HTML 5 and CSS 3, Illustrated Complete

Unit I:
Applying Advanced CSS Styling

UNIT
I
HTML5 and CSS3

Objectives

- Assess advanced CSS styles

- Implement pseudo-elements

- Add generated content

- Integrate opacity

Objectives (continued)

- Create rounded corners

- Create text shadows

- Add box shadows

- Test browser capabilities with Modernizr

Assessing Advanced CSS Styles

- CSS3 can style many aspects that in the past required integration of images
  - New features not supported by all browsers
    - Age of browser relative to time of feature development
    - Modifications to features not supported in older browsers
  - When developing a Web site, developers should try to make Web site usable across spectrum of capabilities

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Assessing Advanced CSS Styles (continued)

- Progressive enhancement: additional features are used as enhancements only for browsers that can render them
  - Main content and capabilities available for least-featured browser
  - Advanced features not crucial to the layout of the Web site

Assessing Advanced CSS Styles (continued)

- <u>Graceful degradation</u>: ensuring that when site is viewed in browsers that don't support advanced features, Web page elements should still be displayed in a usable way
  - Appearance and usability of Web site don't depend on advanced features
  - Example: specifying alternative text for an image, in case the image cannot be displayed

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Assessing Advanced CSS Styles (continued)

- <u>Shims or patches</u>: scripts written specifically to bridge the gap between browsers with reduced feature sets and more fully featured browsers
  - ➢ Available for use by anyone free of charge
  - ➢ Some address a single issue
  - ➢ Some tools package shims in a library of scripts
    - Examples: Modernizr, PIE

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Implementing Pseudo-Elements

- <u>Pseudo-element</u>: selectors that enable you to isolate a portion of a larger element for styling
  - ➤ Preceded by colon (:) in older browsers or by double colon (::) in newer ones
    - • Double colon distinguishes pseudo-element from pseudo-class
  - ➤ <u>Drop cap</u>: First letter is enlarged and drops below the first line of text
    - • Can be created using :first-letter
    - • Must format surrounding text to flow around

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Implementing Pseudo-elements (continued)

- :first-line pseudo-element applied to paragraph

Font weight for entire first line set to bold

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Implementing Pseudo-elements (continued)

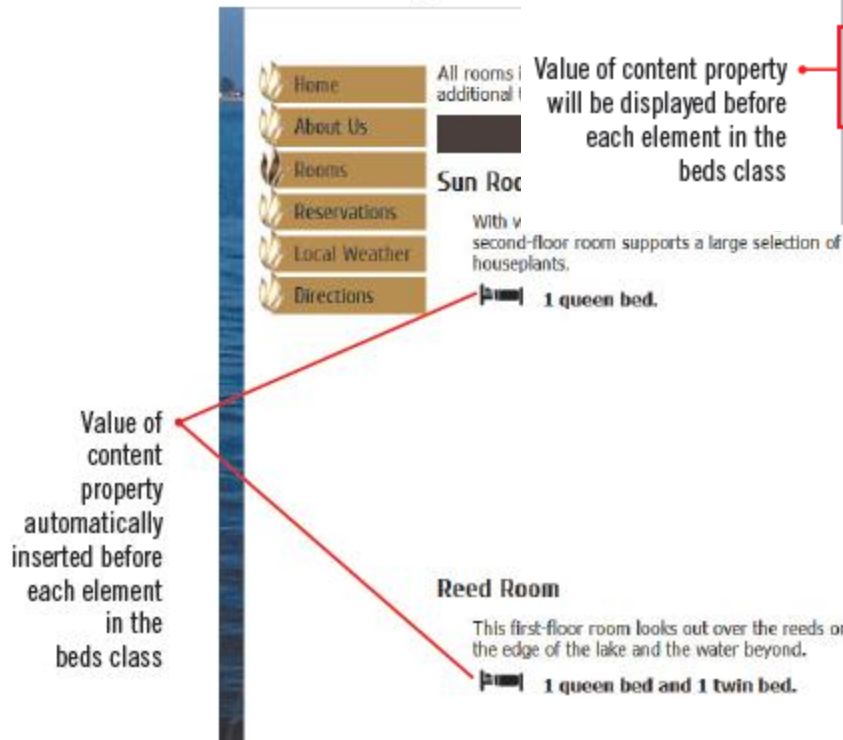- :first-letter pseudo-element applied to paragraph

Adding Generated Content

- :before and :after pseudo-elements: allow you to insert content into Web page using style rules
  - ➢ Typically used for repeated text or pictures
  - ➢ Must specify value for the content property
    - Can be text or path to an image

Adding Generated Content (continued)

- :before pseudo-element code and result


```
.beds {
  padding: 0;
  margin: 1em 0 0 2em;
  font-weight: bold;
}
.beds:before {
  content: url("images/bedicon.png");
}
.callout {
  font-weight: bold;
}
```

Value of content property will be displayed before each element in the beds class

Value of content property automatically inserted before each element in the beds class

Sun Room

With ... second-floor room supports a large selection of houseplants.

🛏 1 queen bed.

The Sun Room

Back to top

Reed Room

This first-floor room looks out over the reeds on the edge of the lake and the water beyond.

🛏 1 queen bed and 1 twin bed.

All rooms ... additional ...

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Integrating Opacity

- Color can be specified in hexadecimal, rgb, and hsl

- Alpha channel: fourth color value representing the opacity
  - Works for rgb and hsl, known as rgba and hsla
    - Many browsers do not support, important to use backup color method
  - Receives decimal between 0 and 1 representing percent opacity

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Integrating Opacity (continued)

- rgba code and resulting partially transparent element

```
figcaption {
    display: block;
    position: absolute;
    bottom: 0;
    left: 0;
    padding: 0.5em 0;
    margin: 0;
    width: 100%;
    background: rgb(255, 255, 255);
    background: rgba(255, 255, 255, 0.6);
}
```
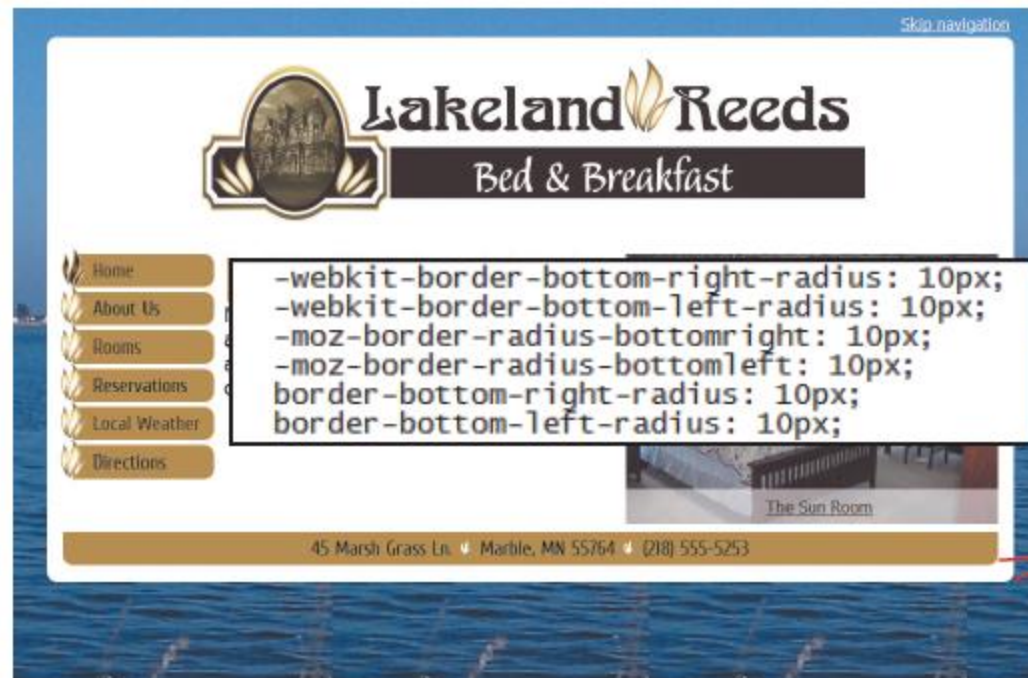
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Alpha value of 0.6 makes white background transparent

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Creating Rounded Corners

- Creating rounded corners is possible using the CSS3 border-radius property
  - In past, required overlay of image files simulating the rounded edge
  - border-radius property receives value in pixels
    - Larger value results in deeper curves
    - Can use individual property for each corner
    - Requires –moz and –webkit prefixes to work with some browsers

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Creating Rounded Corners (continued)

- Code for rounded footer corners and resulting element


```
-webkit-border-bottom-right-radius: 10px;
-webkit-border-bottom-left-radius: 10px;
-moz-border-radius-bottomright: 10px;
-moz-border-radius-bottomleft: 10px;
border-bottom-right-radius: 10px;
border-bottom-left-radius: 10px;
```

Rounded corners applied to lower-left and lower-right corners of footer, and to all four corners of the box element

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Creating Text Shadows

- <u>Text shadow</u>: creates the appearance of a shadow on a surface behind the text
  - In past, required using image manipulation software and linking to resulting graphic

- In CSS3, use text-shadow property
  - Takes four values: horizontal offset, vertical offset, blur, and shadow color

Creating Text Shadows (continued)

- Values for the text shadow property and resulting graphic

text-shadow: 5px 5px 3px #333;

Horizontal offset

Vertical offset

Blur

Color

Gray shadow offset 5px to the right and 5px down from original text, with a 3px blur

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Adding Box Shadows

- <u>Box shadow</u>: creates the appearance of a shadow on an entire unit of page content

- In CSS3, use box-shadow property to apply a shadow to Web page elements

  - Takes four values: horizontal offset, vertical offset, blur, and shadow color
  - Has –webkit and –moz variants

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Adding Box Shadows (continued)

- Code for box-shadow and resulting Web page

```
-webkit-box-shadow: 2px 2px 4px black;
-moz-box-shadow: 2px 2px 4px black;
box-shadow: 2px 2px 4px black;
```


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Edges of box shadows are now 2px to the right and 2px down from edges of original elements

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Testing Browser Capabilities with Modernizr

- <u>Modernizr</u>: free script library for enabling alternative code in order to support graceful degradation
  - Linked to a Web page and tests each user's browser to detect supported properties
  - Based on results, generates set of CSS classes, which can be used by designer to write alternative code and make sure that only the suitable code is rendered

Testing Browser Capabilities with Modernizr (continued)

- Code incorporating Modernizr script

```
<!DOCTYPE html>
<html class="no-js">
  <head>
    <meta charset="utf-8" />
    <title>Lakeland Reeds Bed &amp; Breakfast - About Us</title>
    <link rel="stylesheet" type="text/css" media="screen" href="lakeland.css" />
    <link rel="stylesheet" type="text/css" media="print" href="llprint.css" />
    <!--[if lt IE 7]>
      <style type="text/css">
        #mainnav {left: 0px;}
        li img {left: -42px;}
      </style>
    <![endif]-->
    <script src="scripts/modernizr-1.6.min.js"></script>
  </head>
```

Previous script element replaced
with reference to external file
containing Modernizr script

Class added to apply results of
Modernizr scripts to Web page

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Summary

- CSS3 added many new properties which are not supported by all browsers

- Use progressive enhancement, graceful degradation, patches and shims to ensure usability across spectrum of capabilities

- Pseudo-elements allow you to select a portion of an element for styling

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Summary (continued)

- :before and :after allow you to generate repeated content from style rules, without changing HTML code

- rgba and hsla color systems include a fourth value which represents the level of opacity of an element

- Rounded corners can be created using the border-radius property

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Summary (continued)

- Text shadows and box shadows can be created using the text-shadow and box-shadow properties, respectively

- Free tools, such as Modernizr, enable the creation of alternative code in order to provide graceful degradation for older browsers