Developing Web Content: CSS Layout

Dr. Michele Weigle
Department of Computer Science
Old Dominion University
mweigle@cs.odu.edu

http://www.cs.odu.edu/~mweigle/CS312-F10/

Outline

- More HTML/CSS Syntax
- Positioning
  - absolute
  - relative
- Two-Column Page Layout
- CSS Debugging Tips
- CSS Resources
- Three-Column Page Layout

Content based on Web Development & Design Foundations with XHTML by Felke-Morris.
A Bit More HTML/CSS Syntax

**id vs. class**

- **id**
  - allows us to name a chunk of HTML
  - use this (instead of class selectors with CSS) when you want to apply a CSS rule uniquely to a *single* area
    ```html
    <p id="content">
    </p>
    ```

- **CSS**
  - formatting id selector
    ```css
    #content {color: blue;}
    ```
  - formatting class selector
    ```css
    .myclass {color: blue;}
    ```

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A Bit More HTML/CSS Syntax

div

- Division, *block-level* element that groups together a chunk of HTML
  ```html
  <div id="content">This is my content.</div>
  ```

- Line break above and below the content

- **Uses**
  - format a section that is separated from the rest of the web page by line breaks
  - define a section that contains other block-level elements (`<p>`, `<blockquote>`, `<ul>`, `<ol>`, etc.)
A Bit More HTML/CSS Syntax

span

◆ *Inline* element that groups together a chunk of HTML
  
  ```html
  <span id="content">This is my content.</span>
  ```

◆ *Not* physically separated with line breaks

◆ *Uses*
  
  » format an area that is contained *within* another area
    (inside `<p>`, `<blockquote>`, `<li>`, `<div>`, etc.)

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Why Use CSS for Layout?

◆ *Greater control over text display*
  
  » fonts, spacings, margins

◆ *Increased page layout control*
  
  » variety of positioning options
  » ability to overlap elements

◆ *Increased accessibility*
  
  » easier for screen readers

◆ *Define styles for multiple media types*
  
  » separate style for printing, mobile devices
On to CSS Layout
Let’s Recall the Box Model

Positioning

- Static
  - follows the normal flow of the page (immediately following and preceding other static elements)
  - default

- Relative
  - change the location of an element slightly
  - relative to where it would otherwise appear in normal flow
  - position: relative
    - left – configures position to the left side of the browser
    - right – right side
    - top – the position of the element in relation to the top of the document area in the browser window
Relative Positioning

```css
#myContent {
    position: relative;
    left: 30px;
    font-family: Arial, sans-serif;
}

h1 {
    background-color: #cccccc;
    padding: 5px;
    color: #000000;
}
```

```html
<h1>Relative Positioning</h1>
<div id="myContent">
    <p>This paragraph uses CSS relative positioning to be placed 30 pixels in on the left side.</p>
</div>
```

Positioning

- **Absolute**
  - element is moved offset from the position of its containing block, typically the page itself
  - browsers render absolute positioned elements *outside of normal flow*
  - `position: absolute`
    - left, right, top

- **Fixed**
  - similar to absolute, but items are fixed to the viewport
  - will not scroll when rest of the content does

http://www.cs.odu.edu/~mweigle/cs312/css-layout/relative.html
Absolute Positioning

```css
#myContent {
    position: absolute;
    left: 200px;
    top: 100px;
    width: 300px;
    font-family: Arial, sans-serif;
}

h1 {
    background-color: #cccccc;
    padding: 5px;
    color: #000000;
}
```

This paragraph is contained in a div which uses CSS absolute positioning to be placed 200 pixels in from the left and 100 pixels down from the top of the browser window. A width of 300 pixels is also configured.

```html
<h1>Absolute Positioning</h1>
<div id="myContent">
    <p>This paragraph is contained in a div which uses CSS absolute positioning to be placed 200 pixels in from the left and 100 pixels down from the top of the browser window. A width of 300 pixels is also configured.</p>
</div>
```

Positioning Example (Absolute Positioning)

```
Trillium Media Design

Our professional staff takes pride in its working relationship with our clients by offering professional services that listen to their needs, develop their target areas, and incorporate these items into a well-presented website that works.

- Home
- About
- Services
```

Why is the list immediately below the heading?

```
Trillium Media Design

- Home
- About
- Services

Our professional staff takes pride in its working relationship with our clients by offering professional services that listen to their needs, develop their target areas, and incorporate these items into a well-presented website that works.
```

http://www.cs.odu.edu/~mweigle/cs312/css-layout/absolute.html


http://www.cs.odu.edu/~mweigle/cs312/css-layout/layout-abs.css
Positioning

Example (Relative Positioning)

Only 1 line difference between the layout-abs and layout-rel HTML and CSS files.

Floating

- Float can be used to push boxes around

- Browser renders element in normal flow and then shifts it as far as possible within their container
  - either page or <div>

- Surrounding content flows around the floated box rather than underneath it
  - to stop the flow (have content appear below floated box), use clear
Example
Floating

Floating an Image

The heading and paragraph follow normal flow. The Yellow Lady Slipper pictured on the right is a wildflower. It grows in wooded areas and blooms in June each year. The Yellow Lady Slipper is a member of the orchid family.

#yls {float: right; margin: 0 0 5px 5px; border: solid;}

<img src="http://www.nps.gov/wica/naturescience/images/Yellow-Lady-Slipper.jpg" alt="Yellow Lady Slipper" id="yls" height="100" width="100" />

<h1>Floating an Image</h1>


Example
Floating

The paragraphs follow normal flow. The Yellow Lady Slipper pictured on the right is a wildflower. It grows in wooded areas and blooms in June each year. The Yellow Lady Slipper is a member of the orchid family.

.rightfloat {float: right; margin: 5px; clear: right; border: solid;}

<img src="http://www.nps.gov/wica/naturescience/images/Yellow-Lady-Slipper.jpg" alt="Yellow Lady Slipper" class="rightfloat" height="100" width="100" />

<p>The paragraphs follow normal flow... </p>

Use class instead of id when more than one element can use the style.

.rightfloat {float: right; margin: 5px; border: solid;}

http://www.cs.odu.edu/~mweigle/cs312/css-layout/float2.html
Other Properties

◆ display
  » configures if and how an element is displayed
  » display: none – element will not be displayed
  » display: block – element will be rendered as a block element (takes up full width of browser window)

◆ z-index
  » used to modify the stacking order of elements
  » default value is 0
  » elements with a higher z-index value will appear stacked on top of elements with a lower z-index value

Two Column Page Layout

Door County Wildflowers

Wisconsin’s Door County Peninsula is a unique ecologically diverse place with upland and boreal forest, bogs, swamps, sand, and rock beaches, limestone escarpments, and farmlands.

A wide array of wildflowers grow in the county because of this variety of ecosystems.

Explore the beauty of Door County Wildflowers

Two Column Page Layout

- It's important to plan the layout before starting CSS coding.
- Each named area will correspond to a CSS class or id.
- Key is that the left column will be a float left.
  - Other content will be rendered down the page using normal flow.
Two Column Page Layout

◆ Code XHTML first
  » keep in mind layout sections
  » use <div> and label classes and ids

```html
<div id="wrapper">
  <div id="leftcolumn">
  </div>
  <div id="rightcolumn">
    <div id="logo">
    </div>
    <div class="content">
    </div>
    <div class="footer">
    </div>
  </div>
</div>
```

Two Column Page Layout

◆ Wrapper
  » background and text color
◆ Left Column
  » position
    ◆ float left, 100px wide
  » inherits color from wrapper
◆ Right Column
  » margin 100px
    ◆ don't overlap the left column
  » background and text color
◆ Logo
  » color formatting
  » padding


http://www.cs.odu.edu/~mweigle/cs312/css-layout/two-column.css
Two Column Page Layout

- Content
  - padding
- Floating Image
  - position
- Footer
  - color formatting
  - clear floating image
- Navigation Area
  - no underlines
  - display block
    - each link will appear on a separate line

http://www.cs.odu.edu/~mweigle/cs312/css-layout/two-column.css

CSS Debugging Tips

- Different browsers tend to implement CSS in slightly different ways
  - testing is crucial -- http://browsershots.org/
  - expect pages to look slightly different in different browsers

- Use validation to look for syntax errors
- Configure temporary background colors
  - helps to define where your boxes are
- Configure temporary borders
- Use comments to find unexpected cascades
  - comment out some code to test with smaller group of statements
  - good tip for debugging other programs as well
CSS Layout Resources

- [http://glish.com/css](http://glish.com/css) » collection of CSS page layouts and links to tutorials
- [http://www.websitetips.com](http://www.websitetips.com) » list of tutorials and CSS-related sites
- [http://www.w3.org/Style/CSS/learning](http://www.w3.org/Style/CSS/learning) » W3C's list of CSS resources
- [http://www.bluerobot.com/web/layouts](http://www.bluerobot.com/web/layouts) » collection of CSS page layout

Three Column Page Layout

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Door County Wildflowers

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**Explore the beauty of Door County Wildflowers...**

With five state parks, tons of county parks, and private nature sanctuaries, Door County is teeming with natural areas for you to stalk your favorite wildflowers.

The Ridges

The Ridges Nature Sanctuary offers wild orchid hikes during the summer months. For more info, visit The Ridges.

Newport State Park

The Newport Wilderness Society sponsors free meadow hikes at 9am every Saturday. Stop by the park office to register.

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Three Column Page Layout

- Start with XHTML
  » use ids and classes

- Develop the CSS styles
  » use float left for left column and float right for right column
Three Column Page Layout


Three Column Page Layout

- Body
  - margin, color formatting
- Wrapper
  - color and text formatting
- Logo
  - repeating background image
  - may have to edit image to fit
  - color and text formatting
- Left Column
  - positioning (float left, 150 px wide)
- Right Column
  - positioning (float right, 200 px wide)
- Center
  - margins - to avoid overlapping left and right columns
  - color formatting
- Footer
  - color, text formatting
  - positioning (clear: both)

http://www.cs.odu.edu/~mweigle/cs312/css-layout/three-column.css
Three Column Page Layout

- Navigation Menu
  - margin, list type, link styles
- Left Column Image
  - margin
- Image Floating Right
  - margin, positioning
- News Items
  - margin, font size

http://www.cs.odu.edu/~mweigle/cs312/css-layout/three-column.css

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