PART III: CSS FOR PRESENTATION

Chapter 11: CSS Orientation

CSc2320

In this chapter

- Benefits of CSS
- How (X)HTML markup creates a document structure
- Writing CSS Style rules
- Attaching styles to (X)HTML documents
- CSS concepts:
  - Inheritance
  - Cascade
  - Specificity
  - Rule order
  - Box model
Benefits of CSS

• Better type and layout controls.
• Less work. One style sheet for entire site.
• Potentially smaller documents and faster downloads.
• More accessible sites.
• Reliable browser support.
The power of CSS
How Style Sheets Work

• Three steps:
  ▫ Start with a document that has been marked up in HTML or XHTML.
  ▫ Write style rules for how you’d like certain elements to look.
  ▫ Attach the style rules to the document.

• Step 1: Markup HTML
  ▫ Structure layer
  ▫ HTML
Step 2: Write CSS rules

• A style sheet is made up of one or more style instructions (called rules) that describe how an element or group of elements should be displayed.
• Two simple examples:

```css
h1 { color: green; }
p { font-size: small; font-family: sans-serif; }
```
CSS Syntax

- Two parts:
  - **Selector** identifies the elements to be affected
  - **Declaration** provides the rendering instructions.
    - The declaration is made up of a property (such as color) and its value (green)
  - The heart of CSS lies in the collection of standard properties that can be applied to selected elements.
CSS Syntax cont.

- Example

```html
<style type="text/css">
  h1 {
    color: green;
  }

  p {
    font-size: small;
    font-family: sans-serif;
    margin-left: 100px;
    border-bottom: 1px solid red;
  }

  img {
    float: right;
    margin: 0 12px;
  }
</style>
```

Providing Measurement Values

When providing measurement values, the unit must immediately follow the number, like this:

```
    { margin: 2em; }
```

Adding a space before the unit will cause the property not to work.

**INCORRECT:**

```
    { margin: 2 em; }
```

It is acceptable to omit the unit of measurement for zero values:

```
    { margin: 0; }
```
Step 3: Attaching the styles

• Three ways:
  - **External style sheets.** An external style sheet is a separate, text-only document that contains a number of style rules. In this way, all the files in a web site may share the same style sheet.
  - **Embedded style sheets.** The `style` element must be placed in the `head` of the document and it must contain a `type` attribute that identifies the content of the `style` element as “text/css”.

```html
<head>
  <title>Required document title here</title>
  <style type="text/css">
    /* style rules go here */
  </style>
</head>
```

- **Inline styles.** Apply properties and values to a single element using the `style` attribute in the element itself. **Override** existing rules.

```html
<h1 style="color: red; margin-top: 2em">Introduction</h1>
```
The Big Concepts

- Inheritance:
  - (X)HTML elements pass down certain style properties to the elements they contain.

*Figure 11-5.* The `em` element inherits styles that were applied to the paragraph.
Inheritance:

• Understand document structure
  ▫ An element that is directly contained within another element (with no intervening hierarchical levels), is said to be the child of that element. Conversely, the containing element is the parent.

Figure 11-6. The document tree structure of the sample document, twenties.html.
Inheritance

- Properties related to the styling of text—font size, color, style, etc.—are passed down.
- Properties such as borders, margins, backgrounds, and so on that affect the boxed area around the element tend not to be passed down.

```
p {font-size: small; font-family: sans-serif;}
```
Conflicting styles: the cascade

- Why called “cascading”? What to do with conflict?
  - A hierarchical system that assigns different weights to the various sources of style information.
  - The cascade refers to what happens when several sources of style information vie for control of the elements on a page: style information is passed down until it is overridden by a style command with more weight.
  - The closer the style sheet is to the content, the more weight it is given.
  - Browser Style < User style < External Style < Embedded Style < Inline Style < !important Style
Box Model

• The easiest way to think of the box model:
  ▫ browsers see every element on the page (block and inline) as being contained in a little rectangular box.
  ▫ You can apply properties such as borders, margins, padding, and backgrounds to these boxes, and even reposition them on the page.
  ▫ Example:

```css
h1 { border: 1px solid blue; }
h2 { border: 1px solid blue; }
p { border: 1px solid blue; }
em { border: 1px solid blue; }
img { border: 1px solid blue; }
```
Group Selectors

h1, h2, p, em, img { border: 1px solid blue; }

Moving Forward with CSS

Books

There is no shortage of good books on CSS out there, but these are the ones that taught me, and I feel good recommending them.


*Web Standards Solutions: The Markup and Style Handbook*, by Dan Cederholm (Friends of Ed)

*The Zen of CSS Design: Visual Enlightenment for the Web*, by Dave Shea and Molly E. Holzschlag (New Riders)

*Eric Meyer on CSS: Mastering the Language of Web Design*, by Eric Meyer (New Riders)
Online Resources

World Wide Web Consortium (www.w3.org/Style/CSS)
The World Wide Web Consortium oversees the development of web technologies, including CSS.

A List Apart (www.alistapart.com)
This online magazine features some of the best thinking and writing on cutting-edge, standards-based web design. It was founded in 1998 by Jeffrey Zeldman and Brian Platz.

css-discuss (www.css-discuss.org)
This is a mailing list and related site devoted to talking about CSS and how to use it.
Informative personal sites

Stopdesign (www.stopdesign.com)
Douglas Bowman, CSS and graphic design guru, publishes articles and trend-setting tutorials.

Mezzoblue (www.mezzoblue.com)
This is the personal site of Dave Shea, creator of the CSS Zen Garden.

Meyerweb (www.meyerweb.com)
This is the personal site of the king of CSS, Eric Meyer.

Molly.com (www.molly.com)
This is the blog of prolific author and web-standards activist Molly E. Holzschlag.

Simplebits (www.simplebits.com)
This is the personal site of standards guru and author Dan Cederholm.
Homework

• Reading Chapter 11
• Excise:
  ▫ Try excise 11-1 on page 190 & 192: a simple CSS example.