

CPIS 358: INTERNET APPLICATIONS & WEB PROGRAMMING

CREATE

BEAUTIFUL

WEBSITES

GO>

CHAPTER 3-PART 2: INTRODUCTION TO CASCADING STYLE SHEETS™ (CSS)

TEXTBOOK

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- You can read Chapter 5 page 175-->216

AGENDA

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- Introduction
- Text shadows
- Rounded corners
- Color
- Box shadows
- Linear gradients introducing Vendor Prefixes
- Multiple Background Images
- Image Borders
- Multicolumn Layout

OBJECTIVES

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- At the end of this chapter, the student should be able to:
 - ▣ Add text shadows and text-stroke effects
 - ▣ Create rounded corner
 - ▣ Add shadows to elements
 - ▣ Create linear and radial gradients, and reflections
 - ▣ Create a multicolumn layout

Introduction

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- The new features of CSS3, resulting in
 - ▣ Faster and more economical web development
 - ▣ Better client-side performance
 - ▣ Reduces the need for JavaScript libraries (Chapter4) and sophisticated graphics software packages

Text Shadows

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- The text-shadow property makes it easy to add a text shadow effect to any text
 - ▣ The property has 4 values:
 - Horizontal offset of the shadow: The number of pixels that the text-shadow will appear to the left or the right of the text
 - -: move the text to the left
 - +: move the text to the right
 - Vertical offset of the shadow: The number of pixels that the text-shadow will be shifted up or down from the text.
 - -: move the text to the up
 - +: move the text to the down
 - Blur radius
 - The greater the value, the greater the blurring of the edges
 - Color

Text Shadow

```
1 <!DOCTYPE html>
2
3 <!-- Fig. 5.1: textshadow.html -->
4 <!-- Text shadow in CSS3. -->
5 <html>
6 <head>
7     <meta charset = "utf-8">
8     <title>Text Shadow</title>
9     <style type = "text/css">
10         h1
11         {
12             text-shadow: -4px 4px 6px dimgrey; /* add shadow */
13             font-size: 400%; /* increasing the font size */
14         }
15     </style>
16 </head>
17 <body>
18     <h1>Text Shadow</h1>
19 </body>
20 </html>
```

Rounded Corners...

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- The border-radius property allows to add rounded corners to an element
 - ▣ Create a rectangle with a border
 - Use border property
 - Add new property border-radius
 - Set the border-radius to 15px (for example)
 - This adds slightly rounded corners to the rectangle
 - Greater value of border-radius makes the left and right sides completely round

Rounded Corners

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The border-radius property adds rounded corners to an element.

Increasing the border-radius rounds the corners of the element more.

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 5.2: roundedcorners.html -->
4  <!-- Rounded corners in CSS3. -->
5  <html>
6  <head>
7      <meta charset = "utf-8">
8      <title>Rounded Corners</title>
9      <style type = "text/css">
10         div
11         {
12             border: 3px solid navy;
13             padding: 5px 20px;
14             background: lightcyan;
15             width: 200px;
16             text-align: center;
17             border-radius: 15px; /* adding rounded corners */
18             margin-bottom: 20px;
19         }
20         #round2
21         {
22             border: 3px solid navy;
23             padding: 5px 20px;
24             background: lightcyan;
25             width: 200px;
26             text-align: center;
27             border-radius: 50px; /* increasing border-radius */
28         }
29     </style>
30 </head>
31 <body>
32     <div>The border-radius property adds rounded corners
33     to an element.</div>
34     <div id = "round2">Increasing the border-radius rounds the corners
35     of the element more.</div>
36 </body>
37 </html>
```


Color...

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- Css3 allows to express color in several ways
 - ▣ Name of the color
 - ▣ Hexadecimal values of the color
 - ▣ RGB(Red, Green, Blue)
 - ▣ RGBA(Red, Green, Blue, Alpha)
 - The value of each color Red, green and blue can range from 0 to 255
 - The alpha value (opacity) can be any value in the range 0.0 (fully transparent) through 1.0 (fully opaque)
 - Background: `rgba(255,0,0,0.5)` : a half-opaque red
 - RGBA gives a greater control over the exact colors in your web pages

Color...

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- Css3 allows to express color in several ways
 - ▣ HSL(hue, saturation, lightness)
 - ▣ HSLA(hue, saturation, lightness, alpha)
 - The *hue* is a color or shade expressed as a value from 0 to 359 representing the degrees on a color wheel (a wheel is 360 degrees).
 - The colors on the wheel progress in the order of the colors of the rainbow—red, orange, yellow, green, blue, indigo and violet.
 - The value for red, which is at the beginning of the wheel, is 0
 - Green hues have values around 120 and blue hues have values around 240.
 - The *saturation*—the intensity of the hue—is expressed as a percentage, where 100% is fully saturated (the full color) and 0% is gray.

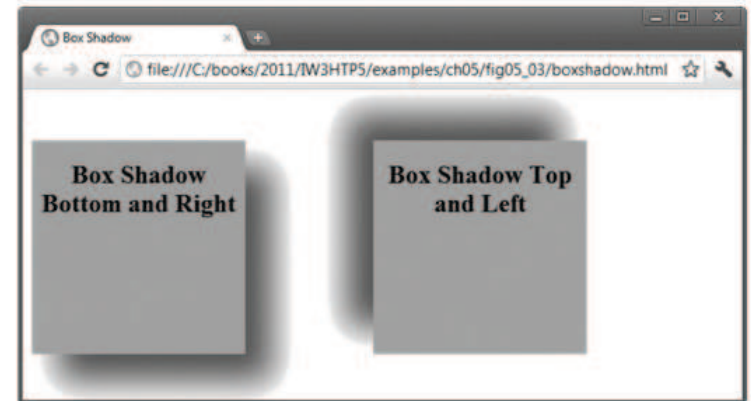
Color...

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- Css3 allows to express color in several ways
 - ▣ HSL(hue, saturation, lightness)
 - ▣ HSLA(hue, saturation, lightness, alpha)
 - *Lightness*—the intensity of light or luminance of the hue—is also expressed as a percentage.
 - A lightness of 50% is the actual hue.
 - If you *decrease* the amount of light to 0%, the color appears completely dark (black).
 - If you *increase* the amount of light to 100%, the color appears completely light (white).
 - For example, if you wanted to use an `hsla` value to get the same color red as in our example of an `rgba` value, you would set the `background` property as follows:
 - `background: hsla(0, 100%, 50%, 0.5);`

Box Shadows

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- You can shadow *any* block-level element in CSS3
- This figure shows you how to create a **box shadow**
 - ▣ Horizontal offset of the shadow—the number of pixels that the box-shadow will appear to the left or the right of the box. A *positive* value moves the box-shadow to the *right*
 - ▣ Vertical offset of the shadow—the number of pixels the box-shadow will be shifted up or down from the box. A *positive* value moves the box-shadow *down*
 - ▣ Blur radius—A blur-radius of 0px would result in a shadow with a sharp edge (no blur). The greater the value, the more the edges of the shadow are blurred
 - ▣ Color—the box-shadow's color

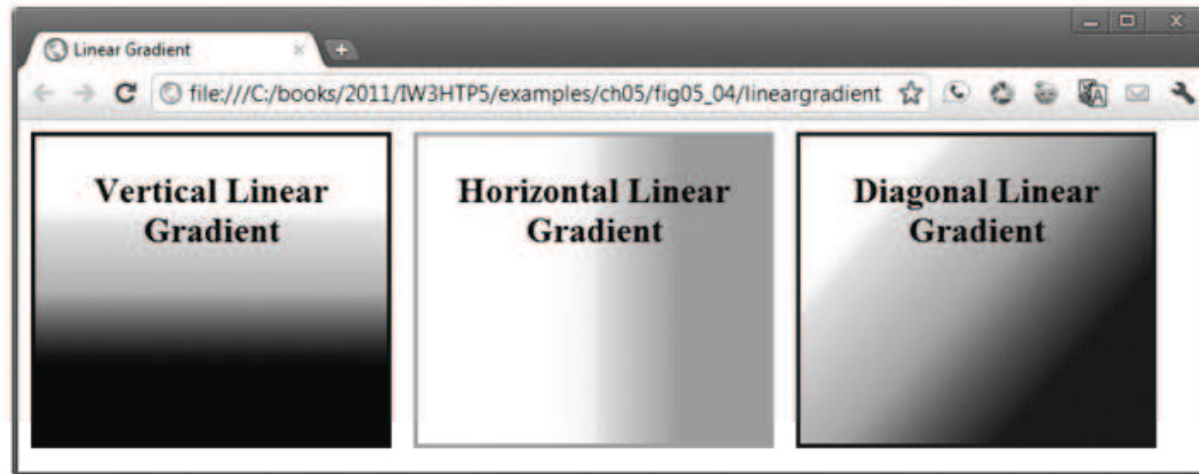
```

1  <!DOCTYPE html>
2
3  <!-- Fig. 5.3: boxshadow.html -->
4  <!-- Creating box-shadow effects. -->
5  <html>
6      <head>
7          <meta charset = "utf-8">
8          <title>Box Shadow</title>
9          <style type = "text/css">
10             div
11             {
12                 width: 200px;
13                 height: 200px;
14                 background-color: plum;
15                 box-shadow: 25px 25px 50px dimgrey;
16                 float: left;
17                 margin-right: 120px;
18                 margin-top: 40px;
19             }
20
21             #box2
22             {
23                 width: 200px;
24                 height: 200px;
25                 background-color: plum;
26                 box-shadow: -25px -25px 50px dimgrey;
27             }
28             h2
29             {
30                 text-align: center;
31             }
32         </style>
33     </head>
34     <body>
35         <div><h2>Box Shadow Bottom and Right</h2></div>
36         <div id = "box2"><h2>Box Shadow Top and Left</h2></div>
37     </body>
38 </html>

```

Linear Gradients; Introducing Vendor Prefixes...

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- **Linear gradients** are a type of image that gradually transitions from one color to the next horizontally, vertically or diagonally.
- You can transition between as many colors as you like and specify the points at which to change colors, called **color-stops**, represented in pixels or percentages along the *gradient line*—the angle at which the gradient extends
- *You can use gradients in any property that accepts an image*

Linear Gradients; Introducing Vendor Prefixes...

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- Many of CSS3 features are not yet finalized, but have already been implemented in various browsers. For that, when you define the style, you should introduce vendor prefixes

Vendor prefix	Browsers
-ms-	Internet Explorer
-moz-	Mozilla-based browsers, including Firefox
-o-	Opera and Opera Mobile
-webkit-	WebKit-based browsers, including Google Chrome, Safari (and Safari on the iPhone) and Android

- The `background` property for each of the three linear gradient styles (vertical, horizontal and diagonal) is defined multiple times in each style—once for WebKit-based browsers, once for Mozilla Firefox and once using the standard CSS3 syntax for linear gradients

```

1  <!DOCTYPE html>
2
3  <!-- Fig. 5.4: lineargradient.html -->
4  <!-- Linear gradients in CSS3. -->
5  <html>
6      <head>
7          <meta charset = "utf-8">
8          <title>Linear Gradient</title>
9          <style type = "text/css">
10      div
11      {
12          width: 200px;
13          height: 200px;
14          border: 3px solid navy;
15          padding: 5px 20px;
16          text-align: center;
17          background: -webkit-gradient(
18              linear, center top, center bottom,
19              color-stop(15%, white), color-stop(50%, lightsteelblue),
20              color-stop(75%, navy) );
21          background: -moz-linear-gradient(
22              top center, white 15%, lightsteelblue 50%, navy 75% );

```

Fig. 5.4 | Linear gradients in CSS3. (Part I of 4.)


```

23         background: linear-gradient(
24             to bottom, white 15%, lightsteelblue 50%, navy 75% );
25         float: left;
26         margin-right: 15px;
27     }
28     #horizontal
29     {
30         width: 200px;
31         height: 200px;
32         border: 3px solid orange;
33         padding: 5px 20px;
34         text-align: center;
35         background: -webkit-gradient(
36             linear, left top, right top,
37             color-stop(15%, white), color-stop(50%, yellow),
38             color-stop(75%, orange) );
39         background: -moz-linear-gradient(
40             left, white 15%, yellow 50%, orange 75% );
41         background: linear-gradient(
42             90deg, white 15%, yellow 50%, orange 75% );
43         margin-right: 15px;
44     }

```

Fig. 5.4 | Linear gradients in CSS3. (Part 2 of 4.)

```

45     #angle
46     {
47         width: 200px;
48         height: 200px;
49         border: 3px solid Purple;
50         padding: 5px 20px;
51         text-align: center;
52         background: -webkit-gradient(
53             linear, left top, right bottom,
54             color-stop(15%, white), color-stop(50%, plum),
55             color-stop(75%, purple) );
56         background: -moz-linear-gradient(
57             top left, white 15%, plum 50%, purple 75% );
58         background: linear-gradient(
59             45deg, white 15%, plum 50%, purple 75% );
60     }
61     </style>
62 </head>
63 <body>
64     <div><h2>Vertical Linear Gradient</h2></div>
65     <div id = "horizontal"><h2>Horizontal Linear Gradient</h2></div>
66     <div id = "angle"><h2>Diagonal Linear Gradient</h2></div>
67 </body>
68 </html>

```

Fig. 5.4 | Linear gradients in CSS3. (Part 3 of 4.)