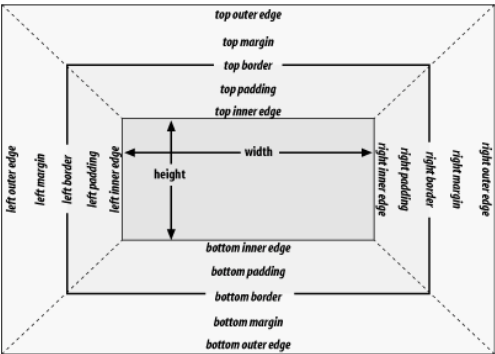
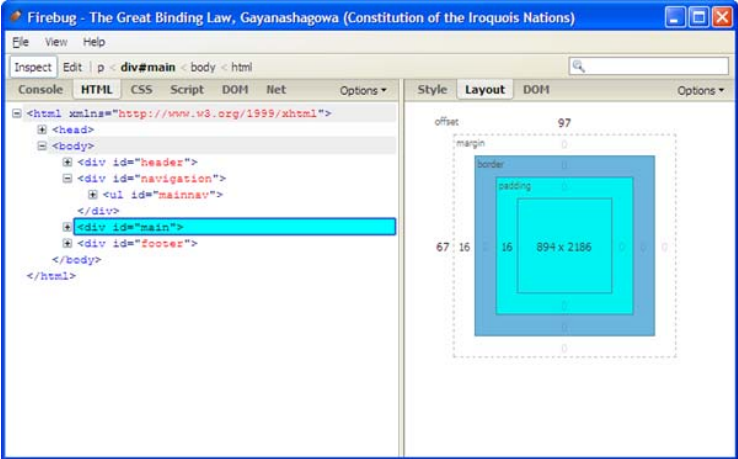


Image from *Cascading Style Sheets: The Definitive Guide*, 3rd ed by Eric Meyer, published by O'Reilly

Firebug visualization of block model (*Layout*):



margin, padding, border

- margin
  - margin-top
  - margin-right
  - margin-bottom
  - margin-left
  - margin (shorthand)
- padding
  - padding-top
  - padding-right
  - padding-bottom
  - padding-left
  - padding (shorthand)
- border
  - border-top-width
  - border-right-width
  - border-bottom-width
  - border-left-width
  - border-width
  - border-color
  - border-style
  - border-top
  - border-right
  - border-bottom
  - border-left
  - border

# TRBL for padding and margin shorthand

Stay out of "TRBL" (top right bottom left) for padding and margin shorthand.

```
view plain print ?
1. p.ex1 {padding: 0.5em 0.25em 0.5em 0.25em;}
2. /* equivalent to... */
3. p.ex2 {padding: 0.5em 0.25em; }
```

# border-style

border is a shorthand notation that allows you to set border-width, border-style, border-color in one statement.

## Example 10.22

Example 10.22 Source:

```
view plain print ?
1. <div>
2.   <h4>Dotted</h4>
3.   <p class="border1" >Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
4.     feugiat mauris facilisis libero. Etiam nisl. Cras est dolor, viverra ac, ultrices
5.     volutpat, vestibulum et, odio. Nulla eget libero. Praesent eget tellus vel nibh
6.     nonummy egestas. </p>
7.   <h4>Dashed</h4>
8.   <p class="border2" > Etiam eu arcu quis lectus semper sodales. Donec vitae risus.
9.     Integer sollicitudin imperdiet dolor. Donec vehicula. Aliquam ut sapien sed eros
10.    imperdiet pharetra. Donec accumsan scelerisque leo. Sed eros nunc, pellentesque
11.    et, mollis non, faucibus venenatis, tortor. </p>
12.   <h4>Outset</h4>
13.   <p class="border3" > Pellentesque a velit. Sed pharetra vestibulum mauris. Ut vel
14.     arcu. Cras dolor ligula, eleifend et, ultrices nec, viverra in, ipsum. In convallis
15.     pharetra lacus. Etiam tellus. Aliquam quam. Vivamus mattis purus nec quam.
16.     </p>
17.   <h4>Solid</h4>
18.   <p class="border4" > Etiam rhoncus. Praesent id neque et odio dictum varius. Integer
19.     imperdiet blandit orci. Donec nec nunc posuere augue egestas accumsan. Nunc nonummy
20.     metus ut nunc. In id turpis vitae nisl eleifend bibendum. Curabitur cursus aliquam
21.     dolor. </p>
22.   <h4>Double</h4>
23.   <p class="border5" > Duis id erat a tortor laoreet aliquet. Quisque consectetur
24.     lobortis mauris. Donec pede. Cras non turpis vel tortor iaculis nonummy. Ut
25.     facilisis viverra sem. Morbi pretium iaculis ligula. Praesent lectus. Aenean vel
26.     ante. </p>
27.   <h4>Groove</h4>
28.   <p class="border6" > Aliquam leo nunc, congue a, imperdiet eget, aliquet ac, tortor.
29.     Sed ac est. Vivamus nisi. Mauris in nisl. Sed ultricies nunc vel nunc. In dignissim
30.     consequat arcu. Sed in risus. Nulla facilisi. Integer purus urna, laoreet vitae,
31.     congue a, posuere ut, ipsum. </p>
32.   <h4>Ridge</h4>
33.   <p class="border7" > Vivamus dictum, sem in vulputate vestibulum, est tellus tempus
34.     dolor, ut laoreet arcu metus eu orci. Sed enim augue, dignissim sed, porta sed,
35.     dapibus ac, nibh. Nunc mattis ipsum eu lectus. </p>
36.   <h4>Inset</h4>
37.   <p class="border8" > Maecenas consectetur, lectus ac tempus iaculis, leo ipsum
38.     tincidunt erat, et aliquam libero nulla ac ipsum. Nam turpis leo, feugiat vel,
39.     nonummy id, ornare a, arcu. Vestibulum porta, justo et ornare porta, neque eros
40.     vestibulum libero, semper iaculis augue turpis eu neque. </p>
41.   <h4>None</h4>
42.   <p class="border9" > Maecenas consectetur, lectus ac tempus iaculis, leo ipsum
43.     tincidunt erat, et aliquam libero nulla ac ipsum. Nam turpis leo, feugiat vel,
44.     nonummy id, ornare a, arcu. </p>
45. </div>
```

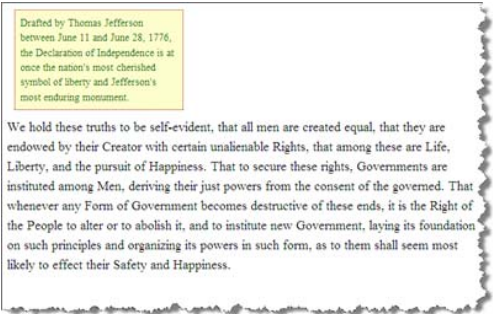
In style element (<style type="text/css">) within head element:

```
view plain print ?
1. body {
2.     font-family: tahoma,arial,sans-serif;
3.     font-size: small;
4. }
5. p {
6.     margin: 1em 2em 0.5em 5em;
7.     padding: 0.5em 3em;
8. }
9. p { width: 50%; }
10. .border1 { border: thin dotted #900; }
11. .border2 { border: medium dashed #090; }
12. .border3 { border: thick outset #009; }
13. .border4 { border: 3px solid #999; }
14. .border5 { border: 5px double #000; }
15. .border6 { border: 10px groove black; }
16. .border7 { border: 5px ridge black; }
17. .border8 { border: 5px inset #900; }
18. .border9 { border: 5px none #090; }
```

Example 10.22 Rendered:

- With Styles
- Without Styles

Margin, Padding, Border Example



Example 10.23

Example 10.23 Source:

```
view plain print ?
1. <div>
2. <div class="about" > Drafted by Thomas Jefferson between June 11 and June 28, 1776, the
3.     Declaration of Independence is at once the nation's most cherished symbol of liberty and
4.     Jefferson's most enduring monument.</div>
5. <div> We hold these truths to be self-evident, that all men are created equal, that they
6.     endowed by their Creator with certain unalienable Rights, that among these are Life,
7.     Liberty, and the pursuit of Happiness. That to secure these rights, Governments are
8.     instituted among Men, deriving their just powers from the consent of the governed. That
9.     whenever any Form of Government becomes destructive of these ends, it is the Right of t
10.    People to alter or to abolish it, and to institute new Government, laying its foundatio
11.    such principles and organizing its powers in such form, as to them shall seem most like
12.    effect their Safety and Happiness.</div>
13. </div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. .about {
2.     width: 33%;
3.     text-align: left;
4.     font-size: 0.75em;
5.     color: #006600;
6.     background: #fefecd;
7.     padding: 0.5em;
8.     margin: 0.75em;
9.     border-width: thin;
10.    border-style: dotted;
11.    border-color: #900;
12. }
13. body {
14.     font-size: large;
15.     line-height: 1.5;
16. }
```

Example 10.23 Rendered:

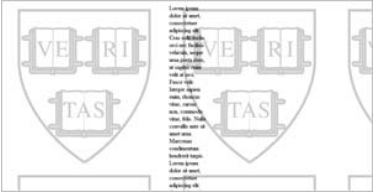
- With Styles
  - Without Styles
- 

## Backgrounds

- background-color
- background-image
- background-repeat
- background-attachment
- background-position
- background (a shorthand property)

### Background Image with CSS

A background image with CSS:



#### Example 10.24

Example 10.24 Source:

```
view plain print ?
1. <div style="margin-left: 45%; margin-right: 45%;" > Lorem ipsum dolor sit amet,
2.   consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urna
3.   porta risus, ut sagittis enim velit at orci. Fusce velit. Integer sapien enim, rhoncus
4.   vitae, cursus non, commodo vitae, felis. Nulla convallis ante sit amet urna. Maecenas
5.   condimentum hendrerit turpis. Lorem ipsum dolor sit amet, consectetur adipiscing elit.
6.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim
7.   velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo vit
8.   felis. Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit turpis. </div>
```

In style element (<style type="text/css">) within head element:

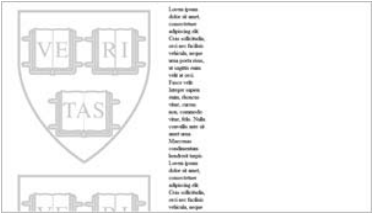
```
view plain print ?
1. body { background-image: url(images/shield-background.gif); }
```

Example 10.24 Rendered:

- With Styles
  - Without Styles
- 

### Repeat

Repeat on y-axis only:



Example 10.25

Example 10.25 Source:

```
view plain print ?
1. <div style="margin-left: 45%; margin-right: 45%;*" > Lorem ipsum dolor sit amet,
2.   consectetur adipiscing elit. Cras sollicitudin, orci nec facilisis vehicula, neque urr
3.   porta risus, ut sagittis enim velit at orci. Fusce velit. Integer sapien enim, rhoncus
4.   vitae, cursus non, commodo vitae, felis. Nulla convallis ante sit amet urna. Maecenas
5.   condimentum hendrerit turpis. Lorem ipsum dolor sit amet, consectetur adipiscing elit.
6.   Cras sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis eni
7.   velit at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo vit
8.   felis. Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit turpis. </div>
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. body {
2.   background-image: url(images/shield-background.gif);
3.   background-repeat: repeat-y;
4. }
```

Example 10.25 Rendered:

- With Styles
- Without Styles

Center and Fix

Center, Don't Repeat and Fix position:



Example 10.26

Example 10.26 Source:

```
view plain print ?
1. <div style="margin-left: 45%; margin-right: 45%;*" >
2.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec fac
3.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec fac
4.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec fac
5.   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec fac
6. </div>
```

In **style** element (<style type="text/css">) within **head** element:

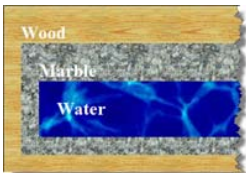
```
view plain print ?
1. body {
2.   background-image: url(images/shield-background.gif);
3.   background-repeat: no-repeat;
4.   background-position: center;
5.   background-attachment: fixed;
6. }
```

Example 10.26 Rendered:

- With Styles
- Without Styles

## Backgrounds aren't just for the "body"

Here we use the following images as backgrounds in `div` elements.



### Example 10.27

Example 10.27 Source:

```
view plain print ?
1. <div class="wood" > Wood
2.   <div class="marble" > Marble
3.     <div class="water" > Water </div> </div> </div>
```

In `style` element (`<style type="text/css">`) within `head` element:

```
view plain print ?
1. body {
2.   font-size: 18pt;
3.   font-weight: bold;
4.   color: white;
5.   div.wood {
6.     padding: 1em;
7.     background-image: url(images/wood.jpg);
8.   }
9.   div.marble {
10.    background-image: url(images/marble.jpg);
11.    padding: 1em;
12.  }
13.   div.water {
14.    background-image: url(images/water.jpg);
15.    padding: 1em;
16.  }
```

Example 10.27 Rendered:

- With Styles
- Without Styles

## Backgrounds aren't just for the "body"

Instead of having an `img` element within the XHTML, we can include design images in the CSS. This example displays the flag.png with the `h1` of the markup.



### Example 10.28

Example 10.28 Source:

```
view plain print ?
1. <div id="ustitle" >
2.   <h1>United States Constitution</h1>
3. </div>
4. <div> Lorem ipsum dolor sit amet, consectetur adipiscing elit. In accumsan ipsum et libe
5.   Donec tincidunt. Duis non nulla a tortor sagittis bibendum. Nunc ante. Vestibulum
6.   vulputate. Aliquam ultricies, est vitae mattis ornare, leo pede lacinia mi, vitae phare
7.   turpis enim sed turpis. Mauris lorem. Ut rhoncus. Fusce congue ultricies est. Nulla
8.   dignissim sagittis ipsum. Vivamus eu lectus non enim dignissim imperdiet. Nulla facilis
9.   Integer euismod cursus erat. </div>
```

In `style` element (`<style type="text/css">`) within `head` element:

```
view plain print ?
1. div#ustitle {
2.   height: 80px;
3.   background: #ddd url(images/flag-small.png) left center no-repeat;
4.   margin-bottom: 0.5em;
5. }
6. #ustitle h1 {
7.   padding-top: 0.5em;
8.   text-align: center;
9.   font-family: tahoma,arial,Helvetica,sans-serif;
10. }
```

Example 10.28 Rendered:

- With Styles
- Without Styles

Backgrounds: use tiling and image size

The image (5px x 150px; 254 bytes):



"Normal" size:

Year	Championship game	Score
2008	Kansas def. Memphis	75-68
2007	Florida def. Ohio State	84-75
2006	Florida def. UCLA	73-57
2005	UNC def. Illinois	75-70
2004	UConn def. Georgia Tech	82-73
2003	Syracuse def. Kansas	81-78
2002	Maryland def. Indiana	64-52
2001	Duke def. Arizona	82-72
2000	Michigan State def. Florida	89-76
1999	UConn def. Duke	77-74
1998	Kentucky def. Utah	78-69

"Increased +4":

Year	Championship
2008	Kansas def. Mem
2007	Florida def. Ohio

Example 10.29

Example 10.29 Source:

```
view plain print ?
1. <table id="stats" >
2. <tr><th rowspan="1" colspan="1" >Year</th><th rowspan="1" colspan="1" >Championship game
3. <tr><td rowspan="1" colspan="1" >2008</td><td rowspan="1" colspan="1" >Kansas def. Mem
4. <tr><td rowspan="1" colspan="1" >2007</td><td rowspan="1" colspan="1" >Florida def. Ohi
5. <tr><td rowspan="1" colspan="1" >2006</td><td rowspan="1" colspan="1" >Florida def. UCl
6. <tr><td rowspan="1" colspan="1" >2005</td><td rowspan="1" colspan="1" >UNC def. Illinoi
7. <tr><td rowspan="1" colspan="1" >2004</td><td rowspan="1" colspan="1" >UConn def. Georg
8. <tr><td rowspan="1" colspan="1" >2003</td><td rowspan="1" colspan="1" >Syracuse def. Ka
9. <tr><td rowspan="1" colspan="1" >2002</td><td rowspan="1" colspan="1" >Maryland def. Ir
10. <tr><td rowspan="1" colspan="1" >2001</td><td rowspan="1" colspan="1" >Duke def. Arizon
11. <tr><td rowspan="1" colspan="1" >2000</td><td rowspan="1" colspan="1" >Michigan State d
12. <tr><td rowspan="1" colspan="1" >1999</td><td rowspan="1" colspan="1" >UConn def. Duke
13. <tr><td rowspan="1" colspan="1" >1998</td><td rowspan="1" colspan="1" >Kentucky def. Ut
14. </table>
15.
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. #stats th {
2.   background-image: url(images/gradient-blue.png);
3.   background-repeat: repeat-x;
4.   background-position: bottombottom;
5.   padding: 0.25em;
6. }
7. #stats td {
8.   border-bottom: thin dotted black;
9.   padding: 0.25em;
10. }
11. table {
12.   border-collapse: collapse;
13.   border: thin solid black;
14. }
```

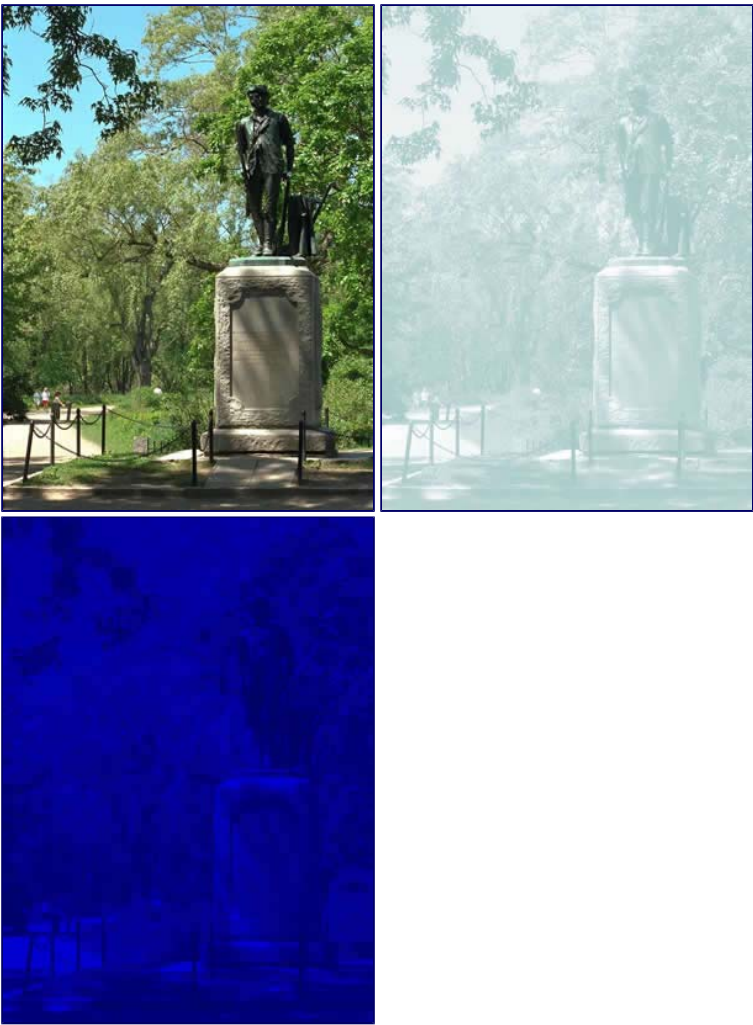
Example 10.29 Rendered:

- With Styles
- Without Styles

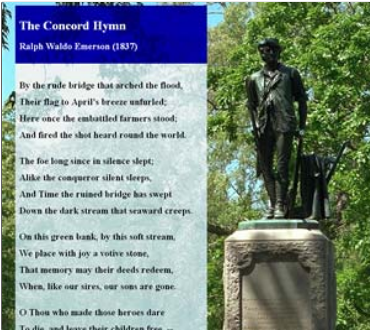
Minuteman

Image as a fixed background for the "body". Alternate versions of the image for the "header" and "main" content areas of the page.

The three images:



Rendered in a browser:



Example 10.30  
Example 10.30 Source:

```
view plain print ?
1. <div id="header" >
2.   <h1>The Concord Hymn</h1>
3.   <h2>Ralph Waldo Emerson (1837)</h2>
4. </div>
5. <div id="main" >
6.   <p> By the rude bridge that arched the flood,
7.     <br/> Their flag to April's breeze unfurled;
8.     <br/> Here once the embattled farmers stood;
9.     <br/> And fired the shot heard round the world. </p>
10.  <p> The foe long since in silence slept;
11.    <br/> Alike the conqueror silent sleeps,
12.    <br/> And Time the ruined bridge has swept
13.    <br/> Down the dark stream that seaward creeps. </p>
14.  <p> On this green bank, by this soft stream,
15.    <br/> We place with joy a votive stone,
16.    <br/> That memory may their deeds redeem,
17.    <br/> When, like our sires, our sons are gone. </p>
18.  <p> O Thou who made those heroes dare
19.    <br/> To die, and leave their children free, --
20.    <br/> Bid Time and Nature gently spare
21.    <br/> The shaft we raised to them and Thee. </p>
22. </div>
```

In **style** element (`<style type="text/css">`) within **head** element:



view plain print ?

```
1. body {
2.     background: #638f29 url(images/minuteman.jpg) 0in -1.25in fixed no-repeat;
3. }
4. #main {
5.     background: url(images/minuteman-light.jpg) 0in -1.25in fixed no-repeat;
6.     font-family: Times, serif;
7.     font-size: x-large;
8.     font-weight: bold;
9.     line-height: 1.75em;
10.    margin-left: 25px;
11.    padding: 10px;
12.    width: 470px;
13. }
14. #header {
15.     background: url(images/minuteman-dark.jpg) 0in -1.25in fixed no-repeat;
16.     color: white;
17.     font-family: Times, serif;
18.     margin-left: 25px;
19.     padding: 10px;
20.     width: 470px;
21. }
```

Example 10.30 Rendered:

- With Styles
- Without Styles

## Pseudo-Classes and Elements

CSS 2.1 defines these pseudo-classes and pseudo-elements. Examples are `p:first-line`, `ul:first-child`, and `input:focus`

### Pseudo-Classes

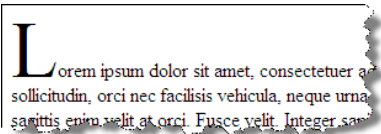
- first-child
- link
- visited
- hover
- active
- focus
- lang

### Pseudo-Elements

- first-line
- first-letter
- before
- after

# Pseudo Elements

first-letter pseudo element.



Example 10.31

Example 10.31 Source:

```
view plain print ?
1. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
2.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
4.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

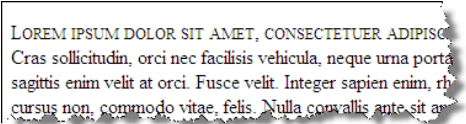
In style element (<style type="text/css">) within head element:

```
view plain print ?
1. p:first-letter { font-size: 400%; }
```

Example 10.31 Rendered:

- With Styles
- Without Styles

first-line pseudo element



Example 10.32

Example 10.32 Source:

```
view plain print ?
1. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
2.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
3.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
4.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. p:first-line { font-variant: small-caps; }
```

Example 10.32 Rendered:

- With Styles
- Without Styles

Opening paragraph with first-letter pseudo element.

Example 10.33

Example 10.33 Source:

```
view plain print ?
1. <p class="opener" > Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras
2.   sollicitudin, orci nec facilisis vehicula, neque urna porta risus, ut sagittis enim vel
3.   at orci. Fusce velit. Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, fe
4.   Nulla convallis ante sit amet urna. Maecenas condimentum hendrerit turpis. </p>
5. <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras sollicitudin, orci nec
6.   facilisis vehicula, neque urna porta risus, ut sagittis enim velit at orci. Fusce velit
7.   Integer sapien enim, rhoncus vitae, cursus non, commodo vitae, felis. Nulla convallis e
8.   sit amet urna. Maecenas condimentum hendrerit turpis. </p>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. p.opener:first-letter { font-size: 400%; float: left; }
```

Example 10.33 Rendered:

- With Styles
- Without Styles

# Pseudo Classes

- a:link
- a:visited
- a:hover
- a:active



Example 10.34  
Example 10.34 Source:

```
view plain print ?
1. <div><a href="http://www.npr.org/" shape="rect" >National Public Radio</a></div>
2. <div><a href="http://www.cnn.com/" shape="rect" >Cable Network News</a></div>
3. <div><a href="http://www.foxnews.com/" shape="rect" >Fox News</a></div>
4. <div><a href="http://www.abcnews.com/" shape="rect" >ABC News</a></div>
5. <div><a href="http://www.economist.com/" shape="rect" >The Economist</a></div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. div {margin: 0.5em; }
2. a {margin: 0.25em; padding: 0.25em;}
3. a:link {
4.     text-decoration: none;
5.     color: blue;
6.     background-color: white;
7. }
8. a:visited {
9.     text-decoration: none;
10.    color: green;
11.    background-color: silver;
12. }
13. a:hover {
14.     text-decoration: none;
15.     color: white;
16.     background-color: blue;
17. }
18. a:active {
19.     text-decoration: underline;
20.     color: red;
21.     background-color: yellow;
22. }
```

Example 10.34 Rendered:

- With Styles
- Without Styles

## Class Names

You can choose class names when authoring your CSS and XHTML. A good rule is to create "logical" class names and not "descriptive" ones. Remember, you've gone to the trouble of separating markup and presentation -- keep this separation when creating class names.

If you can guess how the class is styled based upon the name, this should cause you to consider changing the name.

Good Class/ID Names	Poor Class Names
<ul style="list-style-type: none"><li>• globalnav</li><li>• sitenav</li><li>• gallery</li><li>• imgcaption</li><li>• aside</li><li>• warning</li></ul>	<ul style="list-style-type: none"><li>• thinborder</li><li>• rightcolumn</li><li>• rightnav</li><li>• redbold</li><li>• center</li></ul>

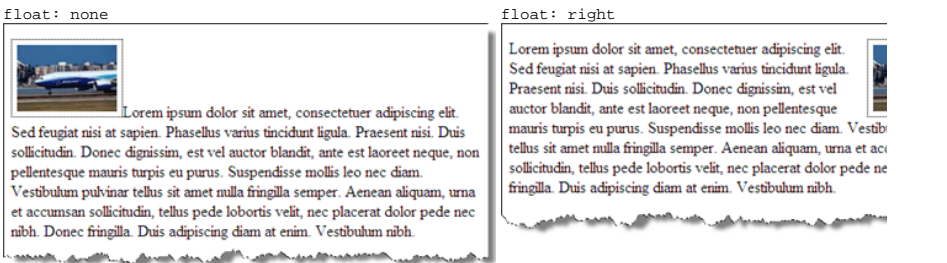
Choosing class and id names appropriately will help with:

- **evolution**  
Your #rightnav may very well become navigation positioned on the left side or the top.  
Your .redbold may very be changed to another color or background entirely.
- **specificity and semantics**  
If you have a .dottedborder class, you may wish to change how your thumbnail images are styled, but leave presentation of other markup that you've given the same class to unchanged.

See: [Choosing Class and ID Names](#)

## Float

Float takes the block out of the flow of the containing block and moves it (right or left) *within the containing block*.



### Example 10.35

Example 10.35 Source:

```
view plain print ?
1. <p>Lorem ipsum dolor sit amet, consectetur
2. adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent
3. nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque
4. non pellentesque mauris turpis eu purus. Suspendisse mollis leo nec diam. Vestibulum
5. pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan
6. sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec
7. fringilla. Duis adipiscing diam at enim. Vestibulum nibh.</p>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. img {
2. float: right;
3. border: thin dotted black;
4. padding: 5px;
5. }
```

Example 10.35 Rendered:

- With Styles
- Without Styles

## Float and Clear

The "clear" property defines the sides of a block where floated blocks cannot occur.


float: right; clear: none

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus. Suspendisse mollis leo nec diam. pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh. Proin sollicitudin ante vel eros. Nunc tempus. Quisque vitae quam non magna mattis volutpat. Nulla vulputate, erat nec tempor mollis, augue metus feugiat urna, id nonummy velit arcu in metus. Donec nonummy, pede non convallis commodo, enim velit ornare nulla, vitae suscipit risus urna eget magna. Maecenas aliquam arcu ac turpis.



float: right; clear: right

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus. Suspendisse mollis leo nec diam. pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh. Proin sollicitudin ante vel eros. Nunc tempus. Quisque vitae quam non magna mattis volutpat. Nulla vulputate, erat nec tempor mollis, augue metus feugiat urna, id nonummy velit arcu in metus. Donec nonummy, pede non convallis commodo, enim velit ornare nulla, vitae suscipit risus urna eget magna. Maecenas aliquam arcu ac turpis.



**Example 10.36**  
*Example 10.36 Source:*

view plain print ?

```
1. <p>
2. 
3. 
4. Lorem ipsum dolor sit amet,
5. consectetur adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt
6. ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante
7. est laoreet neque, non pellentesque mauris turpis eu purus. Suspendisse mollis leo nec
8. diam. pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan
9. sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec
10. fringilla. Duis adipiscing diam at enim. Vestibulum nibh. Proin sollicitudin ante vel
11. eros. Nunc tempus. Quisque vitae quam non magna mattis volutpat. Nulla vulputate, erat
12. tempor mollis, augue metus feugiat urna, id nonummy velit arcu in metus. Donec nonummy,
13. non convallis commodo, enim velit ornare nulla, vitae suscipit risus urna eget magna.
14. Maecenas aliquam arcu ac turpis. </p>
```

In **style** element (`<style type="text/css">`) within **head** element:

view plain print ?

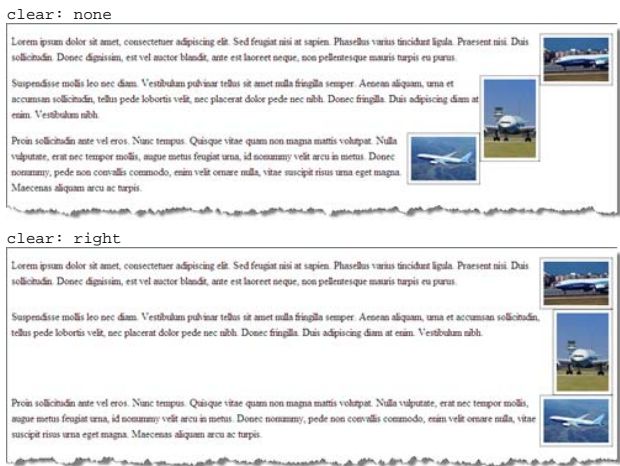
```
1. img {
2.   float: right;
3.   clear: right;
4.   border: thin dotted black;
5.   padding: 5px;
6.   margin: 5px;
7. }
8. p {line-height: 1.5em;}
```

*Example 10.36 Rendered:*

- With Styles
- Without Styles

## Float and Clear

The "clear" property defines the sides of a block where floated blocks cannot occur.



### Example 10.37

Example 10.37 Source:

```
view plain print ?
1. <p>Lorem ipsum dolor sit amet, consectetur
2. adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praeser
3. nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neq
4. non pellentesque mauris turpis eu purus.</p>
5. <p>Suspendisse mollis leo nec diam. Vestibulum
6. pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan
7. sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec
8. fringilla. Duis adipiscing diam at enim. Vestibulum nibh.</p>
9. <p>Proin sollicitudin ante vel eros. Nunc
10. tempus. Quisque vitae quam non magna mattis volutpat. Nulla vulputate, erat nec tempor
11. mollis, augue metus feugiat urna, id nonummy velit arcu in metus. Donec nonummy, pede r
12. convallis commodo, enim velit ornare nulla, vitae suscipit risus urna eget magna. Maece
13. aliquam arcu ac turpis. </p>
```

In style element (<style type="text/css">) within head element:

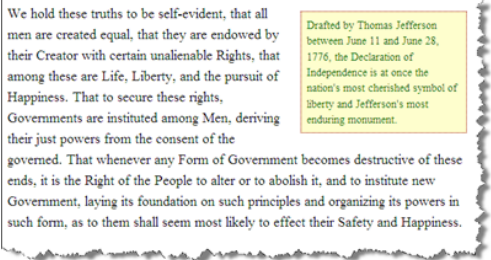
```
view plain print ?
1. p {
2.   clear: right;
3.   line-height: 1.5em;
4. }
5. img {
6.   float: right;
7.   border: thin dotted black;
8.   padding: 5px;
9. }
```

Example 10.37 Rendered:

- With Styles
- Without Styles

## Float

### Float: right



#### Example 10.38

Example 10.38 Source:

```
view plain print ?
1. <div>
2.   <div class="about" >Drafted by Thomas Jefferson between June 11 and June 28, 1776, the
3.     Declaration of Independence is at once the nation's most cherished symbol of liberty
4.     Jefferson's most enduring monument.</div>
5.   <div> We hold these truths to be self-evident, that all men are created equal, that the
6.     endowed by their Creator with certain unalienable Rights, that among these are Life,
7.     Liberty, and the pursuit of Happiness. That to secure these rights, Governments are
8.     instituted among Men, deriving their just powers from the consent of the governed. Th
9.     whenever any Form of Government becomes destructive of these ends, it is the Right of
10.    People to alter or to abolish it, and to institute new Government, laying its foundat
11.    such principles and organizing its powers in such form, as to them shall seem most li
12.    effect their Safety and Happiness. </div>
13. </div>
```

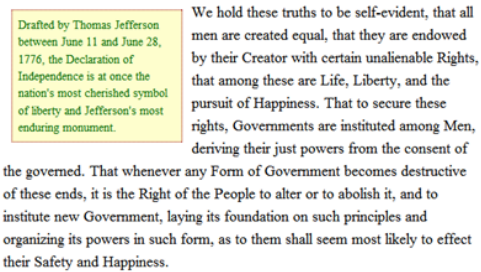
In style element (<style type="text/css">) within head element:

```
view plain print ?
1. .about {
2.   float: right;
3.   width: 33%;
4.   text-align: left;
5.   font-size: 0.75em;
6.   color: #006600;
7.   background: #fefecd;
8.   padding: 0.5em;
9.   margin: 0.75em;
10.  border-width: thin;
11.  border-style: dotted;
12.  border-color: #900;
13. }
14. body {
15.   font-size: large;
16.   line-height: 1.5;
17. }
```

Example 10.38 Rendered:

- With Styles
- Without Styles

### Float: left



#### Example 10.39

Example 10.39 Source:

```
view plain print ?
1. <div>
2.   <div class="about" >Drafted by Thomas Jefferson between June 11 and June 28, 1776, the
3.     Declaration of Independence is at once the nation's most cherished symbol of liberty
4.     Jefferson's most enduring monument.</div>
5.   <div> We hold these truths to be self-evident, that all men are created equal, that the
6.     endowed by their Creator with certain unalienable Rights, that among these are Life,
7.     Liberty, and the pursuit of Happiness. That to secure these rights, Governments are
8.     instituted among Men, deriving their just powers from the consent of the governed. Th
9.     whenever any Form of Government becomes destructive of these ends, it is the Right of
10.    People to alter or to abolish it, and to institute new Government, laying its foundat
11.    such principles and organizing its powers in such form, as to them shall seem most li
12.    effect their Safety and Happiness. </div>
13. </div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. .about {
2.   float: left;
3.   width: 33%;
4.   text-align: left;
5.   font-size: 0.75em;
6.   color: #006600;
7.   background: #fefecd;
8.   padding: 0.5em;
9.   margin: 0.75em;
10.  border-width: thin;
11.  border-style: dotted;
12.  border-color: #900;
13. }
14. body {
15.   font-size: large;
16.   line-height: 1.5;
17. }
```

Example 10.39 Rendered:

- With Styles
- Without Styles

Float Opposite

Use float: left and float: right for content to be on opposite sides.



Example 10.40

Example 10.40 Source:

```
view plain print ?
1. <div class="footer" >
2.   <p class="course" >
3.     <a href="http://cscie12.dce.harvard.edu/" shape="rect" >CSCI E-12 Home</a> |
4.     <a href="mailto:cscie12@fas.harvard.edu" shape="rect" >cscie12@fas.harvard.edu</a>
5.   </p>
6.   <p class="global" >
7.     <a href="http://www.harvard.edu/" shape="rect" >Harvard</a> |
8.     <a href="http://www.dce.harvard.edu/" shape="rect" >DCE</a>
9.   </p>
10. </div>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. div.footer {
2.   background-color: #ccf;
3.   border-top: thin solid #333;
4. }
5. div.footer p.course { float: left; }
6. div.footer p.global { float: right; }
7. div.footer p {
8.   padding: 0.25em 2em 0.25em 2em;
9.   font-size: small;
10. }
11. div.footer a:link,
12. div.footer a:visited,
13. div.footer a:hover,
14. div.footer a:active {
15.   text-decoration: none;
16.   color: navy;
17.   font-weight: bold;
18.   padding: 0.25em;
19. }
20. div.footer a:hover {
21.   color: #ccf;
22.   background-color: navy;
23. }
```

Example 10.40 Rendered:

- With Styles
- Without Styles

The background color of the parent div did not display. The content of this div has been "floated," therefore it has been removed from the calculation of its box model. The parent div size is null. Solution: float the parent div. Recall that a float is always with respect to the containing box.





**Example 10.41**  
*Example 10.41 Source:*

```
view plain print ?
1. <div class="footer" >
2.   <p class="course" >
3.     <a href="http://cscie12.dce.harvard.edu/" shape="rect" >CSCI E-12 Home</a> |
4.     <a href="mailto:cscie12@fas.harvard.edu" shape="rect" >cscie12@fas.harvard.edu</a>
5.   </p>
6.   <p class="global" >
7.     <a href="http://www.harvard.edu/" shape="rect" >Harvard</a> |
8.     <a href="http://www.dce.harvard.edu/" shape="rect" >DCE</a>
9.   </p>
10. </div>
```

In **style** element (`<style type="text/css">`) within **head** element:

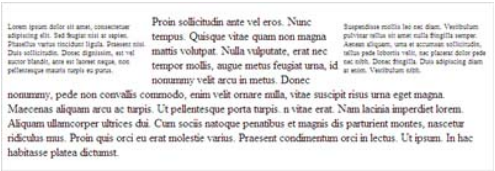
```
view plain print ?
1. div.footer {
2.   background-color: #ccf;
3.   float: left;
4.   border-top: thin solid #333;
5. }
6. div.footer p.course { float: right; }
7. div.footer p.global { float: left; }
8. div.footer p {
9.   padding: 0.25em 2em 0.25em 2em;
10.  font-size: small;
11. }
12. div.footer a:link,
13. div.footer a:visited,
14. div.footer a:hover,
15. div.footer a:active {
16.   text-decoration: none;
17.   color: navy;
18.   font-weight: bold;
19.   padding: 0.25em;
20. }
21. div.footer a:hover {
22.   color: #ccf;
23.   background-color: navy;
24. }
```

*Example 10.41 Rendered:*

- With Styles
- Without Styles

## Float and Margins

We want to float one element left, the other right. We want content to be between the floated elements.



**Example 10.42**  
*Example 10.42 Source:*

```
view plain print ?
1. <p class="first" >Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed feugiat r
2.   sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin.
3.   Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque
4.   mauris turpis eu purus.</p>
5. <p class="second" >Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet
6.   fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede
7.   lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing
8.   diam at enim. Vestibulum nibh.</p>
9. <p>Proin sollicitudin ante vel eros. Nunc tempus. Quisque vitae quam non magna mattis
10.  volutpat. Nulla vulputate, erat nec tempor mollis, augue metus feugiat urna, id
11.  nonummy velit arcu in metus. Donec nonummy, pede non convallis commodo, enim velit
12.  ornare nulla, vitae suscipit risus urna eget magna. Maecenas aliquam arcu ac turpis.
13.  Ut pellentesque porta turpis. n vitae erat. Nam lacinia imperdiet lorem. Aliquam
14.  ullamcorper ultrices dui.
15.  Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus
16.  mus. Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut
17.  ipsum. In hac habitasse platea dictumst. </p>
```

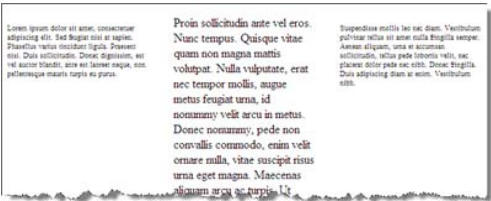
In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. p.first {
2.   float: left;
3.   width: 30%;
4.   font-size: x-small;
5. }
6. p.second {
7.   float: right;
8.   width: 30%;
9.   font-size: x-small;
10. }
```

*Example 10.42 Rendered:*

- With Styles
- Without Styles

Make the middle content not wrap around the floated contents (set margin for the middle content).



Example 10.43

Example 10.43 Source:

```
view plain print ?
1. <p class="first">Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed feugiat r
2. sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin.
3. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque
4. mauris turpis eu purus.</p>
5. <p class="second">Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet
6. fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede
7. lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing
8. diam at enim. Vestibulum nibh.</p>
9. <p class="third">Proin sollicitudin ante vel eros. Nunc tempus. Quisque vitae quam
10. non magna mattis volutpat. Nulla vulputate, erat nec tempor mollis, augue metus
11. feugiat urna, id nonummy velit arcu in metus. Donec nonummy, pede non convallis
12. commodo, enim velit ornare nulla, vitae suscipit risus urna eget magna. Maecenas
13. aliquam arcu ac turpis. Ut pellentesque porta turpis. n vitae erat. Nam lacinia
14. imperdiet lorem. Aliquam ullamcorper ultrices dui.
15. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus
16. mus. Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut
17. ipsum. In hac habitasse platea dictumst.</p>
```

In style element (<style type="text/css">) within head element:

```
view plain print ?
1. p.first {
2.   float: left;
3.   width: 30%;
4.   font-size: x-small;
5. }
6. p.second {
7.   float: right;
8.   width: 30%;
9.   font-size: x-small;
10. }
11. p.third {
12.   margin-left: 35%;
13.   margin-right: 35%;
14. }
```

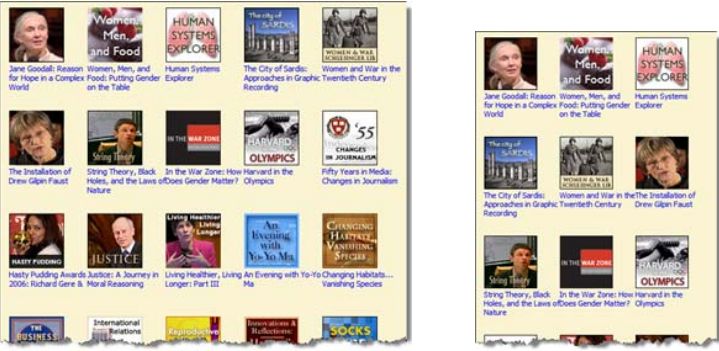
Example 10.43 Rendered:

- With Styles
- Without Styles

Float and a Flexible "Grid"

Here each "program" is wrapped in a div, which contains a thumbnail and a caption. The div elements are sized (height and width set) and floated. The result is a table-like layout that is flexible for varying widths of the browser window.

Harvard at Home Programs



Congress



Float and a Flexible "Grid"

It is important to set *height* and *width* !

Without setting height and width:



Setting height and width:



Example 10.44  
Example 10.44 Source:

```
view plain print ?
1. <div id="gallery" >
2.   <div><br/>Boeing 777</div>
3.   <div><br/>Boeing 777</div>
4.   <div><br/>Boeing 777</div>
5.   <div><br/>Boeing 777</div>
6.   <div><br/>Boeing 777</div>
7.   <div><br/>Boeing 777</div>
8.   <div><br/>Boeing 787 Dreamliner</div>
9.   <div><br/>Boeing 787 Dreamliner</div>
10.  <div><br/>Boeing Business Jet</div>
11. </div>
12.
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. #gallery div {
2.   float: left;
3.   width: 150px;
4.   height: 150px;
5.   padding: 5px;
6.   border: thin dotted #ccc;
7.   margin: 5px;
8.   text-align: center;
9.   font-size: x-small;
10. }
11. #gallery div img { padding-top: 5px; }
12. body {
13.   font-family: arial, helvetica, sans-serif;
14. }
```

Example 10.44 Rendered:

- With Styles
- Without Styles

Display: none

Can use CSS to turn off display. This will be especially useful to manipulate CSS properties with JavaScript.

Full list for the American League:

- American League
  - East
    - Baltimore
    - Boston
    - New York
    - Toronto
    - Tampa Bay
  - Central
    - Chicago
    - Cleveland
    - Detroit
    - Kansas City
    - Minnesota
  - West
    - Los Angeles
    - Oakland
    - Texas
    - Seattle

Example 10.45  
Example 10.45 Source:

```
view plain print ?
1. <ul>
2.   <li>American League
3.     <ul>
4.       <li id="ale" >East
5.         <ul>
6.           <li>Baltimore</li>
7.           <li>Boston</li>
8.           <li>New York</li>
9.           <li>Toronto</li>
10.          <li>Tampa Bay</li>
11.        </ul> </li>
12.       <li id="alc" >Central
13.         <ul>
14.           <li>Chicago</li>
15.           <li>Cleveland</li>
16.           <li>Detroit</li>
17.           <li>Kansas City</li>
18.           <li>Minnesota</li>
19.         </ul> </li>
20.       <li id="alw" >West
21.         <ul>
22.           <li>Los Angeles</li>
23.           <li>Oakland</li>
24.           <li>Texas</li>
25.           <li>Seattle</li>
26.         </ul> </li>
27.     </ul> </li>
28. </ul>
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. #ale { display: none; }
2. #alw { display: none; }
3. * { font-family: arial, helvetica, sans-serif; }
```

Example 10.45 Rendered:

- With Styles
- Without Styles

## Lists

- list-style-type
  - disc | circle | square | decimal | lower-roman | upper-roman | lower-alpha | upper-alpha | none
- list-style-image
- list-style-position
- list-style
  - a shorthand property

### Ordered List

An ordered list:

#### Example 10.46

Example 10.46 Source:

```
view plain print ?
1. <strong>Winningest Active Coaches, Division I NCAA Men's Basketball</strong>
2. <ol class="basketball" >
3.   <li>Mark Few</li>
4.   <li>Roy Williams</li>
5.   <li>Bruce Pearl</li>
6.   <li>Thad Matta</li>
7.   <li>Bo Ryan</li>
8.   <li>Mike Krzyzewski</li>
9.   <li>Jim Boeheim</li>
10.  <li>Bob Huggins</li>
11.  <li>Lute Olson</li>
12.  <li>Tubby Smith</li>
13. </ol>
```


In **style** element (<style type="text/css">) within **head** element:

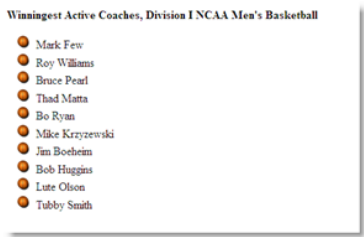
```
view plain print ?
1. ol.basketball {
2.   list-style: upper-roman;
3. }
```

Example 10.46 Rendered:

- With Styles
- Without Styles

## Lists with Image

And now, let's add a basketball icon as a list bullet (image is at [images/basketball.gif](#), )



An unordered list controlled by CSS:

#### Example 10.47

Example 10.47 Source:

```
view plain print ?
1. <div class="basketball" >
2.   <strong>Winningest Active Coaches, Division I NCAA Men's Basketball</strong>
3.   <ul class="basketball" >
4.     <li>Mark Few</li>
5.     <li>Roy Williams</li>
6.     <li>Bruce Pearl</li>
7.     <li>Thad Matta</li>
8.     <li>Bo Ryan</li>
9.     <li>Mike Krzyzewski</li>
10.    <li>Jim Boeheim</li>
11.    <li>Bob Huggins</li>
12.    <li>Lute Olson</li>
13.    <li>Tubby Smith</li>
14.  </ul>
15. </div>
```

In **style** element (<style type="text/css">) within **head** element:

```
view plain print ?
1. ul.basketball {
2.   list-style-image: url(images/basketball.gif);
3. }
```

Example 10.47 Rendered:

- With Styles
- Without Styles

## Doing this without CSS

How to accomplish this without CSS.

### Example 10.48

Example 10.48 Source:

```
view plain print ?
1. <p>Achieving the same effect using HTML and the IMG element (look at the source to see th
2. <div>
3. <strong>Winningest Active Coaches, Division I NCAA Men's Basketball</strong><br/>
4. Mark Few<br/>
5. Roy Williams<br/>
6. Bruce Pearl<br/>
7. Thad Matta<br/>
8. Bo Ryan<br/>
9. Mike Krzyzewski<br/>
10. Jim Boeheim<br/>
11. Bob Huggins<br/>
12. Lute Olson<br/>
13. Tubby Smith<br/>
14. </div>
```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. /* no css rules */
```

Example 10.48 Rendered:

- With Styles
- Without Styles

For the complete list: [NCAA Men's Basketball Statistics](#)

## Lists without list-style

### Example 10.49

Example 10.49 Source:

```
view plain print ?
1. <ul>
2. <li>Big XII</li>
3. <li>Ivy League</li>
4. <li>Pac 10</li>
5. </ul>
```

Example 10.49 Rendered:

- Big XII
- Ivy League
- Pac 10

### Example 10.50

Example 10.50 Source:

```
view plain print ?
1. <ul id="conferences" >
2. <li>Big XII</li>
3. <li>Ivy League</li>
4. <li>Pac 10</li>
5. </ul>
```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. ul#conferences {
2.   list-style: none;
3. }
```

Example 10.50 Rendered:

- With Styles
- Without Styles

### Display List Items "Inline"

- ◆ Big XII
- ◆ Ivy League
- ◆ Pac 10

Unordered List

Big XII Ivy League Pac 10

Inline List Items



Inline List Items

**Example 10.51**

Example 10.51 Source:

```
view plain print ?
1. <ul id="conferences" >
2.   <li>Big XII</li>
3.   <li>Ivy League</li>
4.   <li>Pac 10</li>
5. </ul>
```

In **style** element (`<style type="text/css">`) within **head** element:

```
view plain print ?
1. ul#conferences {
2.   list-style: none;
3. }
4. ul#conferences li {
5.   display: inline;
6. }
```

Example 10.51 Rendered:

- With Styles
- Without Styles

**Example 10.52**

Example 10.52 Source:

```
view plain print ?
1. <ul id="conferencenav" >
2.   <li><a href="http://big12sports.collegesports.com/" shape="rect" >Big XII</a></li>
3.   <li><a href="http://www.ivyleaguesports.com/" shape="rect" >Ivy League</a></li>
4.   <li><a href="http://www.pac-10.org/" shape="rect" >Pac 10</a></li>
5. </ul>
```

In `example52.css`

```
view plain print ?
1. ul#conferencenav {
2.   list-style: none;
3.   padding-bottom: 0.5em;
4.   border-bottom: 2px solid black;
5.   font-weight: bold;
6.   font-family: Arial, Verdana, Helvetica, sans-serif;
7.   color: #990000;
8. }
9. ul#conferencenav li {
10.  display: inline;
11.  margin: 0;
12. }
13. ul#conferencenav a {
14.  padding: 0.5em 1em;
15.  margin-right: 0.25em;
16.  background-color: #dddd00;
17.  border-top: 2px solid black;
18.  border-left: 2px solid black;
19.  border-right: 2px solid black;
20.  text-decoration: none;
21. }
22. ul#conferencenav a:link,
23. ul#conferencenav a:visited {
24.  color: #990000;
25. }
26. ul#conferencenav a:hover {
27.  color: #dddd00;
28.  background-color: #990000;
29. }
```

In **head** element:

```
view plain print ?
1. <link rel="stylesheet" type="text/css" href="example52.css"/>
```

Example 10.52 Rendered:

- With Styles
- Without Styles

Inspired by: [CSS Cookbook](#) by Christopher Schmitt

## Lists as Navigation

Default styling:

- [Baylor](#)
- [Colorado](#)
- [Iowa State](#)
- [Kansas](#)
- [Kansas State](#)
- [Missouri](#)
- [Nebraska](#)
- [Oklahoma](#)
- [Oklahoma State](#)
- [Texas](#)
- [Texas A&M](#)
- [Texas Tech](#)

As navigation:

Baylor
Colorado
Iowa State
Kansas
Kansas State
Missouri
Nebraska
Oklahoma
Oklahoma State
Texas
Texas A&M
Texas Tech

### Example 10.53

Example 10.53 Source:

```
view plain print ?
1. <div id="navlhs" >
2. <ul>
3. <li><a href="http://www.baylor.edu/" shape="rect" >Baylor</a></li>
4. <li><a href="http://www.cu.edu/" shape="rect" >Colorado</a></li>
5. <li><a href="http://www.iastate.edu/" shape="rect" >Iowa State</a></li>
6. <li><a href="http://www.ku.edu/" shape="rect" >Kansas</a></li>
7. <li><a href="http://www.ksu.edu/" shape="rect" >Kansas State</a></li>
8. <li><a href="http://www.missouri.edu/" shape="rect" >Missouri</a></li>
9. <li><a href="http://www.unl.edu/" shape="rect" >Nebraska</a></li>
10. <li><a href="http://www.ou.edu/" shape="rect" >Oklahoma</a></li>
11. <li><a href="http://www.okstate.edu/" shape="rect" >Oklahoma State</a></li>
12. <li><a href="http://www.utexas.edu/" shape="rect" >Texas</a></li>
13. <li><a href="http://www.tamu.edu/" shape="rect" >Texas A&M</a></li>
14. <li><a href="http://www.ttu.edu/" shape="rect" >Texas Tech</a></li>
15. </ul>
16. </div>
```

In example53.css

```
view plain print ?
1. #navlhs {
2.   font-family: Arial, Verdana, Helvetica, sans-serif;
3.   font-weight: bold;
4.   font-size: 0.7em;
5.   width: 15em;
6.   border-right: 1px solid #333;
7.   margin-bottom: 1em;
8.   background-color: #ddd;
9.   color: #900;
10. }
11. #navlhs ul {
12.   list-style: none;
13.   margin: 0;
14.   padding: 0;
15. }
16. #navlhs ul li {
17.   margin: 0;
18.   border-top: 1px solid #333;
19. }
20. #navlhs ul li a {
21.   display: block;
22.   background-color: #ddd;
23.   border-top: 1px solid #333;
24.   border-left: 5px solid #333;
25.   text-decoration: none;
26.   padding: 2px 2px 2px 0.5em;
27. }
28. #navlhs a:link,
29. #navlhs a:visited {
30.   color: #900;
31. }
32. #navlhs a:hover {
33.   color: #fff;
34.   background-color: #900;
35. }
```

In head element:

```
view plain print ?
1. <link rel="stylesheet" type="text/css" href="example53.css"/>
```

Example 10.53 Rendered:

- With Styles
- Without Styles

Inspired by: CSS Cookbook by Christopher Schmitt



# Lists as Navigation

Default styling of nested list:

- [Big XII](#)
  - [Baylor](#)
  - [Colorado](#)
  - [Iowa State](#)
  - [Kansas](#)
  - [Kansas State](#)
  - [Missouri](#)
  - [Nebraska](#)
  - [Oklahoma](#)
  - [Oklahoma State](#)
  - [Texas](#)
  - [Texas A&M](#)
  - [Texas Tech](#)
- [Ivy League](#)
  - [Brown](#)
  - [Columbia](#)
  - [Cornell](#)
  - [Dartmouth](#)
  - [Harvard](#)
  - [Penn](#)
  - [Princeton](#)
  - [Yale](#)
- [Pac 10](#)
  - [Arizona](#)
  - [Arizona State](#)
  - [California](#)
  - [Oregon](#)
  - [Oregon State](#)
  - [Stanford](#)
  - [UCLA](#)
  - [USC](#)
  - [Washington](#)
  - [Washington State](#)

## Example 10.54

Example 10.54 Source:

Nested list styled as clamshell navigation:

Big XII
Baylor
Colorado
Iowa State
Kansas
Kansas State
Missouri
Nebraska
Oklahoma
Oklahoma State
Texas
Texas A&M
Texas Tech
Ivy League
Brown
Columbia
Cornell
Dartmouth
Harvard
Penn
Princeton
Yale
Pac 10
Arizona
Arizona State
California
Oregon
Oregon State
Stanford
UCLA
USC
Washington
Washington State

```
view plain print ?
1. <div id="navlhs" >
2. <ul>
3. <li><a href="http://big12sports.collegesports.com/" shape="rect" >Big XII</a>
4. <ul>
5. <li><a href="http://www.baylor.edu/" shape="rect" >Baylor</a></li>
6. <li><a href="http://www.cu.edu/" shape="rect" >Colorado</a></li>
7. <li><a href="http://www.iastate.edu/" shape="rect" >Iowa State</a></li>
8. <li><a href="http://www.ku.edu/" shape="rect" >Kansas</a></li>
9. <li><a href="http://www.ksu.edu/" shape="rect" >Kansas State</a></li>
10. <li><a href="http://www.missouri.edu/" shape="rect" >Missouri</a></li>
11. <li><a href="http://www.unl.edu/" shape="rect" >Nebraska</a></li>
12. <li><a href="http://www.ou.edu/" shape="rect" >Oklahoma</a></li>
13. <li><a href="http://www.okstate.edu/" shape="rect" >Oklahoma State</a></li>
14. <li><a href="http://www.utexas.edu/" shape="rect" >Texas</a></li>
15. <li><a href="http://www.tamu.edu/" shape="rect" >Texas A&M</a></li>
16. <li><a href="http://www.ttu.edu/" shape="rect" >Texas Tech</a></li>
17. </ul>
18. </li>
19. <li><a href="http://www.ivyleaguesports.com/" shape="rect" >Ivy League</a>
20. <ul class="collapse" >
21. <li><a href="http://www.brown.edu/" shape="rect" >Brown</a></li>
22. <li><a href="http://www.columbia.edu/" shape="rect" >Columbia</a></li>
23. <li><a href="http://www.cornell.edu/" shape="rect" >Cornell</a></li>
24. <li><a href="http://www.dartmouth.edu/" shape="rect" >Dartmouth</a></li>
25. <li><a href="http://www.harvard.edu/" shape="rect" >Harvard</a></li>
26. <li><a href="http://www.upenn.edu/" shape="rect" >Penn</a></li>
27. <li><a href="http://www.princeton.edu/" shape="rect" >Princeton</a></li>
28. <li><a href="http://www.yale.edu/" shape="rect" >Yale</a></li>
29. </ul>
30. </li>
31. <li><a href="http://www.pac-10.org/" shape="rect" >Pac 10</a>
32. <ul class="collapse" >
33. <li><a href="http://www.arizona.edu/" shape="rect" >Arizona</a></li>
34. <li><a href="http://www.asu.edu/" shape="rect" >Arizona State</a></li>
35. <li><a href="http://www.berkeley.edu/" shape="rect" >California</a></li>
36. <li><a href="http://www.uoregon.edu/" shape="rect" >Oregon</a></li>
37. <li><a href="http://www.oregonstate.edu/" shape="rect" >Oregon State</a></li>
38. <li><a href="http://www.stanford.edu/" shape="rect" >Stanford</a></li>
39. <li><a href="http://www.ucla.edu/" shape="rect" >UCLA</a></li>
40. <li><a href="http://www.usc.edu/" shape="rect" >USC</a></li>
41. <li><a href="http://www.washington.edu/" shape="rect" >Washington</a></li>
42. <li><a href="http://www.wsu.edu/" shape="rect" >Washington State</a></li>
43. </ul>
44. </li>
45. </ul>
46. </div>
```

In example54.css

view plain print ?

```
1. #navlhs {
2.   font-family: Arial, Verdana, Helvetica, sans-serif;
3.   font-weight: bold;
4.   font-size: 0.7em;
5.   width: 10em;
6.   border-right: 1px solid #333;
7.   margin-bottom: 1em;
8.   background-color: #ddd;
9.   color: #900;
10. }
11. #navlhs ul {
12.   list-style: none;
13.   margin: 0;
14.   padding: 0;
15. }
16. #navlhs ul li {
17.   margin: 0;
18.   border-top: 1px none #333;
19. }
20. #navlhs ul li a {
21.   display: block;
22.   background-color: #ccc;
23.   border-top: 1px none #333;
24.   border-right: 1px solid #333;
25.   border-bottom: thin dotted #333;
26.   border-left: 5px solid #333;
27.   text-decoration: none;
28.   padding: 2px 2px 2px 0.5em;
29. }
30. #navlhs a:link {
31.   color: #900;
32. }
33. #navlhs a:visited {
34.   color: #900;
35. }
36. #navlhs a:hover {
37.   color: #fff;
38.   background-color: #900;
39.   border-top: 1px outset #333;
40.   border-right: 1px outset #333;
41.   border-bottom: 1px outset #333;
42.   border-left: 5px outset #333;
43. }
44. #navlhs a:active {
45.   color: #fff;
46.   background-color: #900;
47.   border-top: 1px inset #333;
48.   border-right: 1px inset #333;
49.   border-bottom: 1px inset #333;
50.   border-left: 5px inset #333;
51. }
52. #navlhs ul ul a {
53.   list-style: none;
54.   padding-left: 1.5em;
55.   font-size: 80%;
56.   font-weight: normal;
57. }
58. #navlhs ul.collapse {
59.   display: none;
60. }
```

In head element:

view plain print ?

```
1. <link rel="stylesheet" type="text/css" href="example54.css"/>
```

Example 10.54 Rendered:

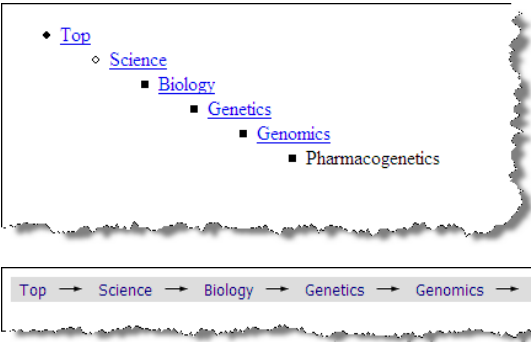
- With Styles
- Without Styles

Inspired by: CSS Cookbook by Christopher Schmitt

## Breadcrumb Navigation

"Just wait, Gretel, until the moon rises, and then we shall see the crumbs of bread which I have strewn about, they will show us our way home again.", *Hansel in Hansel and Gretel*

Markup "breadcrumb" navigation using nested lists so that markup reflects the parent/child or hierarchy relationship.



Strategy is similar to that of creating tabs. Use "display: inline" to make list items inline; use background image for "li" to show arrow.

**Example 10.55**  
Example 10.55 Source:

```
view plain print ?
1. <div id="breadcrumb" >
2.   <ul>
3.     <li> <a href="http://dmoz.org/" shape="rect" >Top</a>
4.     <ul>
5.       <li> <a href="http://dmoz.org/Science/" shape="rect" >Science</a>
6.       <ul>
7.         <li> <a href="http://dmoz.org/Science/Biology/" shape="rect" >Biology</a>
8.         <ul>
9.           <li> <a href="http://dmoz.org/Science/Biology/Genetics/" shape="rect" >
10.             Genetics</a>
11.           <ul>
12.             <li> <a href="http://dmoz.org/Science/Biology/Genetics/Genomics/" sh
13.               Genomics</a>
14.               <ul>
15.                 <li>
16.                   <span>Pharmacogenetics</span>
17.                 </li>
18.               </ul>
19.             </li>
20.           </ul>
21.         </li>
22.       </ul>
23.     </li>
24.   </ul>
25. </div>
```

In example55.css

view plain print ?

```
1.  /*
2.   Order of pseudo-"a" elements:
3.   LoVe HATe (Link, Visited, Hover, Active
4.  */
5.  #breadcrumb a:link , #breadcrumb a:visited ,
6.  #breadcrumb a:hover , #breadcrumb a:active , #breadcrumb li span {
7.      color: navy;
8.      font-family: Tahoma, Arial, Helvetica, sans-serif;
9.      font-size: small;
10.     font-weight: normal;
11.     padding: 0.5em;
12.     text-decoration: none;
13. }
14. #breadcrumb a:hover {
15.     text-decoration: underline;
16. }
17. #breadcrumb li span {
18.     color: black;
19. }
20. #breadcrumb {
21.     background-color: #ddd;
22. }
23. #breadcrumb ul {
24.     display: inline;
25.     margin-left: 0;
26.     padding-left: 0;
27. }
28. #breadcrumb ul li {
29.     display: inline;
30. }
31. #breadcrumb ul ul li {
32.     background-image: url(images/arrow.gif);
33.     background-position: left;
34.     background-repeat: no-repeat;
35.     padding-left: 25px;
36. }
```

In head element:

view plain print ?

```
1. <link rel="stylesheet" type="text/css" href="example55.css"/>
```

Example 10.55 Rendered:

- With Styles
- Without Styles

media selector

CSS2 defines a media selector for different media types.

Incorporate as part of the "link" element:

```
1. <link rel="stylesheet" type="text/css" media="all" href="screen.css" />
2. <link rel="stylesheet" type="text/css" media="print" href="print.css" />
```

Or, use "@media" selector in style rule:

```
1. @media print {
2.     body { font-size: 10pt; }
3. }
4. @media screen {
5.     body { font-size: 12pt; }
6. }
7. @media print {
8.     div.navigation {
9.         display: none;
10.    }
11.    hr {
12.        page-break-after: always;
13.    }
14. }
```

- all** Suitable for all devices.
- braille** Intended for braille tactile feedback devices.
- embossed** Intended for paged braille printers.
- handheld** Intended for handheld devices (typically small screen, limited bandwidth).
- print** Intended for paged material and for documents viewed on screen in print preview mode.
- projection** Intended for projected presentations, for example projectors.
- screen** Intended primarily for color computer screens.
- speech** Intended for speech synthesizers. Note: CSS2 had a similar media type called 'aural' for this purpose.
- tty** Intended for media using a fixed-pitch character grid (such as teletypes, terminals, or portable devices with limited display capabilities).
- tv** Intended for television-type devices (low resolution, color, limited-scrollability screens, sound available).

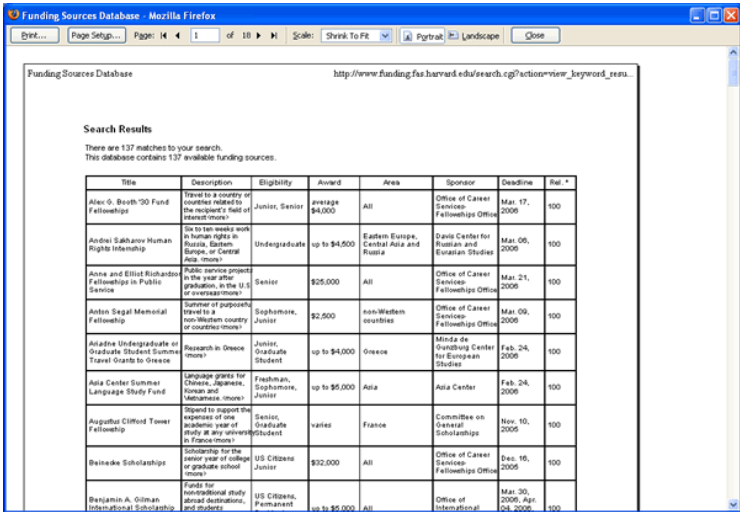
# Harvard College Funding Database

```
1. <link rel="stylesheet" type="text/css" media="all" href="screen.css" />
2. <link rel="stylesheet" type="text/css" media="print" href="print.css" />
```

Screen display (screen.css):



Print display (print.css):



## Print CSS

CSS Print Profile deals with paged media.

The book [Cascading Style Sheets : Designing for the Web \(3rd Edition\)](#) by Hakon Wium Lie and Bert Bos was **printed** using CSS.

See [A List Apart: Articles: Printing a Book with CSS: Boom!](#)

## Yahoo! UI (YUI) Library

- [Yahoo! User Interface Library](#)

The Yahoo! User Interface (YUI) Library is a set of utilities and controls, written in JavaScript, for building richly interactive web applications using techniques such as DOM scripting, DHTML and AJAX. The YUI Library also includes several core CSS resources. All components in the YUI Library have been released as open source under a BSD license and are free for all uses.

- **YUI CSS**
  - [CSS Reset](#) (neutralizes browser CSS styles)
  - [CSS Base](#) (applies consistent style foundation for common elements)
  - [CSS Fonts](#) (foundation for typography and font-sizing)
  - [CSS Grids](#) (more than 1,000 CSS-driven wireframes in a 4KB file)

YUI Grid Example

- YUI Grid Examples
- Special Nesting Grid E: 3/4 - 1/4

Grid: 4 areas:

- header
- body - A - 3/4
- body B - 1/4
- footer

Note the use of "reset-fonts-grids.css", which gives you a blank slate for styles (overrides UA stylesheet for font sizes, margins, padding, etc.)

Header - Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

A - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut visi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

B - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut visi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Footer - Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

Header - Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

A - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut visi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

B - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut visi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Footer - Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

```
1. <html>
2. <head>
3.   <title>Grids CSS Example - YUI Grids - Special Nesting Grid E: 3/4 - 1/4</title>
4.   <link rel="stylesheet" type="text/css" href="../../build/reset-fonts-grids/reset-fonts-grids.css">
5. </head>
6. <body>
7.   <!-- the id on the containing div determines the page width. -->
8.   <!-- #doc = 750px; #doc2 = 950px; #doc3 = 100%; #doc4 = 974px -->
9.   <div id="doc">
10.    <div id="hd">
11.      <p>Header - Lorem ipsum dolor sit amet, ...</p>
12.    </div>
13.    <div id="bd">
14.      <!-- Use Standard Nesting Grids and Special Nesting Grids to subdivide regions of the page. -->
15.      <!-- Special Nesting Grid E has two children, the first is 3/4, the second is 1/4 -->
16.      <div class="yui-ge">
17.        <!-- the first child of a Grid needs the "first" class -->
18.        <div class="yui-u first">
19.          <p>A - Lorem ipsum dolor sit amet, ...</p>
20.        </div>
21.        <div class="yui-u">
22.          <p>B - Lorem ipsum dolor sit amet, ...</p>
23.        </div>
24.      </div>
25.    </div>
26.    <div id="ft">
27.      <p>Footer - Lorem ipsum dolor sit amet, ...</p>
28.    </div>
29.  </div>
30. </body>
31. </html>
```

Harvard Homepage Markup/Style Makeover

Harvard Home Page



Tables exposed:



Markup and Page Stats

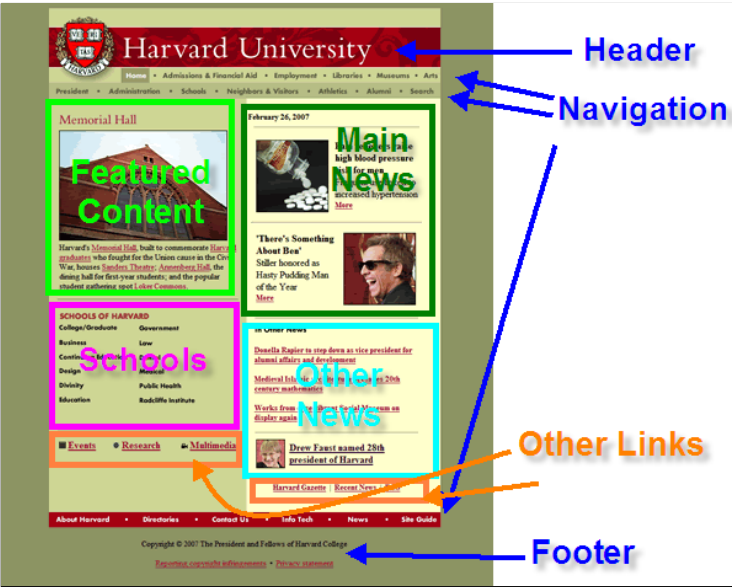
Markup Type	HTML 4.01 Transitional 53 validation errors	
Markup Size	26.1 k	
Markup (after 'tidy')	380 lines	
Document dependencies	<ul style="list-style-type: none"><li>• 1 HTML</li><li>• 48 images</li></ul>	
Total page weight	226 k	
Elements	314 total	
	a	60
	b	15
	body	1
	br	9
	center	2
	div	1
	font	10
	head	1
	hr	6
	html	1

img	61
meta	3
p	9
script	1
table	16
td	85
title	1
tr	32
Attributes	588



Homepage Sections

Homepage

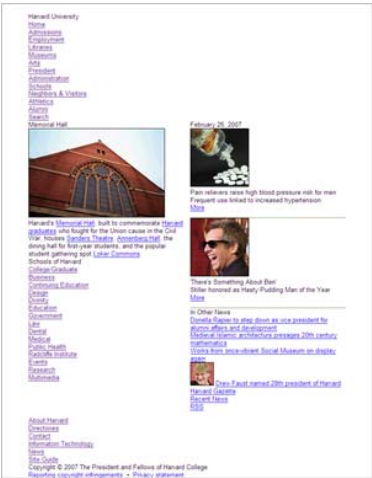


As Markup



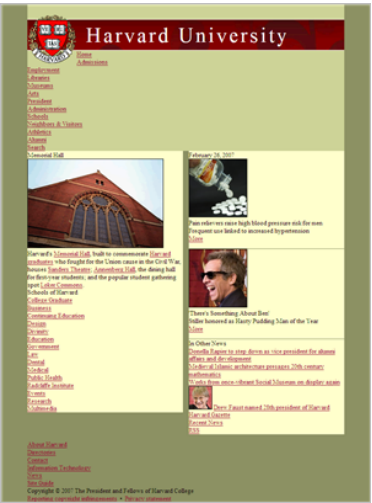
## Stage 1: YUI Grid

- YUI Grid Template
  - XHTML
  - CSS
  - YUI CSS



## Stage 2: Styles for Main sections

- Styles for #doc, #ht, and #ft
  - XHTML
  - CSS



### Stage 3: Styles for Navigation Lists

- Styles for Navigation Lists
  - XHTML
  - CSS



### Stage 4: Styles for Content

- Styles for content
  - XHTML
  - CSS



# Results of Markup/Style Makeover

## Harvard Homepage with Markup/Style Makeover

	Current	After Markup/Style Makeover
Screenshot		
Markup Type	HTML 4.01 Transitional 53 validation errors	XHTML 1.0 Strict
Markup Size	26.1 k	6.9 k
Markup (after 'tidy')	380 lines	134 lines
Style (CSS)	n/a	<ul style="list-style-type: none"><li>Custom CSS 7.6k 241 lines</li><li>YUI CSS 3.3k</li></ul>
Document dependencies	<ul style="list-style-type: none"><li>1 HTML</li><li>48 images</li></ul>	<ul style="list-style-type: none"><li>1 XHTML</li><li>11 images</li><li>2 CSS</li></ul>
Total page weight	226 k	83 k
Elements	elements: 314 a 60 b 15 body 1 br 9 center 2 div 1 font 10 head 1 hr 6 html 1 img 61 meta 3 p 9	elements: 148 a 50 body 1 br 1 div 21 h1 1 h2 2 h3 1 head 1 html 1 img 4 li 43 link 1 meta 1

script	1	p	9
table	16	title	1
td	85	ul	10
title	1	attributes:	106
tr	32		
attributes:	588		

## With CSS disabled:



Assets	<ul style="list-style-type: none"><li>XHTML<ul style="list-style-type: none"><li>harvardhomepage/harvard_css.html</li></ul></li><li>Images<ul style="list-style-type: none"><li>harvardhomepage/images/memorial_hall.png</li><li>harvardhomepage/images/crimson_background2.png</li><li>harvardhomepage/images/stiller.jpg</li><li>harvardhomepage/images/painrelievers.jpg</li><li>harvardhomepage/images/veritas.png</li><li>harvardhomepage/images/faust.png</li><li>harvardhomepage/images/research.png</li><li>harvardhomepage/images/bullet-whiteoncrimson.png</li><li>harvardhomepage/images/bullet.png</li><li>harvardhomepage/images/multimedia.png</li><li>harvardhomepage/images/events.png</li></ul></li><li>CSS</li></ul>
--------	--

- [harvardhomepage/custom.css](#)
- [harvardhomepage/reset-fonts-grids/reset-fonts-grids-min.css](#)

## Results on Many Browsers

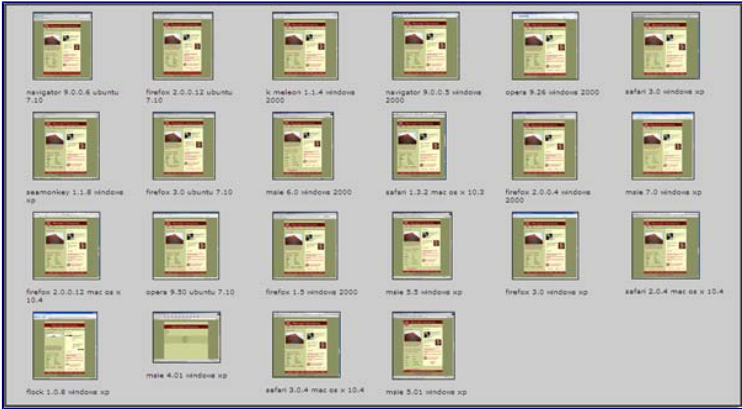
### Services

- Overview article: [Browser Tests, Services and Compatibility Test Suites](#)
- Specific Service: [BrowserShots.org](#)

### Do it yourself

- Capture Screen/Window
- [SnagIt Capture](#)
- [Pearl Crescent PageSaver](#) for Firefox

### Results for Harvard Makeover



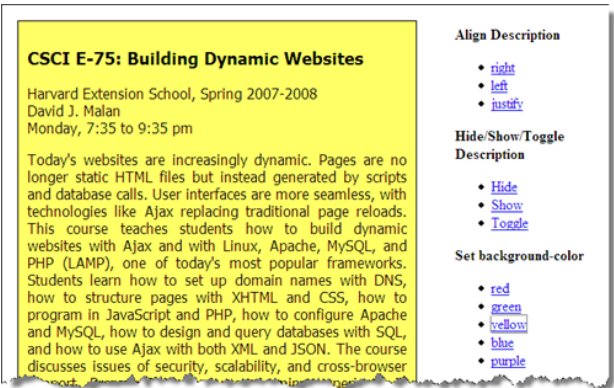
- Screenshots for different browsers, from [BrowserShots.org](#)

The above uses "Thickbox", which is a UI widget written in JavaScript that is built on jQuery and uses AJAX. Uses: [jquery.js](#), [thickbox.js](#), [thickbox.css](#).

JavaScript: Manipulate the Page

JS can be used to manipulate CSS properties.

Note the use of event attributes (onclick, onmouseover, onmouseout) as well as a javascript: protocol in an href value.



Example 10.56  
Example 10.56 Source:

```
view plain print ?
1. <div id="cscie75-course" style="float: left; width: 50%; padding: 10px; margin: 10px; border: 1px solid black;">
2.   <h3>CSCI E-75: Building Dynamic Websites</h3>
3.   <p> Harvard Extension School, Spring 2007-2008
4.     <br/>David J. Malan
5.     <br/> Monday, 7:35 to 9:35 pm</p>
6.   <p id="cscie75-description" > Today's websites are increasingly dynamic. Pages are no
7.     longer static HTML files but instead generated by scripts and database calls. User
8.     interfaces are more seamless, with technologies like Ajax replacing traditional page
9.     reloads. This course teaches students how to build dynamic websites with Ajax and with
10.    Linux, Apache, MySQL, and PHP (LAMP), one of today's most popular frameworks. Student
11.    learn how to set up domain names with DNS, how to structure pages with XHTML and CSS,
12.    program in JavaScript and PHP, how to configure Apache and MySQL, how to design and
13.    databases with SQL, and how to use Ajax with both XML and JSON. The course discusses
14.    of security, scalability, and cross-browser support. Prerequisite: prior programming
15.    experience in any language. (4 credits) </p>
16. </div>
17. <div style="width: 20%; float: left; margin-left: 2em;" >
18.   <p><strong>Align Description</strong></p>
19.   <ul>
20.     <li><a href="#" onclick="align('right')" shape="rect" >right</a></li>
21.     <li><a href="#" onclick="align('left')" shape="rect" >left</a></li>
22.     <li><a href="#" onclick="align('justify')" shape="rect" >justify</a></li>
23.   </ul>
24.   <p><strong>Hide/Show/Toggle Description</strong></p>
25.   <ul>
26.     <li><a href="javascript:hidedesc()" shape="rect" >Hide</a></li>
27.     <li><a href="#" onclick="showdesc()" shape="rect" >Show</a></li>
28.     <li><a href="#" onclick="toggledesc()" shape="rect" >Toggle</a></li>
29.   </ul>
30.   <p><strong>Set background-color</strong></p>
31.   <ul>
32.     <li><a href="#" onclick="backgroundcolor('#f66')" shape="rect" >red</a></li>
33.     <li><a href="#" onclick="backgroundcolor('#6f6')" shape="rect" >green</a></li>
34.     <li><a href="#" onclick="backgroundcolor('#ff6')" shape="rect" >yellow</a></li>
35.     <li><a href="#" onclick="backgroundcolor('#66f')" shape="rect" >blue</a></li>
36.     <li><a href="#" onmouseover="backgroundcolor('#f6f')" onmouseout="revertcolor()"
37.       >purple</a></li>
38.   </ul>
39. </div>
```

In example56.js

```
view plain print ?
1. function align(val) {
2.     node = document.getElementById('cscie75-description');
3.     node.style.textAlign = val;
4. }
5. function hidedesc() {
6.     node = document.getElementById('cscie75-description');
7.     node.style.display = 'none';
8. }
9. function showdesc() {
10.    node = document.getElementById('cscie75-description');
11.    node.style.display = 'block';
12. }
13. function toggledesc() {
14.    node = document.getElementById('cscie75-description');
15.    var currentdisplay = node.style.display;
16.    if(currentdisplay == 'none')
17.        showdesc();
18.    else
19.        hidedesc();
20. }
21. var previouscolor = '#fff';
22. function backgroundcolor(color) {
23.    node = document.getElementById('cscie75-course');
24.    previouscolor = node.style.backgroundColor;
25.    node.style.backgroundColor = color;
26. }
27. function revertcolor() {
28.    node = document.getElementById('cscie75-course');
29.    node.style.backgroundColor = previouscolor;
30. }
```

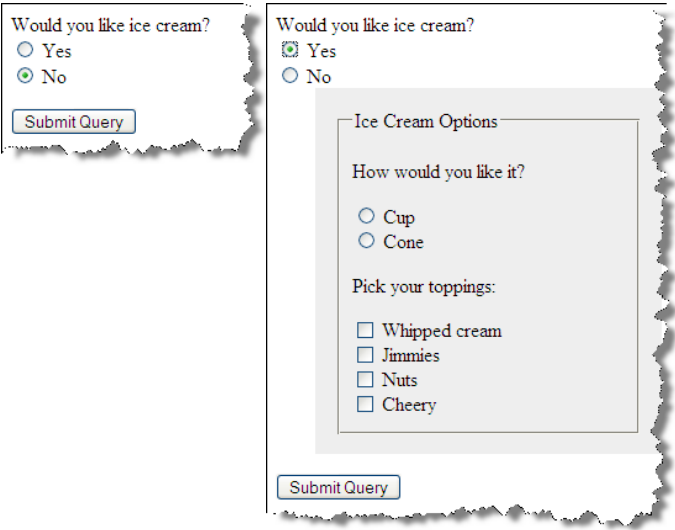
In head element:

```
view plain print ?
1. <script src="example56.js" type="text/javascript"> </script>
```

Example 10.56 Demonstrated

# Exposing Additional Form Elements

Additional relevant form elements are exposed based upon user input. Here, this is achieved by having the entire form in the markup, with a certain section hidden via CSS (`display: none;`). If "Yes" is chosen, the display property is changed to "block" through JS.



Example 10.57

Example 10.57 Source:

```
view plain print ?
1. <form method="get" action="http://minerva.dce.harvard.edu/cgi-bin/echo.cgi" name="ice_c
2. <div> Would you like ice cream?<br/>
3. <input type="radio" name="want" id="ic_yes" value="yes" onclick="displayIceCreamC
4. <label for="ic_yes" >Yes</label><br/>
5. <input type="radio" name="want" id="ic_no" value="no" onclick="displayIceCreamOpt
6. <label for="ic_no" >No</label> </div>
7.
8. <div style="display: none; margin-left: 2em; background-color: #eee; padding: 1em; " i
9. <fieldset>
10. <legend>Ice Cream Options</legend>
11. <p>How would you like it?</p>
12. <input type="radio" id="container_cup" name="container" value="cup" />
13. <label for="container_cup" >Cup</label>
14. <br/>
15. <input type="radio" id="container_cone" name="container" value="cone" />
16. <label for="container_cone" >Cone</label>
17. <br/>
18. <p>Pick your toppings:</p>
19. <input type="checkbox" name="toppings" id="toppings_wc" value="whippedcream" />
20. <label for="toppings_wc" >Whipped cream</label>
21. <br/>
22. <input type="checkbox" name="toppings" id="toppings_j" value="jimmies" />
23. <label for="toppings_j" >Jimmies</label>
24. <br/>
25. <input type="checkbox" name="toppings" id="toppings_nuts" value="nuts" />
26. <label for="toppings_nuts" >Nuts</label>
27. <br/>
28. <input type="checkbox" name="toppings" id="toppings_cherry" value="cherry" />
29. <label for="toppings_cherry" >Cherry</label>
30. </fieldset>
31. </div>
32. <p><input type="submit" /></p>
33. </form>
```

In script element (within head element):

```
view plain print ?
1. function displayIceCreamOptions() {
2.     var divico = document.getElementById('icecream_options');
3.     var state = divico.style.display;
4.     if (document.forms['ice_cream'].want[0].checked) {
5.         divico.style.display = 'block';
6.     } else {
7.         divico.style.display = 'none';
8.     }
9. }
```

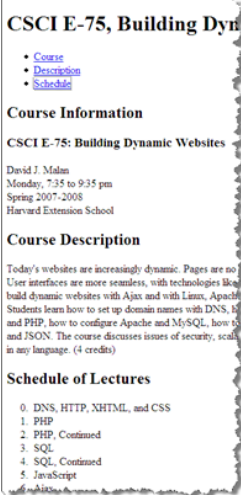
Example 10.57 Demonstrated

# Tabs with jQuery

Tab Plugin for jQuery allows the easy creation of tabs from simple markup.

- Accessible, Unobtrusive Javascript Tabs with jQuery
  - Demos

Without JS and CSS:



With JS and CSS:



- Example: tabs.html

Markup:



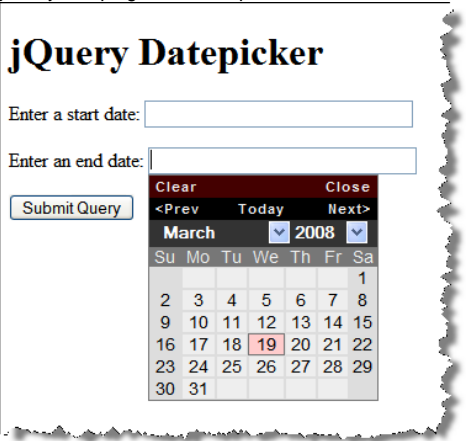
```
1. <div id="container">
2.   <ul class="anchors">
3.     <li class="on"><a href="#basic">Course</a></li>
4.     <li class=""><a href="#description">Description</a></li>
5.     <li class=""><a href="#schedule">Schedule</a></li>
6.   </ul>
7.
8.   <div style="display: block;" id="basic" class="anchor">
9.     <h2>Course Information</h2>
10.    <h3>Fundamentals of Website Development</h3>
11.    <p> Harvard Extension School, Spring 2007-2008
12.    <br/> CSCI E-12
13.    <br/> Wednesday, 5:30 to 7:30 pm</p>
14.  </div>
15.
16.  <div style="display: none;" id="description" class="anchor">
17.    <h2>Course Description</h2>
18.    <p>This course provides a foundation ...</p>
19.  </div>
20.
21.  <div style="display: none;" id="schedule" class="anchor">
22.    <h2>Schedule of Lectures</h2>
23.    <ol>
24.      <li>Introduction, Internet and Web Basics</li>
25.      <li>Markup: XHTML and HTML, Part 1</li>
26.      ...
27.    </ol>
28.  </div>
29. </div>
```

JS:

```
1. <script src="js/jquery.js" type="text/javascript"></script>
2. <script src="js/tabs.js" type="text/javascript"></script>
3. <script type="text/javascript">
4.   $(document).ready(function() {
5.     $.tabs("container");
6.   });
7. </script>
```

# A Calendar Widget

jQuery has plugins that will provide an unobtrusive "calendar" widget for picking dates.



Example: date\_picker.html

Markup:

```
1. <form action="http://minerva.dce.harvard.edu/cgi-bin/echo.cgi">
2.   <p>
3.     Enter a start date: <input class="date" type="text" size="32" name="startdate" id="st
4.   </p>
5.   <p>
6.     Enter an end date: <input class="date" type="text" size="32" name="enddate" id="enda
7.   </p>
8.   <input type="submit"/>
9. </form>
```

JS:

```
1. <style type="text/css">@import url(js/core.ui.datepicker/ui.datepicker.css);</style>
2. <script type="text/javascript" src="js/core.ui.datepicker/ui.datepicker.js"></script>
3. <script type="text/javascript">
4.   $(document).ready(function(){
5.     $('input.date').datepicker();
6.   })
7. </script>
```

Slideshow: Thickbox

ThickBox is a webpage UI dialog widget written in JavaScript on top of the jQuery library. Its function is to show a single image, multiple images, inline content, iframed content, or content served through AJAX in a hybrid modal.

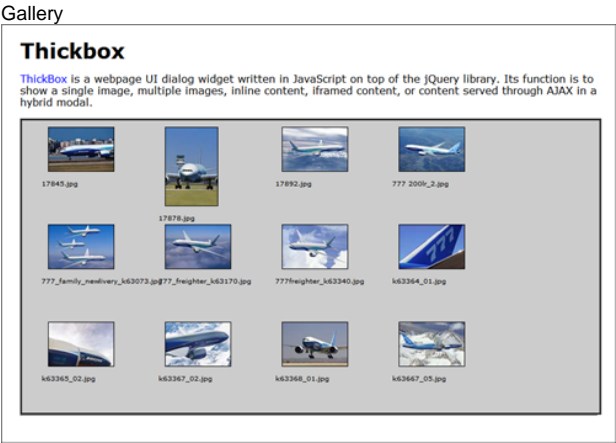
A gallery with no JavaScript -- thumbnail images are linked to the full-sized image with a simple `<a href="full/a.png"></a>`:



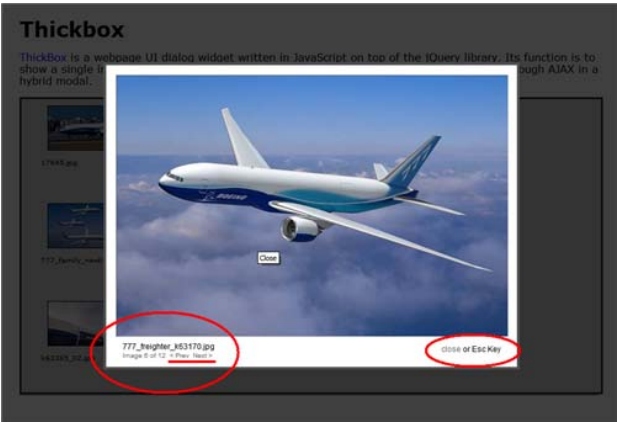
Thickbox

Example: Gallery with Thickbox

Add **Thickbox** and give the "a" elemnts a `class="gallery"`:



Viewing an individual image:



Example Galleries with Lightbox, Lightbox 2, and Thickbox

View [example galleries](#) implemented in Lightbox and Lightbox 2 (using Prototype/Scriptaculous) as well as Thickbox (using jQuery).